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PROBLEMS IN ACCOUNTING

BY

WINDSOR ARNOLD HOSMER

DICKINSON FELLOW
PROFESSOR OF ACCOUNTING

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
GEORGE F. BAKER FOUNDATION
HARVARD UNIVERSITY

SECOND EDITION
SECOND IMPRESSION

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THE MAPLE PRESS COMPANY, YORK, PA.

To

WILLIAM MORSE COLE

For Thirty Years
An Inspiring Teacher of Accounting
In Harvard University

PREFACE

Changes in industry in the last generation have thrown added responsibilities on accountants. The necessity of relying in increasing measure on accounting information, rather than on direct contact with the facts of smaller business units, has led executives, creditors, stockholders, and others to be increasingly interested in the completeness and accuracy of accounting information.

The ability to lay bare the essential facts of a business situation requires a rigor of analysis and a breadth of view commensurate with the complexity of the issues involved. A narrow formalism in accounting will not suffice. It must deal with business facts as they arise and must keep its technique and methods of analysis flexible, in order to meet new demands in whatever form they occur.

In selecting the cases for this volume we have tried to maintain a proper balance between the broader aspects of accounting and the constant emphasis on analysis on the one hand, and the necessity on the other that students become familiar with bookkeeping and other matters of technique. We have also sought to preserve in the cases the vividness of the experience in which they arose and the significance of the situations to the enterprises concerned.

This book is planned for the use of students with or without previous acquaintance with accounting. Cases are presented in Part I which give a general picture of the structure and functions of the principal accounting statements and provide instances in which the meaning of the terms used therein may be examined. Bookkeeping is considered in Part II in the light of the analysis thus developed. Both together constitute an introduction to the problems in substantive accounting beginning in Part III.

This book is the sixth of those made possible by the Arthur Lowes Dickinson Fund, given by Price, Waterhouse & Co., for Accounting Research at the Harvard Graduate School of Business Administration.

A case book necessarily involves the cooperation of many persons. We wish to express our appreciation of the assistance

of business men and of the courtesy with which that assistance has been given. This collection of cases is a part of and is dependent upon the larger body of case material used in the other courses in accounting and in related courses in the School. Professor Sanders and Professor Hanson have made available several cases previously used in Industrial Accounting and Financial Management. Professor Walker developed cases on the budgetary control of funds and on the analysis of income, and Professor Nickerson developed many of the cases on inventories. My colleagues have given liberally of their judgment and criticism throughout the preparation of this volume.

Keith Funston, formerly of the Research Staff of the School and now with the American Radiator Company, Thomas H. Carroll, Instructor in Accounting, and Cedric W. Lutz, Assistant in Research, cooperated in the preparation of many of the cases. Miss Virginia Jenness has served as research assistant throughout the preparation of this edition and has taken charge of many aspects of the preparation of the manuscript.

W. A. HOSMER.

SOLDIERS FIELD,
BOSTON, MASS.,
September, 1938.

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PART I

AN INTRODUCTION TO ACCOUNTS, BALANCE SHEETS, AND INCOME STATEMENTS

I. THE GENERAL STRUCTURE AND FUNCTION OF FINANCIAL STATEMENTS

American Telephone and Telegraph Company—No. 1

THE STRUCTURE AND FUNCTION OF BALANCE SHEETS AND INCOME STATEMENTS

The American Telephone and Telegraph Company has long been noted as a corporation which has attempted through its annual reports and by other means to present relatively complete information to its stockholders and creditors and to other persons interested in the enterprise. At December 31, 1936, there were 641,000 stockholders of record of the American Telephone and Telegraph Company, no one of whom held as much as 1 per cent of the total stock.

The annual report for 1936, which was a document of 30 pages, included balance sheets of the American Telephone and Telegraph Company for December 31, 1936, and for December 31, 1935, and an income statement for the intervening period, the year ending December 31, 1936. These statements are reproduced below, together with a supporting schedule showing the investment in subsidiary or other companies as of December 31, 1936, and a second schedule showing the separate issues of bonds included in funded debt in 1936 and in 1935.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
BALANCE SHEET

Assets	December 31, 1936	December 31, 1935
Plant and Other Investments:		
Telephone Plant	$ 432,114,258	$ 436,331,742
Plant and equipment mainly for providing interconnection between and through territories of operating telephone subsidiaries and other telephone companies		
Investments in Subsidiaries (at cost)(a).	2,296,742,377	2,274,761,609
Stocks(b) $2,182,225,246		
Notes and advances 114,517,131		
Other Investments (at cost)(a)	42,418,124	47,806,946
Stocks $ 41,725,605		
Notes 453,591		
Miscellaneous Physical Property 238,928		
Sinking Funds	500,000	1,202,573
Total Plant and Other Investments	$2,771,774,759	$2,760,102,870
Current Assets:		
Cash required to retire funded debt called for redemption including premiums	$ 138,960,090	$
Other Cash and Deposits	9,622,308	18,236,185
Temporary Cash Investments	170,633,835	194,339,659
United States Government obligations. Market value December 31, 1936, $170,559,900.		
Current Receivables	13,942,404	13,010,978
Amounts due for service (less reserve for uncollectible accounts), interest and dividends receivable, working advances, etc.		
Material and Supplies	8,661,481	8,381,309
Total Current Assets	$ 341,820,118	$ 233,968,131
Deferred Debits:		
Unamortized Discount on Funded Debt	$ 2,577,679	$
Other Deferred Debits	1,517,021	1,680,878
Prepayments of rents, taxes, insurance, etc.; deposits with workmen's compensation commissions; and miscellaneous items the final disposition of which had not been determined at close of year.		
Total Deferred Debits	$ 4,094,700	$ 1,680,878
Total Assets	$3,117,689,577	$2,995,751,879

(a) See detailed list of investments in securities.

(b) At December 31, 1936, stocks of subsidiaries carried at $112,460,166 were pledged under a trust indenture securing the Company's Thirty Year, Collateral Trust 5s, called for redemption on December 1, 1936. It is expected that the collateral pledged will be released during 1937. (*Continued on page 8*)

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
BALANCE SHEET.—(*Continued*)

Liabilities		December 31, 1936	December 31, 1935
Capital Stock:			
Stock issued and outstanding (Authorized $2,500,000,000.)		$1,868,509,300	$1,866,227,500
Par value, $100 per share, of common stock outstanding.			
Premiums on Capital Stock		269,889,978	268,749,078
Amount received in excess of par value.			
Capital Stock Installments		250,602	4,330,337
Amount received under Employees' Stock Plan on stock subscriptions not yet completed or cancelled. (This Plan was discontinued as to new subscriptions in 1933.)			
Total Capital Stock		$2,138,649,880	$2,139,306,915
Funded Debt(c)		$ 443,093,700	$ 443,532,600
Notes sold to Trustee of Pension Fund		11,022,113	11,022,113
Demand notes held by Trustee as an investment of pension funds not presently required to meet pension payments.			
Current and Accrued Liabilities:			
Funded Debt called for redemption but not presented for payment, including premiums		$ 138,960,090	$ .....
Dividend Payable January 15th		42,041,459	41,990,119
Accounts Payable		6,802,723	3,416,837
Interest and Taxes Accrued		7,782,816	11,263,579
Total Current and Accrued Liabilities		$ 195,587,088	$ 56,670,535
Deferred Credits		$ 1,455,165	$ 1,775,453
Items, the final disposition of which had not been determined at close of year.			
Depreciation Reserve		102,649,072	95,040,547
Provision to meet loss of investment in depreciable plant upon its ultimate retirement from service.			
Surplus.			
Surplus Reserved		64,664,444	64,664,444
Amount reserved against general contingencies.			
Unappropriated Surplus		160,568,115	183,739,272
Additions during 1936:			
Net income after dividends	$ 6,745,235		
Miscellaneous additions.	1,012,985		
Total additions	$ 7,758,220		
Deductions during 1936:			
Premiums on funded debt called	$30,041,730		
Miscellaneous deductions	887,647		
Total deductions	$30,929,377		
Net decrease	$23,171,157		
Total Liabilities		$3,117,689,577	$2,995,751,879

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
INCOME STATEMENT

	Year 1936
Operating Revenues	
Toll Service Revenues	$ 89,636,121
Message tolls and private line service revenues.	
License Contract Revenues	13,450,531
Payments received for services furnished telephone companies under license contracts.	
Miscellaneous Revenues	4,199,119
Less: Uncollectible Operating Revenues	364,987
Total Operating Revenues	$106,920,784
Operating Expenses(a)	
Current Maintenance	$ 16,143,285
Depreciation Expense	17,376,311
Traffic Expenses	6,129,897
Commercial Expenses	2,590,614
Operating Rents	11,255,777
General Administration(b)	15,638,501
Accounting and Treasury Department Expenses	3,284,487
Provision for Employees' Service Pensions	914,521
Employees' Sickness, Accident, Death and Other Benefits	450,960
Other General Expenses	1,163,791
Less: Expenses Charged Construction	100,210
Total Operating Expenses	$ 74,847,934
Net Operating Revenues	$ 32,072,850
Operating Taxes	
Federal Income	$ 852,434
Social Security (Excludes $17,170 charged Construction)	302,725
Other—Principally state and local	5,607,834
Total Operating Taxes	$ 6,762,993
Net Operating Income	$ 25,309,857
Dividend Income	166,071,313
Interest Income	7,048,640
Other Income—Net	839,682
Total Income	$199,269,492
Interest Deductions	24,443,078
Net Income(c)	$174,826,414
Dividends Declared	168,081,179
At $9 00 per share of capital stock.	
Balance transferred to Surplus	$ 6,745,235

(a) The greater part of Operating Expenses are incurred in connection with the Company's long distance communication service, but such expenses also include substantial amounts incurred by the Company in the performance of its License Contract services furnished telephone companies.

(b) Includes $9,596,878 for 1936 for cost of development and research work carried on in behalf of the Company by Bell Telephone Laboratories.

(c) Net Income of the Company by itself for 1936 is less by $9,918,050 than the Company's proportion of the consolidated Net Income of the Bel' System for these years.

Note.—The Company does not consider that any liability exists in respect of Federal surtax on undistributed earnings in 1936.

C. A. HEISS, Comptroller.

Source: Company report.

SCHEDULE 1
AMERICAN TELEPHONE AND TELEGRAPH COMPANY
INVESTMENTS IN SUBSIDIARY AND OTHER COMPANIES AT DECEMBER 31, 1936

	Capital Stocks(a)			Notes and Advances
	Par Value of Holdings	% of Total Out-standing	Book Value (Cost)	Face Value
Subsidiary Companies				
New England Tel. & Tel. Co	$ 87,094,200	65 31	$ 92,045,721	$ 17,100,000
New York Tel. Co	421,300,000	100 00	444,280,335	
New Jersey Bell Tel. Co	140,000,000	100 00	153,667,184	6,500,000
Bell Tel. Co. of Pennsylvania	110,000,000	100 00	116,316,050	5,607,769
Diamond State Tel. Co	5,000,000	100 00	5,700,000	730,000
Chesapeake & Potomac Tel Co	20,000,000	100 00	21,000,000	2,895,000
Chesapeake & Potomac Tel. Co. of Balt. City	30,000,000	100 00	31,467,862	4,225,000
Chesapeake & Potomac Tel. Co. of Va	18,000,000	100 00	18,000,000	4,675,000
Chesapeake & Potomac Tel. Co. of West Va	16,200,000	100 00	16,200,000	1,900,000
Southern Bell Tel. & Tel. Co	124,998,700	99 99	126,815,773	8,000,000
Ohio Bell Tel. Co	129,999,600	99 99	130,041,808	
Michigan Bell Tel. Co	124,089,607	99 99	125,402,210	6,150,000
Indiana Bell Tel. Co.	32,999,100	99 99	33,585,586	5,414,362
Wisconsin Tel. Co.	40,000,000	100 00	43,223,835	
Illinois Bell Tel. Co.	148,959,600	99 31	154,440,399	
Northwestern Bell Tel. Co	100,000,000	100 00	101,039,490	11,240,000
Southwestern Bell Tel. Co	172,999,000	99 99	176,252,078	
Mountain States Tel. & Tel. Co.	34,987,500	72.82	36,362,463	16,200,000
Pacific Tel. & Tel. Co.—Common	154,870,900	85 80	150,529,084	4,400,000
Pacific Tel. & Tel. Co.—Preferred	64,095,700	78 17	55,999,180	
Bell Telephone Laboratories, Inc	50,000	(b)50 00	50,000	2,475,000
Western Electric Co., Inc. (no par value)	(c)5,965,975	99 43	144,216,098	
195 Broadway Corporation	5,500,000	100 00	5,515,000	(d)15,520,000
Eastern Tel. & Tel. Co. (Canada)	75,000	100 00	75,000	1,485,000
Total Book Value (Cost)			$2,182,225,246	$114,517,131
Other Companies				
Southern New England Tel. Co	$ 13,337,400	33 34	$ 13,649,213	$ 450,000
Cincinnati & Suburban Bell Tel. Co	8,169,150	20 72	8,732,568	
Bell Telephone Co. of Canada	18,749,800	23 86	18,854,783	
Cuban American Tel. & Tel. Co.—Common	432,500	50 00	162,500	
Cuban American Tel. & Tel. Co. —Preferred	325,000	50 00	325,000	
Sundry	1,230		1,541	3,591
Total Book Value (Cost)			$ 41,725,605	$ 453,591

(a) Common shares except as otherwise indicated. (b) Remaining 50% owned by Western Electric Company, Inc. (c) Number of shares. (d) Includes real estate mortgages of $13,100,000.

Source: Company report.

SCHEDULE 2
AMERICAN TELEPHONE AND TELEGRAPH COMPANY
FUNDED DEBT

	1936	1935
Thirty-Year Collateral Trust 5s, 1946	(a)	$ 64,865,200
Thirty-five Year Sinking Fund Debenture 5s, 1960	(a)	117,984,700
Thirty-five Year Debenture 5s, 1965	(a)	150,000,000
Twenty-Year Sinking Fund Debenture 5½s, 1943	$ 95,170,700	95,170,700
Twenty-five Year Debenture 3¼s, 1961	175,000,000	
Thirty-Year Debenture 3¼s, 1966	160,000,000	
Thirty-Year 4s, 1936		2,589,000
Ten-Year Convertible 4½s, 1939	12,923,000	12,923,000
Total Funded Debt	$443,093,700	$443,532,600

(a) Amount of this issue outstanding on December 31, 1936, treated as a current liability.
Source: Company report.

1. What groups of persons are interested in the facts recorded in the annual report of this corporation? In what decisions do they rely on the facts recorded?

2. To what extent are these persons familiar with financial statements and with the business facts reflected therein? Is the situation different in the case of this corporation from the situation in the case of smaller and somewhat less complex business enterprises of 50 and a 100 years ago?

3. What are the principal facts which an investor might wish to find recorded in a balance sheet and income statement? Is it possible for a typical investor to find these facts clearly set forth in the statements?

4. What is the function of the annual report of this corporation? As elements in this annual report, could the balance sheet and income statement be changed so that they would fulfill the function of the report more fully?

(*Continued from page 4*)

(c) At December 31, 1936, $126,560,600 face amount of funded debt called for redemption had not been presented for payment. This liability, together with the premiums of $12,309,490, is shown under Current and Accrued Liabilities.

No specific provision has been made in the accounts in respect of a contingent liability to the City of New York for taxes imposed under Local Law No. 19 of 1933, and subsequent similar laws, since the Company denies liability for such taxes; nor has specific provision been made for contingent liabilities in connection with certain suits involving patent licensing agreements and alleged patent infringements since it is the opinion of counsel for the Company that it is improbable that the claims thereunder can be sustained.

On December 31, 1936, the Company was surety on bonds for $17,112,669, executed by The Ohio Bell Telephone Company (a subsidiary) as principal, to secure possible refunds to telephone users. In this connection, the Company was also surety on a bond for $20,000,000 filed in connection with the appeal from a judgment of the Supreme Court of Ohio to the Supreme Court of the United States contesting the obligation of The Ohio Bell Telephone Company to make these refunds.

Federal income tax returns of the Company have not been closed for the years subsequent to 1930.

C. A. HEISS, Comptroller.

The Cudahy Packing Company

THE STRUCTURE OF BALANCE SHEETS, INCOME STATEMENTS, AND SURPLUS STATEMENTS

It is the purpose of this case to examine certain structural features in the relation of the balance sheet of an enterprise at the beginning of the period, the income statement and surplus statement for the period, and the balance sheet at the end of the period. These statements for The Cudahy Packing Company for the year ending October 31, 1936, are reproduced below.

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1. *a.* Determine the current ratios for November 2, 1935, and for October 31, 1936. For this purpose, divide total current assets by current liabilities.[1]

b. In using ratios it is necessary to examine critically the facts on which they are based. In this case is there any reason to question the items classified as current?

c. Why did the current ratio change between the two balance sheets?

d. Is it possible to determine from the statements why the corporation borrowed additional funds during the year?

e. Were there alternative methods of meeting the financial needs of the business which would have resulted in showing a higher current ratio in 1936?

f. Determine net working capital (current assets minus current liabilities) in 1935 and 1936.

2. *a.* Determine the days' sales on the books in 1936. For this purpose divide net sales and operating revenue for 1936 by 360 to obtain an approximation of the average daily sales. Add notes receivable to accounts receivable—trade, and divide the total by the figure for average daily sales.

b. Net sales and operating revenue for the year ending November 2, 1935, were $180,218,129. Make a similar computation of the days' sales on the books for 1935.

c. Is it reasonable to assume that most of the customers took about the number of days indicated to pay their bills?

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[1] Ratios determined in a comparable manner for The Cudahy Packing Company in earlier years, and for other packing companies in 1935 and 1936, and also in earlier years are given in Exhibit 1.

3. *a.* Determine the turnover of inventories for 1936. One method would be to divide the figure given for cost of goods sold by the inventories at the end of the period.[1] Determine also the ratio of sales to inventory in 1935 and 1936 by dividing sales for each year by inventory at the end of the year.

b. If it were possible to operate this business with a higher turnover of inventories, what would be the effect on the working capital position of the company?

4. *a.* In every business there is a flow of funds into the business and a similar flow outward. What were the principal sources of the funds received by this business during 1936?

b. In what ways were the funds applied which were paid out during the year?

5. Determine the percentage of secured, long-term debt to fixed assets in 1935 and 1936. For this purpose include the sinking fund payments due within one year and use the net figure for fixed assets after deducting the reserve for depreciation. The security lying behind the first mortgage bonds and the debentures was summarized as follows by the Standard Statistics Company:

First Sinking Fund, 3¾s, Series A, due 1955:

Nature of Lien—A direct obligation of company and secured by first mortgage lien upon:

(1) All of more important properties owned by company on Sept. 1, 1935. After acquired properties are also to be conveyed as security. Company covenants that subsidiaries will keep their properties free and clear of lien, other than those existing thereon Sept. 1, 1935, and lien of current taxes or purchase money mortgages.

(2) By pledge of all capital stock of following subsidiaries:

Cudahy Packing Co. of Alabama
Cudahy Packing Co. of Louisiana, Ltd.
Barry Machinery Co.
Dow Cheese Co.
Olneyville Wool Combing Co.
Bissel Leather Co.
Willows Cattle Co.
Cudahy Packing Co., Ltd. (Foreign)
Cudahy Co., Ltd. (Foreign)

Also by pledge of 23,487 shares Class A and 83,487 shares Class B stocks of American Salt Company.

Stocks of subsidiaries acquired after Sept. 1, 1935 are also to be pledged as security.

The indenture contains provisions for release of security and substitution therefor. Company also covenants that so long as any of these bonds remain outstanding, consolidated current assets at all times will be maintained at an amount equal to at least one and one-half (1½) times consolidated current liabilities.

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[1] Figures for cost of goods sold, necessary to the computation of turnover, are not available for other packing companies, and for the Cudahy company are available in 1936 only.

Company covenants that it will not permit any subsidiary to create any indebtedness, other than to the company, maturing in more than 12 months and that it will not permit any subsidiary to sell any stocks which rank prior to or on a parity with common stock of such subsidiary pledged unless such stock is deposited with the trustee for pledging hereunder.

Dividend Restrictions—Company covenants not to declare or pay any dividends and make any distribution on its common stock (other than stock dividends) except out of earned surplus, and, shall not (1) during any period that earned surplus is less than, or which by such declaration would be reduced below $6,000,000, make any such payment at a rate greater than 1% quarterly on its then outstanding common stock of $50 par value, and (2) during any period that earned surplus is less than $5,000,000, make any declaration or distribution.

Equity—Prior in lien to $4,937,500 of 4% Convertible Debentures of 1950.

Prior Liens—Subject to $40,000 purchase money mortgages.

Offered—($20,000,000) on Aug. 4, 1935, at 100 and interest.

Convertible Sinking Fund Debenture 4s, due 1950:

Security—A direct obligation of company but not secured by mortgage. The agreement under which the debentures were issued contains a covenant that the company, while any of the debentures remain outstanding, shall at all times maintain current assets of company and its subsidiaries at least equal to 1¼ times all current liabilities, plus the principal amount of debentures then outstanding.

Dividend Restrictions have been published under 1st Mtge S. F. A 3¾s, 1955.

Prior Liens—Subject to $40,000 purchase money mortgages and $19,825,000 first mortgage, A 3¾s, due Sept. 1, 1955.

. . . . . .

Offered—($5,000,000) on Aug. 4, 1935, at 100 and interest.[1]

6. *a.* Determine the percentages of total liabilities represented by current liabilities, long-term debt, and net worth in 1936. For this purpose include the sinking fund payments with current liabilities and leave the minority interest out of the three major classes. The total of the three percentages will thus be slightly below 100 per cent.

b. Determine similar percentages for 1935.

c. What are the reasons for the changes?

7. *a.* Determine the number of times interest was earned in 1936. For this purpose use the net income figure before interest charges less the provision for Federal income tax. Divide this by the total of all interest charges.

b. Determine the percentage which net income for 1936 was of net sales and operating revenue for that year, total assets at the end of the year, and net worth at the end of the year.

8. In this case is the amount of long-term debt so great that it jeopardizes the position of the common stock in the event of the corporation meeting several years of depression and reduced earnings?

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[1] *Standard Bond Descriptions*, Individual Descriptions Section, Vol. 11, No. 1023, January 20, 1937.

THE CUDAHY PACKING COMPANY
(A MAINE CORPORATION)
CONSOLIDATED BALANCE SHEETS

Assets	November 2, 1935	October 31, 1936
Current Assets:		
Cash	$ 5,933,343 55	$ 5,342,974 05
Notes receivable	19,257 12	42,433 55
Accounts receivable—		
Trade	8,328,961 08	8,879,935 78
Other	260,273 43	412,212 38
Inventories—Products where costs were not ascertainable were valued at approximate market prices, allowing for estimated selling expenses; other products, and ingredients and supplies at the lower of cost or market—		
Product	19,828,842 00	24,459,762 00
Ingredients and supplies	1,532,240 92	1,640,972 75
Due from employees	73,023 96	47,006 99
	$35,975,942 06	$40,825,297 50
Investments and Other Assets:		
Stock of subsidiaries—not consolidated	$ 28,750 00	$ 28,750 00
Other investments carried at cost	252,564 12	225,506 45
Long-term receivables, etc.	302,903 88	300,497 30
	$ 584,218 00	$ 554,753 75
Special Deposits under State Compensation Acts	$ 30,000 00	$ 29,540 63
Fixed Assets:		
Real estate, buildings, machinery, etc.—Appraised value at Oct. 30, 1915 (date of reorganization) plus subsequent additions at cost—		
Packing and other manufacturing plants	$32,564,945 04	$33,970,686 94
Sales branches	6,693,281.07	6,698,459 78
Car and refrigerator line	3,340,993.00	3,267,611 00
Farm and mineral lands	1,709,187 31	1,682,884 50
	$44,308,406 42	$45,619,642 22
Less: Reserve for depreciation	7,226,961 70	7,520,625.62
	$37,081,444 72	$38,099,016 60
Intangible Assets:		
Old Dutch Cleanser advertising investment	$ 750,000 00	$ 750,000 00
Royalty interest, goodwill, etc., being amortized	110,168 00	94,656 00
	$ 860,168 00	$ 844,656 00
Prepaid Expenses and Deferred Charges:		
Prepaid insurance and interest	$ 186,057 96	$ 255,458 40
Stationery and advertising inventories	171,091 07	173,854 13
Miscellaneous deferred charges	106,766 99	157,057 89
Bond and debenture discount and expense, being amortized over the life of the present issues, including $782,304.38 in 1935, and $732,768 00 in 1936, of premiums and discount and expense, applicable to refunded issues	1,441,103 60	1,383,498 00
	$ 1,905,019 62	$ 1,969,868 42
	$76,436,792 40	$82,323,132 90

* The first sinking fund payment on the First Mortgage sinking fund bonds, due Sept. 1, 1955, was due on Sept. 1, 1936, and semiannually thereafter. The first sinking fund payment on the Convertible sinking fund 4% debentures was likewise due Sept. 1, 1936, and semiannually thereafter.

THE CUDAHY PACKING COMPANY
(A MAINE CORPORATION)
CONSOLIDATED BALANCE SHEETS.—(*Continued*)

Liabilities	November 2, 1935	October 31, 1936
Current Liabilities:		
Notes Payable—		
Banks and brokers	$ 4,505,000 00	$ 9,780,500 00
Others	453,000.00	483,000 00
Accounts payable	797,899.47	1,074,775 90
U. S. processing tax	3,224,618.17	
Due to officers and employees	1,037,840.87	1,102,147 50
Bond and debenture interest accrued	85,960.00	158,555 00
Reserve for Federal and state taxes, embracing income, unjust enrichment and social security (subject to final determination)	167,154.66	1,289,201 95
Employees' pension trust	.....	1,000,000 00
Preferred dividends payable Nov. 1, 1936	.....	289,267.50
Common dividends payable Nov. 5, 1936	.....	292,187.78
Sinking fund payments due within one year—		
First mortgage sinking fund bonds, due Sept. 1, 1936, and Mar. 1 and Sept. 1, 1937	175,000.00	350,000 00
Convertible sinking fund debentures, due Sept. 1, 1936, and Mar. 1 and Sept. 1, 1937	62,500 00	125,000 00
Purchase money mortgages, due Nov. 1, 1936	32,000 00	
	$10,540,973 17	$15,944,635.63
Long-term Debt:*		
First mortgage sinking fund bonds, due Sept. 1, 1955—		
Authorized $30,000,000, Issued—series "A" 3¾%	$20,000,000 00	$20,000,000 00
Less: Bonds called (cash deposited with trustee)		175,000 00
	$20,000,000 00	$19,825,000 00
Deduct: Sinking fund payments due Sept. 1, 1936, and Mar. 1 and Sept. 1, 1937, provided above	175,000 00	350,000 00
	$19,825,000 00	$19,475,000 00
Convertible sinking fund 4% debentures, due Sept. 1, 1950—		
Authorized and issued	$ 5,000,000 00	$ 5,000,000 00
Less: Debentures called (cash deposited with trustee)		62,500 00
	$ 5,000,000.00	$ 4,937,500 00
Deduct: Sinking fund payments, due Sept. 1, 1936, and Mar. 1 and Sept. 1, 1937, provided above	62,500 00	125,000 00
	$ 4,937,500 00	$ 4,812,500 00
Purchase money mortgages	$ 107,500 00	$ 40,000 00
	$24,870,000 00	$24,327,500 00
Minority Interest in Subsidiary Company:		
Capital Stock	$ 126,096 00	$ 121,248 00
Surplus	47,700 40	52,791 74
	$ 173,796 40	$ 174,039 74
Capital Stock and Surplus:		
Capital stock—		
Preferred stock 6% cumulative, $100 par value:		
Authorized and outstanding	$ 2,000,000 00	$ 2,000,000.00
Preferred stock 7% cumulative, $100 par value:		
Authorized and outstanding	6,550,500 00	6,550,500 00
Common stock $50 par value:		
Authorized $36,449,500		
Outstanding	23,374,450 00	23,374,450 00
	$31,924,950 00	$31,924,950 00
Surplus—		
Capital surplus	$ 1,720,414 03	$ 1,722,801 49
Earned surplus	7,206,658 80	8,229,206 04
	$ 8,927,072.83	$ 9,952,007 53
	$40,852,022 83	$41,876,957.53
Contingent Liabilities:		
Foreign drafts discounted, $247,180.32 in 1935, and $158,100 46 in 1936.		
Possible liability arising out of sundry lawsuits which, in the opinion of officers of the company, will not exceed $5,000 in 1935, and $10,000 in 1936.		
	$76,436,792 40	$82,323,132.90

THE CUDAHY PACKING COMPANY
(A MAINE CORPORATION)
CONSOLIDATED INCOME STATEMENT
FOR THE PERIOD FROM NOVEMBER 2, 1935 TO OCTOBER 31, 1936

Net sales and operating revenue			$201,605,825.00
Cost of goods sold, including operating costs, and excluding the charges deducted below			185,475,400.00
			$ 16,130,425.00
Selling, advertising, general and administrative expense		$10,283,543.00	
Depreciation		1,552,609 00	
Taxes (other than income taxes)		853,907.00	
Bad debts, charged off, less recoveries		136,889 00	12,826,948.00
Operating income			$ 3,303,477.00
Other income and deductions:			
Dividends—other investments	$ 2,418.00		
Interest received—misc.	9,548.00		
Rents received	36,075.00		
Proceeds from life insurance policy	25,563.00	$ 73,604.00	
Loss on sale of capital assets		16,672.00	56,932.00
			$ 3,360,409.00
Interest charges:			
Interest on funded debt		$ 949,841.00	
Amortization of debt discount and expense		101,492.00	
Other interest		136,054 00	1,187,387.00
			$ 2,173,022.00
Provision for Federal income tax			345,065.00
			$ 1,827,957.00
Less: Earnings applicable to minority interest			12,344.00
Net income for the period			$ 1,815,613 00

THE CUDAHY PACKING COMPANY
(A MAINE CORPORATION)
CONSOLIDATED SURPLUS ACCOUNT
FOR THE PERIOD FROM NOVEMBER 2, 1935 TO OCTOBER 31, 1936

Capital surplus:			
As at November 2, 1935			$1,720,414.03
Add:			
Capital surplus arising from acquisition of additional interest in a subsidiary company			2,387.46
			$1,722,801.49
Earned surplus:			
As at November 2, 1935		$ 7,206,658.80	
Add:			
Transferring to surplus the hog processing tax accrued to November 2, 1935 and unpaid at the date the tax was invalidated, January 6, 1936		3,166,867.89	
		$10,373,526.69	
Deduct:			
Provision for liabilities arising from invalidation of the hog processing tax, viz.: tax on unjust enrichment, additional Federal income tax and legal and other expenses	$1,212,648.13		
Appropriated for contribution to Pension Trust	1,000,000 00	2,212,648.13	
		$ 8,160,878.56	
Net income for the period from November 2, 1935 to October 31, 1936		1,815,613.00	
		$ 9,976,491.56	
Dividends paid or accrued—			
Preferred stock	$ 578,535 00		
Common stock	1,168,750.52	1,747,285.52	8,229,206.04
Surplus, October 31, 1936			$9,952,007.53

Source: Company reports.

EXHIBIT 1
THE CUDAHY PACKING COMPANY
TEN-YEAR RATIO ANALYSIS OF FOUR PACKING COMPANIES

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
Current Ratio:										
Cudahy Packing Company...	2 9	2.2	2.5	3 3	5.8	6 3	3 8	2 3		
Armour & Company.....	3 8	6.0	5.2	7 2	10 1	10 3	5 6	4.9	4 4	3 7
Swift & Company	7 0	4 5	3.8	6.2	6.5	7.1	8 3	7 7	6 3	6 1
Wilson & Company, Inc ...	7 7	8 7	6 4	9.2	9 4	11 6	8 0	4 2	3 9	3 2
Days' Sales:										
Cudahy.....	17	17	16	15	15	16	19	20		
Armour	26	25	26	21	20	22	27	21	20	17
Swift.....	26	28	27	23	24	19	23	23	19	18
Wilson.....	16	18	17	17	14	15	19	17	17	15
Sales to Inventory:										
Cudahy.....	10.4	10.2	12.3	12 4	13 3	11.2	7 7	7.2		
Armour	7 6	7 1	7.0	8 0	9 6	8 9	6.1	6.3	7.4	7.2
Swift	8 0	7 8	7 8	8 8	9 4	9 5	7 0	6.2	7.8	7 9
Wilson	11 2	11 6	11 3	11 8	14 3	12 1	8 6	8 4	9 6	8 8
Percentage of Secured Debt to Fixed Assets:										
Cudahy.....	27 0	24.0	23 0	22 0	21 0	20 0	19 0	18 0		
Armour.....	56 0	57.0	57 0	57 0	56 0	47 0	45 0	61 0	63 0	56 0
Swift	24 0	22 0	22 0	21 0	23 0	23 0	22 0	22 0	44 0	43.0
Wilson	43 0	42 0	41 0	39 0	36 0	34 0	46 0	44 0	52 0	50 0
Percentage of Current Liabilities to Total Liabilities:										
Cudahy	19 0	26 0	21.0	14 0	7 0	6 0	11.0	21.0		
Armour	11 0	7 0	9 0	6.0	4.0	3.0	7 0	9 0	10 0	13 0
Swift	9 0	14 0	16 0	9 0	8 0	7 0	6 0	7 0	9 0	9 0
Wilson.....	5 0	5 0	7 0	5 0	4 0	3 0	5 0	11 0	12 0	15 0
Percentage of Long-term Debt to Total Liabilities:										
Cudahy	29 0	26 0	26 0	27.0	29.0	29 0	26 0	23 0		
Armour..	29 0	30 0	30 0	29 0	32 0	28 0	25 0	29.0	30 0	26.0
Swift	21 0	18 0	16 0	16 0	17.0	18 0	16 0	15 0	13 0	13 0
Wilson	28 0	27 0	26 0	24 0	24 0	23 0	25 0	23 0	25 0	22 0
Percentage of Net Worth to Total Liabilities:										
Cudahy	52.0	49.0	53.0	59.0	64 0	65.0	62.0	56.0		
Armour.	59 0	62.0	61 0	64 0	64 0	68.0	68 0	61.0	59 0	61 0
Swift	70 0	69 0	68 0	75 0	74 0	75 0	76 0	75 0	72 0	73 0
Wilson	65 0	66 0	66 0	71 0	72 0	74 0	69 0	66 0	63 0	63 0
Times Interest Earned:										
Cudahy	2 3	2 2	2.0	2 5	2 4	1.7*	2 6*	3 0	2 0	
Armour	1 1	2 1	1 9	1 5	1 3*d*	0 4	2.5	3 1	2 8	3 3
Swift	†	†	†	3.4	1 2	0.7*d*	4 6	5 4	8 2	5 9
Wilson	1.2	2 3	2 3	2 6	0 4*d*	0 8	3 7	4 6	4 9	5 6
Percentage of Net Income to Net Sales:										
Cudahy..	1 0	1 0	0.9	1 3	1 1	0 7	1 5	1 3	0 7	
Armour.....	0.1	1.3	1.1	0 5	2 6*d*	0 8*d*	1 7	1 9	1 4	1 4
Swift	1 3	1.5	1 3	1.4	1 2	0.9*d*	2 0	1 9	2 3	1 1
Wilson	0 1	0 8	0 7	0 9	1 0*d*	0 0	2 2	2 1	1 8	1 6
Percentage of Net Income to Total Assets:										
Cudahy	3.1	3.1	3 2	4 0	3.1	1.4	2 7	2.7	1 6	
Armour	0 1	2 5	2 2	1 1	4 6*d*	1 1*d*	2 3	3 4	2 9	3 0
Swift.....	3 6	4 3	3 7	3 9	2 7	1 8*d*	3 4	3 7	5 5	2 9
Wilson..	0 2	2 3	2 4	2 7	2 3*d*	0 1	4.4	5 0	5 2	4.7
Percentage of Net Income to Net Worth:										
Cudahy	5 9	6.4	5.9	6.9	4.8	2 2	4 4	4 8	3 0	
Armour	0.2	4.1	3.5	1.7	7 2*d*	1 6*d*	3 4	5 6	5 0	5 1
Swift	5 2	6.2	5 4	5 2	3.6	2.4*d*	4 5	5 0	7 6	3.9
Wilson.	0.2	3 4	3.6	3 9	3 2*d*	0.1	6 3	7.6	8 2	7.5

* Does not include Miscellaneous Income, Discount on Bonds and Debentures Retired and held for retirement. † Figures not reported.
d = deficit.
Sources: Companies' reports; Moody's *Industrials*, 1937, for the Sales-to-Inventory ratio.

WELLINGTON SHOE COMPANY

WORKING CAPITAL AND CURRENT POSITION

In December, 1934, the treasurer wished to determine whether it would be necessary to borrow funds to meet the financial needs of the business at the date of the next balance sheet, November 30, 1935.

The company had a line of credit of $250,000 at each of two banks. This meant that if the credit condition of the company remained as sound as it was in 1934, each bank was willing to lend up to $250,000 on the unsecured notes of the Wellington company. The treasurer believed that if additional funds were needed to finance the current operations of the business, the larger of the two banks would be willing to increase its line of credit. Negotiations would be facilitated if requirements were known in advance.

In order to determine the financial requirements at November 30, 1935, the treasurer wished to set up a forecast or budgeted balance sheet for that date.

The lines of shoes to be offered during 1935 had been determined, and the cost department had estimated the cost of production on the basis of known past costs for labor, materials, and overhead, and on estimates of material prices and wages during the coming year. The sales department had prepared estimates of sales by lines and by territories based on the records of past sales and on estimates of the trends during the year. The chief executives of the company in reviewing the figures on cost and sales set $8,499,272 as the budgeted gross sales for the year ending November 30, 1935.

This budget estimate of sales had been translated into physical units of pairs of shoes and from these figures the amounts of final inventories, raw material requirements, and expenses had been estimated.

Inventories had been low in 1934 as a result of the active sales in the last few months of that year, and it was apparent that heavier inventories would be required in 1935 if sales occurred at the budgeted rate and especially if prices increased. The estimates of inventories required at November 30, 1935, to meet the needs of the business are given in the budgeted income statement on page 24. Supplies had been high in 1934, and a reduction in that inventory was anticipated.

From the estimated sales in physical units and the requirements for building up the inventories, the purchases were estimated at the figure given on the budgeted income statement. From an analysis of past costs and estimates of wage rates and similar data, the other figures on the budgeted income statement were derived.

Having completed the budgeted income statement for the year ending November 30, 1935, the treasurer had some additional figures developed which were needed in preparing the budgeted balance sheet for the end of the fiscal year.

One estimate required was that for the amount of trade receivables. The number of days' sales on the books in the form of receivables for 1934 was determined by dividing net sales by 360 and dividing the total of receivables by this figure.

$$\frac{\$8,035,473}{360} = \$22,321 \qquad \frac{\$1,046,051}{\$22,321} = 47 \text{ days}$$

On the basis of experience of past years the treasurer estimated that the number of days' sales would increase to approximately 53 in 1935. From this the amount of trade notes and accounts receivable at November 30, 1935, could be derived. He believed that the reserve for doubtful accounts and notes should be the same percentage of receivables as in 1934.

Cash could be allowed to go down somewhat, but approximately $375,000 would be needed to meet the current requirements of the business. The treasurer therefore used $375,000 as the figure for cash on the budgeted balance sheet.

Some additional investment in fixed assets would be required to meet the scheduled rate of operations and some units would be retired. A separate plant budget indicated that fixed assets at November 30, 1935, would be $3,423,000, less a reserve of $2,087,000.

Using a method similar to that applied to receivables, it was determined that the days' purchases on the books as trade accounts payable in 1934 was 15.

$$\frac{\$3,914,717}{360} = \$10,874 \qquad \frac{\$165,907}{\$10,874} = 15 \text{ days}$$

It had been the company's policy in the past to pay for purchases as soon as the goods were received and inspected, and the invoices were checked, because with such a policy it could take advantage of discounts and could buy at better prices. About 15 days were required, on the average, for inspecting and checking. This figure of 15 days was applied to the purchases on the budgeted income statement for 1935 in order to determine the trade accounts payable for the budgeted balance sheet.

November 30, 1935, came four days after the regular pay day and accrued wages (wages earned but unpaid at the balance sheet date) were estimated as $107,000. It was estimated that the liability for Federal and state taxes at November 30, 1935, would be the same as the related expense on the budgeted income statement.

It was expected that if operations showed the profit indicated by the budgeted income statement, dividends would be paid at the rate of $7 per share. If the company used its customary dividend dates, the dividends would all be paid during the year, and there would be no item of dividends payable on the balance sheet. No change in capital stock was anticipated during the year. There were a number of small items on the balance sheet for which separate estimates were not made. It was assumed that they would be the same in 1935 as in 1934.

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1. Using the paper in the Working Forms, prepare a blank form for the budgeted balance sheet as of November 30, 1935, providing the same headings and titles as in the balance sheets for 1933 and 1934. From the facts given in the case determine the amounts of all items other than Notes Payable to Banks. Complete the budgeted balance sheet by determining the amount necessary to borrow from the banks and inserting this amount as Notes Payable to Banks. In making the several computations the use of three decimal places is sufficient for the purposes of this case.

2. When completed, the budgeted statements were submitted to an executive committee, consisting of the president and the heads of the major departments. The president was convinced that the business anticipated could be financed without borrowing

if each executive revised his plans to provide for a more efficient use of working capital. The borrowing of nearly half a million dollars was not justified unless it was necessary to an efficient operation of the business. The president, therefore, asked the members of the committee to reexamine the situation disclosed by the budget and to discover, if possible, practicable methods of reducing the working capital required.

WELLINGTON SHOE COMPANY
BALANCE SHEETS AS OF NOVEMBER 30

	1933	1934
Current Assets:		
Cash	$ 474,359	$ 464,913
Trade Notes and Accounts Receivable	$1,279,991	$1,046,051
Less: Reserve for Doubtful Accounts and Notes	57,143	44,132
	$1,222,848	$1,001,919
Inventories on the basis of Cost or Market, whichever is lower:		
Raw Materials on Hand	$ 437,861	$ 469,756
Goods in Process	175,596	171,842
Finished Goods	993,812	1,142,689
Miscellaneous Supplies	136,442	213,288
Total Current Assets	$3,440,918	$3,464,407
Fixed Assets	$3,396,005	$3,319,262
Less: Reserve for Depreciation	$2,098,723	$2,051,019
	$1,297,282	$1,268,243
Goodwill	1,000,000	1
Deferred Charges:		
Prepaid Taxes and Insurance	$ 8,765	$ 7,027
Dies, Patterns, and Wooden Lasts	4	4
Total Deferred Charges	$ 8,769	$ 7,031
Total Assets	$5,746,969	$4,739,682

	1933	1934
Current Liabilities:		
Notes Payable to Banks	$	$
Trade Accounts Payable	212,020	165,907
Accrued Liabilities:		
Wages	91,396	77,325
Federal and State Income Taxes	61,289	78,840
Miscellaneous Accrued Expenses	23,172	3,300
Sundry Creditors	37,294	34,773
Total Current Liabilities	$ 425,171	$ 360,145
Capital Stock, $100 par	3,730,000	3,730,000
Surplus	1,591,798	649,537
Total Liabilities	$5,746,969	$4,739,682
Total Current Assets	$3,440,918	$3,464,407
Total Current Liabilities	425,171	360,145
Net Working Capital	$3,015,747	$3,104,262

WELLINGTON SHOE COMPANY
INCOME STATEMENT FOR THE YEAR ENDING NOVEMBER 30, 1934

Gross Sales				$8,196,182
Less: Sales Returns and Allowances				160,709
Net Sales				$8,035,473
Less: Cost of Goods Sold				
Inventories:				
Finished Goods, December 1, 1933			$ 993,812	
Goods in Process, December 1, 1933		$ 175,596		
Raw Materials on Hand, December 1, 1933		$ 437,861		
Miscellaneous Supplies, December 1, 1933		136,442		
Purchases of Materials and Supplies		3,914,717		
		$4,489,020		
Inventories:				
Raw Materials on Hand, November 30, 1934	$469,756			
Miscellaneous Supplies, November 30, 1934	213,288	683,044		
Raw Materials and Supplies Used		3,805,976		
Factory Expenses:				
Wages		2,587,680		
Maintenance and Repairs in Factory		96,600		
Depreciation on Factory		99,582		
Taxes on Factory		34,142		
Royalties (including Rents on Machinery)		213,145		
Other Manufacturing Expenses		132,717		
		$7,145,438		
Goods in Process, November 30, 1934		171,842		
Cost of Goods Manufactured			6,973,596	
			$7,967,408	
Finished Goods, November 30, 1934			1,142,689	
Cost of Goods Sold				6,824,719
Gross Profit				$1,210,754

WELLINGTON SHOE COMPANY
INCOME STATEMENT FOR THE YEAR ENDING NOVEMBER 30, 1934.—(*Continued*)

Selling, General and Administrative Expenses:		
Office Salaries and Wages	$ 284,263	
Advertising	205,186	
Traveling Expenses	50,484	
Maintenance and Repairs of Offices	28,246	
Depreciation on Offices	20,572	
Taxes on Offices	22,189	
Rents on Other Real Estate	117,297	
Provision for Doubtful Accounts	9,429	
Other Costs and Expenses	101,897	$ 839,563
Net Operating Income		$ 371,191
Other Income		19,090
Total Income		$ 390,281
Other Expense		7,616
Net Profit before Income Taxes		$ 382,665
Provision for Federal and State Taxes		63,827
Net Profit for Period		$ 318,838
Surplus Balance, December 1, 1933		1,591,798
Total		$1,910,636
Less: Goodwill Written Off	$ 999,999	
Dividends Paid	261,100	1,261,099
Surplus Balance, November 30, 1934		$ 649,537

WELLINGTON SHOE COMPANY
BUDGETED INCOME STATEMENT FOR THE YEAR ENDING NOVEMBER 30, 1935

Gross Sales		$8,499,272
Less: Sales Returns and Allowances		166,652
Net Sales		$8,332,620
Less: Cost of Goods Sold		
Inventories:		
Finished Goods, December 1, 1934	$1,142,689	
Goods in Process, December 1, 1934	$ 171,842	
Raw Materials on Hand, December 1, 1934	$ 469,756	
Miscellaneous Supplies, December 1, 1934	213,288	
Purchases of Materials and Supplies	4,129,152	
	$4,812,196	

WELLINGTON SHOE COMPANY
BUDGETED INCOME STATEMENT FOR THE YEAR ENDING NOVEMBER 30, 1935.—(*Continued*)

Inventories:				
Raw Materials on Hand, November 30, 1935	$713,665			
Miscellaneous Supplies, November 30, 1935	118,095	$ 831,760		
Raw Materials and Supplies Used		$3,980,436		
Factory Expenses:				
Wages		2,729,439		
Maintenance and Repairs in Factory		73,858		
Depreciation on Factory		79,109		
Taxes on Factory		36,087		
Royalties (including Rents on Machinery)		223,514		
Other Manufacturing Expenses		139,971		
		$7,434,256		
Goods in Process, November 30, 1935		222,465		
Cost of Goods Manufactured			$7,211,791	
			$8,354,480	
Finished Goods, November 30, 1935			1,366,212	
Cost of Goods Sold				$6,988,268
Gross Profit				$1,344,352
Selling, General and Administrative Expenses:				
Office Salaries and Wages			$ 290,112	
Advertising			216,653	
Traveling Expenses			54,371	
Maintenance and Repairs of Offices			47,850	
Depreciation on Offices			15,895	
Taxes on Offices			26,122	
Rents on Other Real Estate			128,097	
Provision for Doubtful Accounts			12,020	
Other Costs and Expenses			148,845	939,965
Net Operating Income				$ 404,387
Other Income				24,036
Total Income				$ 428,423
Other Expense				7,027
Net Profit before Income Taxes				$ 421,396
Provision for Federal and State Taxes				92,082
Net Profit for Period				$ 329,314
Surplus Balance, December 1, 1934				649,537
Total				$ 978,851
Less: Dividends Paid				261,100
Surplus Balance, December 1, 1935				$ 717,751

II. PREPAYMENTS AND ACCRUALS

Bristol Valley Stove Company

PREPAYMENTS AND ACCRUALS

The Bristol Valley Stove Company started business on January 1, 1932. In preparing the balance sheet for December 31, 1932, and the income statement for the year ending on that date, an analysis of the following items was necessary in order to determine in each case how much should appear on the balance sheet as an asset or a liability and how much on the income statement as expense or income.

The balance sheet and income statement are given in a form which is complete except for the items affected by prepayments or accruals.

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1. Determine from the data given below in paragraphs *a* to *h* the amounts necessary to complete the statements.

Bristol Valley Stove Company
Balance Sheet as of December 31, 1932

Current Assets:			Current Liabilities:		
Cash	$ 20,914 76		Accounts Payable	$74,430 94	
Accounts Receivable	69,995 87		Salaries Accrued	_____	
Note Receivable	_____		Wages Accrued	_____	
Interest Income Accrued	_____		Interest Expense Accrued	_____	
Inventory	88,360 93		Total		$ _____
Total		$ _____	Deferred Income:		
Buildings and Equipment	$149,519 72		Rent Prepaid		_____
Less: Reserve for Depreciation	9,465 87	140,053 85	Mortgage on Real Estate		_____
Deferred Charges:			Capital Stock		200,000 00
Insurance Prepaid		_____	Surplus		_____
Mortgage Discount		_____			
Organization Expense		_____			
		$ _____			$ _____

2. Complete the balance sheet and income statement by inserting the proper amounts.

BRISTOL VALLEY STOVE COMPANY
INCOME STATEMENT FOR THE YEAR ENDING DECEMBER 31, 1932

Net Sales		$310,231.94
Less: Cost of Goods Sold		
Purchases	$228,385 14	
Ending Inventory, December 31, 1932	88,360.93	
Cost of Goods Sold		140,024 21
Gross Profit		$170,207.73
Less: Operating Expenses		
Wages	$ ____	
Heat, Light, and Power	6,298.01	
Maintenance	3,187.90	
Insurance	____	
Depreciation	9,465.87	
Advertising	14,405.30	
Other Selling Expenses	2,963.54	
Salaries	____	
General Administrative Expense	20,427.84	
Interest	____	
Mortgage Discount	____	
Organization Expense	____	____
Net Operating Loss		$ ____
Add: Other Income		
Interest	$ ____	
Rent	____	____
Net Profit for the Year		$ ____

a. Salaries of $14,025 had been paid for the year 1932 prior to December 31. It was customary to pay salaries on the first business day of each month for the preceding month. On December 31, salaries had been earned to the extent of $1,275 and were to be paid on Tuesday, January 3, 1933.

b. Wages were paid on Friday of each week and included amounts earned by the employees up to the close of business on the preceding Wednesday. Prior to the last week of December, the company had paid $92,873 in wages for 1932. On Friday, December 30, $1,857 was paid. From a computation based on the pay roll records, it was determined that wages earned by the employees on Thursday, Friday, and Saturday, and which would be included in the next wage payment, were $846.

c. On December 31, 1931, the company had paid $1,125 as a premium on fire insurance policies, which were in force from noon

of that day and were to expire at noon on December 31, 1934. The premium covered the entire three years.

d. On April 1, 1932, the company borrowed on a $50,000 first mortgage on its real estate. The mortgage was to run for 10 years with interest of 6 per cent per annum, payable semiannually on April 1 and October 1. Only $47,000 was received, however, and the difference was set up on the books as mortgage discount and included under deferred charges on the balance sheet. The company expected to write this discount off over the life of the mortgage at a rate which would be uniform, as computed by months.

e. Six months' interest on the mortgage was paid on October 1, 1932. In determining the amount of accrual, if any, on mortgage interest, make computations by months.

f. A building belonging to the company was rented to another manufacturer for $6,000 per year, payable quarterly in advance. The arrangement was made as of July 1, 1932. The rent for the first three months of 1933 was received on December 30, 1932.

g. The company held a note from one of its dealers for $3,000, dated November 1, 1932, payable in equal installments on February 1, May 1, August 1, and November 1, 1933, with interest at 6 per cent. Interest for the preceding three months was to be paid with each installment of principal. Compute by months.

h. Organization expense of $5,684.80 was incurred when the business was started. This deferred charge was to be written off over a five-year period.

Riverbank Gas and Electric Company

DISCOUNT ON FUNDED DEBT

On December 15, 1927, the directors of the Riverbank Gas and Electric Company voted to issue $65,000,000 of 5 per cent Debenture Gold Bonds, Series A, dated January 1, 1928, and due January 1, 1938. Interest was payable January 1 and July 1 of each year. The bonds were a direct obligation of the company, but were not secured by a mortgage on the property as were the First Gold 6 per cent bonds already outstanding.

The entire principal amount was sold by the company as of January 1, 1928, to underwriters for cash at $935 for each $1,000 bond. In addition, the company paid expenses of $1,261,980, which included such items as listing, legal and accounting fees, and costs of printing and engraving. Therefore the company received the net amount of $59,513,020 for the new bond issue.

In the process of preparing the statements for December 31, 1928, a question arose concerning the treatment of the discount and expense on the new issue. One suggestion was that the entire amount of discount and expense be written off by a charge to surplus in 1928, the year the bonds were issued. A second suggestion was that the discount and expense be amortized or written off over the 10-year life of the bonds by charging one-tenth of the total each year as an expense. There were precedents for each of these methods in the practice of similar companies.

The management realized that an amortization table might be set up on a mathematical basis, which would give results slightly different from those under the second method above. Amortization tables of this nature were seldom used in practice, and the management felt that the slight differences did not justify the added complexity. If amortization was to be undertaken at all, it was decided to use the so-called straight-line method, under which the total amount was divided by the years of life of the bonds to obtain the expense of each year.

The condensed statements given below were prepared in final form except for the items connected with the bond discount and expense.

1. Complete the statements for December 31, 1928, as they would appear under each of the two methods suggested, using therefor the paper in the Working Forms.

2. During the negotiations preceding the issue of the bonds, the underwriters suggested that they would absorb all of the expense and pay par for the bonds if the interest rate were made high enough. On this basis the company would have issued only $59,500,000 in face value of bonds and would have had no expense in connection with the issue except for the payment of interest. The underwriters indicated that the rate paid for funds by the Riverbank company would be approximately the same with these high coupon bonds, but they believed that the 5 per cent bonds at a discount could be distributed better in the investment market. From the facts given, determine the approximate rate of interest the underwriters would probably have asked if they had absorbed all expenses and paid par for the bonds.

3. Which of the two methods of writing off bond discount and expense would have shown net income for 1928 more accurately?

4. Which method should the company have used?

RIVERBANK GAS AND ELECTRIC COMPANY
CONDENSED BALANCE SHEET AS OF DECEMBER 31, 1928

Property, Franchises, etc.		$168,170,628
Investments in Subsidiaries		1,564,095
Current Assets		8,986,857
Prepayments		459,054
Unamortized Debt Discount and Expense		———
		$ ———
Preferred Stock		$ 26,086,000
Common Stock		12,500,000
Funded Debt:		
First Gold 6s, Series A	$60,000,000	
Debenture Gold 5s, Series A	65,000,000	125,000,000
Current Liabilities		7,727,878
Surplus		———
		$ ———

Riverbank Gas and Electric Company
Condensed Income and Surplus Statements for the Year Ending December 31, 1928

Gross Earnings		$32,666,283
Operating Expenses		21,303,303
Net Earnings		$11,362,980
Fixed Charges:		
Interest Expense	$6,850,000	
Amortization of Debt Discount and Expense	———	———
Net Income		$ ———
Surplus, December 31, 1927		12,905,916
Total		$ ———
Preferred Dividends	$1,565,160	
Common Dividends	2,500,000	4,065,160
		$ ———
Unamortized Debt Discount and Expense Written Off		———
Surplus, December 31, 1928		$ ———

III. THE EFFECT OF INVENTORIES ON THE CURRENT POSITION AND ON INCOME REPORTED

HERENDEEN AND HAPLY WOOLEN MILLS—NO. 1

THE EFFECT OF INVENTORY VALUATION ON THE CURRENT POSITION AND ON INCOME REPORTED

It was the policy of the company to state its inventories at cost or at market, whichever was lower as of the balance sheet date, and to prepare its statements on that basis. The determination of inventory amounts was always a complex matter, but when the books were closed for the year at June 30, 1934, it proved to be peculiarly difficult because of the conditions existing in the wool market at that time.

The methods of determining cost differed for the three types of inventories carried: raw material, goods in process, and finished goods. The cost of raw material inventory was determined largely from the books of account and included the price paid the vendor, brokerage and similar fees if any, transportation to the mill, and any other expenses involved in laying the incoming raw material on the warehouse floor ready to use. The company used a first-in first-out basis, under which it assumed that the wool going into the manufacturing process was the oldest wool of that grade on hand, regardless of whether this assumption was true of any particular physical lot of wool. It thus followed that the wool of any grade on hand at the inventory date was assumed to consist of the most recent purchases necessary to make up that amount. For example, if the inventory at June 30 showed 30,000 lb. of 62s and wool of that grade had been bought as follows: May 4, 6,000 lb.; May 20, 15,000 lb.; June 5, 10,000 lb.; and June 17, 10,000 lb.; cost was determined as the total of the purchases of June 17 and June 5, and enough pounds at the price paid on May 20 to make up the 30,000 lb.

In determining the physical amount of wool on hand, figures were derived giving the total pounds of each grade of wool tops[1] in the inventory. This was not a simple task, but required well-devised records and great care in taking the inventory. The weight of wool in a bale could not be calculated directly by weighing it because the moisture content varied with the weather, and wool was bought on a basis of air-dry content plus 15 per cent for moisture regain.

The cost of goods in process inventory included the cost of the raw material involved, labor already applied, and a proper allocation of the overhead expenses involved in bringing the goods to the stage of completion at which they were on the balance sheet date. The determination of these costs was dependent on the cost system in use in the plant. Reliable figures could be obtained only if the cost system was well devised and was operated with skill and judgment in adapting it to the complexities and changing conditions of production. In the opinion of the management and the auditors, the costs shown for goods in process were reliable and conservative.

For certain portions of the goods in process, such as finished yarn ready for weaving, physical amounts could be determined readily, although adjustment had to be made as before for moisture content, and an allowance for waste in process was necessary in order to arrive at the pounds of raw material of particular grades represented. For yarn on the spinning frames and for warp and partly completed cloth on the looms, which could not be weighed, a process of estimating was necessary, but methods had been devised which yielded results accurate within a narrow margin of error.

The cost of finished goods inventory included the same elements found in the cost of goods in process inventory: the actual cost of raw material content, labor, and an allocation of overhead expenses. These three items were also determined from the company's cost system as were the costs of goods in process inventory. Since it was possible to identify finished goods, the

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[1] Wool tops are the product of the scouring, carding, and combing of grease, or raw wool, and come out of the combing in a continuous strand of fibers lying more or less parallel with each other. This product is then ready for what is known as the drawing and spinning process, which consists essentially of attenuating this strand and at the same time twisting it.

physical amount in the inventory was determined on an individual lot basis.

Turning now to methods of determining market, the figure for raw material inventory was determined by applying, to the total pounds of each grade of wool tops in the inventory, the current costs per pound of replacing that wool at balance sheet date, plus adjustments for inward transportation and similar items.

In the determination of market for the goods in process inventory, the raw material content of goods in process by grades of wool was secured from the company's cost system, and then market figures at balance sheet date were applied to these amounts. Labor and overhead did not change so much as the price of the raw material content, but if significant changes in these elements occurred, suitable adjustments were made. The term market, therefore, as applied to goods in process was assumed to mean the cost of replacing those goods under conditions existing at balance sheet date; except that if yarn, for which there was a market, could be purchased outside for less than the figure shown, that lower figure was used.

In the determination of market for finished goods inventory, cost of replacement under conditions existing at balance sheet date was computed under a method similar to that used for goods in process. There were, however, two additional factors. Finished goods were designed for sale and had a market of their own, independent from, but related to, the market for wool. The sales department estimated the amount that could be obtained for each item of finished goods, net of cost of selling and delivery under conditions existing at balance sheet date. In this case, market meant net realization in the market of sale.

A further factor was that the company was producing style merchandise and could not avoid holding some goods which were subject to style obsolescence. Such goods were not worth the cost of replacing them. The sales department estimated the liquidation price of obsolete items and special care was taken to see that these prices reflected fully any losses implicit in obsolete stock. The sales department was expected to keep such stock at a minimum by selling it for what it would bring as soon as the fact of obsolescence was known.

Cost or market, whichever was lower as applied to finished goods therefore meant the lowest of three bases: actual cost, cost of

replacement, or net realization with prospective loss on any obsolete items fully reflected in the net realization figure.

At June 30, 1934, the cost of inventories had been determined by the methods described. No significant changes were at issue in the amounts of labor and overhead to be included in inventories. The market for wool, however, was such that it was extremely difficult to determine what figures should be used for raw material, and raw material content of goods in process and finished goods in determining the cost of replacement. The net realization estimates of the sales department had already been made, and the wool price to be used was the only issue yet to be decided.

In order to describe the situation in the wool market at June 30, 1934, it is first necessary to go back to 1933 and trace the price changes in the wool top market. The price of standard 62s will be used, because about 70 per cent of the total wool tops in the inventory of this company were of this grade. In 1933 the price of standard 62s rose from 55 cts. to about $1.10 per pound. This rise was caused by two factors: In the first place, there was a demand for cloth from the cutters and makers of clothes, who expected their costs to rise because of labor conditions and who wanted to secure their raw material at low prices. In the second place, the woolen mill operators expected inflation, if not monetary, at least credit inflation, and they were bidding for tops to protect themselves against a high raw material cost. In other words, speculation in raw materials took place in order to avoid anticipated higher prices.

A rather rigid price structure existed in the retail trade division of the woolen industry. Raw material prices could reach a certain point only, for beyond that point the normal price channels for finished goods in the retail trade were thrown out of balance. For example, department-store dresses retailed for fixed prices, $3.75, $5.95, $10.95, etc. In order to keep within the limits when wool top prices were too high, manufacturers would begin to adulterate their fabrics with cotton and rayon, sometimes notifying buyers of this adulteration and sometimes not. Congestion would therefore result in the woolen retail trade, because of adulteration and hesitant consumer demand, and a downward movement in wool top prices would begin.

Combined with these natural limiting phenomena in the wool trade, there was some question in 1934 about the extent of

inflationary forces and where they would carry wool prices. The first wave of a bear movement brought the price of tops down from $1.10 to about 95 cts. The large inventory gains of 1933 were reduced considerably in 1934.

Top makers had been enthusiastic during the upward price movement, and therefore were caught with large stocks when demand fell off. From the first of June well on through the summer, there was scarcely a real demand for tops; that is, buyers would not offer definite prices for definite quantities.

Consequently at June 30, when this company faced the necessity of determining cost of replacement for the tops in the inventories, there were no exchanges going on in the market. The auditors, who were preparing the statements, looked up wool top quotations in the trade journals, but found that they were pro forma only and did not reflect any actual sales of wool. Then they approached the chief top makers, who also were unable to put a price on 62s because no wool was moving. The problem therefore became one of estimating, on the basis of conditions existing in the market, what prices would be when actual sales began again. The consensus of opinion seemed to be that this price would be between 98 and 95 cts., and most of those familiar with the trade felt that 95 cts. was a conservative figure.

However, there were a few distress lots of wool available, and one woolen mill had offered somewhat confidentially to sell 200,000 lb. of 62s at 92.3 cts. This mill did not ordinarily sell wool tops, but it was hard pressed for working capital and needed funds to meet its current commitments.

Exhibit 1 indicates what the inventories would have been, using cost of $1.046, market of 95 cts., and market of 92.3 cts. for wool tops. The balance sheet and income statement are given as they would have been if inventories had been included at cost for wool tops.

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1. Draw up the balance sheet and income statement as they would have been if the price of 95 cts. had been used.

2. Draw up the same statements using figures resulting from a price of 92.3 cts. Use the paper in the Working Forms. In both cases you may summarize those portions not affected by inventory amounts.

3. By what person or group in the corporation should the decision as to inventory valuation have been made?

4. In deciding what basis of inventory valuation to use, should the management have been guided solely by conditions in the wool market or should it also have considered the effects on income, on the market appraisal of the common stock, and on the interests of stockholders and others?

5. It is not intended to raise the whole issue of inventory policy at this time, but in view of the facts given, what figures should have been used?

HERENDEEN AND HAPLY WOOLEN MILLS
BALANCE SHEET AS OF JUNE 30, 1934

Current Assets:			
Cash		$ 762,151 39	
Trade Accounts Receivable.	$1,497,817.26		
Less: Reserve for Doubtful Accounts.	307,629.28	1,190,187.98	
Inventories, at Cost:			
Raw Material	$1,050,693.18		
Goods in Process	1,176,614.68		
Finished Goods	237,563 00	2,464,870.86	
Total Current Assets			$4,417,210 23
Cash Value of Life Insurance Policies			88,102.50
Deferred Local Taxes, Insurance Premiums, etc.			87,519.03
Fixed Assets:			
Land, Buildings, Machinery, and Equipment		$2,049,338 76	
Less: Reserve for Depreciation		961,212 27	1,088,126 49
			$5,680,958 25
Current Liabilities:			
Notes Payable—Banks		$ 850,000 00	
Trade Accounts Payable		129,086 32	
Accrued Taxes, Wages, and Commissions		163,066.38	
Total Current Liabilities			$1,142,152.70
Capital Stock (No Par Value):			
Authorized, 63,036; Issued, 52,454 shares			2,622,675 00
Surplus, Balance June 30, 1933		$1,738,952.18	
Net Profit for the Year		177,178.37	
Surplus, Balance June 30, 1934			1,916,130.55
			$5,680,958 25

HERENDEEN AND HAPLY WOOLEN MILLS
INCOME STATEMENT FOR THE YEAR ENDING JUNE 30, 1934

Net Sales			$3,554,559.24
Less: Cost of Goods Sold			
Finished Goods Inventory, June 30, 1933		$ 371,975.30	
Goods in Process Inventory, June 30, 1933	$1,218,797.61		
Raw Material Inventory, June 30, 1933	$1,285,188.59		
Purchases	1,825,547.19		
Freight In	1,565.34		
	$3,112,301.12		
Discounts Received	101,265.04		
	$3,011,036.08		
Raw Material Inventory, June 30, 1934	1,050,693.18		
Raw Material Used	1,960,342.90		
Factory Expenses:			
Labor	787,691.48		
Taxes	33,796.39		
Depreciation	54,811.01		
Repairs	53,708.75		
Insurance	11,236.56		
Miscellaneous	4,165.14		
	$4,124,549.84		
Goods in Process Inventory, June 30, 1934	1,176,614.68		
Cost of Goods Manufactured		2,947,935.16	
		$3,319,910.46	
Finished Goods Inventory, June 30, 1934		237,563.00	
Cost of Goods Sold			3,082,347.46
Gross Profit			$ 472,211.78
Less: Selling and General Expenses			
Commissions to Salesmen		$ 49,812.58	
Selling Expenses		49,886.30	
Advertising		8,772.80	
Freight and Express Outward		13,136.89	
Salaries		90,100.00	
General Expenses		40,000.17	
Telephone and Telegraph		4,357.98	
State Excise and Capital Stock Taxes		14,450.00	
Interest Paid		8,819.31	279,336.03
Net Operating Profit			$ 192,875.75
Add: Interest Received			7,153.70
Total Income			$ 200,029.45
Less: Other Charges			22,851.08
Net Profit			$ 177,178.37

EXHIBIT 1
HERENDEEN AND HAPLY WOOLEN MILLS

	Cost of inventories at $1.046 per pound for wool tops	Market of inventories at 95 cts. per pound for wool tops	Market of inventories at 92.3 cts. per pound for wool tops
Raw Material	$1,050,693.18	$ 959,082.52	$ 933,317.03
Goods in Process	1,176,614.68	1,116,690.15	1,099.836 37
Finished Goods	237,563.00	224,921 39	221,365.94

IV. PLANT AND DEPRECIATION

CHELMSFORD KNITTING COMPANY—NO. 1

THE NATURE OF DEPRECIATION

The Chelmsford Knitting Company, which was organized in Massachusetts prior to the Civil War, was still using in 1926 a water wheel which was described as follows on the detailed plant records.

Classification: Water Power Development
Building No 1 Floor No. Basement Dept. Power

Original date of acquisition	Quantity	Description	Original cost	Depreciation		Depreciated value
				Date	Amount	
1878	1	Water Wheels · #1 Swain vertical 72″ wheel, steel casing 300 hp under 20′ 0″ head, 7″ center shaft, & beveled gears (Installed)	$3,700	12/31/26	$2,180	$1,520

An engineer reported that the wheel probably had an efficiency when new of 79 per cent, but that the efficiency in 1926 was about 77 per cent, largely as a result of abrasion of the leading edges of the blades. A wheel of modern design, adapted to the available head and to other operating conditions, would have an efficiency of about 86 per cent. There was not much rust, but the beveled gears were badly worn, although still serviceable.

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1. Did depreciation exist in this water wheel in 1926?
2. If by maintenance it had been possible to make it work as well as it did when new, would there still have been depreciation?
3. What causes of the exhaustion of the value of this asset may be distinguished?

4. "Since this water wheel still had an efficiency of 77 per cent, it was absurd to depreciate it to less than 77 per cent of its cost when new." Comment on this statement.

5. On what factors would a determination of the relative accuracy of the depreciation taken depend? Do these factors lie in the area of engineering or accounting, or both?

Boston Elevated Railway Company

ACCOUNTING PROBLEMS IN CONNECTION WITH BUSES

The Boston Elevated Railway Company operated elevated, subway, and surface lines as a coordinated system of transportation in Boston and the surrounding metropolitan area. The company first introduced buses in 1921, but it was not until 1925 that they assumed an important place in the system. Since that time they have become increasingly more important as a means of transportation. The increasing use of buses is shown by the figures presented in Exhibit 1.

The buses represented a new type of property and involved operating problems somewhat different from those arising with rail equipment. The executives therefore decided to develop property and operating records especially adapted to buses. The period prior to 1930 was largely experimental both in operation and in the development of accounting methods. The accounting records were revised in 1930, and there have been relatively few changes since that time.

When a bus was bought, the total cost, delivered and ready to use, was added to the asset, Buses Owned. When a bus was retired, its cost was deducted from the asset, Buses Owned. The balance shown in the asset account at the end of each year therefore gave the cost of all buses owned at that time. This amount appeared in the balance sheet of that date as one of the fixed assets.

In order to provide additional records concerning the investment in buses, a card ledger was maintained with one card for each bus. The front of this card provided space for recording general information about the bus, such as company number, make, model, cost, date of purchase, identification numbers, and specifications. This side of the card also presented information on the location of the bus, registration numbers, and taxes paid on the vehicle during

its life. The reverse side of the ledger card presented a running record of depreciation charges and mileage covered for each unit. These cards were arranged in a file so that the property number, make, and model were visible. Exhibit 2 reproduces the ledger card for No. 920. This vehicle made no mileage during the four months beginning June, 1937. The adjustment items appearing in the years 1931 and 1932 were made necessary by the revisions of the estimated service life on No. 920. In the last year of estimated life a tab was placed on the series of months appearing along the lower edge of the card to indicate to the bookkeeper the last month in which depreciation would be entered. When a bus was retired, its ledger card was removed from the active file and placed in a separate file which provided a complete record of retired equipment.

Other plant assets were separated into two divisions. The first and larger division was depreciated on a group basis. In this case, the reserve for depreciation was set up to cover the exhaustion of service capacity in the entire group rather than for specific units, as was the case with buses. For the second and smaller division which consisted mainly of track, the company used a method whereby the cost of retirements, less salvage, was charged as an expense of the period when they occurred. This method is called retirement accounting and its characteristics will be examined in later cases.

When the new type of equipment was acquired—and it became apparent in 1924 that buses would become an important element in the transportation system—the company decided to apply to this equipment a method of depreciation accounting which was similar to that used in industrial practice. The essential difference between this and the older retirement method was that depreciation accounting sought to record the exhaustion of the service capacity of an asset during the periods of its use, as that exhaustion occurred. The estimated amount of exhaustion of service capacity occurring in any accounting period was recorded as an expense of that period.

In 1924 it was recognized that buses had a short service life, and at that time life was estimated at five years. In the next few years there was marked development in design and construction. The newer models had greater capacity, were more comfortable and attractive to passengers, and were better built from an

engineering standpoint so that they could deliver more mileage before the expense for repairs became excessive. In addition, the company was constantly acquiring new data on the life characteristics of the equipment. Therefore, in 1927, the life estimate was extended to six years on all buses to be acquired after the end of that year. On two occasions following the 1927 revision, life estimates were extended to seven and eight years, respectively. Finally, in 1932, the estimated service life was set at 10 years and that figure was in use from then on.

In applying these life estimates, the company used the straight-line basis, which is used in industrial practice in one of its several forms for about 90 per cent of all industrial plant. Under this method it is assumed that the exhaustion of the original service capacity of the unit of property occurs uniformly over its service life. The company had estimated service lives as described above. In determining the amount of depreciation which should be accrued each month, the company assumed that there would be no scrap value or salvage when the buses were retired. Therefore, for a bus acquired after 1932, the original cost, delivered and ready to use, was divided by 120. Had scrap value entered into the calculation, it would have been deducted from the original cost and the result divided by 120 to get the monthly depreciation.

The amount so determined was entered each month on the reverse of the card recording cost and other data for the coach, as illustrated in Exhibit 2. At the first of each year the depreciation already taken was totaled. By subtracting this from the total cost shown on the front of the card, it was possible to determine the net plant or service value not yet exhausted according to the estimates of the company. A total was taken each month of depreciation for that month on all buses owned, and this was made the basis for a summary entry in the books. Like all other transactions, it was dual in nature. The amount recorded the estimated depreciation taking place during the month on buses. It was therefore recorded as an operating expense of the month—Depreciation on Buses. The same amount measured the decline in the service capacity of the asset and was entered as an increase in Reserve for Depreciation on Buses and thus reflected the decrease in proprietorship connected with this expense. The depreciation which had accumulated on the various buses since the time of their purchase, representing the estimated portion of the original value

used up, was thus recorded in the reserve for depreciation which was shown on the balance sheet as a deduction from the asset account.

At December 31, 1936, buses were reported as follows on the balance sheet of the Boston Elevated Railway Company:

Buses Owned	$4,570,883 88	
Less: Reserve for Depreciation on Buses	1,888,206 64	$2,682,677.24*

* In the condensed balance sheet published in the report of the company, buses were included in the item Equipment.

In the records of the company the plant ledger, consisting of the cards for all buses, supported these figures. The total of the costs shown on each card equaled the amount shown for buses owned. The total of the depreciation on the several buses equaled the reserve appearing on the balance sheet. Similarly, if the net book value for each bus had been determined, the total of these figures would have equaled the net book value for buses shown above. The depreciation of $440,816.36 taken on buses during 1936, which was one element in the operating expenses for that year, was equal to the total of the depreciation entered during the year on each of the ledger cards.

When the life estimates with respect to buses still in service were changed, the amount of the reserve required adjustment to bring it down to the amount necessary under the new estimate. This was accomplished by inserting a red ink figure in the proper amount on the reverse of the ledger card for each unit concerned, and by a summary entry in the books reducing the reserve and showing its other aspect as income for the period when the revision took place. In similar circumstances some other companies have shown the amount as an increase in surplus, on the theory that depreciation in past periods was charged in excessive amounts and that any necessary correction should be shown as an increase in the accumulated results of past earnings recorded in surplus.

The mileage run each month and totals at the first of each year were also recorded on the reverse of the ledger card. These were statistical figures and did not involve an entry in the books of account.

The company maintained records of maintenance and service costs by groups of buses; each group represented units of the same make and design. The sources from which maintenance data were collected consisted of the time cards, material requisi-

tions, and job cards of the repair shops. On the time cards and job and material requisition cards, costs were apportioned to the various buses worked upon through the use of a number code. These cards were collected each week and sent to the accounting office where they were classified and summarized. At the end of each month the information in the weekly summaries was combined and placed in the ledger so that the ledger contained a monthly record for maintenance by types of buses, broken down into the classifications, Chassis, Body, Tires, and Electrical Equipment, depending on the part of the bus on which the maintenance work had been done.

Maintenance costs on tires were collected as explained above. The major portion of tire costs, however, was due to wear. The company did not buy tires outright but entered into contracts with tire manufacturers whereby tires were furnished at a fixed charge per mile. These costs were obtained by multiplying the contract rate by the number of miles covered by a bus during the period. Fuel costs were charged by types of buses from records kept at the several company-owned garages where gas pumps were located. Both tire and fuel costs were collected, summarized by types of buses, and placed in the ledger. At the end of the year the ledger contained monthly records of all these charges and from these data a table such as that shown in Exhibit 3 was prepared.

Maintenance costs were not recorded on the property cards, because to do so would have required extensive records with all expenses broken down by individual buses. The accounting force was already responsible for a large amount of detail, and it was not thought desirable to add to this load unless the results so produced warranted the extra clerical effort. Although the head of the accounting department thought that individual maintenance records might be useful in uncovering individual "lemons" among the buses, the superintendent of rolling stock believed that his maintenance force learned to know the buses quite well and that if there were any "lemons" among them they were soon found out. Furthermore, maintenance by classes gave him all the data he needed in making comparisons among the different makes.

Retirements of buses were made by the general manager upon the recommendation of the superintendent of transportation and/or the superintendent of rolling stock and shops. The head of the accounting department believed that retirements were based

largely upon the estimated service lives. Accordingly, when a bus approached the end of its estimated service life, it was considered subject to retirement and in all probability would be eliminated as soon as the original cost was fully depreciated. He believed that it would be preferable to base retirements upon comparative cost studies rather than upon the amount of accrued depreciation.

As has been explained above, retirements were recorded on the books by deducting the cost from both the asset and the reserve for depreciation accounts. In case the accrued depreciation shown on the ledger card was not equal to the cost of the bus, additional depreciation expense, sufficient to increase the reserve account to the required figure, was charged to the accounting period during which the retirement was made. For example, assume that bus No. 920 was to be retired on November 30, 1939, with a return from salvage of $100. Accrued depreciation at the time would be $10,393.51. Then the effect on the books would be to increase the cash account by $100, increase the depreciation expense account by $166.49, decrease the asset account by $10,660, and decrease the reserve for depreciation account by $10,560.

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1. Was the service capacity of the buses owned at December 31, 1936, partly exhausted?

2. Did the method used by the company bring about a proper charge to operating expenses to cover depreciation on buses during 1936?

3. Is there evidence in the facts given that the life estimates should be revised again? On what person or group in the corporation does the responsibility for such a decision presumably rest? What additional facts would be required for a decision as to revision of the estimates?

4. What was the meaning of the figures shown in the report for 1936 for Buses Owned, Reserve for Depreciation on Buses, the difference between these figures or net book value, and Depreciation on Buses?

5. In a problem involving the retirement of buses, on whom should the responsibility for the decision rest? What facts drawn from the accounting records or from other sources are essential to a decision?

6. In deciding whether to buy new buses and, if so, the types and specifications of buses to be obtained, what facts drawn from

the accounting records or from other sources are essential to a decision?

EXHIBIT 1
BOSTON ELEVATED RAILWAY COMPANY
INCREASED USE OF BUSES
1921–1936

Date (December 31)	Buses on hand	Bought	Retired	Investment in buses	Total miles operated	Round trip, miles of routes
1921	1	1	..	*	*	*
1922	7	6	..	*	63,959	21.20
1923	33	27	1	*	465,391	35.81
1924	65	33	1	224,425.77	961,178	62.57
1925	149	84	..	474,434.27	2,713,729	125.15
1926	230	81	..	1,028,597.58	5,146,443	173.43
1927	242	13	1	1,491,543.59	6,071,466	195.37
1928	293	51	..	2,231,810.92	6,533,615	216.31
1929	314	27	6	2,600,456.13	7,670,805	289.27
1930	364	66	16	3,163,817.92	8,320,323	359.43
1931	386	45	23	3,458,135.50	9,207,840	426.57
1932	393	28	21	3,625,608.51	9,298,897	491.92
1933	381	37	49	3,644,212.47	9,539,738	589.79
1934	388	64	57	3,922,471.43	10,378,326	617.95
1935	407	72	53	4,211,777.10	10,711,732	664 76
1936	434	59	32	4,570,883 88	10,941,862	696.37

* Figures not available.

EXHIBIT 2
BOSTON ELEVATED RAILWAY COMPANY
PROPERTY RECORD CARD FOR BUS NO. 920

Front

B. E. Prop. No. 920 Make _____ Model Urban

Mgt. No. T. C. 827
Weight 16110#
No. of Pass. 39
Pur. on Voucher No.
Retired on J. E. No.

Motor No. R201480
L201488
Bore 3¾" Cyl. 6
Hp. 65 Wheel Base 194"

Authorized 1/17/30
Leased
Received 2/18/30
Purchased 3/14/30
Retired

Cost
Rentals
Invoice $10,660
Other charges
Total $10,660

Date	Location	Registration	
		Year	Number
11/30/31	Somerville	1931	612091
Invent. 32	"	1932	590652
" 33	"	1933	606425
" 34	"		

Date	Location	Registration	
		Year	Number

Motor Vehicle Excise Tax
Year of Manufacture 1930

Year	Excise Value	Excise Tax	Paid To	Voucher No.
1930*	9,590	255 99	Somerville	
1931	7,290	213 23	"	
1932	4,000	119 68	"	
1933	2,000	78 88	"	

Year	Excise Value	Excise Tax	Paid To	Voucher No.

General Remarks.

* Tax for 11 months.

EXHIBIT 2
BOSTON ELEVATED RAILWAY COMPANY
PROPERTY RECORD CARD FOR BUS NO. 920.—(*Continued*)

Reverse

Month	Depreciation	Mileage	Month	Depreciation	Mileage	Month	Depreciation	Mileage	Month	Depreciation	Mileage
To 1/1/31	1,269 00	33,637 99	Bro't F'd	2,842 56	111,744 43	Bro't F'd	4,885 65	199,682 61	Bro't F'd	6,751 08	254,952 37
Jan. 1931	126 90	3,600 58	Nov. 1932	88 83	3,352 62	Oct. 1934	88 83	3,757 78	July 1936	88 83	1,613.47
Feb.	126 90	3,565 06	Dec.	88 83	4,023 48	Nov.	88 83	4,335.12	Aug.	88 83	1,324 46
	206 18*	Adj.									
Mar.	126 90	3,776 02	Jan. 1933	88 83	3,507 63	Dec.	88 83	4,249 00	Sept.	88 83	1,902 66
Apr.	111 04	3,278 11	Feb.	88 83	3,895 04		5,152 14	212,024 51	Oct.	88 83	2,021 60
May	111 04	3,201 32	Mar.	88 83	3,854 74	Jan. 1935	88 83	60 86	Nov.	88 83	2,091 74
June	111 04	3,565 16	Apr.	88 83	4,150 37	Feb.	88 83	982 25	Dec.	88 83	2,139 53
July	111 04	4,358 81	May	88 83	4,238.06	Mar.	88 83	3,633 55		7,284 06	266,045 83
Aug.	111 04	3,776 80	June	88 83	2,756 60	Apr.	88 83	3,152 75	Jan. 1937	88 83	2,360 34
Sept.	111 04	3,289.29	July	88 83	4,358 39	May	88 83	3,011 42	Feb.	88 83	1,779 38
Oct.	111 04	3,019 13	Aug.	88 83	3,903 44	June	88 83	2,833 65	Mar.	88 83	2,750 14
Nov.	111 04	3,615 65	Sept.	88 83	3,853 70	July	88 83	2,198 52	Apr.	88 83	2,151 07
Dec.	111 04	4,044 31	Oct.	88 83	4,582 84	Aug.	88 83	2,513 96	May	88 83	1,646 40
Jan. 1932	111 04	3,900 01	Nov.	88 83	3,615 51	Sept.	88 83	2,232 11	June	88 83	
Feb.	111 04	3,053 42	Dec.	88 83	3,978 04	Oct.	88 83	2,767 66	July	88 83	
Mar.	111 04	3,659 43	Jan. 1934	88 83	3,768 68	Nov.	88 83	1,800 90	Aug.	88 83	
Apr.	88 83	3,359 93	Feb.	88 83	3,729 30	Dec.	88 83	3,130 92	Sept.	88 83	
May	88 83	3,460 49	Mar.	88 83	4,201 90		6,218 10	240,343 06	Oct.	88 83	996 62
June	88 83	2,340 17	Apr.	88 83	4,143 32	Jan. 1936	88 83	2,733 33	Nov.	88 83	2,125 22
	555 25*	Adj.	May	88 83	4,510 91	Feb.	88 83	2,594 83	Dec.	88 83	
July	88 83	3,892 61	June	88 83	3,535 31	Mar.	88 83	3,114 65		8,350 02	
Aug.	88 83	3,471 76	July	88 83	3,073 85	Apr.	88 83	2,043 10			
Sept.	88 83	3,719 25	Aug.	88 83	3,821 81	May	88 83	2,085 32			
Oct.	88 83	3,959 13	Sept.	88.83	3,082.64	June	88 83	2,038 08			

B. E. Prop. No.	Make	Model	Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
920		Urban												

* Red.

EXHIBIT 3
BOSTON ELEVATED RAILWAY COMPANY
MAINTENANCE AND FUEL COSTS FOR YEAR ENDING DECEMBER 31, 1936

	Maintenance						Power			
Type*	Bodies	Chassis	Tires	Electrical equipment	Total maintenance	Cents per mile	Cost	Gallons	Miles per gallon	Cents per mile
A1	$ 905.68	$ 1,903.86	$ 922.87	$ 677.92	$ 4,410.33	2.47	$ 5,416 83	85,793	2.08	2.59
A2	286.89	486.03	176.88	280 55	1,230 35	4.14	894 87	13,631	2.18	1 55
A3	7,604 66	13,504.89	3,552.40	2,057.30	26,719 25	4.86	15,128 74	241,800	2.27	1.32
A4	354.53	1,100 68	886.27	263.21	2,604.69	1.63	3,359 58	54,089	2.95	3.93
A5	1,218.77	7,237 37	5,537.47	1,683.02	15,676 63	1.71	17,464 00	279,633	3.29	3.74
B1	241.80	1,010.15	546.43	453 63	2,252.01	2.58	1,310.59	19,909	4.39	2.48
B2	8,175.73	33,019.04	6,881.21	4,952.55	53,028 53	5.02	29,648.21	476,532	2.22	1.27
B3	52.43	457.78	541.32	223 62	1,275.15	1.48	1,839 48	30,673	2.80	4.32
C1	26.86	35 99	50 62	7 04	120 51	1.36	206 53	3,244	2.72	4.71
C2	1,709 62	6,232 60	2,264 50	1,535 98	11,742.70	3 56	6,637.62	107,153	3.08	2.25
C3	409.28	3,802.93	1,205 98	954 31	6,372.50	2.84	4,044 67	69,088	3 25	1.23
C4	615.54	3,769.38	577.02	431.47	5,393 41	5.20	2,364.55	37,423	2.77	3.83
D1	34,303.65	56,271 06	14,704.43	9,085 86	114,365 00	4.78	54,691 28	877,565	2.73	1.34
D2	2,370.33	14,983.24	6,997.58	2,673 09	27,024 24	2.40	27,465.25	441,228	2.55	2.67
D3	135.72	1,286.46	1,987.46	275 06	3,684.70	1.08	5,468 14	92,285	3.71	5.93
E1	21,664.49	36,673.55	10,292.20	4,882.57	73,512 81	4.38	40,237 95	645,125	2.60	1.46
E2	1,504.21	8,802.20	5,325.80	1,591.36	17,223 57	1.92	17,499 48	283,832	3.17	2.33
E3	762.25	6,079.47	1,355.85	1,705.74	9,903.31	4.87	6,964.85	110,379	1.84	3.14
F	18.41	200.46	65.52	204.54	488 93	4.61	339.49	5,091	2.08	1.39
D4	1,333.03	4,966.70	1,586.81	1,363.47	9,250.01	3.58	8,723.82	140,479	1.84	1.79

* Letters are used instead of actual names because the figures were released by the Boston Elevated Railway Company and not by the manufacturers of the several types of buses.

Exhibit 4
Boston Elevated Railway Company
Purchase and Retirement of Buses by Make and Model

Name of coach	Total acquired	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	Retired	On hand Dec. 31, 1936
Republic	2	1	1	(1)	(1)	...	...	...	...	...	...	...	...	...	...	...	...	2	...
International	23	...	...	...	...	18	5	...	...	(4)	(3)	(3)	(5)	(8)	...	...	...	23	...
Mack	94	...	1	11	14	31	32	3(1)	1	1(2)	(5)	(7)	(4)	(9)	(21)	(27)	(16)	92	2
Mack 110	20	...	...	...	...	...	...	...	...	...	...	...	...	...	20	...	...	0	20
White 400	103	...	4	16	17	30	25	6	3	2	(7)	(12)	(12)	(29)	(18)	(7)	(16)	101	2
White Metro Coach	28	...	...	...	...	...	...	...	...	...	...	...	...	6	19	3	...	...	28
Yellow Coach	26	...	...	...	1	4	18	2	...	...	1	(1)	...	...	(17)	(7)	...	25	1
Yellow Metro Coach (Series 550–559)	10	...	...	...	...	...	...	...	...	...	...	...	1	4	5	...	...	...	10
Fageol	2	...	...	...	1	1	...	...	...	...	(1)	...	...	...	(1)	...	...	2	...
Yellow Coach Transit (Series 570–574)	5	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...	5
Mack Metro Coach	19	...	...	...	...	...	...	...	...	...	...	1	10	8	...	...	...	...	19
ACF (Series 1700)	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15	...	15
Twin Coach Mechanical	71	...	...	...	...	...	...	...	6	14	22	9	14	6	...	...	...	...	71
Twin Coach (Series 1300)	29	...	...	...	...	...	...	...	...	...	...	...	...	...	7	15	7	...	29
Twin Coach (Gas Electric)	15	...	...	...	...	...	...	...	15	...	...	...	...	...	...	...	...	...	15
ACF (Series 1620)	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	19	...	31
ACF Metro Coach	94	...	...	...	...	...	...	...	...	5	43	35	3	8	...	...	...	...	94
Yellow (Series 575)	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	5	...	10
Versare (G. E.)	15	...	...	...	...	...	...	1	14	...	...	...	...	...	...	(12)	...	12	3
ACF (Series 1600)	1	...	...	...	...	...	...	1	...	...	...	...	...	(1)	...	...	...	1	...
Yellow (Series 230)	8	...	...	...	...	...	...	...	...	...	...	...	...	...	3	5	...	...	8
ACF (G. E.)	16	...	...	...	...	...	...	...	11	5	...	...	...	...	...	...	...	...	16
Safeway (G. E.)	2	...	...	...	...	1	...	...	1	...	...	...	...	(2)	...	...	...	2	...
Mack (Series 1400)	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28	7	...	35
Mack (Series 1100)	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	10	...	14
White (Series 1500)	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	5
Twin Coach (Diesel)	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1

Figures in parentheses indicate retirements.

V. THE ANALYSIS OF FINANCIAL STATEMENTS

Aluminum Company of America

THE EFFECT OF MANAGEMENT POLICIES ON THE INTERESTS OF INVESTORS

An investor in the common stock of the Aluminum company, who was himself an executive of a large industrial corporation, asked an investment counselor for his opinion concerning the policies of the Aluminum company in the retirement of bonds and preferred stock, and in the accumulation of dividends on the preferred, and the effects of these policies on his interest as a holder of the common stock. The investor realized that these policies were intimately related to the earnings of the business and to amounts necessary to finance inventories, receivables, and plant extensions.

No cash dividends had been paid on the common stock since 1925. In 1928 the company gave one share of Aluminum Company, Ltd., common stock as a dividend on each three shares of Aluminum Company of America common. It was possible that the changes in securities in recent years, together with the effects of the surtax on undistributed profits,[1] might indicate an intention on the part of the management to initiate dividends on the common stock in the near future.

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[1] Under the Federal Revenue Act of 1937, corporations were required to pay a tax of 8% to 15% on normal tax net income as shown in the table below:

Graduated Corporation Normal Tax on "Normal Tax Net Income" as Defined (for Years Beginning Jan. 1, 1936 and After)

Income Bracket	Rate
$ 0 to $ 2,000	8%
Over $ 2,000 to $15,000	11
Over $15,000 to $40,000	13
Over $40,000	15

(Banks and trust companies, nonresident foreign corporations taxed at flat 15% rate. Resident foreign corporations at 22%.)

Corporations were also subject to a surtax on undistributed profits at rates indicated in the table at foot of page 52.

The investment counselor, who was a man of wide experience and whose firm supervised professionally the investment of many millions of funds, submitted the following analysis and opinion. After reading this opinion, the investor turned again to the statements for the last four years in an effort to evaluate, as well as he could from the data available, the policies of the management and their effects upon the interests of investors.

ALUMINUM COMPANY OF AMERICA
OPINION OF THE INVESTMENT COUNSELOR

In studying the present position of the Aluminum company's common stock it is helpful to start back in 1925 when six shares of new common stock, in addition to seven shares of preferred, were given in exchange for each share of old common stock. As a consequence of the 1925 split, and the issuance of preferred shares, the company's capital structure was highly pyramided. Bonds and preferred stocks, as of December 31, 1929, amounted to 85 per cent of invested capital. Such a pyramid obviously constituted an element of risk in a company whose business is highly cyclical, although the financial hazard was minimized to some extent by the fact that preferred stock, which lacks a creditor position, constituted the bulk of the senior ranking securities, amounting to over 66 per cent of invested capital at the end of 1929.

In 1930 and 1931 the company borrowed heavily from banks and built up inventories, probably for several reasons: production

SURTAX ON UNDISTRIBUTED PROFITS
BASIS OF TAX, "UNDISTRIBUTED NET INCOME" AS DEFINED

Percentage of "Adjusted Net Income" Retained as "Undistributed Net Income"	Rate of Tax	Effective Rates Total Income
First 10%	7%	0 7%
Over 10% to 20%	12%	0 7% to 1.9%
Over 20% to 40%	17%	1.9% to 5.3%
Over 40% to 60%	22%	5 3% to 9.7%
Over 60% to 100%	27%	9.7% to 20.5%

For corporations whose adjusted net income is less than $50,000 a specific credit is allowed in computing the tax, which increases 7% bracket to $5,000.

See: The Revenue Act of 1936 as Amended by the Revenue Act of 1937; Section 13, paragraph 11; Section 14, paragraphs 17 and 18; Section 104, paragraph 198; Section 231, paragraphs 424 and 425.

costs were low, the company's water power would otherwise have been wasted, and the management wished to avoid aggravating the employment situation as much as possible. Net working capital remained at a fairly stable level, and funded debt was reduced by approximately two and one-half million dollars.

During 1932 the company operated at a loss. As a result, the banks probably became more conservative in their attitude toward the loans, and dividends were allowed to accumulate on the preferred stock. In the three years 1932 to 1934, inventories declined moderately and bank loans were reduced by about nine and one-half million dollars from over twenty-five million dollars. Net working capital remained at approximately the 1929 level, and the company continued to purchase and retire its bonds with cash released by depreciation and other non-cash charges. In 1935 and 1936 substantial reductions were made in both funded debt and preferred stock outstanding. In 1935 bonds aggregating twelve million dollars and preferred stock aggregating six hundred thousand dollars were purchased and retired. Net working capital was reduced moderately, and dividends on the preferred stock continued to accumulate. In 1936 the company's operations were profitable, and a total of $12 per share was paid on the preferred stock, reducing arrearages thereon from $15 to $9. Bonds were reduced further by about one million dollars, and working capital was drawn on to finance expenditures for plant as well as the purchase and retirement of preferred stock to the extent of ten million, six hundred thousand dollars.

No cash dividends have ever been paid on the present common stock. The book value of this issue has never exceeded $25 a share and dropped to below $10 a share at the depths of the depression, when the depreciation in the value of investments is taken into account.

With the above background, the pros and cons of Aluminum company's policies can now be discussed. With respect to the management's policy of retiring bonds and preferred stock in 1935 and 1936, at a time when the company was faced with the probability of having to expand plant, and was borrowing from the banks, two pertinent questions were involved from the common stockholder's point of view. First, would the use of approximately $25,000,000 of cash to retire senior securities, $13,000,000 of it taken from working capital, unduly impair the soundness of

the enterprise? Second, could the funds have been put to a more profitable use?

In answer to the first question it is probably fair to say that the management felt assured that it could borrow additional funds from the banks should another emergency arise. There was reason for this assurance in the good past record of loan reduction and in the excellent relationship with the banks. Furthermore, the business appeared to be facing a period of cyclical recovery and (this will be discussed later) it seems clear that the management's action was preliminary to a broad-scale financing program which there was good reason to believe could be put through on favorable terms during more prosperous times. Thus the answer to the first question is that the use of cash to retire senior securities did not seriously endanger the finances or operations of the company and the risk involved was not great.

In connection with the second question, as to whether or not the funds could have been better employed, the thought inevitably occurs that a management in the early phases of an upward business trend should be able to use its funds to better advantage for plant or inventory purposes than for the reduction of senior capital. The management can hardly be criticized, however, for the way it did use its funds in 1935 and 1936. Fair cyclical recovery had already been experienced, and inventories were being reduced rather than increased. As explained before, inventories were built up early in the depression and the company through 1936 had adequate plant facilities. Since money could undoubtedly be borrowed from banks at a lower cost than the 5 per cent being paid on the bonds and the 6 per cent requirement on the preferred, the company's action resulted in a definite saving in senior capital costs. Indefinite, or too heavy, reliance upon bank loans would, of course, have been dangerous and, since the company was growing, it was evident that there would be need in the near future to bolster working capital and to secure more funds for plant expansion than could be supplied from depreciation. In buying in its own securities, the management must have had some more permanent financing plan in mind, particularly since passage of the undistributed profits tax law in 1936 meant that additional capital could be accumulated from earnings only at a high cost. It is quite obvious that the retirements in 1935 and 1936 were in fact preliminary to a general financing program. This actually

took place, in July, 1937, through the sale to a group of insurance companies of a $24,000,000 issue of 3¾ per cent Debentures and through the making of serial bank loans of $6,000,000. The remaining 5 per cent bonds were recently called at 103. The answer to the second question is, then, that, bearing in mind the expectation of raising new capital, the cash was well employed in retiring bonds and preferred stock in 1935 and 1936.

In discussing the management's policy of accumulating dividends on the preferred, it is worth pointing out that this policy might be subject to criticism by the preferred stockholder were the company using the money thus retained to buy in the preferred stock plus accruals at a discount. Preferred dividends were reduced, however, in 1932, when the company was operating at a loss and the banks could hardly be expected to loan money for the full payment of these dividends. Thus the arrears were built up prior to 1936, the only year in which a large amount of preferred was purchased. During the same year, which was the first since 1930 when there had been more than nominal earnings for the common, dividend accumulations on the preferred were reduced by the payment of $12 a share. This should have made it reasonably clear to the preferred stockholder that the management's intention was to pay the arrears in full in cash.

The effect of the two policies on the common stockholders was beneficial on balance. The broad refinancing program to which the purchase of bonds and preferred stock was preliminary was beneficial because it reduced the cost of capital ahead of the common. Any net reduction in prior-ranking securities also strengthened the asset position of the common. Moreover, the cash borrowed at the banks was undoubtedly secured at lower interest rates than the charges on the bonds and preferred, and the purchase of preferred at prices below call plus arrears in effect paid for the arrears at a discount. The retention of preferred dividend money at no interest cost was also obviously beneficial to the equity. Assuredly there was some risk involved in retiring prior obligations at a time when the funds could be used for reducing bank debt or for bolstering working capital and when it was becoming apparent that further additions to plant would be necessary. However, in the particular case of Aluminum company, with its established position, capable management, and readily available bank credit, the risk was not great. It may be

concluded that in effect Aluminum company could adopt policies with reasonable safety which might be considered as involving unwarranted risk in the case of a less favorably situated company.

Looked at from considerations of sound capital structure, however, while the lowered cost of senior capital (including bank loans) facilitates trading on the equity during periods of prosperity and capacity operations, the financial policies initiated and carried through by the management have not made the company's finances appreciably less unwieldy in terms of an enterprise subject to violent cyclical fluctuations in business. On December 31, 1936, bonds and preferred stock amounted to 84 per cent of invested capital. This does not spell financial disaster for the company during a depression any more than it did in 1932, since preferred stock comprises 66 per cent of total invested capital, but it means that common shareholders may continue to expect wide fluctuations in their earnings per share (and a necessarily uncertain dividend policy if dividends are initiated on the common stock) with fluctuations in the company's total net earnings, owing to the continued presence of excessive leverage in the amount of senior capital.

Balance sheets and income statements in comparative form are given for the period from 1933 to 1936. The texts of the reports for 1934, 1935, and 1936 are also included. In Exhibit 1, ratios similar to those developed in the Cudahy case are presented. In Exhibit 2, the prices of aluminum metal are shown, and in Exhibit 3, the prices of the securities of the company are given.

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1. In the Working Forms, a form of statement sometimes called a where-gone where-got statement is worked out to show the changes in individual balance sheet items between 1934 and 1935. Prepare a similar statement for 1935–1936.

2. Determine for each of the years 1933–1936 the amount of income before interest necessary to cover the interest on bonds outstanding at the end of the year and the dividends on preferred. For this purpose, consider only the currently accruing dividends on the preferred and ignore the past accumulations.

3. Analyze the most significant changes shown by the where-gone where-got statements and the computation of interest and

ALUMINUM COMPANY OF AMERICA
COMPARATIVE CONSOLIDATED INCOME AND SURPLUS ACCOUNTS

	1933	1934	1935	1936
Beginning Surplus	$15,712,399	$15,173,617	$15,571,889	$18,626,077
Earnings, after deducting all Expenses incident to Operations..	$ 7,447,469	$12,058,955	$14,939,782	$27,617,665
Less Reserves for Depreciation & Depletion.	5,825,056	5,684,242	5,520,661	5,522,416
Earnings	$ 1,622,413	$ 6,374,713	$ 9,419,121	$22,095,249
Gain from Purchase & Retirement of Preferred Stock	42,134	91,435	152,086	1,228,313*
Net Income .	$ 1,664,547	$ 6,466,148	$ 9,571,207	$20,866,936
Dividends on Preferred Stock ..	2,203,329	.....	.....	.....
$ 1.75 per share† .	... .	2,567,876	....	.....
2.75 per share‡ ..	. . .	.....	4,017,019	.....
12.00 per share‡ ..	. .	....	... .	17,463,175
	$ 538,782*	$ 3,898,272	$ 5,554,188	$ 3,403,761
Reserve for Decrease in Value of Securities & Investments . .	.	3,500,000	2,500,000	....
Ending Surplus. ...	$15,173,617	$15,571,889	$18,626,077	$22,029,838

* Loss.
† Includes $ 25 on accumulated dividends in arrears, payable January 2, 1935.
‡ Includes $ 87½ paid January 1, 1936; and $1.50 paid Janaury 1, 1937.
Source: Company reports.

dividend requirements from the point of view of the investor in the common stock.

4. In examining the prospects for dividends on the common stock, the investor, who was himself an executive of an industrial corporation, decided that if he analyzed the problem as he would do if he were a member of the management of the Aluminum company, he would have good grounds for determining what the actual management probably would do, or at least for determining the limits within which its decisions would lie. In doing this he wished to separate clearly those factors having to do with the operation of the business from other factors which were concerned solely with the refinancing. In view of the facts given, what dividend policy should the Aluminum company have followed?

ALUMINUM COMPANY OF AMERICA
COMPARATIVE CONSOLIDATED BALANCE SHEETS

	1933	1934	1935	1936
ASSETS				
Current Assets				
Cash	$ 2,862,878	$ 3,588,870	$ 4,114,747	$ 2,515,567
Accts. & Notes Rec., Less Res.	10,318,237	10,844,117	14,070,927	15,779,020
Marketable Securities, at Cost	23,464,318	4,053,486	2,761,842	2,339,976
Inventories of Aluminum, Materials & Supplies	38,563,936	36,271,135	31,417,342	29,653,256
Total Current Assets	$ 75,209,369	$ 54,757,608	$ 52,364,858	$ 50,287,819
Sinking Fund Balance in Hands of Trustee	700	956	151	551
Prepaid Expenses and Deferred Charges to Operations	3,558,006	3,094,272	2,841,158	3,225,754
Invest. in Subsid. & Other Cos. not Consolidated Herein	15,455,844	36,162,718	36,006,283	35,961,718
Land, Water Rights, Plants & Facilities	$216,610,135	$216,149,672	$216,887,574	$221,254,268
Less Amortization, Depletion & Depreciation	76,830,951	80,931,767	85,119,179	87,686,589
Net Plant	$139,779,184	$135,217,905	$131,768,395	$133,567,679
	$234,003,103	$229,233,459	$222,980,845	$223,043,521
LIABILITIES				
Current Liabilities				
Accounts Payable	$ 1,678,214	$ 1,234,180	$ 1,736,476	$ 2,511,270
Bills Payable	22,550,000	15,920,000	8,270,000	16,625,000
Accrued Items not yet Due	2,140,414	1,784,510	1,858,064	2,487,807
Res. for Income and other Taxes	564,568	1,526,015	2,616,386	6,335,970
Pfd Stk. Div. Payable Jan. 1	550,601	916,072	1,277,832	2,181,335
25-Yr. 5% S.F. Debenture Gold Bonds, incl. Premium, called for Redemption, March 1, 1936			6,385,050	
Total Current Liabilities	$ 27,483,797	$ 21,380,777	$ 22,143,808	$ 30,141,382
25-Yr. 5% S.F. Debenture Gold Bonds, due 1952	$ 35,050,000	$ 33,968,000	$ 27,033,000	$ 20,000,000
Less in Treas. for Redemption		924,000		
Less Bonds Called for Redemption, March 1, 1936			6,081,000	
	$ 35,050,000	$ 33,044,000	$ 20,952,000	$ 20,000,000
10-Yr. 6% S.F. Gold Notes, due December 1, 1934	$ 335,000	$	$.	$
Misc. Oper. & Other Reserves.	1,772,064	1,803,168	1,858,535	2,086,876
Res. for Decline in Value of Securities & Investments		3,500,000	6,000,000	6,000,000
Capital Stock				
Preferred Stock—Par Value per Share $100; authorized —1,500,000 shares; outstanding*	146,825,500	146,570,500	146,037,300	135,422,300
Common Stock—No Par (Stated Value $5 per Share); authorized—1,500,000 shares; outstanding—1,472,625 shares	7,363,125	7,363,125	7,363,125	7,363,125
Earned Surplus†	15,173,617	15,571,889	18,626,077	22,029,838
	$234,003,103	$229,233,459	$222,980,845	$223,043,521

* 1,468,255 shares in 1933; 1,465,705 in 1934; 1,460,373 in 1935; and 1,354,223 in 1936.
† Dividends of $7 50 per share in 1933, $11.75 in 1934, $15.00 in 1935, and $9.00 in 1936 have accumulated on the preferred stock.
Source: Company reports.

TEXT OF THE 1934 ANNUAL REPORT

There is submitted herewith Consolidated Balance Sheet of Aluminum Company of America and its wholly owned subsidiary companies as of December 31, 1934, together with Consolidated Income and Surplus Account for the year 1934.

Current Assets, excluding Marketable Securities, remain substantially the same as in 1933. Securities of the Niagara-Hudson Power Corporation, heretofore carried in Current Assets as Marketable Securities at their cost to Aluminum Company of America of $20,699,178.37, are now more appropriately classified under Investments in Subsidiary and Other Companies. The balance sheet of the Niagara-Hudson Power Corporation indicates the book value of these securities as nearly equal to their cost to Aluminum Company of America. The December 31, 1934 market value of these Niagara-Hudson securities was $3,229,307.87.

During the year, Bills Payable decreased $6,630,000.00. Other current liabilities remain substantially the same. Funded debt decreased $1,417,000.00 by the retirement at maturity of the bonds of the Franklin Fluorspar Company and by retirement through the usual sinking fund of the required amount of Aluminum Company of America 25-year 5% Debenture Bonds. There were also acquired during the year, bonds having par value of $924,000.00, which were held in the treasury at the end of the year. These bonds were retired through the sinking fund January 24, 1935.

Deliveries made upon orders and sales contracts were 37% greater than in the preceding year. There was an increased use of aluminum in nearly all of the older fields of application, and development of new uses for the Company's products continues to advance favorably. The utilization of aluminum in the fields of transportation and architecture is expanding. In 1934, aluminum experienced its most successful year in the truck and bus industries. The prospects are favorable for a further increase in sales during 1935.

TEXT OF THE 1935 ANNUAL REPORT

The consolidated financial statements of the Aluminum Company of America and its entirely owned subsidiary companies for the year ended December 31, 1935 appear on the following pages.

Excluding marketable securities, current assets decreased 2¼% and inventories 13¼% as compared with the end of 1934. The holdings in securities of the Niagara-Hudson Power Corporation were slightly reduced during the year so that the Company's present interest in that corporation is now less than 10%. The market value of the Niagara-Hudson securities at December 31, 1935 was $8,117,399, an increase of 160% over their market value at the end of 1934. The large stock of aluminum accumulated during the years 1929 to 1932 inclusive was considerably reduced during the year and at the close of 1935 was 22% less than on December 31, 1934.

Due to additions and betterments in excess of retirements, the fixed capital of the Company was increased $737,901.99 during the year. As a result, however, of the application of normal depreciation and depletion rates, the net investment in fixed capital was decreased by 2½% as compared with the previous year. After provision for bad debts, accounts and bills receivable show an increase of 29¾%, and cash an increase of 14½%, as compared with the previous year.

In addition to the regular sinking fund retirement effective March 1, 1935, $6,000,000 par value of the Company's bonds were called and retired as of September 1, 1935 and an additional $6,081,000 were called December 30, 1935 for redemption on March 1, 1936. Since the date of the attached statement, $952,000 par value of bonds were retired by sinking fund requirements, so that as of the present date the Company's funded debt is $20,000,000. Bills payable were reduced 48% during the year. Interest payments decreased 27½%; on the other hand, taxes paid to the United States and the various State Governments increased 63¼%.

In 1934 a reserve of $3,500,000 was appropriated from net income for decrease in value of securities and investments. A further amount of $2,500,000 was appropriated for this same purpose during 1935 so that the present reserve against decrease in market value of securities and investments amounts to $6,000,000.

Gross sales were 29¼% greater in 1935 than during the previous year and practically all manufacturing operations increased. New or crude aluminum was produced in an amount 60¾% greater than during the previous year and this production has been still further increased in 1936. The Niagara plant for the production of aluminum, closed in 1931, resumed production in January, 1936. The average number of employees during 1935 was 18,152 as compared with 16,351 in 1934, an increase of 11%. During December of 1935 there were 20,523 employees.

The research and development work accounts for a considerable portion of the increase in sales, and furthermore has resulted in numerous economies in manufacturing operations. The outlook for further expansion and economies of a similar nature is excellent.

TEXT OF THE 1936 ANNUAL REPORT

Consolidated financial statements of Aluminum Company of America and its wholly-owned subsidiary companies for the year ended December 31, 1936, are submitted on succeeding pages.

After deducting taxes, operating expenses, depreciation and depletion, the net income for the year is $20,866,936.33, as compared with $9,571,206.29 in 1935. After setting aside $6.00 per share for the annual dividend on the preferred stock, there would remain an amount equivalent to $8.65 per share of outstanding common stock, as compared with 55 cents per share in 1935.

Accounts and notes receivable show an increase of 12¼%. Bills payable increased from $8,270,000.00 at the end of 1935 to $16,625,000.00 at the end of 1936. This increase was due in part to the payment of

$7.25 per share on December 21st against the accumulated back dividends on the preferred stock, on which there still remains unpaid back dividends amounting to $9.00 per share.

The average wage paid to employees and the number of employees, of whom there were 26,168 in December of 1936, have increased during the year. Taxes paid to the United States and the State Governments were 137% greater in 1936 than in the previous year.

The demand for aluminum has grown until at the end of 1936 practically all plants were in operation. Gross sales were 35% greater than in 1935. Several of the fabricated products, such as cooking utensils, forgings, tubing, extruded shapes and aluminum powder, have shown notable increases during the year.

EXHIBIT 1
ALUMINUM COMPANY OF AMERICA
RATIO ANALYSIS

	1933	1934	1935	1936
Current Ratio	2.7	2.6	2.4	1.7
Current Liabilities to Total Liabilities, per cent	11.7	9.3	9 9	13.5
Long-term Debt to Total Liabilities, per cent	15.1	14.4	9.4	9.0
Net Worth to Total Liabilities, per cent	73.1	76.3	80 7	77.5
Net Income to Total Assets, per cent	0.7	2.8	4.3	9 4
Net Income to Net Worth, per cent	1 0	3 7	5 3	12 1

Note—Days' sales, turnover, times interest earned, and percentage of net income to sales cannot be computed, because of lack of information in the reports.
Source: Company reports.

EXHIBIT 2
ALUMINUM COMPANY OF AMERICA
ALUMINUM PRICES
AVERAGE PRICES IN CENTS PER POUND, BASED ON OPEN MARKET QUOTATIONS OF PURE ALUMINUM (NO. 1 VIRGIN 98%–99%, 1912–1929; 99+%, 1930–1937) IN NEW YORK

1912	22.52	1921	21 21	1930	23 79
1913	23.63	1922	18.68	1931	23 30
1914	18.59	1923	25.41	1932	23.30
1915	34.13	1924	27.03	1933	23 30
1916	60.73	1925	27.19	1934	21 58
1917	51.25	1926	26 99	1935	20 50
1918	33.60	1927	25.41	1936	20 50
1919	32.14	1928	23.90	Jan.–Oct. 1937	20 10
1920	30.61	1929	23.90		

Sources: *Metal Statistics*, 1925, p. 433; 1936, p. 465; *American Metal Market*, November 2, 1937, p. 7.

EXHIBIT 3
ALUMINUM COMPANY OF AMERICA
BOND AND STOCK QUOTATIONS

	5% Debenture Gold Bonds	Stock	
		Preferred	Common
1925*	106½	99 -100	63 - 65
1926*	105½-105¾	102 -103	71½- 72½
1927*	101⅛-101⅜	105½-106	120 -125
1928	100 -103½	104 -110¼	120 -197¾
1929	99¾-103⅛	103 -108½	146 -524½
1930	100⅛-104⅞	104 -111½	140½-356
1931	93⅛-105⅝	56¾-109⅝	48 -224
1932	81 - 99¾	33½- 67¾	22 - 90
1933	80 - 99	37 - 77½	37¼- 96
1934	95¼-107½	60 - 78	43 - 85¾
1935	105¾-108	69½-114	32 - 95
1936	105⅝-108½	109 -125¼	87 -161
Jan.-Oct.1937	102 15/16-107	109 -119¾	76 -177½

* Quotations in 1925–1927 were not the yearly high and low quotations as in 1928–1937, but were bid and asked quotations at the end of each year.

Source: *Bank & Quotation Record*, January issues, 1926–1937; October, November, 1937.

PART II

BOOKKEEPING

There is no clear line of demarcation between bookkeeping and accounting. Bookkeeping is a part of accounting work; it is that part which relates to the actual recording of business transactions in systematic fashion; therefore it tends to be of a routine nature. Accounting is concerned with problems of valuation, the comparison of different methods of determining depreciation, and similar questions involving considerations somewhat broader than the routine recording of transactions. Accounting includes, moreover, the planning of a set of records which will at the same time furnish all the information which may be required and do it economically. The distinction is somewhat the same as that between the work of an artisan and an engineer.

Historically there is an important distinction. While records of some sort have been kept since the earliest times, the systematic consideration of accounting problems was rather unusual before 1890, and most of the literature on the subject appeared after 1900.

Modern bookkeeping, which is almost synonymous with double entry, is a tradition which has developed gradually over a period of some seven centuries. It is a logically cohesive system which is based on two principles: first, that in any business the assets are equal to the claims against the assets, and second, that every transaction is dual in nature. The first of these principles is the basis of the balance sheet; the second is the basis for the record of every transaction by modern methods.

Double entry was first used in connection with the commercial revival accompanying the Italian Renaissance. A few pages from the account book of a Florentine banking and money-lending partnership of 1211, which is the earliest accounting record of this period, show a recognition of the dual nature of some transactions, but the system was fundamentally that of the older diary or paragraph accounting, in which each transaction was described in a separate paragraph without any attempt at classification or formal arrangement. The accounts of the communal stewards of

Genoa of 1340 are probably the earliest instance of the use of double entry. In these records, the separation of the two aspects of each transaction was complete, and each aspect was classified into accounts which are remarkably similar in form to those now in use. In 1494 Lucas Pacioli wrote a treatise on double entry bookkeeping in which he described the commercial practice in Venice at that time. This treatise and those account books of the period which have been preserved show that the underlying principles of double entry were firmly established by the end of the fifteenth century. Pacioli's treatise was the standard text on bookkeeping for two centuries and was translated into English, French, German, and Dutch, so that it exercised a considerable influence on the development of bookkeeping throughout Europe.

The books of the Massachusetts Bank, which was opened in Boston in 1784, are an excellent example of bookkeeping technique at the time and show some interesting evidences of Pacioli's influence.

The cases in Part II are designed to familiarize the students with what might be termed the classical tradition of bookkeeping. Most businesses at present use special journals and ledgers, each of which is adapted to record a particular type of transactions. These special books are considered in a later chapter, but they are all based upon the principles of the simple journal and ledger considered here.

Familiarity with bookkeeping is essential to an understanding of accounting. It is also useful as a tool of analysis even when the results are not embodied in formal books of account. The principles of bookkeeping are relatively simple but it is as impossible to learn the art without practice as it would be to play tennis after reading a book on the subject. Bookkeeping partakes somewhat of the nature of a manual skill; it cannot be considered to be fully learned until most of the operations become automatic.

The cases in Part II contain typical transactions from a number of different businesses. They are designed to give sufficient practice in the analysis of transactions, posting, adjusting, and closing to illustrate the principles involved and to show the relations between the fundamental books of account and the statements. An opportunity for further practice is available in the laboratory.

VI. THE RELATION BETWEEN THE STATEMENTS AND THE BOOKS OF ACCOUNT

HERENDEEN AND HAPLY WOOLEN MILLS—NO. 2

THE RELATION BETWEEN THE STATEMENTS AND THE LEDGER

The balance sheet and income statement of this company for June 30, 1934, were summaries of information preserved in greater detail in the several accounts in the ledger. In some instances an item appearing on the statements was the balance of a single account in the ledger, while other items represented the total of the balances of a series of accounts. The extent of subdivision in the ledger depended on the amount of detail needed in the administration of the business. It is possible to obtain by examining the statements a condensed list of accounts with their balances as carried in the ledger, that is, a condensed trial balance. By analyzing the needs of the business for additional information, it is possible to determine the points at which there presumably was additional subdivision of the accounts in the ledger.

Using the balance sheet as of June 30, 1934, and the income statement for the year ending on that date, shown on pages 36 and 37, determine as far as possible the accounts carried in the ledger of the company and the balances of those accounts. For that purpose use the paper in the Working Forms, and enter the data in the following manner:

Title of account	Kind of account	Balance	
		Debit	Credit
Cash.....	Asset	762,151.39	

In the process of closing the books and preparing the statements, the primary expense and income accounts were closed out through various clearing accounts, the net effect of all their balances being reflected in the change in surplus during the period.

For the purposes of this case, therefore, show the accounts as they were before closing.

For instance, show net sales and purchases at the figures at which they appear in the income statement and do the same for the expenses, such as repairs and advertising. If this is done, it is necessary to use the beginning figure for surplus, the balance at June 30, 1933. It was only after all the income and expense accounts were closed thereto that the final balance of surplus at June 30, 1934, appeared.

Include the inventories in the trial balance as assets at the figures shown on the balance sheet. It may be noted that beginning and final inventories for raw material, goods in process, and finished goods appeared in the income statement as part of the computation of the cost of raw material used, the cost of goods manufactured, and the cost of goods sold. In order to provide for these facts, include the three clearing accounts in the trial balance with the amounts shown. No other amounts in connection with the inventory facts on the income statement need be included. The reasons for this treatment will be examined in connection with later cases.

Title of account	Kind of account	Balance	
		Debit	Credit
Raw Material Used.	Clearing	1,285,188 59	1,050,693.18
Cost of Goods Manufactured	Clearing	1,218,797.61	1,176,614 68
Cost of Goods Sold	Clearing	371,975 30	237,563 00

Take totals of the amounts appearing in the debit and credit columns of the trial balance.

The process of adjusting and closing the books and the preparation of statements will be examined in later cases. The purpose at this point is to examine the relations between amounts appearing in the statements and in the ledger.

1. What type of balance is shown by each of the main classes of accounts appearing in the ledger?

2. What is the relation of each of these classes of accounts to the balance sheet and to the income statement?

3. For which items in the trial balance were a series of accounts probably carried in the ledger? That is, at which points did the needs of the business presumably require the carrying of additional accounts to give the management information needed in the conduct of the business?

VII. THE ANALYSIS OF TRANSACTIONS

The Analysis of Transactions—No. 1

Each of the cases below includes a description of a transaction or transactions and a list of the balances of certain ledger accounts as they were before the transactions occurred. The balances are given in a single column in order to provide experience in determining from the nature of the accounts concerned whether they have debit or credit balances. Each list of accounts includes all of those necessary in an analysis of the transactions. Do not use any accounts that are not listed.

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1. In each case set up the ledger accounts with the balances indicated.

2. Analyze the transactions described, determine exactly what occurred, and make any computations which are necessary.

3. Prepare the requisite journal entry or entries.

4. Post the journal entries to the ledger.

Use the journal and ledger paper in the Working Forms. Complete all operations with respect to *a* before proceeding to *b*. It is intended that the journal and ledger for each of the sections below shall constitute a unit. There is no necessary connection between successive sections, and in most cases they do not refer to the books of the same company. In the journal allow two blank lines between the entries arising from successive sections. In the ledger use one page for the accounts involved in each section.

In a number of instances the balances of certain accounts would be likely to be affected between the dates indicated by entries arising from other transactions. In these cases assume that no entries were made except those arising from the transactions described, and ignore the effects of other transactions.

a. The company issued 1,000 additional shares of its $100 par common stock on June 1, 1937, and received therefor $115,000.00 in cash. Expenses involved, including legal and accounting fees,

taxes, registration fees, and printing and engraving, were $5,218.71. Assume that the expenses were incurred and paid on June 1.

Balances May 29, 1937:

Cash	$ 97,384.43
Common Stock	1,000,000 00
Premium on Stock	112,300 00
Expenses of Issue, Common Stock	8,642.15

b. On May 1, 1937, in order to secure additional working capital, the company issued $500,000 of 4 per cent Sinking Fund Debentures. These were sold to underwriters at 96. The underwriters absorbed the expenses of the issue.

Balances April 30, 1937:

Cash	$126,839.37
4 Per Cent Sinking Fund Debentures	———
Bond Discount	———

c. On November 13, 1937, the company paid to its employes wages of $595.25 for the week beginning November 8.

Balances November 12, 1937:

Cash	$49,010.68
Wages Expense	16,908 73

d. On September 13, 1937, the Chase Belting Company ordered leather from the Barkley Company of Philadelphia. The invoice, received on September 18, gave the following information:

500 rough cow butt bends, 6,165 lb. at 55 cts. $3,390.75
Terms: 2 per cent 30 days; net 60 days.

The shipment was delivered on September 20, and the Chase Belting Company paid $55.62 freight charges to the Seaboard Freight Line on September 21. The Barkley Company had agreed to allow freight charges to be deducted from the amount of the bill. These freight charges were treated as cash payments in figuring cash discount.

The Chase Belting Company sent a check to the Barkley Company on October 4, 1937, for the balance due.

Balances September 18, 1937:

Cash	$ 74,287.96
Purchases	151,460.27
Discount on Purchases	4,623.38
Accounts Payable—Barkley Company	———

e. On October 6, 1937, the Jason Paint Company received a shipment of raw materials from the Barnard Whiting Company:

10 bbl. whiting, 2,000 lb. at 2 cts. $40.00

The shipment arrived by truck with freight prepaid by the vendor. Terms were 1 per cent 10 days; net 30 days.

On October 15 the Jason Paint Company mailed a check to the Barnard Whiting Company to cover the balance due.

Balances October 5, 1937:

Cash	$75,654.10
Accounts Payable—Barnard Whiting Company	
Purchases	96,471.28
Discount on Purchases	728.91

f. On September 7, 1937, the Hulst Shoe Company received a shipment of leather from the Linquist Leather Company. The invoice, dated September 3, gave the following information:[1]

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[1] Explanation of leather invoice by lines:
1 doz., Grade D, weight H, color No. 14, Eskimo veals waterproofed.
8½ doz., Grade K, weight H, color No. 14, Eskimo veals waterproofed.
1⅔ doz., Grade Q, weight H, color No. 14, Eskimo veals waterproofed.
1 doz., Grade D, weight M, color No. 24½, Cretin calf butts (The part of a hide or skin of an animal corresponding to the upper part of the rear haunches and back.)
5⅔ doz., Grade K, weight M, color No. 24½, Cretin calf butts.
2 doz., Grade K, weight L.M , color No. 6, Norwegian calf.
19 doz., Grade 2, weight M, Russian lining calf waterproofed.
1 doz., Grade 3, weight M, Russian lining calf waterproofed.

	List of Weights
HH	Very heavy
H	Heavy
H.M.	Heavy medium
P.M.	Plump
M	Medium
M Dash	Medium
M.L.	Light medium
L.M.	Light medium (minus)
L	Thin
L.L.	Very thin

List of Grades

B
C
D
Dx

These are the first four standard grades. Grade A is not listed because it is so rare now that for practical purposes it does not exist.

Grades below these are unimportant and are marked according to individual desires of tanners.

			Sq. Ft.	List	Extension
1	DZ	HD #14 ESK VLS WP	208½	at 47¢	$ 98.00
8 1/12	DZ	HK #14 ESK VLS WP	1,717½	at 42¢	721.35
1 2/3	DZ	HQ #14 ESK VLS WP	388	at 39¢	151.32
1	DZ	MD #24½ Cret. CF Butts	118¾	at 48¢	57.00
5 2/3	DZ	MK #24½ Cret. CF Butts	662¼	at 43¢	284 77
2	DZ	LMK #6 NOR CF	282¼	at 33¢	93 14
19	DZ	M #2 Russ Lin CF WP	2,833¾	at 22¢	623.43
1	DZ	M #3 Russ Lin CF WP	175¼	at 20¢	35.05
					$ 2,064.06

Terms: 2 per cent on bills settled the 15th of following month; interest at the rate of 6 per cent per annum to be charged thereafter.

Freight to the amount of $16.24 was paid to the Jackson Truck Company upon receipt of the shipment and was deducted from the amount of the bill. In this case, freight charges could not be considered as cash payments in figuring cash discount.

The Hulst Shoe Company was pressed for working capital at the time and allowed the account to run until December 7, when a check was issued for the balance due, including interest of $18.09.

Balances September 7, 1937:

Purchases	$215,337 12
Discount on Purchases	5,772 68
Accounts Payable—Linquist Leather Company	
Cash	97,628.14
Interest Expense	302 76

g. On September 16, 1937, the Jason Paint Company received the following order from the Jackson Company, of 245 High Street, Clinton, Mass.

		List	
8	1 Gal. Cans No. 1528	$2.95 gal.	$23.60
4	1 Gal. Cans No. 535	2.95 gal.	11.80
1	½ Gal. Can No. 303	1.69 ½ gal.	1.69
			$37 09

Terms: 12 and 4 per cent trade discount; 1 per cent cash discount for payment by the end of the month; net at the end of the second month; f.o.b. seller's plant, Worcester.[1]

[1] Enter the sale net of trade discounts. The discount of 4 per cent should be applied to the balance after deducting the discount of 12 per cent.

The order was shipped on September 17 by the Clinton Auto Express.

On September 30, the Jackson Company paid the balance of its account. The cash discount period on the balance of $62.82 had already elapsed.

Balances September 16, 1937:

Cash	$ 34,376.48
Accounts Receivable—Jackson Company	62.82
Sales	328,417.83
Discount on Sales	2,846.24

h. On July 6, 1937, the Chase Belting Company of Buffalo, New York, received an order from the Castro Machinery Corporation of Akron, Ohio. The order, as described below, was shipped and billed on July 7.

Item	List	Amount
50 ft. × 1½ in. single Oak Belting	$0 36	$18.00
50 ft. × 3 in. single Oak Belting	0 72	36.00
		$54 00

Terms: 40 and 5 per cent trade discount; 2 per cent 10 days; net 30 days; f.o.b. Buffalo.

On July 16 the Chase Belting Company received a check from the Castro Machinery Corporation for the entire balance of its account. The cash discount period on the balance of $132.10 had already elapsed.

Balances July 6, 1937:

Cash	$ 67,482.14
Sales	416,908.28
Discount on Sales	7,326.56
Accounts Receivable—Castro Machinery Corporation	132.10

i. On October 4, 1937, the Alton Leather Company, of Baltimore, sold the goods listed below to the Bolton Shoe Company, of St. Louis. The goods were shipped the same day.

Amount	Specifications	Feet	Price	Extension
52 doz.	7B Spec. 50	4,700–2	20¢	
52 doz.	7B Spec. 50	4,740	20¢	
44 doz.	7B Spec. 50	3,943–1	20¢	$2,676 75
10 doz.	FXB Color 50	938–2	19¢	
55 doz.	FXB Color 50	4,780–3	19¢	
50 doz.	FXB Color 50	4,685	19¢	1,976.81
22 doz.	FXB Color 50	2,015	16¢	322.40
		25,801–8		$4,975 96

Terms: 2 per cent 30 days; 1 per cent 60 days; net plus 6 per cent per annum thereafter; f.o.b. Baltimore.

On December 15, 1937, a check for the balance due was received from the Bolton Shoe Company, including interest of $9.95.

Balances October 4, 1937:

Cash	$ 36,432 18
Accounts Receivable—Bolton Shoe Company	
Sales	916,485.96
Discount on Sales	15,465.42
Interest Income	757.29

j. On October 1 the company, a wholesale druggist, received a check from the receiver for the Watkins Drugstore, which had failed a few months previously. The assets had been liquidated, and the receiver was paying the general creditors at 60 cts. on the dollar. No further payments could be expected. The company charged off the balance of the account as a bad debt loss to the reserve set up for that purpose.

Balances September 30, 1937:

Accounts Receivable—Watkins Drugstore	$ 1,516 42
Reserve for Bad Debts	110,540.87
Cash	221,652.39

k. It was the practice of the company, when it was recognized that an account receivable would not be collected, to debit Bad Debts Written Off and credit Accounts Receivable. This was done during the year whenever it became apparent that an account could not be collected. The credit was, of course, to the account receivable from an individual customer, but for purposes of this case, only the total of accounts receivable is given above.

Bad Debts Written Off was closed out at the end of the year to the Reserve for Bad Debts, and after this was done, the com-

pany adjusted its reserve so that it represented 4 per cent of the balance in the Accounts Receivable account at that time. The amount by which it was necessary to increase the reserve established the amount of the bad debt expense for the year.

Make all entries necessary to close Bad Debts Written Off and to adjust the Reserve for Bad Debts.

Balances December 31, 1937:

Accounts Receivable	$821,097.56
Reserve for Bad Debts	39,430.71
Bad Debts Written Off	18,140.63
Bad Debts Expense	

l. The Reserve for Bad Debts had been built up through a charge of ½ per cent of sales per month to Bad Debts Expense. On December 31, officers of the concern went through the accounts receivable and wrote off accounts aggregating $19,897.45. This required a credit to the individual accounts receivable, but for the purposes of this case, enter the total as a credit to Accounts Receivable. The bad accounts were charged to Bad Debts Charged Off. The balance of Bad Debts Charged Off was then charged against the Reserve for Bad Debts.

During the year bad debts previously charged off had been collected to the extent of $5,280.06. This amount appeared on the books as a credit to Bad Debts Collected. On December 31, Bad Debts Collected was closed out to Reserve for Bad Debts. Any balance then remaining in the reserve was carried over to the next year.

Balances December 31, 1937:

Accounts Receivable	$212,502.69
Reserve for Bad Debts	28,114.37
Bad Debts Expense	21,023.54
Bad Debts Collected	5,280.06
Bad Debts Charged Off	

m. On October 19 the company declared a quarterly dividend of 1½ per cent, payable December 15 to stock of record November 20.

Show journal entries to record both the declaration and the payment of the dividend. Close Dividends into Surplus as of December 31.

Balances October 1, 1937:

Common Stock	$1,000,000.00
Surplus	440,947.21
Cash	105,836.47
Dividends Payable	
Dividends	45,000.00

n. Interest was payable August 1 and February 1 and had been paid in full on August 1, 1936. Interest on the bonds had been accrued to December 31, 1936. On February 1, 1937, another six months' interest was paid on the bonds.

Show entries to record interest expense for the month of January and the payment of interest February 1, 1937.

Balances January 30, 1937:

5 Per Cent First Mortgage Bonds	$15,000,000 00
Interest Expense Accrued	312,500.00
Interest Expense	
Cash	993,617.48

o. On December 8 the company ordered from the La Salle Equipment Company a new stamping machine that cost $10,500.00. The machine arrived on December 13, and was installed the same day. Freight charges were $198.32, labor cost on installation, $145.96, and materials and supplies used in installation, $23.16.

Show journal entries to record the payment of freight, and the payment of wages involved in the labor cost of installation as of December 13. The materials and supplies were already on hand and were recorded in that account.

The expenses incurred up to the time a machine started producing goods were considered a part of its cost and were debited to the asset account. Show additional entries necessary to bring this about. The machine was paid for on December 20.

On December 23 the company dismantled and retired an old stamping machine. This machine had cost $9,428.00, and depreciation of $8,980.50 had been accrued by yearly charges to operations. The cost of dismantlement was $95.12, and salvage of $250.93 was received.

Assume that the cost of dismantlement was paid in cash, and that cash was received for salvage. This company charged the balance of undepreciated cost as an addition to the depreciation expense for the year.

Use the account Machinery Retired to bring together the several facts involved in the retirement of this machine. Show entries to transfer to Machinery Retired the amounts previously standing in Machinery and Equipment and Reserve for Depreciation, with respect to this machine. Similarly, transfer the amounts standing in Cost of Dismantlement and Salvage to

Machinery Retired, and transfer the final balance of Machinery Retired to Depreciation Expense, in accordance with the policy of the company.

Balances December 1, 1937:

Cash	$34,364.29
Machinery and Equipment	93,616.75
Reserve for Depreciation	29,475 36
Accounts Payable—La Salle Equipment Company	
Depreciation Expense	9,450.67
Freight	752 81
Wages	25,618.05
Materials and Supplies	10,417.22
Cost of Dismantlement	
Salvage	
Machinery Retired	

p. In 1937 the Montin Manufacturing Company purchased a new-type punch press and auxiliary equipment from the Palman Machine Company of Newark, N. J. On May 13 in a conference with the engineers of the Palman company, executives of the Montin Manufacturing Company had submitted the problem of developing a new type of press which could perform numerous operations on a new product. In July the Palman company presented drawings of the new equipment. These were examined by the Montin company and found to be satisfactory. On July 21 a contract for the new machine was signed.

On November 2 the Palman company shipped punch press No. 33 with auxiliary equipment, a detailed set of drawings, and a complete set of manufacturing tools to the Montin company and billed the latter for the price agreed upon. The shipment arrived at its destination on November 6, and by November 12, the equipment was installed and ready to function. After several days' operations it was apparent that the new machinery was satisfactory so that final acceptance was made by the Montin company on November 16. On this latter date the purchase was booked by the Montin company. The amounts involved were:

1 No. 33 punch press with standard die head and arranged for motor drive	$ 4,000 00
2 Extra die heads at $550	1,100.00
1 Lever press at $650	650 00
1 Set of detailed drawings	350 00
1 Complete set of tools	4,000.00
Freight	179.38
Installation charges	532.91
	$10,812 29

A check for $10,100.00 was sent to the Palman company on November 16, and on the same day, a check was issued to the Central Railroad Company for the freight on the press. In accordance with the practice of the company, drawings and tools should be recorded in separate accounts, but the punch press, die heads, and lever press should be recorded as machinery and equipment. The installation charges of $532.91 had already been paid and were included in Press Department Maintenance, but should be transferred to the account Installation Charges to facilitate allocation as indicated below.

The expenses incurred in installing the press were allocated as follows: of the freight, $24.03, and of the installation charges, $72.07, were charged to the tools, and the balance of the two amounts was added to the cost of the press.

It was the practice of this company to write off tools and drawings to Press Department Maintenance. This was done on November 30.

The new machine displaced seven old-type presses which were retired on November 30. These presses had originally cost $2,877.00, but during the life of these machines additions amounting to $284.00 had been made, so that $3,161.00 was the capitalized value of the machines. Depreciation of $3,075.80 had been accrued to the date of retirement. The cost of dismantlement was $156.69 and salvage of $210.31 was received.

Assume that the cost of dismantlement had already been paid and charged to Press Department Maintenance, and that the salvage was received in cash. Show entries to transfer the cost of dismantlement to the account of that title, and to record the receipt of the salvage in cash. The Montin company charged undepreciated cost to an earmarked surplus account, Reserve for Obsolescence. As in the preceding case, transfer all of these amounts to Machinery Retired and close the balance of this account in accordance with the practice of the company.

Balances November 15, 1937:

Machinery and Equipment—Press Department	$116,741.58
Drawings	———
Small Tools	———
Freight	480.49
Installation Charges	———
Cash	147,923.47
Press Department Maintenance	5,260.61
Cost of Dismantlement	———
Salvage	———
Reserve for Depreciation	25,348.32
Reserve for Obsolescence	52,629 84
Machinery Retired	———

q. A Standard Bond Card dated May 6, 1931, issued by the Standard Statistics Company gave the following information concerning the 4½ convertible bonds of the American Telephone and Telegraph Company.

10-YEAR 4½ PER CENT CONVERTIBLE BONDS, 1939

Convertible into company's stock at Treasurer's office, on and after January 1, 1930, and until December 31, 1937, at the following prices: During 1930 at $166.88 a share; during 1931 and 1932 at $175.46 a share; and during the years 1933 to 1937, inclusive, at approximately $183.60 a share with adjustment of interest and dividends. If bonds are called for redemption they may be converted not later than the redemption date. (Interest payable January 1 and July 1.)
Conversion Options.

a. The bondholder may take one share of stock for each $100 principal amount of bonds surrendered, on payment in cash for each such share of the difference between the conversion price then in effect and $100 or

b. The bondholder may take as many shares as the principal amount of bonds surrendered is a multiple of the conversion price then in effect, and if there be a remainder, the bondholder may take one additional share on payment in cash of the difference between such conversion price of such share and such remainder.

Assume that a bondholder on April 15, 1931, offered $10,000 principal amount of bonds of this issue for conversion under option *a* and included a check for the requisite amount of cash. The interest owed to the bondholder was paid in a separate check. Consider the interest period to be 3½ months. Because of the date, no adjustment was necessary for dividends.

Assume that a second bondholder offered the company the same amount of bonds the same day for conversion under option *b* and that he took the additional share to which he had a right under the second part of option *b* above.

Show journal entries to record the bond conversion under each of the assumptions made above.

Assume that the balances of the accounts involved before these transactions were entered were as follows:

Capital Stock ($100 par)	$1,801,968,100.00
Convertible Bonds	12,923,000 00
Cash	38,165,131.22
Interest Expense	8,147,584 39
Premiums on Stock	261,026,672.75

JOHN L. STEELE, REALTOR[1]—NO. 1

THE RELATION BETWEEN THE STATEMENTS AND THE BOOKS OF ACCOUNT

The facts of this case have been simplified in order to show more clearly the relation between the statements and the ledger, between the ledger and the journal, and the manner in which the transactions are entered in the journal. No details of the transactions are given. Details with respect to a similar group of transactions are given in the next case.

The changes between the balance sheets of December 31, 1931, and January 31, 1932, resulted from the outside transactions during the month and certain adjustments based on the following facts.

John L. Steele owned the building in which his office was located, subject to a mortgage of $9,000, and rented part of the building as a store for $110 per month. He had estimated that the land was worth $8,000 and that the building represented the balance of the cost. Depreciation was charged on the value of the building at 5 per cent per year, distributed by months. Interest on the mortgage was payable February 1 and August 1 at 5 per cent. His automobile was included as an asset of the business at cost, less depreciation at 3 per cent per month. The personnel consisted only of himself and a secretary-bookkeeper who received a salary of $100 per month.

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[1] "Realtors are real estate brokers or agents who are active members of a local Real Estate Board which is connected with the National Association of Real Estate Boards. They are licensed to use this designation by the National Association, whose exclusive right to the use of the term has been upheld by the Courts."—From a pamphlet published by the local real estate exchange.

The ledger is shown as it appeared after all bookkeeping operations for the month had been finished. For the purposes of this case all balances standing in the ledger at the beginning of the period are marked (*a*), the entries which resulted from the outside transactions during the month are marked (*b*), the adjusting and closing entries are marked (*c*) and (*d*), respectively, and the balances at the end of the month are marked (*e*).

The bookkeeper drew up the statements on February 1, including transactions up to the close of business on Saturday, January 30, although the statements were dated as of the last day of the month, even when that fell on Sunday.

The journal shows the accounting analysis of the transactions. The details were preserved in documents filed in numbered folders, the number being included in the journal entry, so that the supporting documents for any entry could be readily found.

The entries necessary for adjusting and closing are also included in the journal. The process of simplification for the purposes of this case has distorted the picture somewhat, since in actual practice, the number of outside transactions was much greater.

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1. Trace each item on the balance sheets and income statement to the ledger and determine the relation between the statements and the ledger.

2. Trace each item on the journal to the ledger and determine the relation between the two books.

3. Check the source of each journal entry.

4. Take a trial balance of the ledger as it is after closing. Use the paper in the Working Forms.

BALANCE SHEET, DECEMBER 31, 1931

Cash		$ 6,389 00	Mortgage	$ 9,000.00
Supplies .		290 00	Interest Accrued . . .	187 50
Land .		8,000.00	Rent Prepaid ..	110 00
Building	$13,680.00		John Steele, Capital. ..	15,000 00
Less: Res.			John Steele, Drawings...	3,112.50
Depn. .	2,280.00	11,400.00		
Furniture &				
Fixtures ..		782.00		
Automobile..	$ 900.00			
Less: Res.				
Depn....	351.00	549.00		
		$27,410.00		$27,410.00

Balance Sheet, January 31, 1932

Cash		$ 6,637.70	Mortgage	$ 9,000.00
Supplies		242.00	Interest Accrued	225.00
Land		8,000.00	Rent Prepaid	110.00
Building	$13,680.00		John Steele, Capital	15,000.00
Less: Res. Depn.	2,337.00	11,343.00	John Steele, Drawings	3,191.70
Furniture & Fixtures		782.00		
Automobile	$ 900.00			
Less: Res. Depn.	378 00	522.00		
		$27,526.70		$27,526 70

Income Statement for the Month Ended January 31, 1932

Commission on Sales	$447 50	
Commission on Leases	54.00	
Rental Income	110.00	
Total Income		$611 50
Less: Expenses		
Salaries	$100.00	
Advertising	12.80	
Depreciation	84.00	
Supplies Expense	48 00	
Interest Expense	37.50	282.30
Net Income		$329.20
Less: Withdrawn by Proprietor		250.00
Surplus for the Month		$ 79.20

Ledger

Cash

Page 1

1932 Jan.	1	Balance (a)	✓		6	3	8	9	00	1932 Jan.	8	Advertising (b)	J1			1	2	80
	4	Commission on Sales (b)	J1				8	7	50		11	Liab. to Customers (b)	J1				6	00
	11	Liab. to Customers Commission on Sales (b)	J1				6	0	00		12	Liab to Customers (b)	J1			1	4	0	00
	12	Liab to Customers Commission on Sales (b)	J1				5	0	00		30	Salaries (b)	J1			1	0	0	00
	30	Rent Prepaid (b)	J1				1	1	0	00	30	J. Steele, Drawings (b)	J1			2	5	0	00
											30	Balance	✓		6	6	3	7	70
					7	1	4	6	50						7	1	4	6	50
Feb	1	Balance (e)	✓		6	6	3	7	70										

Supplies

1932 Jan	1	Balance (a)	✓			2	9	0	00	1932 Jan.	30	Supplies Expense (c)	J2			4	8	00
											30	Balance	✓		2	4	2	00
						2	9	0	00						2	9	0	00
Feb	1	Balance (e)	✓			2	4	2	00										

Land

1932 Jan	1	Balance (a)	✓		8	0	0	0	00								

Building

1932 Jan.	1	Balance (a)	✓		13	6	8	0	00								

Reserve for Depreciation on Building

1932 Jan.	30	Balance	✓		2	3	3	7	00	1932 Jan.	1	Balance (a)	✓		2	2	8	0	00
											30	Depreciation Exp (c)	J2				5	7	00
					2	3	3	7	00						2	3	3	7	00
										Feb	1	Balance (e)	✓		2	3	3	7	00

Furniture and Fixtures

1932 Jan.	1	Balance (a)	✓			7	8	2	00								

Automobile

1932 Jan.	1	Balance (a)	✓			9	0	0	00								

Reserve for Depreciation on Automobile — Page 2

1932 Jan.	30	Balance	✓			378	00	1932 Jan.	1	Balance (a)	✓			351	00
									30	Depreciation Exp. (c)	J2			27	00
						378	00							378	00
								Feb	1	Balance (e)	✓			378	00

Mortgage

								1932 Jan.	1	Balance (a)	✓		9	00	00	00

Interest Accrued

1932 Jan.	30	Balance	✓			225	00	1932 Jan.	1	Balance (a)	✓			187	50
									30	Interest Expense (c)	J2			37	50
						225	00							225	00
								Feb	1	Balance (e)	✓			225	00

Liability to Customers

1932 Jan.	11	Cash (b)	J1			6	00	1932 Jan.	11	Cash (b)	J1			6	00
	12	Cash (b)	J1			140	00		12	Cash (b)	J1			140	00
						146	00							146	00

Rent Prepaid

1932 Jan.	30	Rental Income (c)	J2			110	00	1932 Jan.	1	Balance (a)	✓			110	00
	30	Balance	✓			110	00		30	Cash (b)	J1			110	00
						220	00							220	00
								Feb	1	Balance (e)	✓			110	00

John Steele, Capital

								1932 Jan.	1	Balance (a)	✓	1	5	00	00	00

John Steele, Drawings — Page 3

Jan. 1932	30	Cash (b)	J1			2	5	0	00	Jan. 1932	1	Balance (a)	✓		3	1	1	2	50
	30	Balance	✓		3	1	9	1	70		30	Loss and Gain (d)	J3			3	2	9	20
					3	4	4	1	70						3	4	4	1	70
										Feb	1	Balance (e)	✓		3	1	9	1	70

Commission on Sales

Jan. 1932	30	Loss and Gain (d)	J2			4	4	7	50	Jan. 1932	4	Cash (b)	J1				8	7	50
											12	Cash (b)	J1			3	6	0	00
						4	4	7	50							4	4	7	50

Commission on Leases

Jan. 1932	30	Loss and Gain (d)	J2				5	4	00	Jan. 1932	11	Cash (b)	J1				5	4	00

Rental Income

Jan. 1932	30	Loss and Gain (d)	J3			1	1	0	00	Jan. 1932	30	Rent Prepaid (c)	J2			1	1	0	00

Salaries

Jan. 1932	30	Cash (b)	J1			1	0	0	00	Jan. 1932	30	Loss and Gain (d)	J3			1	0	0	00

Advertising

Jan. 1932	8	Cash (b)	J1				1	2	80	Jan. 1932	30	Loss and Gain (d)	J3				1	2	80

Depreciation Expense

Jan. 1932	30	Res. Depn on Bldg (c)	J2				5	7	00	Jan. 1932	30	Loss and Gain (d)	J3				8	4	00
	30	Res Depn on Auto (c)	J2				2	7	00										
							8	4	00								8	4	00

Supplies Expense

Page 4

Jan. 1932	30	Supplies (c)	J2			48	00	Jan. 1932	30	Loss and Gain (d)	J3			48	00

Interest Expense

Jan. 1932	30	Interest Accrued (c)	J2			37	50	Jan. 1932	30	Loss and Gain (d)	J3			37	50

Loss and Gain

Jan. 1932	30	Salaries (d)	J3		100	00		Jan. 1932	30	Commission on Sales (d)	J2		447	50	
	30	Advertising (d)	J3		12	80			30	Commission on Leases (d)	J2		54	00	
	30	Depreciation Expense (d)	J3		84	00			30	Rental Income (d)	J3		110	00	
	30	Supplies Expense (d)	J3		48	00									
	30	Interest Expense (d)	J3		37	50									
	30	J. Steele, Drawings (d)	J3		329	20									
					611	50							611	50	

Journal

Page 1

1932 Jan.	4	Cash	1				8	7	50								
		Commission on Sales	3												8	7	50
		Folder No. 314															
	8	Advertising	3				1	2	80								
		Cash	1												1	2	80
		Folder No. 280															
	11	Cash	1				6	0	00								
		Liability to Customers	2													6	00
		Commission on Leases	3												5	4	00
		Folder No. 317															
	11	Liability to Customers	2					6	00								
		Cash	1													6	00
		Folder No 317															
	12	Cash	1				5	0	0	0	00						
		Liability to Customers	2												1	4	0	0	00
		Commission on Sales	3												3	6	0	0	00
		Folder No 321																	
	12	Liability to Customers	2				1	4	0	0	00								
		Cash	1												1	4	0	0	00
		Folder No. 321																	
	30	Cash	1				1	1	0	0	00								
		Rent Prepaid	2												1	1	0	0	00
		Folder No 268																	
	30	Salaries	3				1	0	0	0	00								
		Cash	1												1	0	0	0	00
		Folder No. 110																	
	30	John Steele, Drawings	3				2	5	0	0	00								
		Cash	1												2	5	0	0	00
		Folder No 128																	

Adjustment Entries — Page 2

1932																
Jan.	30	Rent Prepaid	2			1	1	0	00							
		Rental Income	3									1	1	0	00	
		To record the month's income from rent on property owned.														
	30	Depreciation Expense	3				5	7	00							
		Reserve for Depreciation on Building	1										5	7	00	
		To record the month's depreciation on the building at 5% per annum.														
	30	Depreciation Expense	3				2	7	00							
		Reserve for Depreciation on Automobile	2										2	7	00	
		To record the month's depreciation of 3% on the automobile.														
	30	Supplies Expense	4				4	8	00							
		Supplies	1										4	8	00	
		To record the amount of supplies used during the month														
	30	Interest Expense	4				3	7	50							
		Interest Accrued	2										3	7	50	
		To record the month's portion of the mortgage interest at 5% per annum.														
		Closing Entries														
	30	Commission on Sales	3			4	4	7	50							
		Loss and Gain	4									4	4	7	50	
		To record the closing of the Commission on Sales account.														
	30	Commission on Leases	3				5	4	00							
		Loss and Gain	4										5	4	00	
		To record the closing of the Commission on Leases account.														

Page 3

1932 Jan.	30	Rental Income	3				1	1	0	0	0	0					
		Loss and Gain	4										1	1	0	0	0
		To record the closing of the Rental Income account.															
	30	Loss and Gain	4				1	0	0	0	0	0					
		Salaries	3										1	0	0	0	0
		To record the closing of the Salaries account.															
	30	Loss and Gain	4					1	2	8	0	0					
		Advertising	3											1	2	8	0
		To record the closing of the Advertising account.															
	30	Loss and Gain	4					8	4	0	0	0					
		Depreciation Expense	3											8	4	0	0
		To record the closing of the Depreciation Expense account.															
	30	Loss and Gain	4					4	8	0	0	0					
		Supplies Expense	4											4	8	0	0
		To record the closing of the Supplies Expense account.															
	30	Loss and Gain	4					3	7	5	0	0					
		Interest Expense	4											3	7	5	0
		To record the closing of the Interest Expense account.															
	30	Loss and Gain	4				3	2	9	2	0	0					
		John Steele, Drawings	3										3	2	9	2	0
		To transfer this month's profit to the proprietor's drawing account.															

The following transactions took place during January, 1932:

January 4 A building lot was sold for $1,750.00. The commission of 5 per cent was collected in cash, the rest of the payment being made directly to the vendor by the vendee.

January 8 Three houses were advertised in the newspaper; charges of 40 cts. per line for a total of 32 lines were paid in cash, the expense being borne by the broker.

January 11 A single house of eight rooms was leased for one year beginning February 1 at $90 per month. The tenant deposited $60 to apply on the first month's rent. The broker deducted his commission of 5 per cent of a year's rent and remitted the balance to the owner.

January 12 One of the houses advertised on the eighth was sold for $9,000. The transfer did not take place till March 1, but the commission was considered earned when the sales contract was signed on January 12. On that day the purchaser deposited $500 with the broker, who retained his commission of 4 per cent and remitted the balance to the owner.

January 30 On Saturday, January 30, rent of $110 was received for February on the store next to the office.

The secretary-bookkeeper's salary for January was paid, $100.

Steele withdrew $250, leaving the rest of the profit for the month in the business.

An inventory, taken on January 30, disclosed that $242 of supplies were still on hand.

JOHN L. STEELE, REALTOR—NO. 2

RECORDING TRANSACTIONS IN THE JOURNAL

The outside transactions for February are indicated below. Enter these transactions in the journal, using therefor the paper in the Working Forms.

In charging for his services, Mr. Steele adhered to the rates established by the Boston Real Estate Exchange for suburbs of Boston.

FOR BOSTON SUBURBS
AND CITIES OTHER THAN BOSTON OVER 100,000 POPULATION

	Minimum
Sales	
4% up to $25,000 and 3% on next $175,000 and 1½% on balance of price (except as follows)	$100
Cooperative Apartment; 5% on price	
Land (vacant or with building incapable of yielding net rent), Garage or Stable; 5% up to $100,000 and 3% on balance	50
Farm, Industrial Plant or Wharf; 6%	200
Subdivision Contract; 15% to 25% by agreement	
Subdivision House Lot; 5% to 10% by agreement	25
Mortgages	
First Mortgages and Construction Loans; 2%	$ 50
Second Mortgages; 3%	50
Exchanges — Commissions as above paid by both parties.	
Leases	
Business Premises; 4% on rent for first two years, 2% on rent for next two years and 1% on rent for balance of term	$ 25
Less Than One Year or Tenant-at-Will; 45% of a month's rent	15
Garage, Industrial Plant, Stable, Wharf or Land; 6% on rent for a year and 3% on rent for balance of term	25
Residence or Apartment; 5% on rent for a year (or season) and 2½% on rent for balance of term	25
Tenant-at-Will; 50% of a month's rent	15
Management	
On Amounts Collected by Agent	6%
Monthly rents under $15 and Weekly Rents	10%
On Cost of Improvements (not repairs) supervised by Agent	5%
On Cost of Repairs, only when specifically agreed to	5%

The following transactions took place during February:

February 1 The interest on the mortgage was paid.

February 3 The previous month a two-family stucco house, at 46 Ipswich Street, had been listed under an exclusive sale contract.

JOHN L. STEELE
Realtor
464 Main Street Hartford
EXCLUSIVE SALE CONTRACT

Hartford Mass.
January 18 1932

In consideration of special service on the part of J. L. Steele, I hereby give the said J. L. Steele exclusive sale of the property listed below for a period of ..... three ..... months from this date, and thereafter until this agreement is revoked by me by written notice delivered to J. L. Steele. I hereby agree to pay J. L. Steele the usual broker's commission in case the property is sold during the life of this contract.

The two family stucco house with double garage at 46 Ipswich Street, being lot number 182, in the Ipswich subdivision, in which I have a good and clear title except for a mortgage of $4,500 held by the Stebbins Cooperative Bank. Sale price $12,500 cash.

Accepted by

John L. Steele

Signed in duplicate

SARAH BENTON Owner

On January 28 a customer, Henry Lancaster, submitted an offer of $9,500 which was not accepted. On February 1 he increased his offer to $10,000 in cash, which was accepted on February 3. A contract of sale was drawn up providing for the transfer of the property March 1.[1] On February 3 the purchaser deposited $800 with the broker, who deducted his commission and remitted the balance to the owner. Commissions were considered as earned upon the signing of the contract of sale.

AGREEMENT made this 3rd day of February A. D. 1932 between Sarah Benton of Hartford, County of Clinton, Commonwealth of Massachusetts,
of the first part, and Henry Lancaster of Oakland, County of Houston, Commonwealth aforesaid,
of the second part.

[1] On March 1 the owner, the broker, a representative of the bank holding the mortgage, and the attorney representing the purchaser met at the registry of deeds for the county in which the property was located. The attorney, who had already examined the title, satisfied himself that no changes had occurred since his examination. The quitclaim deed, which had been prepared by the broker, was signed by the owner, and revenue stamps at the rate of $1 per $1,000 of the agreed price were affixed at the expense of the owner. The representative of the Stebbins Cooperative Bank gave the attorney the canceled note for $4,500 and a discharge of the mortgage and surrendered the insurance policies properly assigned to the new owner.

The water rates, taxes, mortgage interest, and insurance premiums were adjusted as of the date of the transfer, and $9,200 plus the amount of the adjustments was paid to the vendor in treasurer's checks. The bank then collected $4,500 plus accrued interest from the mortgagor.

The computations were made by the broker as representative of the owner and were checked by the representatives of the other parties at interest.

The deed and the discharge of the mortgage were left at the registry of deeds to be recorded and were sent to the new owner six or seven weeks later.

The party of the first part hereby agrees to sell, and the party of the second part to purchase,
the land in said Hartford with the buildings thereon at No. 46 Ipswich Street, being Lot No. 182 in the Ipswich Subdivision as shown on a "Plan of land belonging to Ipswich Associates, Hartford, Mass.," by Harvey S. Johnson, C. E., dated February 10, 1922 and recorded with Clinton County Registry of Deeds in Book of Plans 243, Plan 21, and bounded and described as follows:

Northeasterly By Ipswich Street, Seventy-five (75) feet;

Southeasterly by Lot No. 183 on said plan, One Hundred (100) feet;

Southwesterly by land now or formerly of the Ipswich Associates, Seventy-five (75) feet;

Northwesterly by Lot No. 181 on said plan, one Hundred (100) feet; containing according to said plan Seventy-five Hundred (7500) square feet of land.

Being the same premises conveyed to the Seller by Joseph L. Dawes by deed dated June 19, 1924, recorded with said Deeds in Book 4625, Page 429.

Said premises are to be conveyed on or before March 1, 1932 by a good and sufficient Quitclaim deed of the party of the first part, conveying a good and clear title to the same free from all encumbrances except taxes assessed as of April 1, 1932, restrictions of record so far as the same may now be in force and applicable.
and for such deed and conveyance the party of the second part is to pay the sum of

Ten Thousand ($10,000)	dollars
of which Eight Hundred ($800)	dollars
has been paid this day, Ninety-two Hundred ($9200)	dollars

is to be paid in cash upon the delivery of said deed.

Full possession of the said premises, free of all tenants except tenant at will in lower apartment is to be delivered to the party of the second part at the time of the deed, the said premises to be then in the same condition in which they now are, reasonable use and wear of the buildings thereon, and damage by fire or other unavoidable casualty excepted.

The buildings on said premises shall, until the full performance of this agreement, be kept insured in the sum of Seven Thousand ($7000) dollars by the party of the first part, in offices satisfactory to the party of the second part, and, in case of any loss, all sums recovered or recoverable on account of said insurance shall be paid over or assigned on delivery of the deed, to the party of the second part, unless the premises shall previously have been restored to their former condition by the party of the first part.

Rents, Taxes, Insurance and Water Rates shall be apportioned as of the day of the delivery of the deed.

The deed is to be delivered, and the consideration paid, at the Registry of Deeds in which the deed should by law be recorded, at twelve o'clock, noon, of the First day of March 1932 unless the parties hereto agree in writing to some other time and place.

If the party of the first part shall be unable to give title or make conveyance as above stipulated, any payments made under this agreement shall be refunded, and all other obligations of either party hereunto shall cease, but the acceptance of a deed and possession by the party of the second part shall be deemed to be a full performance and discharge hereof.

In consideration of the above, Harold Benton, Husband of the said Sarah Benton , hereby agrees to join in the deed to be made as aforesaid, and to release to the party of the second part all right of curtsy and homestead in the said premises.

It is understood that a broker's commission of Four (4) per cent on the said sale is to be paid to John L. Steele, Agent by the said party of the first part.

IN WITNESS WHEREOF the said parties hereto and to another instrument of like tenor, set their hands and seals on the day and year first above written.

In presence of	SARAH BENTON (Seal)
JOHN L. STEELE	HAROLD BENTON (Seal)
EMILY NEWELL	HENRY LANCASTER

February 6 An apartment was rented for a year for $70 per month, beginning March 1. The tenant deposited $35 with the broker when the lease was signed on February 6, with the understanding that this would apply on the first month's rent. The rest of the commission was to be paid by the owner on March 1.

February 9 The house at 11 Ipswich Street was listed by the owner, A. V. McKenzie, and a listing contract similar to that in a previous transaction was signed.

February 10 Four houses, including the one above, were advertised at the expense of the broker, 38 lines at 40 cts. per line, paid in cash.

February 16 Some time previously, a client had been referred to Mr. Steele by a broker in Boston. After being shown a large number of properties, he decided to make an offer of $9,800 on a house listed for $11,000. The offer was accepted by the owner and a contract of sale was signed on the sixteenth, possession to be given March 1. In order to close the transaction Mr. Steele had to negotiate a first mortgage of $6,000. Since the sale went through his office, however, he made no charge for this service.

The purchaser deposited $500 when he signed the contract of sale. The commission was subtracted and the balance was remitted to the owner. One-half the commission was then paid to Holbrook and Mahoney, the brokers who referred the client to Mr. Steele.

February 23 Mr. Steele negotiated a sale of a lot belonging to a builder and a contract for the erection of a house thereon by the builder. The contract, which included specifications for the house, which was to be erected before June 1, was signed February 23. The total price was $16,400. The commission, at the rate of 4 per cent on the total price, was deposited with the broker.

February 27 A store was leased for three years to a baker for $85 per month. The lease was signed February 27, with occupation April 1. Fifty dollars was deposited with the broker when the lease was signed and the owner agreed to pay the rest of the commission from the first sums received from the tenant.

February 29 The secretary-bookkeeper's salary of $100 was paid for February. Rent of $110 was received for March on the store next to the office. Mr. Steele withdrew $250 in cash.

An inventory showed $186 in supplies still on hand.

JOHN L. STEELE, REALTOR—NO. 3

POSTING AND CLOSING

Set up the ledger accounts given in the first case of this series with the balances as of February 1, 1932. Post the journal entries resulting from the transactions during February, adjust and close the books as of February 29, and draw up the statements. Use the paper in the Working Forms.

THE ANALYSIS OF TRANSACTIONS—NO. 2

The facts given in the several sections below relate to adjustment and closing. As in The Analysis of Transactions—No. 1, set up the ledger accounts involved in each section. Prepare journal entries necessary to bring the adjustments on the books and post these entries. Then prepare and post journal entries necessary to close the accounts in accordance with the suggestions made in each section.

Journal and ledger paper for use in this case will be found in the Working Forms.

a. On December 31 the inventory of supplies still on hand was $15,613.74.

It was the practice of the company to charge Supplies Inventory when supplies were purchased. The balance of $76,724.83 therefore included the inventory of supplies at the beginning of the year and supplies purchased during the year. After adjustment, Supplies Inventory recorded as an asset the amount of inventory on hand and Supplies Expense recorded the expense for the period.

Show a journal entry to record the adjustment, and close Supplies Expense into Loss and Gain.

Balances December 31, 1937:

Supplies Inventory	$76,724.83
Supplies Expense	———
Loss and Gain	———

b. Wages and salaries accrued for the last four days in December amounted to $1,989.35.

Make entries necessary to set up the accrual and to close Wages Expense into Loss and Gain.

Balances December 31, 1937:

Wages Expense	$187,835.92
Wages Accrued	
Loss and Gain	

c. On December 6 the company took out a two-year fire insurance policy on its furniture and fixtures, paying therefor $1,283.50. The old policy expired at noon the same day, and the amount still prepaid on it as of December 1, was $17.12.

The balances in the accounts showed the amount of insurance prepaid and insurance expense for all policies in force. It was the custom of the company to charge insurance expense on the last day of each month for the amount applicable to that month. The balance of $3,732.96 in Insurance Expense represented the amount of that expense for 1937 through the month of November. The expense for December was $253.76, exclusive of the expense on the new and on the expiring policy.

Make entries to record the purchase of the new policy, and to record the proper insurance expense for December. Since all of the policies expired at noon, compute the expense up to noon December 31, and ignore the fact that this was not the close of business on that day. Close Insurance Expense to Loss and Gain.

Balances December 1, 1937:

Insurance Prepaid	$ 4,045.21
Insurance Expense	3,732.96
Cash	15,728 93
Loss and Gain	

d. In October, 1932, the Catron Company mortgaged its plant for $210,000.00. The terms of the mortgage provided that interest at 6 per cent was due and payable on December 31 of each year. The principal was to be amortized by the following payments:

December 31, 1935	$ 50,000 00
December 31, 1936	60,000.00
December 31, 1937	100,000.00

On December 31, 1937, the Catron Company made the last payment plus interest due at that time.

Record the December 31 payments and close to Loss and Gain any accounts which need to be closed at the end of the period.

Balances December 31, 1937:

Cash	$191,627.13
Interest Expense	7,293.26
Mortgage Payment due December 31, 1937	100,000.00
Accrued Interest Payable on Mortgage (to November 30)	5,500.00
Loss and Gain	

e. The leaseholds recorded below had cost $25,520.00 on July 1, 1934. The life of the leases was 20 years, and the cost was to be amortized over that life. At December 31, 1934, one-half year's amortization was taken, and a full year's amortization was charged at December 31 of subsequent years.

Make entries necessary to set up the amortization and to close that expense to Loss and Gain.

Balances December 31, 1937:

Leaseholds	$22,330 00
Amortization of Leaseholds	
Loss and Gain	

f. The Hulst Shoe Company obtained a large portion of its machinery on a rental or royalty basis from the Black Shoe Machinery Corporation, which retained title to the machines. The rental contract provided for payments on a time basis; the royalty payments were based upon the number of pairs of shoes on which machines were used.

The balances in the expense accounts below recorded the amount of the expenses for the first 11 months of the year. An assistant in the office of the factory manager of the Hulst Shoe Company prepared at the end of each month a schedule showing the amount of rent and of royalties applicable to that month on the machines obtained from the Black Shoe Machinery Corporation. This schedule was sent monthly to the accounting department and was the basis of an entry to the expense accounts below and to the accrual account. The amounts on December 31 were:

Rent:	
Stitching and cutting operations	$ 82.00
Sole leather and lasting rooms	137.75
Finishing operations	39.50
	$ 259.25
Royalties	1,570.58

The Hulst Shoe Company paid these charges on machinery monthly, but the accrual account ordinarily carried a small balance

because the billing by the Black Shoe Machinery Corporation did not coincide exactly with the accruals entered by the shoe company.

The Hulst Shoe Company paid $1,731.62 on December 11, on rents and royalties. Show entries to record this payment and entries as of December 31 to record the expense. Close Rent Expense and Royalty Expense into a clearing account, Cost of Goods Manufactured.

Balances December 1, 1937:

Cash	$24,631.96
Rent Expense	2,592.50
Royalty Expense	15,705 80
Accrued Rents and Royalties	2,085 84
Cost of Goods Manufactured	

g. In the process of closing the books of a trading company as of December 31, 1937, a physical inventory of merchandise still on hand was taken and found to be $490,352.81.

Enter the new inventory by debiting it and crediting Cost of Goods Sold. Close Purchase Returns and Allowances to Purchases, and transfer the balance of that account, or net purchases, to Cost of Goods Sold. Close the old inventory into Cost of Goods Sold. The balance of this account now represents the cost of the goods sold during the period.

Balances December 31, 1937:

Inventory of Merchandise, January 1, 1937	$601,463.52
Inventory of Merchandise, December 31, 1937	
Purchases	994,572.86
Purchase Returns and Allowances	8,831.79
Cost of Goods Sold	

h. Close Sales Returns and Allowances into Sales and the balance of that account, or net sales, into Trading. Close the balance of Cost of Goods Sold into Trading. The balance of this account now represents the gross profit on the goods sold during the period.

Balances December 31, 1937:

Cost of Goods Sold	$1,096,851.78
Sales	1,768,006.23
Sales Returns and Allowances	16,457.19
Trading	

i. Transfer the gross profit to Loss and Gain, and close the operating expenses into that account. Transfer the balance of

Loss and Gain, or net profit for the period, to Surplus. Close Dividends to Surplus.

Balances December 31, 1937:

Trading	$654,697.26
Wages and Salaries	178,906.73
Heat and Light	60,238.91
Advertising	139,117.42
Other Operating Expenses	220,724.38
Loss and Gain	
Surplus	331,835.67
Dividends	52,641.25

j. On December 31, the physical inventory of merchandise still on hand was $1,471,058.43.

Prepare and post all entries necessary to adjust and close the accounts shown below.

Balances December 31, 1937:

Merchandise Inventory, January 1, 1937	$1,804,390 56
Merchandise Inventory, December 31, 1937	
Surplus	995,507 01
Sales	5,304,018 69
Sales Returns and Allowances	49,371.57
Purchases	2,983,718 58
Discounts on Purchases	26,495.37
Salaries and Wages	536,720 19
Office Expenses	180,716 73
Selling Expenses	417,352.26
Administrative Expenses	466,088.40
Interest Expense	196,084 74
Dividends	157,923.75
Cost of Goods Sold	
Trading	
Loss and Gain	

General Trust Company

THE COMPUTATION OF DISCOUNT ON NOTES

This subject presents a number of complications because of the different forms of notes handled and because notes of the same form may appear in transactions in different ways. Also, current practices differ slightly between banks in different parts of the country, and even between banks in the same state. Business houses other than banks customarily use methods slightly different from those used by banks. This case records the computations and the journalization with respect to a group of typical note transactions by a bank of medium size, operating in Massachusetts.

Some notes are written with interest and some without. If a note is written with interest, the borrower receives the principal amount when the loan is made and pays the principal and the stipulated interest at maturity. If it is written without interest, it is discounted; that is, the stipulated amount is subtracted from the principal at the time the loan is made and the principal alone is paid at maturity. The bank makes its loans primarily on notes without interest, although it frequently loans on notes with interest when borrowers present notes received from their customers, and occasionally loans on the note of the borrower written with interest when the borrower for some reason wishes it written in that way.

The first step in computing interest or discount is to determine the time involved. The bank uses the 360-day basis, that is, one day's discount is considered to be $\frac{1}{360}$ of the agreed rate, and if the effective time on a note is 34 days the discount is $\frac{34}{360}$ of the rate per year. In computing the time on a note, the bank uses the total elapsed days, not counting the day of making or discount, but counting the date of maturity. If a note matures on Saturday, Sunday, or a bank holiday, it is payable on the next full business day and interest is computed to and including that day. It is the custom to permit borrowers to pay notes in advance if they wish, and discount is rebated if the amount involved is over $1.

Computations and booking are given for the following notes which are typical of those handled by the bank.

1. On November 27, 1931, the bank loaned C. E. Allen on a note of the same date for $1,000, due in three months, the note being written without interest, but a discount rate of 6 per cent being agreed upon.

A three months' note matures on the corresponding day of the calendar month three months hence. February 27, 1932, fell on Saturday, so the note was payable on Monday, February 29. The bank uses a special calendar which gives each day in the year a consecutive number and includes a calendar for the next year with the consecutive numbers continued so that the elapsed days can be determined by subtracting 331, the number for November 27, from 425, the number for February 29, giving 94 elapsed days. Without such a calendar the elapsed days can be computed in the following manner:

Month	Days in the month	Note dates	Elapsed days
November	30	November 27	3
December	31		31
January	31		31
February	29	February 29	29
			94

If the note had been written for 90 days, it would have matured on February 25 and the elapsed time would have been, of course, 90 days.

The note teller has a table giving simple interest at various rates for any number of days up to one year; but since the customary rate is 6 per cent, she performs most of the computations by the 6 per cent method and many of them in her head. For instance, since interest on $600 at 6 per cent is 10 cents per day, the interest on $600 for 94 days would be $9.40 and by dividing by six and multiplying by 10 the interest on $1,000 at 6 per cent for 94 days is found to be $15.67.

A somewhat more laborious method is often used by those who do not handle notes constantly. This involves the use of a table which need not be remembered since it can be computed in a few minutes at any time. It is based on the assumption that a year

consists of 360 days and gives rates for different numbers of days so that the rate corresponding to the effective days on a note can be found by addition.

Period, days	Rate
360	0.06
60	0.01
30	0.005
20	0.0033333
15	0.0025
10	0.0016666
6	0.001
5	0.0008333
4	0.0006666
3	0.0005
2	0.0003333
1	0.0001666

The repeating fractions should be carried to one more decimal place than there are places in the principal sum, including cents. For example, $9,000.00, six places, plus one, or seven places for the repeating fractions.

The interest on $1,000 for 94 days can be computed in the following manner by building up from the table the requisite number of days.

Period	Rate		Principal		Interest
94 days	0.06		$1,000		
60 days	0.01				
30 days	0.005				
4 days	0.0006666				
94 days	0.0156666	×	$1,000	=	$15.67

If the discount rate were 5 per cent, the interest could be computed on the 6 per cent basis and the result obtained by dividing by six and multiplying by five.

When this note was discounted, entries were made on the books as follows, and a notice of the amount of the discount and the amount of the credit to his account was sent to Mr. Allen.

November 27, 1931	Notes Discounted.....	$1,000	
	Deposits, C. E. Allen...		$984.33
	Discount.....		15.67

When the note was paid by Mr. Allen's check on the General Trust Company, the entry was:

February 29, 1932	Deposits, C. E. Allen.....	$1,000	
	Notes Discounted.....		$1,000

The bank uses only two interest accounts. All discount on notes is credited to Discount which is closed at the end of the period into Loss and Gain. The interest on mortgages, demand loans, and the balances of this bank carried in other banks is credited to an account called Interest, which is likewise closed into Loss and Gain at the end of the period. Interest and discount are carried on a cash basis and no accruals are figured even when the books are closed.

2. On December 2, 1931, the bank loaned A. R. James $300 on a note which appeared as follows:

Boston, Massachusetts
December 2, 1931

Thirty days after date I promise to pay three hundred dollars ($300) to the order of the General Trust Company, for value received, with interest at 6 per cent.

A. R. James

This type of note is unusual, since the bank ordinarily loans on notes without interest when the notes are made by the borrower, but it is done occasionally. The bank frequently discounts notes receivable of its customers which are written with interest.

Since this note was dated December 2 and was due in 30 days, it matured on January 1, 1932, which was a holiday, and the next day being Saturday the note was payable on Monday, January 4, and the period for interest computation was, therefore, 33 days.

If a note of this sort were large, the bank would add the interest to the principal and discount the total, but usually the bank simply takes the interest for the period.

The interest of $1.65 was added to the principal, in pencil, on the face of the note.

$ 1.65
300.00

$301.65

The journal entries were:

December 2, 1931	Notes Discounted.....	$301.65	
	Deposits, A. R. James...		$300.00
	Discount.....		1.65
January 4, 1932	Deposits, A. R. James.....	$301.65	
	Notes Discounted.....		$301.65

3. On December 2, 1931, the bank also discounted for A. R. James one of his notes receivable, given him by a customer, dated November 9, $500, 60 days, with interest at 6 per cent. Discount rate 6 per cent.

The note was due January 8, 1932, and the interest, payable at maturity date, was $5. The discount period was 37 days. The bank added the interest to the face of the note and discounted the total for 37 days, the discount being $3.11. The entries were as follows:

December 2, 1931	Notes Discounted.....	$505.00	
	Deposits, A. R. James...		$501.89
	Discount.....		3.11
January 8, 1932	Cash (check from maker) .	$505.00	
	Notes Discounted.....		$505.00

4. The bank discounted another note on December 2, 1931, which A. R. James had received from a customer, dated October 9, $600, three months, without interest. Discount rate 6 per cent.

The note was due January 9, 1932; but since this was Saturday, the note was payable on Monday, January 11. Discount was, therefore, computed for 40 days.

December 2, 1931	Notes Discounted.....	$600.00	
	Deposits, A. R. James...		$596.00
	Discount.....		4.00
January 11, 1932	Cash (check from maker)..	$600.00	
	Notes Discounted.....		$600.00

5. On September 11, 1931, E. J. Eaton discounted a note receivable, dated September 11, three months, $2,100 with interest at 5 per cent, discount rate 6 per cent.

This note matured on December 11, 1931, and the period, for both interest and discount, was 91 days. The interest for 91 days at 5 per cent was computed as $26.54. This was added to the face of the note and the total $2,126.54 discounted at 6 per cent for 91 days, the discount being $32.25. This was subtracted from $2,126.54 to give the credit to deposits.

September 11, 1931	Notes Discounted...	$2,126.54	
	Deposits, E. J. Eaton.....		$2,094.29
	Discount.....		32.25

The note was not paid by the maker on December 11, so notice of protest was sent to E. J. Eaton on that day.

On Monday, December 14, Mr. Eaton paid $2,127.60 in a check on the General Trust Company, this total representing the face of the note, $2,100, interest $26.54 and added interest for three days $1.06.

December 14, 1931	Deposits, E. J. Eaton	$2,127.60	
	Notes Discounted..		$2,126.54
	Interest.....		1.06

6. On April 16, 1931, the bank loaned H. N. Durfee $2,000 on a demand note with interest at 6 per cent secured by $3,000 face value of bonds as collateral. Interest on this note was payable July 1, October 1, January 1, and April 1, until the note was paid. Interest was computed on the 360-day basis for the elapsed days in each quarter, and for the elapsed days till and including the date of payment, no adjustments being made for Saturdays, Sundays, or holidays. This note was paid on January 6, 1932.

Period ending	Elapsed days	Interest
June 30.....	75	$25.00
September 30.....	92	30.67
December 31.....	92	30.67
January 6.....	6	2.00

April 16, 1931	Demand Loans.....	$2,000.00	
	Deposits, H. N. Durfee		$2,000.00
July 1, 1931	Deposits, H. N. Durfee.	25.00	
	Interest.....		25.00
October 1, 1931	Deposits, H. N. Durfee.	30.67	
	Interest.....		30.67
January 1, 1932	Deposits, H. N. Durfee.	30.67	
	Interest.....		30.67
January 6, 1932	Deposits, H. N. Durfee.	2,002.00	
	Demand Loans.....		2,000.00
	Interest.....		2.00

In this instance, each payment was made in a check on the General Trust Company. As explained above, interest on mortgages, demand loans, and balances in other banks is credited to Interest and not to Discount.

Mortgages are written for three years and interest is computed and entered quarterly as indicated in the instance of the demand loan. Construction mortgages are written for one year, and payments are made to the mortgagor as construction progresses, but interest is charged quarterly for the entire amount of the mortgage.

During the period covered by this case Sundays fell on the following days:

1931				1932		
September	October	November	December	January	February	March
6	4	1	6	3	7	6
13	11	8	13	10	14	13
20	18	15	20	17	21	20
27	25	22	27	24	28	27
		29		31		

1. Verify the computations of interest and discount on the notes above.

2. Make computations for the following notes and show journal entries to record in each case the making of the loans and payment at maturity. Use the paper in the Working Forms.

a. L. S. Douglas borrowed $800 from the bank on December 4, 1931, giving a note for two months, without interest. Discount rate 6 per cent.

b. On December 8, 1931, Howard Adams borrowed $2,300 on a note for 60 days, without interest, the rate being 5½ per cent.

c. Arthur Vaughn received a note for $1,700, with interest at 5 per cent, from a customer in settlement of an account. The note was dated December 1, 1931, and was payable at 90 days. On December 11, 1931, he discounted the note at the bank, the rate being 6 per cent. The customer paid the note at maturity.

d. E. R. Huff borrowed $4,000 on December 14, 1931, on a one-month note, without interest. Discount rate 6 per cent.

e. On December 15, 1931, John Wilshire discounted a note receivable dated December 10, and due in three months, for $2,400, without interest. Discount rate 6 per cent.

f. Mitchell Roy borrowed $800 on September 1 on a demand note, with interest at 6 per cent, and agreed to pay $200 on the first of each month until the note was paid in full. He also agreed to pay on the first of each month all interest which had run on those dates. Show all the journal entries involved.

WILCOX LUMBER COMPANY—NO. 1

RECORDING PURCHASES

The following purchases are typical of those recorded on the books of the company. In each instance, the original invoice received by the Wilcox Lumber Company from the vendor is given, together with a description of other phases of each purchase and of the payment therefor.

Using the paper in the Working Forms, enter in a journal all transactions involved in each purchase. Use the account Purchases and instead of a general Accounts Payable account, use Accounts Payable, Keefe Lumber Company. It is not customary to separate notes payable in the books by name; therefore all notes may be recorded in a single account, Notes Payable. Enter each purchase on the earliest date when both the goods and the invoice have been received.

A. On April 9, 1929, the company purchased three lots of No. 1 fir lumber to be delivered from the cargo of a vessel to arrive approximately one month later. The invoice on page 107, which carried the date of the original order, was received May 8, and the lumber arrived by rail May 9 and 10.

D4S, ¼″ scant meant that the lumber was dressed or planed on four sides and that both width and thickness were ¼ in. less than the measurements indicated. The No. 2 lumber developed in manufacturing was usually 5 to 10 per cent. Adjustment was asked for if it ran much above that on any order. 15/16 meant 15 pieces 16 ft. long.

The price quoted was f.o.b. the vendee's yard, but the ocean and railroad freight had to be paid within 48 hours of arrival, the

amounts so paid being deducted from the invoice price. The railroad collected the ocean freight as agent for the steamship line. The bill on page 108 was received from the railroad giving the ocean freight on each lot and the railroad freight for each car. This was paid May 11, 1929, by check to the Boston and Maine.

When the lumber was unloaded, it was checked on tally sheets and the board feet were computed. Lot 1612 was found to be

INVOICE

Boston, Mass. April 9 1929

Wilcox Lumber Co.

Portsmouth, Mass.

Bought of KEEFE WHOLESALE LUMBER CO.

Lumber and Timber

Sold by Mr. Pierce

Terms: 60 days Net or 4 mos. Note with Interest after 60 Days.

S. S. Cotuit Order #309 Shipped to Wilcox Lumber Co.

# 1 COMMON FIR—D4S ¼" SCANT, WITH #2 DEVELOPED IN MANUFACTURING INCLUDED				
Lot #1611	4 × 6"*	$^{15}/_{16}$, $^{150}/_{18}$, $^{50}/_{24}$, $^{100}/_{26}$, $^{12}/_{28}$, $^{5}/_{34}$	14492 FT.	
	4 × 8"	$^{93}/_{18}$	4464 FT.	
		18956 FT. at $36.00		$ 682.42
Lot #1612	2 × 8"	$^{980}/_{13}$, $^{51}/_{22}$, $^{100}/_{24}$, $^{100}/_{26}$		
		25149 FT. at $36.00		905.36
Lot #1614	2 × 6"	$^{490}/_{13}$, $^{400}/_{14}$, $^{100}/_{16}$, $^{500}/_{18}$, $^{50}/_{20}$, $^{50}/_{22}$, $^{28}/_{24}$, $^{100}/_{26}$		
		28432 FT. at $36.00		1,023.55
		72537 FT.		$2,611.33

Ocean freight to be paid in cash. Not subject to cash discount.

No claims, shortage or otherwise, will be allowed unless a complete tally, showing both pieces, size and lengths and verified by affidavit is returned to us within ten days of delivery.

*"Board foot. A volume equal to that of a board 1 ft. × 1 ft. × 1 in., or 144 cubic inches, used in measuring lumber. Thus a board 2" × 4" × 12' contains eight board feet."—From Webster's Collegiate Dictionary, 3d Ed., 1930.

Lot number	Ocean freight	Car number	Railroad freight
1611	$239.06	90273	$60.58
1612	289.38	80432	73.03
		91118	6.22
1614	321.96	90365	76.30
		90754	13.41

1504 board feet short. The tally sheets and an affidavit were sent to the vendor, and a credit memorandum was received under date of May 23.

An error was discovered in the computation of the board feet in lot 1614. A credit memorandum covering this was received May 28.

The purchase was entered in the books on May 10, when the last car was received and the shortage and error were carried to Purchase Returns and Allowances when the credit memoranda were received.

On June 1 the Wilcox Lumber Company sent the vendor three notes, two being for $500 each and maturing on September 10 and 20. The third was for the balance of the account as shown by their books and matured on September 30.

When the notes came due, they were paid with interest at 6 per cent beginning 60 days after May 10 (July 9). Interest was computed as $5.25, $6.08, and $6.36, respectively, on the three notes.

B. The invoice on page 109 was received June 9, 1929, and the shipment on June 22. Freight of $491.09 was paid June 23 by a check payable to the Boston and Maine Railroad. According to the terms of the purchase agreement, freight was to be deducted from the invoice price. Two notes were given to the vendor, one of $584.86 due November 10, and one of $584.87 due November 17. The notes were paid at maturity, together with interest at 6 per cent beginning 60 days after June 22 (August 21), the interest being $7.90 and $8.58, respectively.

Boston, Mass., June 8 1929

Wilcox Lumber Co.

Portsmouth, Mass.

Bought of KEEFE WHOLESALE LUMBER CO.

Lumber and Timber

Sold by Mr. Pierce

Terms: 60 days net or 4 Mos. Note with Interest after 60 days

SOO Line 75726 Order #4444 Shipped to Wilcox Lumber Co.

CEDAR SHINGLES

124,800	18″	Perfections	$7.26	$ 906.05
128,800	16″	XXXXXX	$5.86	754.77
				$1,660.82

Less Freight

C. On August 5, 1929, the wholesaler offered the lumber included on the invoice on page 110 at $29.50 and the salesman agreed orally that it need not be paid for until sold. Railroad freight of $41.62 was paid to the Boston and Maine on August 10, the day after the shipment was received. This amount was deducted from the bill. Ocean freight was paid by the vendor and this amount was not deducted, since the $252.95 had not been added to the invoice price.

Boston, Mass. August 5 1929

Wilcox Lumber Co.

Portsmouth, Mass.

Bought of KEEFE WHOLESALE LUMBER CO.

Lumber and Timber

Sold by Mr. Pierce

Terms: 60 Days or 4 Mos. Note with Int. after 60 days

S. S. "John Smith" Order #3437 Shipped to Wilcox Lumber Co., SDG., #1286—#501 Lot #18

#1 COMMON FIR &/OR HEMLOCK D4S ¾" × ½" SCT.*
WITH #2 DEVELOPED IN MFG. INC.

1 × 12" 13/16, 309/8, 449/10, 569/12, 195/14, 279/16, 87/18, 107/20, 8/22, 8/24

25,136 at $29.50 $741.51

WE PAY OCEAN FREIGHT $252.95

* ¾" × 11½" actual measurement.

In checking the shipment, several overages and shortages were discovered. A credit memorandum covering a net shortage of 486 ft.[1] was received August 27.

Overage		Shortage	
4/6	24	18/8	144
16/14	244	19/10	190
3/22	66	3/12	36
		15/16	240
	334	9/18	162
		2/24	48
			820
			334
			486

The balance was paid March 13, 1930, when most of the lumber had been sold.

[1] Note the error in the computation.

WILCOX LUMBER COMPANY—NO. 2

RECORDING SALES

Sales were of two general types. Most of them were made "over the counter" without a contract or agreement in advance. Some of these were for cash, but 90 per cent in dollar volume were on account. The terms were 30 days net, but they were allowed in many instances to run longer, depending on the credit of the customer.

When a builder built a house, either for sale after completion or on contract, he usually asked two or three lumber companies to figure on the bill of materials. If the Wilcox Lumber Company got the order, a contract was prepared which usually provided for a monthly billing for the material delivered during the month. These bills were supposed to be paid currently from the first and second mortgage financing. In many cases this was done, but in the lumber and building industries in 1929 there was no rigid administration of credit terms. Builders had most of their funds

WILCOX LUMBER COMPANY
Portsmouth, Mass., October 1, 1929

Sold To: John Anderson — Checked By J

Sold By N — Delivered 16 Main Street — Ledger

Teamed By D

Quantity	Material	Feet	Price		Amount	
2	Doors for Cupboard 16″ × 48″		$ 1	70	$ 3	40
5	Pcs. 4 × 8 Rockwall	160	45		7	20
12″	Pine 3/12	24	90		2	16
200	Lineal ft. 6″ N. C. Finish	100	100		10	00
200	Lineal ft. Base Mldg.			03	6	00
16	Side Stop 5′	80		4½	3	60
8	Head Stop 3′	24		7½	1	80
4	Door Frames 2–6–6–6–5⅜ wide				12	00
5	Door Frames 2–6–6–6–3½ wide				11	00
					57	16

invested in lots or completed houses, and if one lumber company imposed strict credit terms the business went elsewhere.

Enter all transactions involved in each sale in a journal, using therefor the paper in the Working Forms. Instead of a general Accounts Receivable account, use a separate account for each customer, as Accounts Receivable, John Anderson, and use a Sales account.

A. On October 1 lumber was sold to John Anderson as shown by the invoice on page 111. Payment was received November 17.

B.

WILCOX LUMBER COMPANY
Portsmouth, Mass., October 1, 1929

Sold To: H. Ransome

Checked By J

Sold By N

Delivered #2 Cliff Road

Ledger

Teamed By D

Quantity	Material	Feet	Price	Amount
2 × 8	$5\frac{3}{16}$ $30\frac{1}{14}$	1,691	$42 00	$ 71 02
2 × 10	$2\frac{2}{22}$	74	48	3 55
2 × 6	$18\frac{1}{10}$	180	42	7 56
2 × 6	$15\frac{1}{16}$ $15\frac{1}{13}$ $16\frac{1}{17}$	738	42	31 00
88	Lineal 3″ crown		04	3 52
4 × 6	$\frac{1}{24}$	48	44	2 11
100	Lineal 2 × 4	67	40	2 68
100	Lineal 2 × 3	50	40	2 00
	300 sq. ft. S. E. Fir Bds.		37	11 10
				134 54

A partial payment of $75 was received November 6 and $30 on December 5. The balance of the account was carried until December 31, 1930, when it was written off to Reserve for Bad Debts.

C. A sale was made to Henry Wallis October 4 as shown by the invoice on page 113 and payment was received in cash on that date. Wallis had had an account but had paid in full some time previously. Carry the sale through his account, so that the account will record the amount of sales to him.

D. On October 5 H. A. Jensen submitted a list of materials for a house he planned to build at 28 School Street and asked for a price. The materials were figured at cost and a margin was added to give a total of $978. He had obtained figures at two other

WILCOX LUMBER COMPANY
Portsmouth, Mass., October 4, 1929

Sold To: Henry Wallis — Checked By J

Sold By N — Delivered 186 South Avenue — Ledger

Teamed By D

Quantity	Material	Feet	Price	Amount
84	Lineal 4 × 5 Gutter		$ 15	$12 60
	2/6	61	51	3 11
2 × 7	2/4	56	50	2 80
				18 51

yards but accepted the quotation from the Wilcox Lumber Company and signed a contract October 7.

The contract contained a provision which made it a conditional sale and enabled the lumber company to file a lien on the house. The company did not ordinarily do this but took a second mortgage on the house for $1,500. No lumber was delivered until the attorney of the company reported that the second mortgage was recorded.

The lumber was delivered as requested by the builder and a detailed record was kept and compared with the contract. On the last day of each month, a bill was sent for an amount in round numbers which corresponded to the portion of the contract delivered. Extras were billed as an addition in detail.

Billings and payments on this contract were as follows:

	Billings		Payments
October 31	$ 325.00	November 14	$ 300.00
November 30	450.00	December 8	400.00
December 31	203.00	December 27	150.00
December 31 Extras	78.31	January 8	206.31
	$1,056.31		$1,056.31

At the time of the payment on December 27, all of the lumber had been delivered and Jensen asked that the second mortgage be discharged, as he had a chance to sell the house. Since his credit was good, the mortgage was released and the house was sold on January 3, 1930.

Consider the second mortgage as security for the debt and do not enter it in the books. Book the sale as of the date of the billings.

BREWSTER PAPER COMPANY—NO. 1

THE PURCHASE OF MATERIALS, SUPPLIES, AND MACHINERY

Using the paper in the Working Forms, enter the following transactions in a journal:

TAREYTON FUEL COMPANY
Boston, Massachusetts

Sold To:
Brewster Paper Company
Oswego, Maine

Date June 5, 1933
Invoice No. P-7
Shipping No. Sn-27
Shipped From Portland
F. O. B. Cars

Shipped To — Oswego, Maine

Terms: Cash on 15th. of Month Following Shipment

Date	Car Initial	Car Number	Grade	Weight—Lbs.	Price per 2,240 Lbs.	Amount
1933 6/1	Me C	2970	Nut & Slack	97,500		
		3004		99,200		
		2991		94,900		
				291,600	$4.50	$585.80

Rubber Stamp
Bill Rec'd. June 7, 1933
Goods Rec'd. 6/1
Frt. Pro. 50–51–52
Mill S
Approved
B Office N
F. O. B. Cars Portland
Account Fuel Expense

A. The invoice on page 114, covering the purchase of three carloads of coal, was received by the Brewster Paper Company.

The invoice, in duplicate form, was received at the general office of the company. It was rubber stamped by a clerk in the purchasing department, who indicated the date of receipt of the bill, f.o.b. point, and account to be charged, and then had the invoice approved by the purchasing agent. The original copy was then forwarded to the mill for approval there by the mill representative. The duplicate copy was retained in the general office until the original was returned approved. The initial B on the lower left of the invoice was the initial of the receiving clerk at the mill, who also indicated the date the goods were received and the numbers of the freight bills covering the shipment. ("Freight Pro." meant freight progressive, that is, the progressive number of the freight bills received from the railroad covering this shipment.) When the invoice was approved, it was returned to the accounting department at the general office where the payment date was indicated after the price and extensions had been checked. The transaction was then ready for entry in the journal.

At the time of entry, the invoice was rubber stamped as follows:

Journal Entry
Page By
Checked

The journal page was indicated, together with the initial of the person making the entry. The entry was checked by a second clerk who also added his initial. The invoice was then filed awaiting date of payment.

Upon payment, the cashier made a journal entry and a second clerk checked the entry and placed on the invoice the journal page, the check number, and his initial. The invoice was then stamped "Paid" and filed in a "Bills Paid" file under the name of the vendor.

A statement was received from the railroad company each day, which was a summary of bills covering shipments received on the previous day. Freight bills were not carried through Accounts Payable, because they were paid shortly after they were received. Freight bills covering this invoice were as follows:

No. 50	$ 65.72
No. 51	66.87
No. 52	63.97
	$196.56

These freight bills were paid in total on June 3, 1933. All freight was charged to Freight Expense, which was used to

HUDSON PULP COMPANY
Jamaica, New York

To—Brewster Paper Company
Oswego, Maine
Shipped To—Oswego, Maine

Date June, 1933
Inv. No. 513

Terms: Net Cash—30 Days
Interest at 6% Per Annum Chargeable on Overdue Payments

91 Bales (13.86 Tons) of Hudson Prime Bleached Sulphite, Strong Quality
33,905 lbs. at 91.59% equal to 31,054 lbs. air dry weight at $2.00 per 100 lbs. Dock Portland, Maine — $621.08

Test Weight 31.190 lbs.
Billed Weight 31.054

136 over
.43%

Rubber Stamp
Bill Rec'd. June 22, 1933
Goods Rec'd. 6/24
Frt. Pro. #562
Mill S
Approved
B Office N
F. O. B. Ex. Dock Portland
Account Pulp Stock

centralize all freight expenditures. Freight bills were sorted at the close of each month by classification such as Pulp Stock, Fuel Expense, Supplies, Machinery and Equipment, etc. The proper accounts were then debited for their share of the freight expense, a credit for the total being made to Freight Expense to clear this account.

The Tareyton Fuel Company was paid in full on June 15, 1933.

Note.—It was the policy of this company to charge coal to Fuel Expense as purchased. At the close of the year an estimate was made

of the quantity of coal on hand. This quantity was priced by working back from the most recent invoice until sufficient invoices had been drawn from the files to cover the amount of coal on hand. Freight bills covering coal shipments were also drawn from the files. The total value so obtained formed the basis of a journal entry debiting Fuel Inventory and crediting Fuel Expense. The Fuel Expense account then represented fuel consumed.

B. The invoice shown on page 116 was received covering a purchase of pulp.

VALLEY PULP COMPANY
130 East 42nd. St.
New York, N. Y.

Invoice No.	N P—568		
Your Order No.	B O—424	Terms—Net 30 days	
Our Order No.	N P—368 G		
Shipped From	Portland, Me.	Date—June 26th, 1933	
Car. No.	Me C—36172		
Routing	Me Cent. R. R.	Sold To—Brewster Paper Company Oswego, Maine	
		Shipped To—Oswego, Maine	

	A. D. Tons	On Dock	
144 Bales Valley New Standard Bleached Sulphite Pulp Lot #844	27.204	$41.00	$1,115.36

Rubber Stamp
Bill Rec'd. July 1, 1933
Goods Rec'd. 6/28
Frt. Pro. #636
Mill S
Approved
B Office N
F. O. B. Ex. Dock Portland
Account Pulp Stock

All pulp received was tested by the chemists of the Brewster Paper Company to check the air dry weight. Any marked difference between the test weight and the billed weight was called to the attention of the Hudson Pulp Company for adjustment. If the Hudson Pulp Company objected to the results of the test, an independent chemist was called in to make a test and his word was accepted as final. No adjustment was made

if the difference between billed weight and test weight was less than 1 per cent.

Pulp was charged to an inventory account called Pulp Stock.

The freight on this shipment from Portland to Oswego amounted to $38.71 and was paid on June 26.

The pulp bill was paid in full on July 15, 1933.

C. The invoice shown on page 117 was received covering another purchase of pulp.

This bill was paid on July 12.

Freight on this shipment amounted to $65.60 and was paid on June 30.

D. The following invoice was received covering a purchase of rosin:

PAPER MANUFACTURER'S SUPPLY CO.
Boston, Massachusetts

Date—July 5, 1933

To—Brewster Paper Company
Oswego, Maine

Sale No. B2638-6827
Buyer's No. B O 364
Via—B. & M. R. R. Freight—Collect and Allowed

300 Bbls. Gum Rosin 87.600 # at 4.50 per 280 # C I F Oswego Maine	$1,407 87
Less Freight at 39¢ cwt. & 3¢ per pkg.	350.64
	$1,057.23

Terms—Net cash payable on receipt of bills of lading

Rubber Stamp

Bill Rec'd. July 7, 1933
Goods Rec'd. July 7, 1933
Frt. Pro. F 112
Mill S
Approved B Office N
F. O. B. Oswego
Account Manufacturing Supplies Expense

Rosin was purchased on a C. I. F. basis; that is, the purchase price included the cost of the article, insurance during shipment, and freight. This particular shipment, however, was sent freight

collect, which meant that the Brewster Paper Company had to pay the freight on arrival. In recognition of this, the vendor's traffic manager estimated what the freight would be and this amount was deducted from the invoice at the time that it was prepared. In journalizing the transaction, the Brewster Paper Company entered only the net amount of $1,057.23 from this bill. The freight on this shipment actually amounted to $350.64 and was paid on July 8. At the close of the month, as part of the allocation of Freight Expense this amount was charged to Manufacturing Supplies Expense to bring the cost of the rosin up to $1,407.87. The rosin was paid for on July 11.

E. The following invoice was received, covering printing of office forms, paper for which was supplied by the Brewster Paper Company:

July 18, 1933

Brewster Paper Company
Oswego, Maine

To Oswego Press, Dr.
Oswego, Maine

Terms 3% Cash 10 days

Number	Quantity	Description	Price
B O 326	1,300	4—5/8 × 10—3/16 Blue Printed and Ruled in Black	
	3,250	" " Buff " " " " Red	
	8,500	" " " " " " " Black	
	1,850	" " " " " " " Green	
	14,900	All forms punched 12 round holes	$40.00

Rubber Stamp
Bill Rec'd. July 19, 1933
Goods Rec'd. 7/19
Frt. Pro.
Mill S
Approved
Office N
F. O. B.
Account Office Expense

This bill was paid on July 26. The 3 per cent cash discount was taken. Inasmuch as all cash discounts were taken, invoices were journalized at the billed price less discount.

F. The invoice shown on page 121 was received covering a purchase of nails.

Items such as nails, rope, small tools, etc., were charged to a Storehouse account, from which they were issued to the mill on requisition.

This bill was paid July 3. The discount was taken at the time the invoice was first journalized.

G. The invoice shown on page 122 was received covering the purchase of a new machine.

HARDWARE SUPPLY COMPANY
Boston, Massachusetts

Inv. Date June 26, 1933
Refer to
Invoice No. WSW 9091

Car No.
Freight—Prepaid
F. O. B.—Oswego, Maine

Sold To—Brewster Paper Company
Oswego, Maine

Shipped—To same
Destination—Oswego, Maine
Via—B. & M. c/o M. C. Pick Up

Important

Cash Discount Notice
If paid within the discount period, the discount will be allowed on

$221.31

No discount is allowed on freight included in delivered cost

Terms: Due net 60 days from date of invoice, 2 per cent cash discount will be allowed on the discountable amount shown under "important cash discount notice," if payment is made within 10 days from date of invoice.

Quantity	Description of Material	Weight	Price Extras	Amount	Total
5 Kegs	6 smooth box		65	$ 3.25	
1	8		55	.55	
5	4 common		80	4.00	
5	6		60	3.00	
5	8		50	2.50	
10	10		40	4 00	
10	20		25	2 50	
5	30		25	1.25	
10	50		25	2.50	
56 Kegs		5,600 Base	2.803	156.97	$180.52
	Coated Nails		Extras		
10 Kegs	10 Sinkers		65	$ 6.50	
10	9		75	7.50	
20		2,000 Base	2.803	56.06	70 06
76 Kegs Total		7,600			$250.58

Rubber Stamp

Bill Rec'd. June 29, 1933
Goods Rec'd. 6/29
Frt. Pro. F 2649
Mill S
Approved
B Office N
F. O. B. Oswego
Account Storehouse

MANSFIELD EQUIPMENT COMPANY
Mansfield, N. Y.

Sold To—Brewster Paper Company
Oswego, Maine

Shipped To—Oswego, Maine
Via—Freight—Me. Central R. R.
Delivery

Date June 16, 1933
Inv. No. 16450
Your Order No. 56
Dated 6/1/33
Our Order No. 418
F. O. B. Factory
Terms: 1% 10 days 30 days net

1 Model X Mansfield Portable Mixer 1 H. P., 110 Volt, Single Phase, 60 Cycle 1¾" × 72" Monel Shaft, 6" Dual Propellers	$205.00

Rubber Stamp
Bill Rec'd. June 19, 1933
Goods Rec'd. 6/25
Frt. Pro. F 1820 A
Mill S
Approved
B Office N
F. O. B. Mansfield
Account Machinery and
Equipment

This bill, less 1 per cent for cash discount, was paid June 27.

The freight on this shipment amounted to $3.21 and was paid on June 26.

BREWSTER PAPER COMPANY—NO. 2

JOURNALIZING SALES TRANSACTIONS

Orders received by this company were handled by an order department, which was the contact point between sales and production. This department carried on the bulk of correspondence with sales offices regarding customers' orders. It was responsible for keeping posted on prices of all items manufactured, and for pricing all invoices sent to customers. When an order had been checked, to make sure that it was understood and could be filled, detailed instructions regarding it were sent to the mill, and it was placed in an "ordered" file. The work of the order department required it to be in constant touch with the manufacturing and sales departments.

When an order was shipped, the mill office made out an invoice in triplicate (additional copies prepared if requested by customers), showing the items shipped and their quantities. It did not enter the prices charged, that function being handled by the order department. The original and duplicate were sent to the general office and the triplicate was retained in the files at the mill office. At the general office the order department checked the invoice with the customer's original order and wrote in unit prices on the duplicate. The customer's order was filed under his name for future reference. The original and duplicate were then sent to the billing clerks, where the unit prices were inserted on the original. Working independently, one clerk extended the prices on the original and another extended them on the duplicate, the weights being carefully analyzed and checked as well. The two were then compared, and, if alike, it was assumed that the extensions were correct. The original was then sent to the customer and the duplicate was placed in a loose-leaf folder to serve as the basis for journal entries.

The following duplicates, among others, appeared in the folder for sales made on August 21, 1933. (Terms on all sales were 1 per cent 10 days, net 30 days, f.o.b. mill.)[1]

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[1] Reading an invoice from left to right, Bundles, Rolls, and Reams indicated the units in which the items were prepared. The Order Number was the number given to this order by the customer and was used when referring to this particular order with the customer. (The paper company's order number appeared on the duplicate

(*Continued on page 124*)

Enter these transactions in a journal, using the paper in the Working Forms.

Sold To Paper Supply Company
14 Kay Street
Boston, Mass.

Bdls.	Rolls	Reams	Order No.			Price	
	30		1234	18 50 Modern Waxed	1225	4⅝	$56.66
			1234	48 50 Blackstone	253	2¾	6.96
							$63.62

F.O.B. Mill
Nugent Motor Trans. Co.

Sold To Paper Wholesalers, Inc.
180 First Street
Boston, Mass.

Bdls.	Rolls	Reams	Order No.		Price	
	50		907A	18 Brewster Striped	1370	4½	$61.65

Brewster Striped Labels
No weight marks

F.O.B. Mill
B. & M.R.R. Delivery Service

Sold To Hastings & Kay
230 Fulton Street
New York, N. Y.

Bdls.	Rolls	Reams	Order No.		Price		
10		10	1891	40 × 48 200 General Fibre	1981		
10		10	1891	40 × 48 200 General Fibre	1993		
25		25	1891	40 × 48 250 General Fibre	6294		
					10268	2	$205.36

No grade marks

F.O.B. Mill
Charge Freight[1]
In New York Car Frt. Prepaid $ 31 83

Sold To Pennsylvania Stationery Co.
221 Market Street
Philadelphia, Pa.

Bdls.	Rolls	Reams	Order No.		Price		
	20		AX 201	9 35 Brewster Drug	360		
	15		AX 201	12 35 Brewster Drug	340		
	10		AX 201	30 35 Brewster Drug	115		
					815	4¼	$34.64

[1] In this instance, the freight was prepaid and the amount was charged to the customer as an addition to his bill.

(*Continued from page 123*)
retained in the general office, in a column provided solely for the paper company's use.) This was followed by a description of the items ordered giving the size, the name, and the number of pounds. The price was the unit price per pound.

Sold To Smith & Bird
20 Knowlton Street
New York, N. Y.

Bdls.	Rolls	Reams	Order No.				Price	
	5		3020	38½	35	Manila Sh. #111	268	
				40	35	Manila Sh.	1433	
				38½	35	Manila Sh.	1109	
				42	35	Manila Sh.	930	
							3740	4¼ $158.95
						F.O.B. Mill		
						Charge Freight[1]		$ 11.59

[1] In this instance the freight was prepaid and the amount was charged to the customer as an addition to his bill.

Payment for these invoices was received as follows:[1]

Paper Supply Company	August 29
Paper Wholesalers, Inc.	August 29
Hastings & Kay	September 2
Pennsylvania Stationery Company	August 30
Smith & Bird	August 30

DETROIT EDISON COMPANY—NO. 1

TRANSACTIONS INVOLVING FUNDED DEBT

The following excerpt was taken from the text of the report of the Detroit Edison Company for December 31, 1931:

BALANCE SHEET—LIABILITIES

Important changes have been made [during 1931] in the Long Term Debt. The entire First and Refunding issue which was due in 1940, amounting to $34,984,000, was called for redemption on March 1st, at a premium of 5%. More than half of this issue ($18,319,000) bore interest at 6%, and the remainder bore 5%. The 6% bonds were sold in the troubled years 1920 and 1921, when they brought very low prices notwithstanding their high rate of interest. On February 1, we sold 4½% bonds to the same principal amount as the bonds called—this 4½% series being Series D, General and Refunding Bonds due in 1961, but payable at par if called during five preceding years. This substitution of a 4½% issue makes a decrease by $358,110 of annual interest charge on the same par value. The unamortized remainder of the selling discount and expense of the First and Refunding Bonds was $2,221,573.06, which has been written off against Surplus. This is its proper disposition and it occasions the reduction of Surplus which is shown. On the issue of the like amount of General and Refunding Bonds, the State fees and recording tax were paid to the amount of $227,396, which amount likewise has been written off out of Surplus, according to our custom. The discount on the sale of this lot of 4½%

[1] Discounts were not allowed on freight charged.

bonds [assume that the discount was 3½ per cent], and the premium paid on the call, are charged to Debt Discount and Expense, to be amortized in equal monthly charges over the long life of the new bonds.

Show journal entries for the above transactions in as much detail as possible. Use the paper in the Working Forms.

PENDAR PAPER COMPANY—NO. 1

RESERVE FOR BAD DEBTS AND RELATED ACCOUNTS

The trial balance of the Pendar Paper Company at December 31, 1935, before adjustment and closing showed the following balances in certain accounts related to receivables:

Sales	$1,118,200
Bad Debt Expense	5,600
Bad Debts Collected	4,000
Accounts Receivable	133,700
Bad Debts Charged Off	
Reserve for Bad Debts	8,200
Loss and Gain	

In order to facilitate the preparation of monthly statements, it was the practice of the company to charge ½ per cent of sales as bad debt expense each month. This produced the balance of $5,600 appearing above. The company did not charge off bad debts until the end of the year; therefore that account above showed no balance, but the credit manager had determined that $12,300 should be charged off as of December 31. The credit department continued its efforts to collect accounts after they had been written off, and had collected $4,000 during 1935.

While entries were made to bad debt expense monthly on the basis of a percentage of sales, the company adjusted the amount of bad debt expense and of the reserve for bad debts as of the end of the year through the use of additional facts. Bad debts collected and bad debts charged off were both closed into the reserve for bad debts. The amount needed in the reserve was then determined by the method described below. If the actual balance was less than the reserve requirement as computed, bad debt expense was increased to bring the reserve up to the required amount. If the actual balance was too high, bad debt expense was reduced in order to bring the reserve down.

Total accounts receivable at December 31, 1935, were $121,400. Of this amount, $35,200 consisted of the balances of the accounts

which were in part overdue in that some portion of the balance of each account was over two months old. That part of the total balance of overdue accounts arising in the current month, December, was $11,000. The amount arising in the second month, November, was $10,000, and that arising from sales during the third month, October, was $11,000.

In accordance with an established practice, it was desired to have the reserve for bad debts after closing show the following percentages of the balances standing in overdue accounts: current month, ¼ per cent; second month, 1 per cent; third month, 3 per cent; fourth, fifth, and sixth months, 25 per cent; seventh, eighth, and ninth months, 50 per cent; tenth month and over, 100 per cent. No reserve was provided for the balance of current accounts or for notes receivable. The accounts receivable control sheet showed the following data for December 31, 1935, after the $12,300 credit referred to above.

	Months old	December 31
	10 and over	$ 1,100
	9	400
	8	200
	7	300
	6	200
	5	400
	4	600
	3	11,000
Total of Overdue Balances of Overdue Accounts		$ 14,200
Current Balances in Overdue Accounts	2	10,000
	1	11,000
Total Balance of Overdue Accounts		$ 35,200
Balance of Current Accounts		86,200
Total Accounts Receivable		$121,400
Notes Receivable		9,200
Total Outstanding Receivables		$130,600

Set up the ledger accounts concerned. Make and post journal entries to record bad debts charged off and to adjust the reserve and close the accounts concerned in accordance with the practice of the company. Use the paper in the Working Forms.

VIII. ADJUSTING AND CLOSING THE BOOKS. THE USE OF THE WORK SHEET

ROBINSON SHOE COMPANY—NO. 1

ADJUSTING AND CLOSING THE BOOKS

In the Working Forms will be found the ledger of the Robinson Shoe Company at December 31, 1936, before adjusting and closing. This ledger included the results of all transactions during 1936, except those presently to be entered in the process of adjusting and closing the books. In the original ledger of the company, most of the accounts included a number of entries made since the books were last closed at December 31, 1935, and a few accounts, such as Cash and Sales, included a very large number of entries. In order to save space, however, full detail is given with respect to only two accounts: Notes Payable and Interest Expense. For the other accounts only the balance is given as it stood in the ledger at December 31, 1936.

Certain preparatory work was done during December in computing the amount of adjustments, but the actual closing took place early in January as of the close of business on December 31. The adjustment data, determined as of December 31, were as follows:

Inventory of Merchandise, December 31, 1936	$1,756,142
Inventory of Supplies, December 31, 1936	16,757
Unexpired Insurance	63,627
Rent Prepaid	52,949
Interest Expense Accrued	3,118
Wages and Salaries Accrued	14,805
Depreciation Expense	223,569
Estimated Loss from Bad Debts	2,407
Federal Income Tax	64,093

1. Take a trial balance of the ledger as it stands before adjustment, using therefor the paper in the Working Forms.

2. Record in the general journal in the Working Forms, entries necessary to bring the adjustment data into the books.

3. Post these adjustment entries to the ledger.

4. Record in the general journal entries necessary to close the books. In closing use the following clearing accounts: Cost of Goods Sold, Trading, and Loss and Gain.

5. Post the closing entries to the ledger.

6. Close and rule all accounts.

7. Draw up the balance sheet as of December 31, 1936.

8. Draw up the income statement and the surplus reconciliation statement for the year ending on that date.

ROBINSON SHOE COMPANY—NO. 2

THE WORK SHEET

The trial balance, taken from the books as at December 31, 1937, before adjustment and closing, is given in the Working Forms. In Robinson Shoe Company—No. 1 the process of adjustment and closing involved direct use of the journal and ledger. When the number of accounts is large, this is awkward, and the process has the further difficulty that if an error is made in any of the entries, it is not likely to be discovered until after the entry has been posted to the ledger. Correction is then difficult. In practice accountants use a work sheet on which all entries involved in adjusting and closing may be made or indicated, and the entire process checked before any entries whatever are made in the journal or posted to the ledger. In any complicated closing process a work sheet saves time and avoids in large part the defacing of the books of account with erroneous entries which later need to be corrected.

In the Working Forms a work sheet of this form, developed for another company, is given as an indication of one method commonly used.

It may be observed that the adjustment entries are made in the Adjustment columns in a form similar to that in which they were made in the journal in the preceding case. Those amounts which will appear in the Cost of Goods Sold account in the ledger are then transferred to the Cost of Goods Sold columns. The balance of these columns is transferred to the Trading columns, and any amounts which in the ledger are closed into that account appear likewise in these columns. The balance of the Trading columns, which is the gross profit for the period, is transferred to the Loss and Gain columns, and any amounts appearing on the trial balance

which in practice are closed directly to Loss and Gain are extended to these columns. The balance of the Loss and Gain columns is transferred to the Surplus columns. Dividends and any other amounts carried direct to Surplus are also shown in the Surplus columns. The balance of Surplus is transferred to the Balance Sheet columns as the amount of surplus at the end of the year.

With a work sheet arranged in this form, the process of adjustment and closing as represented on the work sheet is an exact parallel of the method illustrated in Robinson Shoe Company—No. 1, in which adjusting and closing entries were made directly in the journal and posted therefrom to the ledger. On the work sheet the Adjustment columns give in full detail the adjustment entries which will later be made in the journal. The Cost of Goods Sold, Trading, Loss and Gain, and Surplus columns include the same amounts which will be found in ledger accounts of the same titles after the closing process is completed.

When the work sheet is finished and checked, both the adjusting and closing entries may be drawn directly therefrom. The balance sheet and income statement may also be drawn up directly from the work sheet. In practice the work sheets prepared for successive closings are customarily included as a part of the general ledger or filed in other permanent form so as to be available for later reference in any problem involving the source of the statements or the procedure used in closing in prior periods.

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1. Prepare the work sheet for the Robinson Shoe Company for December 31, 1937, in the form shown for Harrington and Marshall, Inc. The adjustment data, determined as of December 31, were as follows:

Inventory of Merchandise, December 31, 1937	$1,317,378
Inventory of Supplies, December 31, 1937	15,463
Unexpired Insurance	13,081
Rent Prepaid	47,577
Wages and Salaries Accrued	17,473
Depreciation Expense	226,445
Estimated Loss from Bad Debts	2,208
Federal Income Tax	55,536

2. After the work sheet has been checked and found correct, prepare therefrom the adjusting entries and the closing entries.

3. Draw up from the work sheet the balance sheet, the income statement, and the surplus reconciliation statement.

DRAKE CHEMICAL COMPANY—NO. 1

ADJUSTING AND CLOSING THE BOOKS OF A MANUFACTURING ENTERPRISE

The process of adjustment and closing in a manufacturing business differs from that in a merchandising concern in two particulars. There are, typically, three inventories, Raw Materials, Goods in Process, and Finished Goods, and it is necessary in closing to differentiate clearly between manufacturing expenses and other expenses.

The process of adjustment is the same as that in a merchandising business except that there are three inventory adjustments to make. The appropriate inventory account is debited to record each of the new inventories, the credit for raw materials being to Raw Materials Used, the credit for goods in process to Cost of Goods Manufactured, and for finished goods to Cost of Goods Sold.

Several methods of closing are in general use, but only one will be illustrated at this point. Under this method five main clearing accounts are used: Raw Materials Used, Cost of Goods Manufactured, Cost of Goods Sold, Trading, and Loss and Gain. The original inventory of raw materials is closed into Raw Materials Used, to which the credit related to the final inventory has already been carried as an adjustment. After purchase returns and purchase discounts and allowances have been closed into purchases, the balance of the Purchases account is closed into Raw Materials Used. The balance of this account, as its title indicates, then gives the raw materials used in the business. This balance is closed into Cost of Goods Manufactured.

The initial inventory of goods in process is closed into Cost of Goods Manufactured, to which the credit related to the final inventory has already been carried as an adjustment. All the manufacturing expenses are then closed into Cost of Goods Manufactured. Manufacturing expenses are those which are incurred with respect to the goods manufactured up to the time the finished goods are delivered to the finished goods storeroom. They include direct material, which has already been transferred as the balance of Raw Materials Used, direct labor, and the several types of overhead applicable to a factory. After expenses of this type

have been closed to Cost of Goods Manufactured, the balance of the account, as its title indicates, shows the cost of goods manufactured during the period. This balance is closed to Cost of Goods Sold.

From this point on the closing procedure is identical with that used in the Robinson Shoe Company.

The ledger of the Drake Chemical Company at December 31, 1936, before adjusting and closing, will be found in the Working Forms. The adjustment data, determined as of December 31, were as follows:

Inventories, December 31, 1936:	
Raw Materials	$5,013,408
Goods in Process	3,654,836
Finished Goods	7,863,948
Real Estate Taxes Accrued[1]	81,247
Interest Expense Accrued	96,300
Depreciation on Plant and Equipment[1]	905,562
Insurance Expense[1]	110,647
(Insurance Unexpired included under Deferred Charges)	
Estimated Loss on Bad Debts	111,915
Estimated Income Tax	1,017,944

[1] The portion of these items properly chargeable to selling and administration has already been transferred to Selling and Administrative Expense.

1. Take a trial balance of the ledger as it stands before adjustment, using therefor the paper in the Working Forms.
2. Record the adjusting entries in the general journal in the Working Forms.
3. Post these adjusting entries to the ledger.
4. Record in the general journal entries necessary to close the books.
5. Post the closing entries.
6. Draw up the balance sheet as of December 31, 1936.
7. Draw up the income statement and the surplus reconciliation statement for the year ending on that date.

DRAKE CHEMICAL COMPANY—NO. 2

THE WORK SHEET

It is even more important in a manufacturing than in a merchandising business to use a work sheet in the process of adjusting and closing the books, because the complexity of the accounts involved is somewhat greater. A work sheet adapted to the requirements of manufacturing closing is illustrated in the Working Forms. The trial balance of the Drake Chemical Company at December 31, 1937, is given in the Working Forms. The adjustment data, determined as of December 31, 1937, are given below:

Inventories, December 31, 1937:	
Raw Materials	$6,114,775
Goods in Process	3,875,335
Finished Goods	9,201,865
Real Estate Taxes Accrued[1]	113,300
Interest Expense Accrued	114,480
Depreciation on Plant and Equipment[1]	1,104,905
Insurance Expense[1]	115,220
(Insurance Unexpired included under Deferred Charges)	
Estimated Loss on Bad Debts	114,150
Estimated Income Tax	809,281

[1] The portion of these items properly chargeable to selling and administration has already been transferred to Selling and Administrative Expense.

The adjustments are entered in a manner similar to that used in the work sheet of the Robinson Shoe Company, except that there are three inventories to be recorded. The work sheet is expanded to provide columns representing each of the main clearing accounts used in closing the books of a manufacturing enterprise. The several amounts arising out of the trial balance and the adjustments are extended to these columns in accordance with the closing procedure described in Drake Chemical Company—No. 1. The balances which appear in these columns on the work sheet will therefore be identical with those shown by the accounts with the same titles in the ledger after the closing entries have been posted.

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1. Prepare the work sheet of the Drake Chemical Company for December 31, 1937, in the form shown for the Wabash Manufacturing Company.

2. After the work sheet has been checked and found correct, prepare therefrom adjusting and closing entries.

3. Draw up from the work sheet the balance sheet, income statement, and surplus reconciliation statement.

PART III

ACCOUNTING FOR CURRENT ASSETS AND CURRENT LIABILITIES. AN INTRODUCTION TO SPECIAL JOURNALS

IX. CASH

HENDERSON MILLS

ITEMS TO BE INCLUDED IN CASH

The quarterly report of the auditors of the Henderson Mills to the directors, as of March 31, 1928, included a condensed balance sheet and a detailed balance sheet. In the first, cash was given as $470,312.89. In the second, cash and certain other items were reported as follows:

Cash on Hand and in Banks	$468,164.61
Interest on Deposits—Accrued	1,433.28
Cash Advances	715.00
	$470,312 89

The text of the report included additional information on these items:

Cash on Hand and in Banks		$467,904.12

The Cash on Hand and on Deposit, amounting to $467,904.12, consists of the following:

On Hand:		
Boston Office Fund	$ 1,300.00	
Lowell Fund	4,011.32	
Manchester Cash Fund	7,176 85	$ 12,488.17
On Deposit:		
Bank A	$ 90,981.70	
Bank B	96,834 62	
Bank C	18,371.57	
Bank D	15,696 29	
Bank E	121,178 80	
Bank F	6,500.00	
Bank G	8,496 97	358,059.95
Certificate of Deposit pledged as collateral security on bond, Bank C		97,500 00
Preferred Stock Sinking Fund, Bank C		116 49
		$468,164.61
Less Petty Cash Items Accrued		260.49
Total Cash on Hand and in Banks		$467,904 12
Interest on Deposits Accrued		$1,433 28

Interest accrued on deposits, but not actually credited to the several bank accounts as of March 31, 1928, as determined from letters received from depositories, amounts to $1,433.28, as follows:

Bank C	
Certificate of Deposit	$ 787.87
Bank C regular account	351.30
Bank B regular account	143 21
Bank A	150 90
Total	$1,433.28
Cash Advances	$715.00

The cash advances, as evidenced by the book records as well as by certificates received from the holders, are as follows:

A. B.	$260.00
C. D.	325.00
E. F.	130.00
Total	$715.00

Note.—A certificate of deposit is an obligation issued by a bank. If a customer of the bank has funds which he will not need for some time, he may deposit them in the bank and take a certificate of deposit payable on demand, after 30 days' notice, or at a definite future date. The bank is required to keep a separate record of demand and other certificates outstanding, since the reserve required against demand certificates is the same as that against demand deposits, while other certificates are treated for reserve purposes like time deposits. The bank customarily pays interest on certificates outstanding, the rate being lower on those payable on demand.

The document appeared as follows before being pledged. Although it was stated that it was pledged as security on a bond, the nature of the bond was not indicated in the report. From other sources it appeared that the bond was given in connection with litigation pending against the company.

Countersigned
Henry Parsons, Teller

BANK C $97,500.00

Boston, Massachusetts, February 1, 1928

Henderson Mills
have deposited in
Bank C

Ninety Seven Thousand Five Hundred Dollars
Payable to the Order of
Themselves Thirty Days after Notice
on return of this certificate properly endorsed

No. 811

John Tyler, Treasurer

Questions arose concerning the inclusion of several of the items above as cash. Which of the items should, in your judgment, have been included in the figure given for cash on the published statements?

X. ACCOUNTS AND NOTES RECEIVABLE

Northey National Bank

THE EFFECT OF LOANS TO OFFICERS ON THE CREDIT OF A COMPANY

In March, 1935, the vice-president in charge of new business for the Northey National Bank of Chicago, was interested in enlarging the bank's borrowing clientele in order to loan profitably excess funds then on hand.

The Thornton Radiator Company, a Cleveland manufacturer of radiators and plumbers' supplies, was one of the prospective customers. In order to investigate its financial condition and credit standing, the vice-president secured data, shown in Exhibit 1 in a somewhat condensed form.

EXHIBIT 1

CONDENSED FINANCIAL STATEMENTS OF THE THORNTON RADIATOR COMPANY AS OF DECEMBER 31

	1932	1933	1934
Current Assets	$2,082,620	$1,893,328	$1,750,453
Investments	43,400	3,163	7,052
Fixed Assets	1,740,080	1,768,381	1,678,369
Other Notes and Accounts	237,567	555,429*	754,565*
Miscellaneous Items	256,500	374,516	414,777
	$4,360,167	$4,594,817	$4,605,216
Current Liabilities	$ 36,558	$ 82,071	$ 95,998
Reserves	660,552	781,330	784,452
Capital Stock	3,010,000	3,010,000	3,010,000
Surplus	653,057	721,416	714,766
	$4,360,167	$4,594,817	$4,605,216
Contingent Liabilities	$ 104,621	$ 190,651	$ 152,856†
Net Sales‡	2,367,722	2,175,974	2,288,637
Net Income	27,453	69,419	77,763
Current Ratio	56.97	23.07	18.23
Net Worth to Debt	118.27	54 98	46 97
Sales to Net Worth	0.55	0 48	0 51
Profit on Sales, per cent	1.16	3.19	3.40

* Details of the larger items making up these totals were given and included amounts due from R B. Webber and Son, 1933, $274,680; 1934, $481,627.

† Drafts and trade acceptances discounted, $84,410; accounts receivable discounted, $68,446.

‡ Net Sales in 1930 were $3,322,862; in 1931, $3,731,305.

A report from a credit agency stated that:

On the whole the situation is attractive from a credit viewpoint. With a good operating record over a period of years, this company has built up a more than adequate working capital position and has consistently accorded creditors a wide margin of safety.

On the basis of these facts, the vice-president decided that the Thornton Radiator Company would be a profitable customer if a share of its business could be obtained. Therefore he referred the statements to the head of the bank's credit department for advice as to whether or not that department would consider unsecured loans to the company desirable enough to make advisable the solicitation of its business.

In examining the data, the credit manager noticed the following item under "Other Notes and Accounts" on the 1933 and 1934 balance sheets:

	1933	1934
R. B. Webber and Son (Secured by Thornton Radiator stock)	$274,680	$481,627

Although the credit manager knew that R. B. Webber was president of the company, he assumed from the form in which this item was reported that it represented a loan to an affiliated company. However, because of the size of the account and its rapid growth, he asked a credit agency for more information. The agency reported that this item resulted from advances to R. B. Webber, and to his son, L. A. Webber, secretary of the Thornton Radiator Company. Several years previously the two had been associated in another business venture incorporated under the name of R. B. Webber and Son Corporation, but these advances were to the two men individually.

The credit manager looked over the audit certificates and found that in each year the auditor had certified that in his opinion, the balance sheets fairly presented the financial position of the company, although he had made no detailed audit of transactions.

After studying the facts thoroughly, the credit manager advised the vice-president in charge of new business that he did not think the Thornton account merited solicitation, mainly because of the uncertainty surrounding the sizable advances to R. B.

Webber and his son, and partly because of the company's declining sales volume, and the fact that sales were so low in comparison with net worth.

C. F. Hartshorn and Sons, Inc.

RECEIVABLES AS COLLATERAL SECURITY FOR BANK LOANS

The corporation was organized in 1934 to manufacture rum. It obtained a plant in Peoria, Ill., and purchased the right to use the Hartshorn name, which, prior to prohibition, had been used by a distiller of a high grade of rum, well known in the area.

From its inception the company maintained a deposit with the Loop Bank and Trust Company of Chicago. In November, 1934, the bank agreed to loan the corporation up to $15,000 on the security of tax-paid rum and assigned accounts receivable. On November 30, 1934, the full amount of the loan was outstanding.

The portion of the bank's staff that supervised commodity-secured loans had developed a procedure for handling loans secured by assignment of accounts receivable. The borrower submitted a list of his receivables, stating the name of the debtor, also the terms, the amount, and the age of each account. The bank selected from this list the accounts which it would accept as security. In making the selection the bank obtained a rating of the debtors from a commercial agency and chose those accounts which seemed the least likely to give trouble. The size of account also entered into the selection, as the expenses of administering the loan varied with the number of accounts that had to be supervised. When doubt existed, the bank decided in favor of its customer.[1]

The borrower furnished the bank with carbon copies of the bills that had been sent to those owing the accounts which were selected. On each copy was placed the borrower's assignment to the bank of all interest in the amount due, together with the borrower's guaranty of full payment.[2] In addition the borrower

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[1] In a good many cases the bank accepted all the current accounts that its customer offered.

[2] The form of assignment was as follows:

KNOW ALL MEN BY THESE PRESENTS that we, _____ of _____, Illinois, for value received hereby sell, assign, and transfer to the LOOP BANK AND TRUST COMPANY the claims or accounts described and set forth in the above statement, the goods covered by or described therein and all moneys due or to become due thereon

(*Continued on page 142*)

certified to the bank that the company's ledger had been marked to indicate the accounts which had been assigned.

The bank followed the policy of not giving notice of the assignment to those owing the accounts unless it was decided to withdraw aid to the borrower because of insolvency or some other reason. Were notice given, there would be a tendency for debtors to transfer future purchases to another concern. Debtors did not wish to be indebted by assignment to an institution which had no interest in them other than the current claim, nor were they willing to accept the risk that delivery of goods might be delayed by insolvency. Furthermore, any notification invariably led to diffusion of the fact throughout the trade that the accounts of the borrower had been hypothecated. The effect of this knowledge was a shortening of the credit terms available to the borrower for its purchases. For these reasons borrowers believed that giving notice of an assignment of accounts would do more harm than could be offset by the benefits obtained from the funds advanced. Since the bank had been advised that delay in giving notice of assignment did not jeopardize its rights over the assigned accounts, it was willing to accede to borrowers' wishes.[1]

In making loans on the security of assigned accounts, the bank usually deducted 6 per cent of the amount of an account as an interest charge and advanced 80 per cent of the amount remaining, thus carrying a margin, when the loan was first made, of 25 per cent of the amount loaned on each account, exclusive of interest and subject to a small reduction if any debtor took advantage of the seller's terms of discount.

It was desirable, for reasons having reference to the creation of preferences in anticipation of bankruptcy, that payments of

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(*Continued from page 141*)

with full power to compromise and collect the same in our name and as our attorney, irrevocable, hereunto authorized to its own use.

We hereby certify that said account is a bona fide and correct account for goods actually sold and delivered, that there are no offsets or credits, that the consideration of this assignment is based upon the truthfulness of all statements herein contained, and we guarantee its payment in full. WITNESS our hand and seal this _____ day of _____ 1934.

[1] Quite frequently the Loop Bank and Trust Company would receive inquiries from other banks which requested information about customers who had assigned accounts as security for loans. Usually such an inquiry was made on behalf of one of the customers of the inquiring bank. In such cases the answer was phrased to convey adequate information without compromising the interests of the borrower. For example, the reply might state, "We have been glad to make secured advances to assist in carrying inventory."

assigned accounts should not pass through the borrower's deposit account. Therefore, as the borrower received a check in payment of an account that had been assigned, it would be endorsed to the order of the Loop Bank and Trust Company, and sent to the bank's loan and discount department. That department entered the payment as a credit to the amount of the loan on the books of the bank. Since the entire amount of each payment was credited to the loan, the bank's margin of security increased as payments were received. If assigned accounts became overdue, the borrower was asked to take action to obtain payment. The bank reserved the right to demand substitution for any account that might at any time be considered undesirable by them.

After consideration of the request of C. F. Hartshorn and Sons, Inc., the Loop Bank and Trust Company, in November, 1934, determined to make use of the procedure that it had developed for other purposes in making new loans to borrowers whose credit position was weak. Consequently, the bank signified its willingness to lend the Hartshorn company up to $15,000 on the security of tax-paid rum valued at $2 per gallon and assigned accounts receivable valued as described above. The first advance was made during November when the full amount of the commitment was extended. In February, 1935, the bank was considering a request that the line of credit be extended to $30,000 secured in the same way as prior loans.

At the end of February, a difficulty arose. Previous to December 31, 1934, the monthly statements had been used only by the management and by the bank. During January, other creditors had asked the Hartshorn company for copies of its statements. The auditors, who previously had certified the statements with reluctance and only after being assured that the only outside user was the bank, insisted that unless the pledged inventory and receivables were clearly segregated in the statements for February 28, the certificate of the auditors would have to be qualified in a way which would reveal the facts as to pledged assets.

EXHIBIT 1

FINANCIAL STATEMENTS OF C. F. HARTSHORN AND SONS, INC., AS OF OCTOBER 31, 1934, AND MONTHLY TO JANUARY 31, 1935*

	October 31, 1934	November 30, 1934	December 31, 1934	January 31, 1935
ASSETS				
Cash	$ 3,747	$ 12,593	$ 29,565	$ 3,969
Accounts Receivable	381	24,894	32,487	39,170
Raw Material	13,524	11,206	12,633	16,530
Goods in Process	3,385	.....	5,187	22,750
Finished Goods	39,866	73,449	78,984	81,984
Current Assets	$ 60,903	$122,142	$158,856	$164,403
Capital Assets, Net	231,647	240,233	244,674	243,392
Deferred Charges, Etc	18,778	18,514	21,182	23,304
Unamortized Organization Expense	47,324	49,733	53,103	17,064
Goodwill	46,470	46,620	47,931	47,931
Total Assets	$405,122	$477,242	$525,746	$496,094
LIABILITIES				
Notes Payable—Banks	$	$ 15,000	$ 795	$ 8,250
Trade Acceptances	9,290	11,368	14,090	10,960
Accounts Payable—Merchandise	27,761	34,316	32,465	31,046
Accounts Payable—Machinery	56,961	47,961	23,490	23,490
Notes Payable—Capital†	34,620	54,626	67,584	57,657
Accruals and Mortgage Payable within 30 Days	5,746	8,962	9,108	7,200
Current Liabilities	$134,378	$172,233	$147,532	$138,603
Mortgage on Plant	....	5,760	5,730	5,700
Paid-in Capital and Surplus	270,744	298,496	375,744	354,359
Undivided Profits		753	3,260*d*	2,568*d*
Total Liabilities	$405,122	$477,242	$525,746	$496,094
Sales, Monthly	....	23,761‡	33,482	28,634
Net Profits, Monthly	.....	753‡	4,013*d*	692
Current Ratio	0.45	0.71	1.08	1.19
Net Worth—Debt	2.01	1.74	2.52	2.54
Net Worth—Fixed Assets	1.17	1.25	1.52	1.45
Merchandise—Receivables	149.02	3.40	2.98	3.10

* Audited.
† Funds advanced against a stock subscription of equal amount. Payable March 1, 1935, when stock subscription also was to be paid.
‡ Last two weeks of November.
d = deficit.

The president of the Hartshorn company discussed the problem with another firm of public accountants who refused to undertake the engagement unless they were free to segregate the pledged assets clearly. The president felt that this would make it more difficult to obtain credit from suppliers through trade acceptances

and on open account. Since he and the auditor who had previously certified the statements were unable to agree, the president asked the auditor to join him in a conference with a vice-president of the Loop Bank and Trust Company in order to develop a solution which would facilitate the granting of a $30,000 line of credit by the bank.

Bowers Rubber Manufacturing Corporation

REVOLVING CREDITS CARRIED AS ACCOUNTS RECEIVABLE

The company distributed its products through exclusive agents, many of whom did not have sufficient capital to carry the rather extensive inventories necessary to stock a full line. It was customary in the industry for manufacturers to render some assistance to distributors in carrying these inventories, and the Bowers company followed this practice.

Prior to 1929 the company had consigned to each agent who needed the assistance a portion of the goods which he was expected to carry. A number of difficulties developed and a new system of revolving credits was instituted. Under this method title to the goods passed to the distributor, and if he had had a consignment of $10,000 to help him in carrying a full line of inventory, he was extended credit of that amount as an open account.

It was necessary for the jobber to carry the remainder of the inventory himself. On this extra amount and for purchases to replenish his inventory, the agent was expected to pay by the tenth of the month following purchase.

As long as a distributor continued to serve as an exclusive agent, the revolving credit had no maturity.

When the revolving credit was first adopted in 1929, the company made no detailed agreement with the various jobbers concerning its use. Soon thereafter misunderstandings arose concerning its operation, and formal agreements clearly defining the revolving credit arrangements were included in the exclusive agency contracts with individual jobbers.

No two agreements were identical. All had the force of a contract and explained clearly the undertakings of both parties with respect to the revolving credit. In general, the Bowers company undertook to contribute a specified amount of credit which would aid the jobber in obtaining a complete stock; the

jobber agreed to use the credit only for inventory purposes and to pay the account when due. The revolving credit became due immediately upon termination of the exclusive agency contract, which contained definite stipulations as to when the contract could be ended. All the agreements contained the provision that the revolving credit was payable immediately upon the breach of any of the jobber's undertakings under the agreement.

It had not been customary to charge interest on these revolving credits, but under a ruling of the N.R.A. Rubber Manufacturing Code Authority, rubber manufacturers were required after July 1, 1934, to charge interest at 5 per cent on credits of this nature outstanding at the end of each quarter.

According to the president, two objections to the revolving credit method remained after July 1, 1934. First, since the Bowers company no longer kept records of the physical units of its distributors' inventories, it could not be sure that a jobber was using the revolving credit as intended; namely, to supply stock which in addition to that financed by the agent would be adequate to serve his territory properly. If a jobber used the revolving credit to provide most of his inventory and did not maintain an adequate stock by supplementing it with inventory that he himself financed, the purpose of the revolving credit was frustrated. In this instance, the jobber was using the Bowers company's money to finance his own business. Furthermore, the company could not determine by inquiry to what extent the jobber was maintaining an adequate inventory without antagonizing the customer.

The second objection was that the credit risk of the revolving credit plan was greater than under the consignment method. Accounts receivable were large, and in the event of the failure of a customer, the company's position was only that of a general creditor. To agents whose credit ratings appeared doubtful, therefore, the company refused to extend revolving credits, but dealt with them instead on a consignment basis.

The president stated that because the profit margins on the company's products normally were small, a revolving credit, or a consigned goods arrangement, was unprofitable unless the jobber enjoying its benefits gave the company a large volume of business. From its experience the company had found that a stock turn of five times a year was necessary before the jobber's business justified the cost of extending him financial assistance.

In 1935 the revolving credit method was used for most of the distributors who needed financial assistance, but a few remained on a consignment basis.

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1. Should the receivables arising under the revolving credit arrangement have been reported on the statements as short-term trade receivables?
2. How should the consigned goods have been reported?

Pendar Paper Company—No. 2

TERMS OF SALE. THE CONTROL OF ACCOUNTS RECEIVABLE

The Pendar Paper Company was a large wholesale distributor of fine-texture paper in the trade area surrounding Seattle, Wash. During 1934, sales, which annually averaged $1,500,000, were made to approximately 2,500 customers who ordered from the company at least once every three months. At the end of any month there were typically between 1,700 and 1,850 accounts with unpaid balances on the books.

The stated credit terms extended by the company were 2 per cent/30 days, net 31 days, if payment was made by invoice, or 2 per cent/15th proximo, net 16th proximo, if payment was made on monthly balances. Most of the customers used the proximo terms. As was customary in the trade, the Pendar Paper Company did not hold all customers to these stated terms, however. For several years certain large vendees had been given the privilege of taking the cash discount on monthly balances if paid before the 25th proximo. The stated net terms were enforced only against weak customers. The actual net terms implied were net 60 days in the case of invoice payment and net 15th of the second month following date of sale in the case of monthly payment. No account was considered overdue until it was at least 60 days old on the last day of the month when the accounts were being aged.

Approximately 2 per cent of sales were for cash and on 65 to 75 per cent the cash discount was taken.

Accounts Receivable Control Sheet.—In the control of accounts receivable, the credit manager of the Pendar Paper Company kept monthly figures of the volume and age groups of overdue accounts, that is, those which were more than 60 days old. In addition, the

number of days' sales represented by the total receivables on the books of the company was computed. From the latter figure and that of the volume of overdue accounts, the credit manager was able to get a picture in terms of sales volume of the condition of the receivables as a whole. By comparing recent figures with those for the corresponding months of previous years, he could eliminate the effect of seasonal variations and appraise more accurately the volume of accounts outstanding. If at any time it appeared that the volume of overdue accounts or the number of days' sales on the books was too large in view of past experience, the credit manager knew that he ought to press collections intensively.

To find the number of days' sales on the books, the sales of a given month, January, for example, were divided by the actual number of working days within the month to obtain the average daily sales during that period. The average daily sale of the most recent month, January, was added to a similar figure for the month preceding, December, and the average daily sales for two months obtained. Upon dividing this latter figure into the total receivables outstanding as of February 1, 1934, the number of days' sales outstanding on the books at that time was obtained.

Aging Statement.—The credit manager had the accounts receivable aged as of the last day of each month to provide the data on overdue accounts for the control sheet and to provide in the aging schedules information for credit and collection control of individual accounts. No account was shown on the statement unless a part of its outstanding balance arose from a sale made in the third month previous to the date of aging. In other words, no account was aged unless part of its balance was at least 60 days old.

As a by-product of the operation in which debits and credits were posted to the customers' ledger, the bookkeeping machine used by the company aged the unpaid invoices composing the balance of an account as of the month in which they were dated.

When postings were completed at the end of the month, each account in the customers' ledger therefore showed the total balance owed by the customer and also a breakdown of this balance on the basis of the months in which the related sales were made. At January 31, 1934, the accounts of two customers showed the following:

Customer	Account No.	Total	January	December	November	October
Pennwell Company..	58	$158.06	$92.57	$65.49	$.....	$.....
John Aberdeen.....	59	64.40	15.76	20.05	28.59	.....

The balance owed by the Pennwell Company arose out of sales of $92.57 during January and $65.49 during December. Since accounts were not considered overdue unless they were over 60 days old, no part of the Pennwell balance was overdue. The balance of the Aberdeen account arose from sales in the amounts indicated during January, December, and November. Since part of the balance arose from a sale in November and was, therefore, overdue at January 31, the account was classified as overdue even though part of the balance arose from sales in the last two months.

At the end of each month all overdue accounts were listed on an aging schedule similar to Exhibit 1. This provided a column for the total balance and columns for the breakdown by the months in which the related sales were made. The Aberdeen account No. 59 is the first listed on the exhibit. The list included several hundred accounts, but only a few are shown in detail.

To complete the aging schedule footings were taken for each of the columns. At January 31, 1934, $44,751.40 was the total of accounts receivable at that date standing in accounts some portion of the balance of which was overdue. Of this total $10,359.84 arose out of sales made during January and $8,768.76 from sales during December. It is important to note that these amounts were not overdue even though they were in accounts each of which did have some overdue amounts. The other totals showed the amounts of receivables which were over 60 days old, $9,628.39 of which arose out of sales in November which had not yet been paid for, $2,212.79 from sales in October, etc. The miscellaneous column included all amounts 10 months old and older.

The totals on the aging schedule were used in setting up the monthly figures on the control sheet, Exhibit 2. The figures for the aging schedule illustrated are those which appear on the control sheet for January 31. The total balance of overdue accounts, $44,751.40, was subtracted from the total of all accounts receivable, $142,823.37, to give $98,071.97, which was the amount

of receivables standing in accounts all of the balances of which were less than 60 days old—like that of the Pennwell Company. This figure could be checked, if necessary, by taking a total of such accounts directly from the customers' ledger.

The total amount of overdue accounts was broken down on the control sheet by months as a summary of the aging schedule. It may be observed that receivables of $8,768.68, arising from December sales which were two months old at January 31, had risen to $14,120.42 at February 28 when they were three months old, probably because additional accounts had become overdue. At March 31 all but $199.10 had been collected, but the next month the amount rose to $666.96 because a note receivable was not paid at maturity and was charged back to accounts receivable. The amount of receivables 10 months old and older declined sharply at December 31, 1934, because several large accounts were written off at that time.

The figures for a particular month were available by the tenth of the succeeding month. No records had been kept of the cost of obtaining these figures, but they were a by-product of the machine bookkeeping system in use for receivables and were obtained at very slight additional cost.

Copies of the control sheet were provided for the president, the treasurer, and the credit manager, and were referred to the directors whenever credit problems were under discussion. Unless good judgment was used in extending credit and collections were pushed actively, there was a danger that receivables would absorb too much working capital and bad debt losses would become too high. The executives wanted to be in a position to detect tendencies in that direction before they became serious.

In addition to its use for purposes of control of receivables, the figures on the control sheet were used to set the amount of reserve for bad debts. Each month bad debt expense was debited and the reserve was credited in the amount of ½ per cent of sales for the month as described in Pendar Paper Company—No. 1. This, however, was only an approximation used to facilitate drawing up monthly income statements. At December 31 after bad debts charged off and recoveries had been closed into the reserve, the aging data on the control sheet were used to set the reserve to appear in the annual balance sheet. The directors had established a policy of keeping the reserve at the end of each year at the

following percentages of the aged accounts. No percentage was used for the balances in current accounts which were not aged.

	Per Cent
Accounts over 1 year old	100
January–March	100
April–June	50
July–September	25
October	3
November	1
December	¼

If the amount in the reserve was lower than that indicated by this computation, it was increased and bad debt expense was debited. If the reserve was above the figure indicated, it was debited and bad debt expense was credited.

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1. Trace all amounts in the column for January 31 on the control sheet (Exhibit 2), and determine how the amounts were developed.
2. Was this method of controlling receivables well adapted to the needs of the company?
3. Was the policy used in setting the reserve sound?

EXHIBIT 1
PENDAR PAPER COMPANY
SECTION OF AGING SCHEDULE AND TOTALS, JANUARY 31, 1934

Customer	Total	January	December	November	October	September	August	July	June	May	Miscellaneous
59	$ 64.40	$ 15.76	$ 20.05	$ 28.59	$.....	$.....	$.....	$.....	$.....	$.....	$.....
63	121.31	41.30	.....	.....	.....	.....	16.52	18.67	14.37	30.45	.....
69	10.09	.....	.....	2.65	1.02	6.42	.....	.....	.....	.....	.....
75	11.85	.....	.....	.....	6.58	.....	.....	.....	.....	.....	(1932) 5.27
78	120.39	.....	36.20	38.50	32.64	13.05	.....	.....	.....	.....	.....
80	4.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	(1932) 4.25
89	41.64	.....	.....	.....	.....	.....	.....	.....	.....	.....	Note and Interest Charged 41.64
94	62.48	.....	10.16	12.03	23.21	17.08	.....	.....	.....	.....	.....
119	28.11	.....	23.83	4.28	.....	.....	.....	.....	.....	.....	.....
127	51.63	9.82	13.46	28.35	.....	.....	.....	.....	.....	.....	.....
138	106.67	.....	.....	.....	.....	106.67	.....	.....	.....	.....	.....
150	199.64	65.42	59.16	75.06	.....	.....	.....	.....	.....	.....	.....
Total	$44,751.40	$10,359.84	$8,768.76	$9,628.39	$2,212.79	$772 33	$609.34	$68.22	$130 77	$94.04	$12,106.92

EXHIBIT 2
PENDAR PAPER COMPANY
ACCOUNTS RECEIVABLE CONTROL SHEET FOR 1934

	Months old	Jan. 31	Feb. 28	Mar. 31	Apr. 30	May 31	June 30	July 31	Aug. 31	Sept. 30	Oct. 31	Nov. 30	Dec. 31
	10 and over	$ 12,106.92	$ 12,662.95	$ 12,043.95	$ 12,893.40	$ 12,441.54	$ 12,665.77	$ 12,428.08	$ 12,152.02	$ 12,131.37	$ 11,946.59	$ 12,063.21	$ 1,239.67
	9	94.04	89.22	71.94	80.24	86.85	152.86	204.74	41.43	36.22	80.75	111.25	442.53
	8	130.77	94.97	39.54	127.53	347.91	253.49	51.43	165.08	213.61	148.77	537.15	182.96
	7	68.22	203.27	53.16	384.80	1,032.87	77.91	265.06	287.61	454.91	575.56	249.33	233.78
	6	609.34	486.34	260.04	388.59	285.01	281.89	344.39	586.84	732.98	310.51	273.98	152.96
	5	772.33	1,374.60	427.78	666.96	554.67	216.31	662.60	875.35	993.74	415.97	715.91	406.48
	4	2,212.79	1,773.09	199.10	929.33	1,252.93	1,742.97	1,294.72	1,871.42	1,143.84	1,755.81	779.55	473.62
	3	9,628.39	14,120.42	7,732.19	8,948.23	9,616.56	10,525.97	9,951.83	9,682.72	11,216.43	8,592.11	13,703.64	10,011.22
Total of Overdue Balances of Overdue Accounts		$ 25,622.80	$ 30,804.86	$ 20,827.70	$ 24,419.08	$ 25,618.34	$ 25,917.17	$ 25,202.85	$ 25,662.47	$ 26,923.10	$ 23,826.07	$ 28,434.02	$ 13,143.22
Current Balances in Overdue Accounts	2	8,768.76	9,855.33	4,662.16	9,184.07	8,516.06	9,670.85	7,506.41	10,190.06	8,895.04	7,923.34	8,912.45	9,152.49
	1	10,359.84	9,246.75	10,168.18	9,319.50	11,360.62	9,519.60	8,619.41	10,964.37	11,697.40	9,173.39	9,684.45	9,746.48
Total Balance of Overdue Accounts		$ 44,751.40	$ 49,906.94	$ 35,658.04	$ 42,922.65	$ 45,495.02	$ 45,107.62	$ 41,328.67	$ 46,816.90	$ 47,515.54	$ 40,922.80	$ 47,030.92	$ 32,042.19
Balance of Current Accounts*		98,071.97	88,328.18	96,457.18	82,743.39	88,618.73	80,124.38	76,614.84	70,493.98	78,616.16	92,641.15	84,631.88	78,337.46
Total Accounts Receivable		$142,823.37	$138,235.12	$132,115.22	$125,666.04	$134,113.75	$125,232.00	$117,943.51	$117,310.88	$126,131.70	$133,563.95	$131,662.80	$110,379.65
Notes Receivable		13,056.96	11,786.71	10,730.72	10,351.77	9,441.18	8,912.27	7,724.89	7,379.92	7,508.86	11,179.40	11,789.64	8,368.32
Total Outstanding Receivables		$155,880.33	$150,021.83	$142,845.94	$136,017.81	$143,554.93	$134,144.27	$125,668.40	$124,690.80	$133,640.56	$144,743.35	$143,452.44	$118,747.97
Sales		$ 78,615.03	$ 74,760.99	$ 92,803.88	$ 88,910.84	$ 97,695.12	$ 83,438.81	$ 73,781.53	$ 78,173.11	$ 85,427.65	$ 95,437.49	$ 82,640.55	$ 84,862.97
Number of Business Days in the Month		26	23	26	24	26	25	25	27	24	26	24	25
Average Daily Sales		3,023.66	3,250.48	3,569.38	3,704.62	3,757.50	3,337.55	2,951.26	2,895.30	3,559.49	3,670.67	3,443.36	3,394.52
Average Daily Sales for 2 Months		3,036.54	3,137.07	3,409.93	3,637.00	3,731.06	3,547.53	3,144.41	2,923.28	3,227.40	3,615.08	3,557.02	3,418.94
Number of Days' Sales Outstanding		51	48	42	37	38	38	40	43	41	40	40	35

* Figure obtained by subtracting total of overdue accounts from total accounts receivable.

McKesson & Robbins, Inc.—No. 1

CONTROL OF RECEIVABLES

The company was organized in 1928 as a consolidation of 15 drug wholesaling establishments distributed throughout the United States and a manufacturing concern located in Connecticut. The organization grew to include 76 wholesale houses located in the major markets of 42 states, territories, and countries, handling its own manufactured goods, crude drugs sold to outside customers, liquor, and products of independent drug manufacturers. Between 60 and 70 per cent of the total sales were made on account to independent drugstores through the wholesale houses.

Late in 1933, the comptroller of McKesson & Robbins, Inc., came to the conclusion that a more definite control over the receivables of the branch houses was needed. Most of the branch houses originally had been independent concerns and when consolidation took place, authority had been allowed to remain largely decentralized. Each house had a manager who was, in some instances, also a vice-president of McKesson & Robbins, Inc. Every house maintained its books according to the manual of accounts set up by the comptroller and sent in to the main office a standard monthly report listing the receivables, reserve for doubtful accounts, and current provision for doubtful notes and accounts receivable, but responsibility for matters relating to the extension of credit,[1] collections, write-offs of doubtful receivables, and maintenance of an adequate reserve, rested with the branch managers.

Policy formulation for the business as a whole was carried out by the central officers and the board of directors, of which the divisional vice-presidents were members. The comptroller had charge of accounting practices and determined the form and content of reports which were submitted by the branch houses.

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[1] Terms varied with the type of merchandise sold. In some sales, terms were net with no cash discount. In others, 1 or 2 per cent was given as a cash discount for payment before the due date.

Due dates and billing dates were arranged according to the two main divisions of the business—drugs and liquor. Liquor billing days were the first, tenth, and twentieth of each month. Drug sales were billed on the first and fifteenth. In each case an account was due on or before the billing date following the date of record. For example, a drug sale made on the twenty-eighth would be billed on the first of the next month and would be due on or before the fifteenth.

The problem of controlling receivables was important from several standpoints. It was desirable that the branch houses remit cash arising from profits to the main office as promptly as possible. This was difficult to do if receivables were allowed to absorb too much of the working capital. Net sales, receivables, and net profits are shown in Exhibit 1 for the years 1928–1934.

The comptroller believed that collections were not always handled with proper dispatch. The personal relationships which existed between the branch managers and many of the customers influenced the decisions of the executives. Basing his action upon his own evaluation as to the reliability and honesty of the firm or individual, a manager might allow collections to slide and delay writing off the account as a bad debt. In consequence of this situation, the receivables reported by the branches were not so clean and current as the comptroller desired for balance sheet purposes.

Accuracy in reporting net income was affected by failure to reserve adequately against bad debts. An examination of the situation in 1932 had disclosed that numerous accounts still on the books should be written off. The reserve for doubtful accounts was not adequate for the eliminations anticipated and it was necessary to set up, out of earned surplus, a special reserve of $4,000,000 which was applied as a reduction in the net book value of receivables. In 1933, $2,679,301.69 of this reserve was specifically applied against bad debts. A further application of $320,698.31 was made in 1934, bringing the total of receivables written off against this reserve in the two years to $3,000,000.

The comptroller of McKesson & Robbins, Inc., made personal contacts with the branches as often as possible, but by reason of the distances to be covered and the limited time available he was unable to handle the problem satisfactorily in this manner. Because of the decentralization of authority, he realized that it would be unwise to enforce complete and rigid standardized procedures. Nevertheless, he believed that reports from the branches furnishing him with detailed and classified data would be both practical and desirable. He also believed that the annual provision for doubtful receivables, bearing as it did upon the reporting of income, should be subject to close supervision by his office. He therefore determined to outline a series of reports and

procedures dealing with receivables which would supply him with the significant facts necessary to proper treatment of the problem.

In view of this situation what action should be taken by the comptroller of McKesson & Robbins?

EXHIBIT 1
MCKESSON & ROBBINS, INC.
RECEIVABLES, SALES, AND INCOME FOR YEARS 1928–1934

End of year	Receivables net of reserve*	Net sales	Net income
1928	$11,687,444.25	$ 83,867,835.09	$3,741,281.50
1929	22,361,080.78	140,635,026.49	4,109,872.92
1930	24,962,747.29	134,865,440.02	2,629,196.46
1931	22,816,155.45	119,967,384.71	1,845,739.39
1932	20,935,567.87	104,227,131.31	921,641 62*d*
1933	19,813,375.42	104,961,034.34	304,248.97
1934	20,901,773.37	124,452,631.14	1,720,259.78

* Receivables reported included: Accounts receivable, customers, Installment notes and other notes due in the following year, Due from officers and employees, Miscellaneous.
d = deficit.
Source: Company reports.

XI. INVENTORIES

A. COST, MARKET, AND COST OR MARKET, WHICHEVER IS LOWER

The American Tobacco Company

VALUATION OF INVENTORIES

The accounting procedures of The American Tobacco Company, in the treatment of tobacco inventories, have been followed consistently for many years.

Manufacturers of tobacco products carry stocks of tobacco large enough to meet their contemplated future manufacturing requirements.

It is a recognized practice in the tobacco industry to use cost in the valuation of inventories, and cost includes carrying charges incurred in storing tobacco from the time it is purchased in its green state until it is ready for use. This practice has been recognized by the Treasury Department for the purpose of computing taxable income, and the public accountants who audit tobacco companies believe the accounting practices in use to be sound.

Public accountants recognize as a sound practice the addition of carrying charges as a cost of inventory in all cases where it is necessary to subject commodities to an aging treatment. In the liquor industry, for example, the addition of carrying charges during the aging period is an accepted and universal practice.

There is no basis upon which to follow the cost or market, whichever is lower theory of inventory valuation for tobacco because there is no market in which the particular needs of the company may be purchased in the quantities required. Wheat, corn, cotton, and other staple commodities, having a wide market, are unlike tobacco. There are market prices for those commodities but not for aged tobacco.

The American Tobacco Company manufactures a variety of tobacco products which require the purchase of numerous grades of American-grown tobacco and the importation of some foreign-grown varieties. Throughout the accounting procedures, records

are kept in detail for each individual grade, type, and crop year. With minor variations, the procedures described in the following paragraph are typical for domestic tobaccos.

The company purchases tobacco at auction sales warehouses which are located throughout the tobacco-producing areas. Several auction sales warehouses are located in each of the central points at which tobacco is sold. Farmers bring their tobacco to these sales warehouses for sale at auction to representatives of foreign and domestic tobacco companies and dealers in leaf tobacco. The tobacco is placed in baskets in rows on the warehouse floor and an auctioneer employed by the sales warehouse company conducts the auction sale, at which the buyers may bid on each individual basket of tobacco and the final bid on a particular basket represents the purchase of the tobacco from the farmer. The farmer considers the price offered and, if in his judgment it is not satisfactory, the farmer has the privilege of rejecting the bid; in which case the tobacco is again offered for sale. If the farmer is satisfied with the offer, the tobacco is sold to the company whose representative made the final bid. It is of interest to observe that the transaction is entirely between the farmer who grew the tobacco and the purchasing company. The transaction occurs shortly after the maturity of the tobacco crop and long in advance of the time when the tobacco will be required for manufacturing purposes by the purchasing company.

Wheat, corn, cotton, and other staple commodities are dealt in on commodities exchanges. It is possible to purchase these commodities in large quantities through these exchanges and it is even possible to deal in futures. In the case of tobacco, however, each individual purchase represents a personal selection by a company buyer.

From the auction floor baskets of tobacco are moved to a central point in the market town where they are sorted by grades and packed into hogsheads ready for shipment to a redrying plant of the company. The plant at which this packing takes place is called a prizery. At points where the company operates redrying plants, the tobacco is moved directly from the auction sales floor to the redrying plants.

The moisture content of tobacco at the time it is purchased varies, contingent upon current climatic and other conditions. Tobacco is subjected to the redrying process for the purpose of

establishing a uniform moisture content, which will render it best suited for the aging process that follows. After passing through the redrying machine, tobacco is packed into hogsheads which hold approximately 1,000 lb., and moved to storage warehouses.

The storage promotes mellowness by removing certain of the harsh irritants, which are found in all tobacco. A natural process of sweating (fermentation) occurs twice each year, in the early summer and early fall. Two years constitutes the minimum storage period and three years is considered the ideal period for most tobacco, after which time it is ready for manufacture.

The stemming process has as its purpose the removal of the middle rib or stem from each tobacco leaf. A small portion of tobacco is stemmed before it is redried, but as to the bulk of tobacco, the stem is removed immediately preceding the use of the tobacco in the manufacture of finished products.

A typical cigarette blend used by The American Tobacco Company contains four types of tobacco, namely, Flue-Cured, Burley, Maryland, and Turkish.

All of the costs in connection with buying, redrying, and storing tobacco are considered to be additions to the cost of the tobacco inventory. The cost of stemming is added to the value of that portion of the inventory which is stemmed. Although stemming cost is reflected as part of the cost of tobacco used in manufacture, only a relatively small amount of stemming cost is reflected in the value of the leaf tobacco inventory. All additions to inventory values represent actual cost, and the accounting transfer from the raw material inventory to cost of manufacture is based upon the average cost of all tobacco of the particular grade on hand at the beginning of the month.

The cost of the tobacco at this point represents an accumulation which includes the following elements:

A. Price paid for green tobacco at auction.
B. Buying costs:
   1. Salaries of buyers and supervising buyers; wages of foremen and employees who handle the tobacco at the country markets.
   2. Cost of hogsheads used as containers in transporting tobacco.
   3. Cost of transportation to redrying plants.
   4. Overhead at buying points including rent of the central prizery, salaries of bookkeepers, and other overhead expenses.
C. Redrying expenses including steam, labor, and overhead incurred in respect to redrying leaf tobacco prior to storage.

D. Carrying expenses:
1. Rent (or depreciation, local property taxes, and maintenance).
2. Labor—salaries of employees at the storage plant.
3. Insurance.
4. Taxes.
5. Overhead incurred in respect to storage.

In order to establish a reasonable basis for the distribution of buying costs to a crop of tobacco, prior to the opening of the markets each year an estimate is made of the total buying expenses and of the total number of pounds of tobacco to be purchased from the crop. From this budget the buying expense rate is set and buying expenses are added to the cost of leaf as it passes through the redrying process. Redrying expenses are allocated to cost of leaf on the basis of a similar budget for those expenses. The estimates contain only a small margin of error and, since the entire crop is placed in storage during the buying season and none is used before the season ends, the variations between the estimate and actual costs are adjusted by increasing or decreasing the inventory accounts at the end of the season so that the actual buying and redrying costs are added to each crop on a per pound basis.

Carrying expenses are added to the cost of the leaf inventory monthly as incurred. Rent and labor charges are distributed on the basis of the number of pounds of tobacco stored, whereas insurance and taxes are applied according to the value of each grade of tobacco on hand. The company uses an average cost basis (in contradistinction to the use of the cost of specific lots or a first-in first-out method) for the reason that, in the various processes through which tobacco passes, it is impossible to keep track of specific lots. For example, in the redrying process the identity of specific lots is lost and shipments of the same grade from several buying points are mingled. An average price for a grade is the logical cost basis, since all tobacco of one grade serves the same purpose.

From the time the tobacco is purchased green until it is ready for use (while it is being redried, stored, and stemmed) there is a loss in the weight of the leaf. This loss is recognized in the accounting procedures by decreasing the number of pounds of the particular grade in question but permitting the accumulated cost to remain intact; hence, the number of pounds to which costs apply will decrease as the tobacco passes through the various

stages of treatment, but the accumulated cost of the tobacco as it passes into the final processes represents the accumulated cost for the particular grade.

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1. What are the significant differences between the practices in inventory valuation of The American Tobacco Company and the Herendeen and Haply Woolen Mills (page 31)?

2. Do these differences represent adaptations of the policies to conditions peculiar to the industries involved?

3. Does the fact that there is no organized market for aged tobacco preclude the use of cost or market, whichever is lower?

4. Should either company adopt a policy more similar to that of the other?

EXHIBIT 1
THE AMERICAN TOBACCO COMPANY
(000 omitted)

Year	Inventory*	Net income
1927	$ 85,820	$23,258
1928	91,385	25,014
1929	102,542	30,178
1930	108,238	43,295
1931	98,137	46,189
1932	114,137	43,267
1933	115,480	17,401
1934	121,612	24,084
1935	120,902	24,282
1936	121,152	20,184
1937	137,422	26,197

* Includes Leaf Tobacco, Manufactured Stock, Operating Supplies, etc., at cost.
Source: Company reports.

Warner Bros. Pictures, Inc.

VALUATION AND AMORTIZATION OF FILM INVENTORIES

Inventories in the film industry possess certain peculiar characteristics which require specialized accounting treatment. Positive prints derived from the original negative are rented or leased to exhibitors. The income received from these rentals parallels the receipt of admissions in the exhibiting theaters to the extent that the films are leased based on a percentage of the box office receipts. Therefore, although films remain physically intact, except for wear, in the producer's inventory, their earning capacity declines as the play-off progresses. These circumstances give rise to the problem of what portion of cost should be charged against income during each accounting period.

The amortization methods used by Warner Bros. Pictures, Inc., are described as follows in the company's annual report (Form 10-K) to the Securities and Exchange Commission for the fiscal year ended August 28, 1937.

> The method employed by the registrant in the amortization of the costs of the released productions consists in writing off the costs in proportion to the receipt of income derived from the exhibition of its pictures throughout the world.
>
> In conformity with good accounting practice, the amortization table is revised to reflect such changes as the most recent complete experience of film rental income from distribution throughout the world indicates in the trend of film rental income. While no portion of the negative costs is assigned, as such, to the foreign territories in which the registrant's pictures are released, the income derived from distribution in foreign territories is included among the statistics used in determining the amortization table.

Periodically the company prepared a table showing the combined experience of films for which amortization had been completed and also noted the trend for other pictures which had not completed their earning life. This was compared with the amortization rates in effect, and whenever the percentage of total revenue received varied from the percentage of cost amortized sufficiently to affect seriously the accuracy of the income statement, the controller adjusted the amortization rates to parallel the new rental experience.

The following table, prepared from the company's annual reports to stockholders for the years 1932–1937, illustrates the changes in amortization which took place during that period.

Weeks after release	Positive prints				Negatives		
	Prior to 1932	1932	1934	1937	Prior to 1932	1932	1937
4	.....	.....	17%	22%	.....	13%	15%
8	.....	.....	45%	52%	.....	32½%	36½%
13	49%	64½%	74%	75%	42½%	51½%	53%
26	78%	90%	96%	96%	65¾%	73%	70½%
30	.....	92½%	100%	100%	.....	77%	74%
39	93½%	96¾%	.....	.....	79¼%	84¼	83%
52	100%	100%	.. ..	.....	86½%	93¾%	95%
65	.....	.....	.....	.....	93%	100%	100%
88	.....	.....	.....	.....	100%	.....	.....

Changes in the over-all length of a film's rental life and in the rate of rental inflow might have been caused by changes in methods of distribution and exhibition. Two possibilities are suggested:

1. Double feature billing has caused the production of a large number of second-rate feature pictures. The life expectancy of these films might be lower than that of regular features with a corresponding effect upon the average life expectancy of all films.

2. Sales departments of the film corporations have endeavored to secure as many day and date showings as possible. As this policy has been realized, more positives have been exhibited at the same time, and the inflow of rentals has shifted accordingly.

The methods of amortization employed by Warner Bros. were not universally accepted in the film industry. Procedures of Columbia Pictures Corporation are indicated below through excerpts taken from a prospectus issued by the company in 1935.

The method employed by the registrant in the amortization of the cost of released productions consists of writing off the cost, as closely as possible, in proportion to the receipt of income derived from the exhibition of pictures in the various territories. Adjustments are made from time to time in the proportion of negative costs allocated between domestic and foreign territories, and in the percentages used in the amortization tables, in order to reflect changes in the trend of film rental income from the several territories where the pictures are distributed. These amortization tables are based on averages obtained

from the play-off experience of all pictures of each particular class, viz., features, westerns, and shorts.

. . . . . .

The negative cost of features and westerns are apportioned 75% to domestic territories and 25% to foreign territories, the latter being subdivided 20% to Great Britain and 5% to other foreign territories. No portion of the negative cost of shorts will be allocated to foreign territories.

Because of the difference in the rate of play-off of features, westerns and shorts, separate tables are used for these three types of pictures in the territory of the United States and Canada, which in summarized form are as follows:

	Features	Westerns	Shorts
13 weeks	57½%	30½%	32½%
26 weeks	87½%	60¼%	61%
39 weeks	96½%	79%	78%
52 weeks	100%	91½%	89½%
78 weeks		100%	100%

The quotation below, also taken from the 1937 report of Warner Bros. Pictures, Inc., to the Securities and Exchange Commission, presents the elements of cost included in the company's films.

The costs of producing motion picture negatives include: (1) cost of stories and of scenarios and continuities prepared therefrom; (2) salaries of directors, camera men and the cast of players; (3) cost of sets, wardrobe and all accessories; (4) cost of negative and positive film excluding cost of positive prints used in film distribution; (5) costs of synchronization; and (6) general studio overhead and depreciation and amortization of studio properties, apportioned over the motion picture negatives produced during each production year upon the basis of direct costs.

The items of direct cost listed by Warner Bros. were common to the industry. Treatment of indirect cost, however, varied both as to the proportion of total indirect costs charged against films and the basis of allocation. Four methods of allocating indirect costs to films were in use:

1. Distribution to picture costs on a "shooting" day basis; that is, a flat charge per day for each day that the cameras were in actual operation.

2. Distribution according to the ratio that the estimated direct cost of each picture bore to total production cost for the year.

3. Actual weekly overhead distributed equally to all productions in process during that period.

4. Distribution of total overhead equally to pictures completed within the year.

Of these methods, the second was most commonly used, and was basically the procedure employed by Warner Bros.

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1. Do the methods used by Warner Bros. Pictures, Inc., in accounting for film inventories accomplish the objectives which have led companies in many other industries to use cost or market, whichever is lower?

2. When the books of a motion-picture-producing company are being audited, what examination of inventories should be made by the public accountants?

WARNER BROS. PICTURES, INC.
CONSOLIDATED BALANCE SHEET AT AUGUST 28, 1937
(000 omitted)

ASSETS

Current and Working Assets:		
Cash		$ 4,058
Accounts and Notes Receivable, Net		1,787
Inventories:		
Released Productions at Cost, Less Amortization	$ 7,821	
Productions Completed but Not Released, at Cost	8,025	
Productions in Progress and Charges To Future Productions, at Cost	3,956	
Rights and Scenarios Unproduced, at Cost Less Reserve	2,083	
Raw Materials, Accessories, Supplies, etc	484	22,369
		$ 28,214
Net Current Assets of Subsidiaries Operating In Foreign Territories Having Exchange Restrictions		214
Investments in Affiliated Companies:		
Investments at Cost Less Reserves	$ 975	
Advances Less Reserve	285	
Investment in Stocks, Bonds and Receivables	313	1,573
Fixed Assets:		
Properties Owned and Equipment at Cost Less Reserve	$120,804	
Properties Leased and Equipment at Cost Less Reserve	15,073	135,877
Other Assets:		
Mortgages, Long Term Notes and Special Accounts Receivable, Less Reserve	$ 511	
Accounts Receivable from Officers	110	
Deposits to Secure Contracts, Less Reserve	1,313	
Sinking Fund Deposits	93	
Shares in Building and Loan Associations	45	
Miscellaneous Investments, Less Reserve	161	2,233
Deferred Charges:		
Prepaid Taxes, Insurance, Rent, etc		1,134
Goodwill		8,300
Total Assets		$177,545

WARNER BROS. PICTURES, INC.
CONSOLIDATED BALANCE SHEET AT AUGUST 28, 1937.—(*Continued*)
(000 omitted)

LIABILITIES

Current Liabilities:		
Notes Payable:		
Secured—		
Banks	$ 1,775	
Others	100	$ 1,875
Unsecured—		
Banks	$ 1,952	
Others	332	2,284
Accounts Payable		4,915
Interest Accrued		1,422
Other Accrued Liabilities		3,057
Reserve for Federal Income Taxes		3,013
Long Term Debt Maturing Within One Year		4,778
Owing to Affiliated Companies		109
Royalties and Participations Payable		1,169
Advance Payments For Film Deposits, etc		478
		$ 23,100
Net Current Liabilities of Subsidiaries Subject to Exchange Restrictions		49
Funded and Other Long Term Debt:		
6% Convertible Debentures Due 1939	$ 29,413	
Bonds & Mortgages Maturing After One Year	39,408	
Bonds & Mortgages Subject in Part to Renewal	3,638	
Purchase Money and Contractual Obligations	557	
Notes Payable	377	73,393
Deferred Credits:		
Discount on Subsidiary Treasury Stock and Bonds	$ 871	
Foreign Subsidiary Remittances in Abeyance	598	
Miscellaneous	492	1,961
Reserve for Contingencies	$ 1,270	
Minority Interest Capital Stock	168	
Minority Interest Surplus	70	
Preferred Stock Issued and Outstanding	5,671	
Common Stock Issued and Outstanding	19,007	
Capital Surplus	57,044	83,230
		$181,733
Less Deficit		4,188
Total Liabilities		$177,545

WARNER BROS. PICTURES, INC.

STATEMENT OF CONSOLIDATED PROFIT AND LOSS AND DEFICIT FOR THE YEAR ENDING AUGUST 28, 1937

(000 omitted)

Net Income (after deducting $25,445,916.48 representing amortization of film costs, including depreciation of studio properties) before other income and charges shown below.			$16,719
Deduct:			
Amortization and Depreciation of Properties (other than $991,453.13 in respect of studio properties charged to film costs)		$ 4,771	
Interest Expense		4,574	
Provision for Investment in Affiliated Companies		291	
Provision for Contingencies		200	9,836
Profit Before Other Income and Charges			$ 6,883
Other Income:			
Interest & Discount Earned		$ 251	
Dividends Received		237	
Additional Proceeds Under Settlement Made in 1934		44	
Miscellaneous Income		27	559
Profit Before Minority Interest and Federal Income Taxes			$ 7,442
Add Proportion of Loss Applicable to Minority Stockholders (Net)			4
Profit Before Federal Income Taxes			$ 7,446
Provision For Federal Income Taxes			
Normal Income Taxes		$ 1,260	
Surtax on Undistributed Profits		310	1,570
Net Profit Carried to Deficit			$ 5,876
Deficit, August 29, 1936		$10,469	
Deduct:			
Redemption Discount on Bonds of Subsidiaries	$563		
Credit Resulting From Exchange of Bonds of Subsidiary	240		
Adjustments of Reserves and Accruals of Prior Years	97	900	
		$ 9,569	
Add:			
Additional Provision for Federal Income Taxes in Respect of Year Ending August 31, 1930	$166		
Losses and Provisions for Losses of Capital Assets	329	495	10,064
Deficit, August 28, 1937, Carried to Balance Sheet			$ 4,188

STATEMENT OF CAPITAL SURPLUS FOR THE YEAR ENDING AUGUST 28, 1937

(000 omitted)

Capital Surplus, August 29, 1936	$56,774
Add: Appropriations authorized by the Board of Directors as of August 27, 1932 not required in respect of: Investment in Participation of Profits, License Rights, etc.	270
Capital Surplus, August 28, 1937	$57,044

Source: Company report.

EXHIBIT 1
WARNER BROS. PICTURES, INC.
(000 omitted)

	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Income before Amortization of Film Costs	$10,287	$ 31,248	$ 52,340*	$ 36,371	$ 23,046	$ 23,504	$ 26,829	$ 31,419	$ 34,934	$ 42,164
Less Amortization of Film Costs	7,013	12,134	37,037	28,301†	21,272†	16,075†	18,161	20,185	21,251	25,446
Net Income, before other income and charges	$ 3,274	$ 19,114	$ 15,303	$ 8,070	$ 1,774	$ 7,429	$ 8,668	$ 11,234	$ 13,683	$ 16,718
Inventories:										
Released, at cost less amortization	$ 2,693	$ 9,248	$ 11,311	$ 9,080	$ 4,533	$ 4,166	$ 5,271	$ 5,384	$ 7,489	$ 7,821
Unreleased, at cost	2,695	10,157	11,311	4,283	2,744	3,063	3,364	3,755	6,670	8,025
Productions in Progress, at cost	260	2,902	1,398	855	1,623	1,537	1,740	2,748	2,249	3,956
Positive Prints, Raw Film, Accessories and Supplies	494	1,718	1,328	781	542	453	456	663	457	484
Rights and Scenarios, at cost	92	846	1,191	1,397	996	530	728	1,088	1,614	2,083
Advances to Outside Producers less Reserve	.....	122	613	535	27	33	11	.....	.....	.....
Total Inventories	$ 6,134	$ 24,993	$ 27,152	$ 16,931	$ 10,465	$ 9,782	$ 11,570	$ 13,638	$ 18,479	$ 22,369
Total Assets	$15,786	$167,189	$230,185	$213,857	$182,728	$169,791	$168,342	$168,472	$173,009	$177,545

* Includes $604,839.44 profit on sale of capital assets and $134,336 profit on capital stock purchased for temporary investment.
† Amortization of film costs for the years 1931, 1932, and 1933 are exclusive of depreciation on studio properties.
Source: Company reports.

EXHIBIT 2
TWENTIETH CENTURY-FOX FILM CORPORATION*
(000 omitted)

	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Gross Income	$14,897	$ 39,245	$ 96,446†	$ 82,699	$ 29,712	$24,289	$36,254	$42,448	$51,671	$56,172
Amortization of Film Costs	10,069	21,779	27,305	29,762	24,482	12,871	19,372	22,066	25,987	27,201
Net Income, before other income and charges	$ 4,828	$ 17,466	$ 69,141	$ 52,937	$ 5,230	$11,418	$16,882	$20,382	$25,684	$28,971
Inventories	$16,115	$17,712	$ 21,627	$ 17,136	$ 10,237	$11,124	$13,688	$15,702	$16,684	$19,434
Total Assets	$58,270	$124,244	$201,354	$166,840	$119,162	$45,904	$46,822	$54,172	$56,784	$60,364

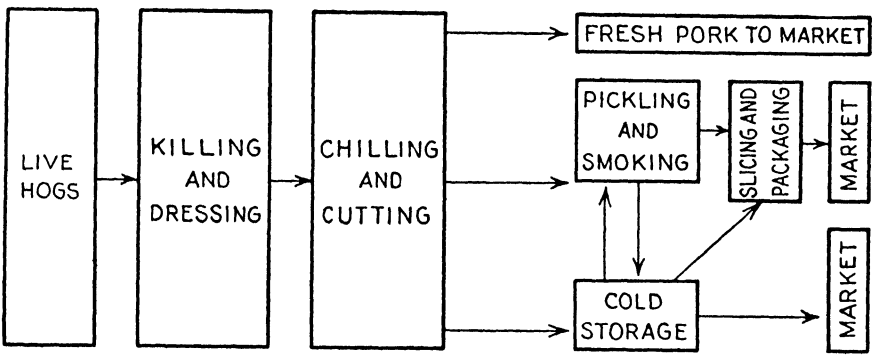
* Prior to 1935 figures are those of Fox Film Corporation only.
† Rentals of film to subsidiary theater operating companies not eliminated.
Source: Company reports.

Delta Packing Company

THE PRICING OF INVENTORIES IN THE MEAT-PACKING INDUSTRY

The Delta Packing Company, an affiliate of one of the major packing concerns, was located on the eastern seaboard. The company was devoted entirely to the production of fresh pork and allied products, such as hams, bacon, sausage, lard, etc. Corn-fed hogs were shipped in from the Middle West and slaughtered, so that within 24 hours the fresh meat would be available to consumers in the metropolitan district served. Since fresh pork declined rapidly in taste and appearance, the ability of the company to provide pork so soon after killing was the principal economic reason for its survival in such a highly competitive field.

The processing of pork is not a complicated procedure and may be illustrated by the diagram given below:



Unlike the beef-packing business, wherein common practice was to sell the whole beef carcass, the hog business dealt only in cut products. Since these cuts were all major parts of the hog carcass, the situation gave an excellent illustration of joint products. Because of the difficulties involved in accounting for joint products, the Delta company treated each department as a separate business and drew up a form of loss and gain statement by departments each month. This statement was based upon the following departmental debits and credits, any balance remaining being transferred to Loss and Gain.

Debits	Credits
Opening Inventory	Transfers to Other Departments
Transfers from Other Departments	Net Sales
Purchases	Closing Inventory
Plant Expense	

For the purpose of simplification, this case will consider only the problem of pricing bacon. This inventory existed in the pickling department, where the complete process of converting fresh hog bellies into bacon was performed. The inventory of bacon in process or completed was of considerable size. Several circumstances accounted for this. First, the primary aim of the company was to produce fresh pork. Hog bellies were not much in demand as fresh meat but did sell well in the form of bacon. Thus the pickling department served in one sense as a reservoir for excess fresh pork slaughtered. Second, the curing process required 30 to 45 days for bacon. Third, although fresh pork moved very slowly during the high-temperature season, bacon was consumed most heavily during the summer months, and an inventory to meet this demand had to be built up in advance. Inventories of cured meats were accumulated largely during November, December, and January and were liquidated most extensively during June, July, and August. Fourth, profit in the meat-packing business depended to a large extent upon market conditions, and consequently, packers generally slaughtered heavily when live-animal prices were favorable and curtailed operations when those prices were too high. This procedure led to fluctuations in volume of operations, and inventories had to be maintained to absorb this variation in production. The figure for hams and bacon in the pickling department in June, 1937, was in excess of $1,000,000.

Inventory control was maintained through a perpetual inventory system based entirely on weight. A careful record of the weights of all products entering and leaving each department was maintained. Thus it was possible to calculate the percentage of shrinkage which was comparable to a figure set as a standard by the controlling packing corporation. Every three months a complete physical inventory was taken. At this time the management compared actual shrinkage with standard as a check on the departmental foremen. Generally, these men kept shrinkage close to the standard set.

In pricing the inventory of bacon, the general concept of cost or market could not be used. Accurate costs were known for the live hogs in the pens and for the hog carcass up to the beginning of the cutting operations. From that point on costs were not recorded because there was no feasible way in which to allocate

carcass cost among the several joint products derived therefrom. Further, hogs were purchased in lots at different prices, and it would be difficult to identify the various cuts with any particular lot of hogs after the meat had progressed beyond the cutting operation. Finally, once a hog was slaughtered, all meat products had to be sold within a very definite time limit, and the determination of accurate costs for each cut, even if possible, would have been of little use to the management in regulating its marketing. Costing for control purposes was carried out upon the basis of one day's operations for the killing and cutting departments. Once each week a weight check was made upon the products derived from some particular day's kill. Through the use of such data a set of percentages was computed, and these figures represented the portion of the total live weight going into each type of product. These percentages were applied to a hundredweight of live hogs, and the results priced at current market quotations. From the total return thus obtained, the purchase price and the processing cost of the hundredweight were subtracted. The result represented the margin of gross profit or loss realized per hundredweight on the day's operations. This procedure is illustrated in Exhibit 1. The margin of profit or loss realized was a small percentage of the packer's market price and generally ran between 50 cts. loss and 25 cts. profit per hundredweight.

In determining the inventory of bacon for the semiannual financial statements, the number of pounds was taken from perpetual inventory cards and included all bacon in the pickling department regardless of the stage of completion. The price used was the current market price at which fresh bellies were being sold by the Delta company at the date of the balance sheet. It was possible to buy and sell all products of the various departments, and, if it proved possible to buy bellies at a lower price, this replacement cost was used. Processing costs in the pickling department were approximately 1 ct. per pound but, since the price of fresh bellies was used, these costs were not included. The inventory of bacon and hams at June 30, 1937, was over $1,000,000 and the bacon inventory included the following items:

Description	Size	Quantity, pounds	Price	Extension
Cured fancy bellies	8/10	67,562	24	$16,214.88
Cured fancy bellies	10/12	94,374	23½	22,177 89
Cured fancy bellies	12/14	86,931	23	19,994.13

Accountants outside the industry had suggested to the management of the Delta Packing Company that the methods used resulted in taking up unrealized profits on the books in any period in which prices were advancing.[1] Under the conditions of June 30, 1937, an increase of 2½ cts. would have involved an unrealized profit in inventories of 10 per cent. Between April and July, 1937, bellies in the Chicago market as quoted in the *National Provisioner* advanced from 18⅜ to 20 cts. and changes in other years had been greater. It was suggested that market at time of acquisition, or market at balance sheet date, whichever was lower, would be more conservative. The management did not consider that a change from the market method of valuing inventories was feasible in view of the existence of joint costs in the packing industry.

[1] For the relation between inventories and income in the packing industry see The Cudahy Packing Company, pp. 9–16. Also see Swift & Company, especially pp. 238–240.

EXHIBIT 1
DELTA PACKING COMPANY
TEST ON LOT OF HOGS

Product	Average weight	Per cent of live weight	Current market price, cents	Extension
Fresh hams	16–18	13½	13	$1.76
Fresh shoulders	12–15	10	10½	1.05
Fresh bellies	14–16	12	17	2.04
Fat backs	8–10	7	7	0 49
Pork loins	8–10	10	14½	1.45
Spare ribs	.....	1	11	0 11
Prime steam lard	.....	14½	8	1.15
Trimmings	.....	2	7½	0 15
Tankage and miscellaneous	... .	3	2	0.06
Shrink	....	27*	0	
Yield and gross value	.. ..	100	.. .	8 26
Processing costs per 100 lb	.....	.		0 62
				7 64
Cost of live hogs per 100 lb	.....	.....	....	7.68
Gross profit or loss per 100 lb	... .	.....	. ..	0 04†

* The allowance for shrinkage was based upon the estimated difference between the live weight of the hogs purchased and the weight of the products sold. This difference was accounted for by the following factors:

a. Elimination of waste at time of slaughter.

b. Dehydration of by-products. Blood and tankage were sold in dried form.

c. Dehydration of carcasses in cold storage caused both by natural evaporation and by action of the refrigerating surfaces.

d Dehydration of cuts of meat in storage, for similar reasons.

† Adjustment to be made on this figure for administrative and selling expense before net profit or loss.

Southern Peanut Products Company

REPORTING OF INVENTORY LOSSES

The Southern Peanut Products Company produced peanut butter, salted peanuts, peanut confections, and peanut bars. Although the candy business in general was seasonal, many of the products of this company, such as peanut butter, showed no marked seasonal demand and helped to even the flow of production.

As with all agricultural products, the supply of peanuts was seasonal and could not be readily adjusted to demand. In order to be sure of an adequate supply, the company purchased heavily from the growers during the fall. The market price of peanuts as of December 31 varied from the fall price according to the trend of demand and the supply of peanuts at that time. Over a long period the price, of course, was affected by the general trend of prices.

As of December 31, 1932, the market had dropped to 1 ct. per pound, which was less than the cost of growing the peanuts. If the company followed its usual practice of writing down the inventory to the lower of cost or market for balance sheet purposes, a heavy loss would be realized, which would be charged to the operations of 1932.

Because of custom, the retail price of such items as peanut bars remained fixed at 5 cts. A considerable part of the sales volume was represented by sales of this product. Thus to the extent that these selling prices remained stable, the operations of 1933 would result in profits, a large part of which would be merely offsetting the losses taken in 1932. The operations of both years would be so influenced by the book profits and losses that the true profits or losses would be obscured.

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1. Were these inventory losses to be followed by increased profits merely book figures or actual losses and profits?

2. The following recommendations were made by officers of the company with respect to inventories:

   a. Value the ending inventories at the lower of cost or market and thereby allow the inventory loss to affect the cost of raw materials used, cost of goods manufactured, and cost of goods sold in the income statement.

b. Value the ending inventories at cost in the income statement, and show the inventory loss as a special item in computing the cost of goods sold.

c. Value the ending inventories at cost in the income statement for the purpose of finding the gross profit and then deduct from this gross profit the inventory loss as a special item.

d. Compute both gross and net profit from operations using inventories valued at cost and then deduct inventory loss from the net profit as thus figured.

Which one of these recommendations do you prefer? Give reasons.

3. If the company used either *b*, or *c*, or *d*, how could it explain the differences between the ending inventories shown on the income statement and those on the balance sheet?

4. What advantages might result, if any, from changing the company's fiscal year so that the yearly financial statements could be drawn up in the fall prior to the heavy commitments in raw materials?

B. THE CONTROL OF INVENTORIES

CHURCHILL PUBLISHING COMPANY—NO. 1

INVENTORY CONTROL AND VALUATION OF FINISHED GOODS

The normal inventory of the Churchill Publishing Company, publishers of textbooks, contained a larger quantity of books than could be found in any single library in the world. In part, this large inventory resulted from spreading production in economical lots throughout the year in preparation for the rush season which came prior to the opening of schools in the fall. A further cause was the production of a two or three years' supply of certain books in order to realize the economies of production in large lots. It was possible to do this because, for the majority of the books, the demand could be estimated with a high degree of accuracy. The remaining inventory consisted of books for which the demand had declined and which were being retained in the hope that they might eventually be sold. The company devoted considerable attention to the judicious selection of books to be printed; otherwise the inventory would have included a large supply of unsalable books.

New books originated in three ways: (1) The company received unsolicited manuscripts. (2) The company sensed the need of a particular book and approached an author or authors to write it. (3) The company sensed the need of a book or series of books along certain lines and arranged with authors to write under direction and in accordance with plans laid out by the company.

The final decision with respect to the publication of a new book was made by an executive committee of six individuals who were considered to be the best informed on the various aspects of the business.

Unsolicited manuscripts were passed upon by the editorial department. If a given manuscript was found to be suitable, subject to necessary or desirable corrections and changes, the department submitted a recommendation for publication to the executive committee.

Suggestions for new books were made from time to time by individuals in the various departments of the company. These suggestions were cleared through the editorial department which selected the suggestions that appeared to be of merit and laid tentative plans as to the nature of the proposed books and the authors who might be asked to write them. The plans, in the form of recommendations, were submitted to the executive committee for approval before further action was taken.

The aid of the managers of the company's various sales offices was enlisted in determining the quantity of a new book to be printed by asking them to estimate the quantity which they could sell in the months remaining to the first of November. This estimate was only for the purpose of determining the production requirements on a new book for the current year. Thereafter estimates were submitted by the sales offices as described below for old books.

Decisions as to the quantity of old books to be printed at any one time depended upon the following factors: (1) The quantity on hand at the plant and at the various sales offices. (2) The annual orders, and revisions of these orders, received from the sales offices. (3) Economical production lot size. (4) The ability of the company to finance the inventory without excessive loans from banks.

Perpetual inventory records were maintained at the plant for books stored there. Quantities only were shown on the cards,

dollar values being considered unnecessary. Each sales office maintained its own stock records and each month reported to the home office at the plant the quantity of each title on hand on the last day of the month.

Annually, during October, each sales office sent an order to the home office covering the expected requirements for each title, for the year beginning November 1. The orders were also broken down by three periods, the first from November 1 through January 31, the second from February 1 through July 31, and the third from August 1 through October 31. These orders were subject to revision during the year. Shipments were made on the basis of requisitions received from the sales offices. Frequently orders were received directly from customers and shipments were made to them. In other cases requisitions were received from the sales offices, but shipment was made directly to customers.

The perpetual inventory cards maintained at the plant not only showed additions to stock, shipments, and balance on hand for each title, but also showed the shipments, current orders, and future orders of each sales office and totals for all offices. From November 1 to January 31, "current orders" included only the winter portion of the annual order, and "future orders" included the spring-summer and fall portions of the annual order. From February 1 to July 31, "current orders" included only the spring-summer portion of the annual order, and "future orders" included only the fall portion of the annual order.

This knowledge of quantity on hand and expected requirements formed the major basis of decisions with respect to the quantities to be published. There was a marked seasonal trend in sales, and the estimates of expected requirements enabled the company to spread its production over the year and to build up inventories in preparation for the most active selling season.

The matter of production in lots of economical size played a part in the determination of the quantity of a given book to be produced at any one time. An economical lot size often exceeded the sales requirements of a single year. In years when the company had ample working capital, production in economical lots was the major factor in deciding production quantities on books that were certain to be sold in the future. Investment in books of this type had proved to be sound since their known salability assured within reason that they would eventually be converted

to cash, and the realized economies in production represented a good return on the investment. The company, however, placed a definite limit on its loans from banks and in years when the company's own working capital was not so plentiful, a definite limit was set on the total investment in inventory and production was reduced to smaller lots.

Part of the inventory consisted of printed sheets ready to be bound. Out of a total yearly production of about 8 million books, approximately 6½ million were bound at the time of printing, and 1½ million were stored in sheet form to be bound later. The maintenance of a stock of books in sheet form minimized both the investment and the possible losses through failure of a book to sell. The cost of binding a book was about as much as the cost of the paper and printing combined. In addition, this reservoir enabled the bindery to develop its production schedule with less dependence upon the current output of the pressroom.

There were over 3,000 perpetual inventory cards for the finished goods inventory. The production department notified the inventory control department as each lot of books was completed, and proper entries were made on the perpetual inventory cards. The shipping department sent the inventory control department a notice covering each shipment. This shipping notice showed, among other things, the quantity of each title shipped and the sales office to which shipment had been made, or the sales office to be given credit for the sale in the event the shipment had been made directly to the customer. The receipts and shipments of books were recorded on the perpetual inventory cards in physical quantities only, through the use of mechanical equipment. This equipment made it possible to develop sales and inventory summaries with almost any breakdown desired.

The clerks in charge of the storerooms were required to make a physical count of a few items each day. The count was then checked with the stock on hand as shown by the inventory cards, these cards being kept by a separate clerk. This method utilized the time of the inventory clerks to good advantage, maintained the accuracy of the inventory cards in showing what was actually on hand, and overcame the necessity of taking a complete physical count at any one time.

In addition to the constant check provided by the perpetual inventory system, the entire inventory list was reviewed three

times a year by a special committee. For the purpose of the first review, a list was drawn up from the inventory cards, from cost records, and from sales records; this showed the quantity and cost of each title on hand at the beginning of the year, the production and cost since the first of the year, the quantity sold, and the current inventory quantity. For the remaining two reviews it was necessary only to place on the same sheet the quantity produced, production cost, sales for the period since the prior review, and the current inventory quantity.

The main purpose of the first two reviews was to compare the inventory of each book with the sales of that book and to note the trend of sales as shown by comparison with the review lists of other years, as a guide to plans for future production. The review at the end of the year included the problems of valuation for the balance sheet and of dealing with old books which could not be sold and which were eating up their value through carrying costs.

The general policy had been to make a five-year estimate of sales for each book in the inventory which was not being currently produced. If the inventory on hand exceeded the five-year sales estimate, the excess was written off, and, if the eventual sale of this excess appeared to be hopeless, books to this amount were actually destroyed.

The remaining inventory had been valued at the lower of cost or market. Market represented the replacement cost as currently estimated by the cost department. Cost represented the actual cost of materials, printing, and binding, and an arbitrary charge for factory overhead.

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1. What were the objectives sought by the executives of this company in decisions concerning inventories?

2. Were the accounting methods and control devices well adapted to facilitate the attainment of these objectives?

Whitman Tin Plate Company

INVENTORY IN EXCESS OF CURRENT REQUIREMENTS

The Whitman Tin Plate Company was a relatively small manufacturer of tin plate, making only a small percentage of the total tin plate production of the country. It had, nevertheless, been a profitable enterprise, largely as a result of friendly relations with several consumer companies in different industries, with which it had for many years carried on mutually satisfactory business.

As a result of unsettled business conditions, the price of pig tin dropped steadily throughout 1930; towards the close of that year the price struck a new low point for all time. Since pig tin was one of the major raw materials of the company, both in quantity and value, any fluctuation in tin prices greatly influenced both the profits of the company and the value of its inventories. In the opinion of officials of the Whitman Tin Plate Company, the low point for pig tin late in 1930 was near, if not below, the out-of-pocket costs of the producers. If so, the mines would shut down rather than sell at a lower price. Believing this to be the case, they thought that the price would not drop much lower and, if it did, that such a price could prevail only for a short time, after which it would again rise, with improved business conditions, to a more normal point. Without attempting to pick the very bottom of the market, but simply wishing to make what seemed to the executives a conservative and yet highly favorable commitment, they contracted during the last few weeks of 1930 for more than a year's supply of pig tin. Not all the tin was purchased at one price, but the average price was near the lowest quoted for many years. As was customary in the trade, the contracts were made for future delivery, so that materials might be received as manufacturing requirements demanded.

What were the significant differences in the nature of the decisions with respect to inventories in this case and those in the Churchill Publishing Company case? Were there differences in the extent to which accounting data could be used in facilitating these decisions?

EXHIBIT 1
WHITMAN TIN PLATE COMPANY
PIG TIN PRICES
(In cents per pound at New York)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Av.
1920	62 74	59 87	61 93	62.12	54 99	48 34	49 29	47 60	44 43	40 47	36 97	34 04	50 23
1921	35 94	32 16	28 76	30 36	32 50	29 39	27 69	26 35	26 70	27 70	28 93	32 41	29 91
1922	32 03	30 74	29.14	30 58	30 92	31 46	31 67	32 36	32 36	34 61	36 76	37 48	32 51
1923	39 16	41.98	48.61	45.84	43.11	40 97	38.47	39 33	41.60	41 80	44 09	47 16	42 68
1924	48 70	53.41	55.03	50.02	44.08	42.74	46 29	51 89	49 24	50.60	54 25	56.03	50 19
1925	58 26	57.09	53 67	52 27	54 65	55 93	58 05	58.12	58.27	62 24	63 30	62.94	57 90
1926	62 31	63.63	64 58	63.44	62.69	60 68	63 03	65 33	69.25	70 41	70 70	68.28	65 36
1927	66 53	68.75	69.28	68.22	67.35	67.28	64 31	64.45	61 50	57 03	57 68	58 47	64 24
1928	55 56	52.47	52 11	52 28	51.53	47.92	47 01	47 97	48 06	48 99	50 76	50 23	50 41
1929	49 21	49.39	48.85	45 93	43 88	44 20	46 29	46.60	45 32	42.25	40 18	39 87	45 16
1930	38.84	38.63	36.76	35 90	32.16	30 26	29 76	30.00	29.59	26 76	25 87	25 01	31 63

Source: Standard Statistics Company, Inc., *Standard Trade and Securities*, Vol. 80, No. 29, Sec. 5.

TEXAS GULF SULPHUR COMPANY, INC.

INVENTORY CONTROL AND VALUATION

Of the world's known deposits of natural sulphur, the largest and richest is that occurring on the Boling Dome property, located in Wharton and Fort Bend counties of Texas, controlled by this company under leases. . . . Aggregate reserves at active deposits are estimated to have a life of more than 40 years. Company is the largest producer of sulphur, accounting for around 60% of domestic output, which in turn represents from 70% to 75% of the world's total production of native sulphur.

Originally held by Gulf Production Co. (subsidiary of Gulf Oil Corp.) under lease, Boling Dome was initially developed by Texas Gulf Sulphur in 1927 under an agreement by which company was first to reimburse itself in full, out of profits arising from sales of all sulphur produced therefrom, for development costs and operating expense incurred in getting property on a paying basis, and thereafter Gulf Production was to receive 50% of net profits. Because of the complexities of operating and accounting problems under this contract a new arrangement was effected in September, 1934. Under this plan, Texas Gulf Sulphur issued 1,300,000 shares of capital stock, representing 33.85% interest, plus $650,000 in cash, for entire assets of Delaware Gulf Oil Co. (another subsidiary of Gulf Oil Corp.) to which Gulf Production Co. had transferred all its interests in above contract; and in addition, certain other sulphur properties and rights located in Texas, including an option by which Delaware Gulf Oil had right for 10 years, from July 4, 1934, to acquire without additional consideration all sulphur interests of Gulf Production Co. in Texas.

. . . . . .

Only other major domestic producer of sulphur is Freeport Texas Co., owning two deposits in Texas, and one in Louisiana, producing about 30% of domestic output. Several smaller companies together produce remaining 10% of native brimstone. Manufacture of sulphur from pyrites, and from smelter gases, to date has not challenged importantly the entrenched position of mined sulphur.

. . . . . .

The peculiar geological structure of the Texas deposits has permitted recovery at relatively low cost. Extraction is by method known as Frasch Process.[1] Water at a temperature of 330°F. is pumped through the sandy soil into sulphur horizon, melting sulphur underground; melted product is then pumped to surface by use of compressed air, and collected for storage in great bins where, upon cooling, it solidifies into massive blocks of 99½ per cent pure sulphur, impervious to action of the elements. This process, although it involves a high initial plant investment, requires comparatively few workers and therefore cost of production in the United States is lower than in other countries where physical structure of deposits makes it necessary to use regular mining methods followed by comparatively costly refining.

Sulphur in some form is said to touch nearly every industrial process. Three principal users are manufacturers of acids and chemicals, fertilizer companies and paper and pulp makers, consumption of native sulphur in the United States by these three groups in order named being about 55, 20, and 15 per cent of the total. Remainder is used in connection with manufacture of dyes, rubber, pharmaceutical preparations, and a great variety of other miscellaneous products.

The domestic price of sulphur has been maintained at $18 a ton (f.o.b. mines) since October, 1927, and is reported to be controlled largely by the price of pyrites. Because of the convenience and various economies resulting from its use, native sulphur commands a slightly higher price than the equivalent sulphur in pyrites. As the price of pyrites has been reasonably constant for a number of years, it has had a stabilizing effect on sulphur quotations. . . . [2]

The income statement for 1937 and the portion of the balance sheet for that year dealing with inventories are given below. Prior to 1934 materials and supplies were included with sulphur inventories in a single figure and miscellaneous income was included with sulphur sales. It was the practice of the company to show

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[1] In the Frasch Process, each pipe is expected to bring up from 70,000 to 100,000 tons of sulphur before it has to be replaced. The limited life of the pipes is due to earth slips caused by the melting out of the underlying supporting layer of sulphur. The pipes are expensive, and each is used until it fails, since, if the heating is interrupted, the chances are that the sulphur may "freeze" in such a way that the pipe cannot be used again.

[2] *Standard Corporation Records*, Individual Reports Section, July 6, 1937.

the inventory of sulphur as a working asset but to exclude it from the total of current assets. The inventory of sulphur, gross revenue from sulphur sales, and net income, for the years 1927–1937 are shown in Exhibit 1.

Since it was stated above that sulphur was sold for $18 a ton beginning in 1927, it is possible to compute the number of tons sold by dividing gross revenue from sulphur sales by $18. This method is subject to some inaccuracy, especially prior to 1934, but it gives at least a rough indication of the number of tons sold. These figures are included in Exhibit 1.

It was stated in the balance sheets that the inventory of sulphur was carried at cost. The 1934 report included the following statements:

> The sulphur inventories (sulphur above ground) consist mainly of sulphur at Gulf, Newgulf and Long Point. Sales from these inventories are determined by actual weight. In the past however, the quantity of sulphur produced and added to inventory at Gulf had been estimated as accurately as possible after making numerous tests to determine the weight of a cubic foot of solid sulphur. Sulphur shipments from Gulf, where there has been no production since September 1932, made it possible during 1934 to calculate with greater accuracy the tonnage on hand in inventory there. From these calculations it appeared that the weight per cubic foot used in computing production at Gulf had been too low, resulting in an underestimate of the sulphur tonnage. Accordingly, an adjustment was made in the number of tons in inventory at Gulf to reflect this overage, which, with a reduction in tonnage to provide for sulphur contained in vat bottoms and for shortages due to over-estimates elsewhere, automatically resulted in a net increase in the total number of tons carried in inventories and in a decrease in the average cost per ton of such inventories. Production taxes on account of the said overage have been paid to the State of Texas, subject to audit.
>
> . . . . . .
>
> It should be noted that the reserves for both depreciation and amortization are created by charges against inventory per ton of sulphur produced and that as sulphur is sold the income account is charged with the average depreciation and amortization per ton of sulphur in inventories.

On the assumption that the items included in the cost of inventory were operating costs and charges for depreciation and amortization, it is possible to compute the approximate cost of sulphur

by adding these items and dividing by the indicated tons sold. For 1937 the computation was as follows:

Operating costs	$10,112,328
Depreciation	630,056
Amortization	815,177
Total	$11,557,561
Indicated tons sold	1,446,576
Indicated cost per ton	$7.99

Similar figures for 1934–1936 were $8.60, $8.55, and $7.96, respectively. These figures are only approximate because, among other things, changes in the volume of inventory were not taken into consideration, but apparently the average cost per ton was about $8.25. Therefore, if the inventories at cost for each year were divided by $8.25, the indicated tons in the inventories were as shown in Exhibit 1.

---

1. Do you agree with the practice of the company in excluding inventories from current assets?

2. Do you agree with the practice of stating inventories at cost?

3. In what respects did the problems of inventory control in this case differ from those in the case of the Whitman Tin Plate Company? Were there differences in the type of accounting data necessary to the control of inventories?

TEXAS GULF SULPHUR COMPANY, INC.
INCOME ACCOUNT FOR THE YEAR ENDED DECEMBER 31, 1937

Gross Revenue from Sulphur Sales	$26,038,375
Costs and Expenses:	
Operating and Delivery Costs	$10,112,328
Selling, General and Administrative Expenses	1,410,007
Provision for Contingencies	300,000
Depreciation	630,056
Amortization	815,177
Total Costs and Expenses	$13,267,568
	$12,770,807
Miscellaneous Income	188,403
	$12,959,210
Provision for Current Federal Income and Capital Stock Taxes (The Company has no liability for surtax on undistributed profits)	1,369,929
Net Income for the Year—Carried to Earned Surplus	$11,589,281

TEXAS GULF SULPHUR COMPANY, INC.
BALANCE SHEET AS AT DECEMBER 31, 1937

ASSETS

Current Assets:		
Cash on hand and on demand and time deposit..		$ 9,815,616
U. S. Treasury Notes at cost (Market Value December 31, 1937—$2,234,250)		2,200,000
Accounts Receivable—Customers..		2,023,413
Notes and Trade Acceptances Receivable.....		37,931
Miscellaneous Receivables and Advances.....		69,466
Total Current Assets.....		$14,146,426
Working and Trading Assets at Cost:		
Inventories of Sulphur above ground.....	$15,059,271	
Inventories of Materials and Supplies.....	379,569	15,438,840

. . . . . .

LIABILITIES, CAPITAL STOCK AND SURPLUS

Current Liabilities:	
Accounts and Wages Payable.....	$ 803,214
Provision for Current Taxes.....	2,192,847
Total Current Liabilities.....	$ 2,996,061

. . . . . .

Source: Company report.

EXHIBIT 1
TEXAS GULF SULPHUR COMPANY, INC.

Year	Inventory of sulphur	Materials and supplies*	Gross revenue from sulphur sales	Miscellaneous income†	Net income	Indicated tons sold	Indicated tons in inventory
1927	$ 8,665,879	$.....	$22,328,199	$	$12,099,374	1,240,455	1,050,409
1928	7,893,947	.....	26,083,613	.. ...	14,517,619	1,449,089	956,842
1929	8,731,960	.....	29,883,243	.. ....	16,247,478	1,660,180	1,058,419
1930	11,928,750	.....	25,815,550	.....	13,972,085	1,434,197	1,445,909
1931	14,192,158	. .....	18,213,807	.. ....	8,942,602	1,011,878	1,720,261
1932	14,443,803	..... .	13,487,538	..... .	5,910,492	749,307	1,750,764
1933	12,817,018	440,531	17,818,345	.	7,443,613	989,908	1,553,578
1934	13,521,459	402,304	16,733,654	298,192	6,958,476	929,647	1,638,965
1935	13,322,597	403,178	17,755,056	78,472	7,468,017	986,392	1,614,860
1936	13,627,817	449,079	22,080,137	171,080	9,853,015	1,226,674	1,651,857
1937	15,059,271	379,569	26,038,375	188,403	11,589,281	1,446,576	1,825,366

* Until 1933 these items were included in sulphur inventory.
† In 1934 a change in the form of statements occurred which caused miscellaneous income to be set out as a separate item. In years previous to 1934 this item was included in gross revenue.
Source: Company reports.

Clark Wholesale Paper Company

THE CONTROL OF INVENTORIES IN A WHOLESALE PAPER COMPANY

The Clark Wholesale Paper Company purchased from paper mills a wide range of paper, varying in type and quality, which it sold to printers, stationers, and small jobbers, and to large business concerns for their own use. Sales could be classified by these types of customers and also by the methods of sale which were as follows:

Warehouse sales, representing sales from stock physically stored and recorded on perpetual inventory cards.

Indirect sales, covering goods received but distributed immediately to customers without entry on perpetual inventory cards.

Direct sales, covering goods shipped directly from mill to customer without having been physically handled by the Clark Wholesale Paper Company.

Warehouse sales could be further classified as full lots and broken lots. Broken lot sales were made when a printer wished to buy only the number of sheets required for a definite job. Frequently, paper was cut by the wholesaler to a size ordered by a printer. Broken lot prices were sufficiently above full lot prices to allow for a few extra sheets, the extra expense involved, and the inevitable losses from dirt and spoilage once a package had been opened.

Perpetual inventory cards (Forms 1 and 2) were maintained for inventory control purposes and figures were kept for quantities only, though the unit cost of each purchase was indicated. Forms 1 and 2 were both on one sheet folded so that when filed, Form 1 came prior to Form 2, and Form 2 extended sufficiently above Form 1 so that the items Line, Size, Color, and Finish were visible.

The perpetual inventory cards provided the following information:

1. The name of the item and its size, color, finish, and location in the storeroom.
2. The source of supply, the quantity in each package, the minimum number of packages to be stocked, and the number to be ordered at the time of each purchase.
3. The quantities ordered and received, and the dates on which they were ordered and on which they were received.

4. The balance at the beginning of the period, additions, subtractions, and running balance. (In quantities only)
5. The unit cost of each lot purchased.

A complete physical inventory was taken twice each year, once as of June 30 and again as of December 31, in connection with the preparation of semiannual financial statements. Perpetual inventory cards were corrected in accordance with the physical count, the corrections involving for the most part minor adjustments for losses on items of stock from which broken lot sales had been made. It was very rare to find any significant difference between the physical count of an item and the amount shown on its perpetual inventory card, though not infrequently there were differences which, after a recount, were found to have been errors in taking the physical inventory.

The business was departmentalized according to classes of customers served and the heads of the various departments did their own purchasing. They established minimum and ordering quantities which were entered on the perpetual inventory cards, and one of their responsibilities was the maintenance of an ample quantity of stock without excessive investment.

Each department head also was responsible for the supervision of salesmen and for pricing, but major changes were decided in consultation with the president, treasurer, and assistant treasurer.

For some time the executives had been considering the advisability of strengthening centralized control in order to meet competition more effectively and to take more complete advantage of opportunities in the industry. The treasurer suggested that it would be possible, through a development of figures already available to obtain turnover data for each item in stock on an annual or monthly basis, and also to cost invoices so that gross profit could be obtained on each sale. Many of the expenses could be allocated to individual sales or types of sales so that an indication could be obtained of the net profit on each.

It was the opinion of the treasurer that the development of this information from the accounts should precede any steps in the centralization of executive responsibility because he believed that changes of that order should be based on the most complete information available.

FORM 1*

Ord. from X Paper Co. Unit Pkg. 6 Rms. Ordering Quan. 10 Ctns. Min. 30 Rms.

Cost	ORDERED			INVOICED			LOCATION		
	Date	Order No.	Quantity	Date	Quantity	Rec'd	Case	Amount	Section
9.09 Cwt.	12/10/36	13640	10 Ctns.	12/12	60 R	12/15	10 Ctns.	60 R	R-4

FORM 2*

X Bond — LINE; 17 × 22—40 M — SIZE; White — COLOR; Bond — FINISH

Rec'd	Date	Sold	Balance	Rec'd	Date	Sold	Balance	Rec'd	Date	Sold	Balance
			44 R								
	12/8	4	40								
	12/8	4	36								
	12/10	6	30								
	12/14	2	28								
	12/14	4	24								
	12/15	12	12								
60	12/15		72								
	12/19	3	69								
	12/24	12	57								
	12/30	4	53								
Inv.	12/31/36		53								

* Paper purchased from the mills was priced by weight, the cost in this example being $9.09 per 100 lb. as shown in the first column in Form 1. The company sold this type of paper by the ream (500 sheets) and recorded the receipt, issue, and balance in reams as shown on Form 2. The size of this paper is shown on Form 2 as 17 × 22 in., 40 lb. per 1,000 sheets. The ordering quantity as shown on Form 1 was 10 cartons, there being 6 reams to each carton; the weight being 120 lb. per carton. Ten cartons (1,200 lb.) were ordered on December 10 and received on December 15 (Form 1). This purchase was recorded as 60 reams on Form 2. The company was endeavoring to change to a weight basis in recording and selling paper, but to date had not overcome the resistance of printers and other customers who were accustomed to purchasing on a ream basis.

McKesson & Robbins, Inc.—No. 2

CONTROL OF INVENTORIES

The chief executives of McKesson & Robbins, Inc., regarded inventory control as one of the important problems involved in the proper operation of their business.[1] Emphasis in this respect had been placed upon personal supervision, but the comptroller believed that the accounting department could prepare data which would be useful in judging the results achieved.

The difficulties involved in inventory control were accentuated by the structure of the organization and the nature of the merchandise handled. Drug items carried by the branch wholesale houses were shipped from the McKesson & Robbins plant in Bridgeport, Conn., and from the plants of independent manufacturers located in the East. It was the purpose of the company to serve through its wholesale branches as a source of supply for independent druggists, and to accomplish this it was necessary to stock between 40,000 and 50,000 items.

The company's line of liquors included well-known brands of wines, champagnes, gins, and whiskies, which were produced in distilleries owned by the company or were purchased from independent sources in the United States and foreign countries. After the repeal of prohibition, the liquor business grew rapidly until the company came to be the largest distributor of wines and liquors in the United States. These products were handled through combination wholesale branches as well as those confined wholly to the sale of liquors.

Both the background of the organization and the variation of the problems to be met in the territories served made decentralization of authority advisable. Consequently, responsibility for inventory control rested largely on the branch managers. Supervision was exercised by the divisional vice-presidents who traveled over their respective territories and were able to gain firsthand knowledge of branch house operations.[2] Much information reached the chief executives through these channels, but the comptroller believed that there was a need for concrete data.

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[1] The organization and growth of the company have been described in a previous case, McKesson & Robbins, Inc.—No. 1.

[2] See Exhibit 2 for organization chart of company. Divisional vice-presidents were also directors.

To accomplish this purpose, the comptroller decided to have the monthly reports include figures on turnover and on the number of days' sales outstanding in inventories. Accordingly, he issued the following instructions to all branch house accountants:

The inventory turnover to be shown at the bottom of the monthly balance sheet will be computed in the following manner:

1. Compute average inventory as follows:

Inventory on hand at end of	
December (previous year)	$_____
January (current year)	_____
February (current year)	_____
Etc.	
	_____
Total	$_____

Divide total as shown by the number of months listed and the amount obtained will represent the average inventory for the year to date.

2. Into the cost of sales divide the average inventory as outlined above. This will give the inventory turnover from January 1 to date.

In computing the number of days' sales outstanding[1] (in connection with the monthly financial statements) proceed as follows:

1. Divide the cost of sales for the previous three calendar months by 90 in order to obtain the average daily cost of sales.

2. Divide the average daily cost of sales as above into the inventory on hand as of the last day of the month.

The above calculations were to be performed for liquor and drug inventories separately.

In addition, branch houses were required to report on inventory and its relation to sales and purchases according to the following form:

[1] As will be noted, this figure refers to inventory and should be distinguished from figures concerning receivables, often described under a similar title.

Sales—Inventories—Purchases

	Sales less returns		Inventories, current year		Purchases	
	This month	This year to date	This month	Per cent to sales	This year to date	Per cent to sales
Drug.... ..						
Liquor.....						
Total						

Liquor inventory as at	
McKesson imported brands	
McKesson domestic brands preferred	
Other controlled brands	
National distillers	
Seagram—Calvert	
Scotch	
Fleischmann gin	
Stamps	
Aging	
Total	

The comptroller realized that an accurate comparison among branches could not be based upon the number of days' sales without making allowances for differences in operating conditions. Variations in the markets served and in the development and purposes of the branches were factors which could not be reduced to figures. The executives were acquainted with the circumstances of each case and presumably would make the proper allowances. Nevertheless, the comptroller believed that something could be done in the nature of establishing standards. The most influential factor in determining the size of inventories other than the volume of sales was the distance from sources of supply. Obviously, a house in San Francisco would be obliged to carry a heavier inventory than one in Boston, since the latter could replenish its stock on comparatively short notice.

In cooperation with other divisions of the organization the comptroller developed par figures. These figures represented the standard number of days' sales which should be included in inven-

tories after making the proper allowances for the differences in the time required to replenish stock. These standards were developed for both drug and liquor inventories and were presented with the actual figures as periodic reports to the executives. A portion of one of these reports covering the period from July 31 to December 31, 1937, is reproduced in Exhibit 1.

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1. What are the functions which inventory control should perform in this case?

2. Is the use of par figures based upon the number of days' sales a satisfactory control device?

3. Do you believe that the company could profitably improve and extend its inventory control procedures?

EXHIBIT 1

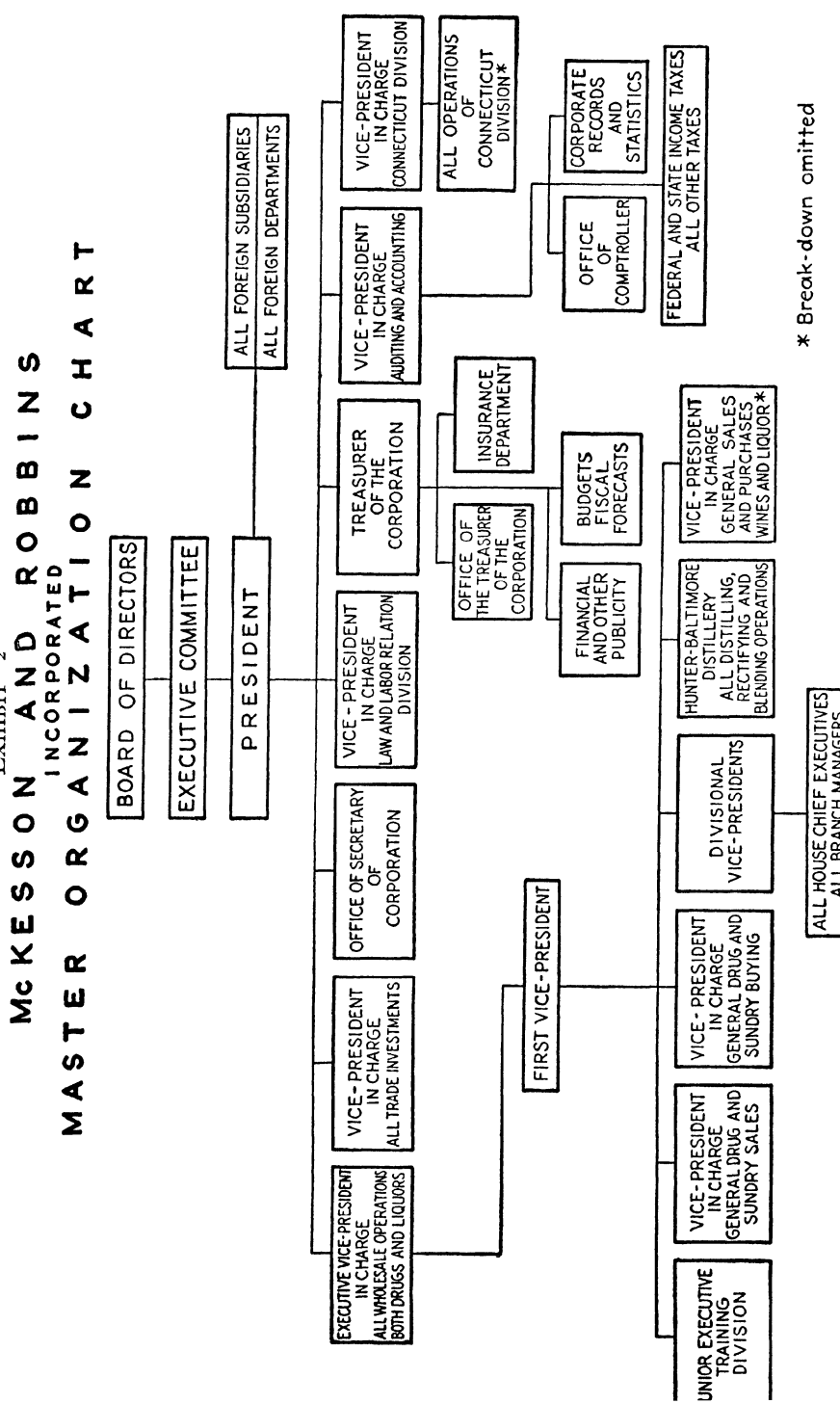
McKESSON & ROBBINS, INC., AND SUBSIDIARIES

INVENTORIES—DAYS' SALES ON HAND MONTHLY FROM JULY 31 TO DECEMBER 31, 1937

	Par figures	July 31	Aug. 31	Sept. 30	Oct. 31	Nov. 30	Dec. 31
Eastern Division:							
Drugs, etc., Dept.							
Albany	47	51	53	52	58	60	48
Boston	47	58	59	53	51	58	52
Brooklyn	47	53	54	46*	51	57	52
Buffalo	47	73	71	56	69	79	68
Newark	47	54	53	57	48	63	53
New Haven	47	64	71	65	66	79	67
New York City	47	144	163	52	58	61	66
Providence	47	89	87	83	87	98	90
Rochester	47	78	72	60	68	67	56
Springfield	47	82	88	80	76	77	65
Syracuse	47	88	71	69	72	84	81
Yonkers	47	55	56	61	57	60	52
		69	69	59	61	68	64
Liquor Dept.							
Albany	48	38*	38*	36*	43*	48	48
Boston	50	51	58	47*	57	70	64
Buffalo	50	64	71	56	48*	53	59
Newark	45	70	77	72	66	56	30*
Atlantic City	45	28*	30*	36*	45	54	30*
Neptune City	45	34*	24*	22*	22*	..	..
New Haven	46	55	65	66	79	84	64
Hartford	46	69	79	57	39*	35*	37*
Providence	45	99	100	100	82	80	67
Rochester	48	59	68	58	54	57	50
Springfield	48	127	100	74	105	92	78
Syracuse	48	69	66	68	54	57	47*
		59	61	55	56	58	47
Combined Drugs and Liquor		63	66	57	60	65	57
South Atlantic Division:							
Drugs, etc., Dept.							
Augusta	60	151	150	136	141	146	116
Columbia	60	104	117	96	106	91	66
Jacksonville	60	105	103	99	108	92	75
Macon	60	99	104	90	88	93	69
Miami	60	125	128	124	109	81	62
Orlando	60	138	135	123	113	105	86
Roanoke	60	97	90	79	73	74	63
Tampa	60	122	110	100	90	84	65
		111	111	100	100	90	79
Liquor Dept.							
Columbia	45	53	39*	41*	44*	46	56
Jacksonville	45	99	81	60	65	73	57
Miami	48	109	91	95	84	81	44*
Tampa	48	92	70	81	75	61	56
		84	67	63	64	67	53
Combined Drugs and Liquor		101	93	85	86	80	66

* Indicates better than par figures.

EXHIBIT 2


McKESSON AND ROBBINS
INCORPORATED
MASTER ORGANIZATION CHART
BOARD OF DIRECTORS
EXECUTIVE COMMITTEE
PRESIDENT
ALL FOREIGN SUBSIDIARIES
ALL FOREIGN DEPARTMENTS
EXECUTIVE VICE-PRESIDENT IN CHARGE ALL WHOLESALE OPERATIONS BOTH DRUGS AND LIQUORS
VICE-PRESIDENT IN CHARGE ALL TRADE INVESTMENTS
OFFICE OF SECRETARY OF CORPORATION
VICE-PRESIDENT IN CHARGE LAW AND LABOR RELATION DIVISION
TREASURER OF THE CORPORATION
VICE-PRESIDENT IN CHARGE AUDITING AND ACCOUNTING
VICE-PRESIDENT IN CHARGE CONNECTICUT DIVISION
ALL OPERATIONS OF CONNECTICUT DIVISION*
OFFICE OF THE TREASURER OF THE CORPORATION
INSURANCE DEPARTMENT
BUDGETS FISCAL FORECASTS
FINANCIAL AND OTHER PUBLICITY
OFFICE OF COMPTROLLER
CORPORATE RECORDS AND STATISTICS
FEDERAL AND STATE INCOME TAXES ALL OTHER TAXES
FIRST VICE-PRESIDENT
DIVISIONAL VICE-PRESIDENTS
HUNTER-BALTIMORE DISTILLERY ALL DISTILLING, RECTIFYING AND BLENDING OPERATIONS
VICE-PRESIDENT IN CHARGE GENERAL SALES AND PURCHASES WINES AND LIQUOR*
UNIOR EXECUTIVE TRAINING DIVISION
VICE-PRESIDENT IN CHARGE GENERAL DRUG AND SUNDRY SALES
VICE-PRESIDENT IN CHARGE GENERAL DRUG AND SUNDRY BUYING
ALL HOUSE CHIEF EXECUTIVES ALL BRANCH MANAGERS
* Break-down omitted

C. THE DETERMINATION OF COST

Hastings and Eau Claire Print

THE COST ACCOUNTING METHOD OF COMPUTING THE COST OF GOODS SOLD

Previous cases involving the use of work sheets and the preparation of financial statements have required the use of inventory figures in computing the cost of goods manufactured and the cost of goods sold. This is an indirect method known technically as the inventory method of preparing financial statements.

Under this method, it is necessary at the close of an accounting period to take a physical inventory of raw materials, work in process, and finished goods. This involves counting and listing the quantities on hand. Cases will be presented later illustrating this procedure and showing that in some instances physical quantities can be established only by estimation. The ascertainment of correct physical quantities is of paramount importance. The values of individual items which are summarized to obtain the inventory figures for the financial statements are found by the multiplication of quantity by price. There is no point in making fine distinctions in matters of price if quantities are not established with a reasonable degree of accuracy.

The list of raw materials is priced at cost by reference to the costs shown on purchase invoices and the quantities of work in process and finished goods are priced at cost by the use of whatever information a company has with respect to the manufacturing cost of its various products. In companies where a complete cost accounting system is not used, the manufacturing cost of a given product is established by estimation or through cost studies of trial runs.

When inventories are to be shown in the financial statements on the basis of cost or market, whichever is the lower, it is necessary to establish the market value of each item on the inventory list. Establishing cost and market values for inventories is a difficult task involving a wide area of accounting custom, judgment, and opinion.

Having established the value of the closing inventories, the cost of goods manufactured and the cost of goods sold can be

found by deduction. The beginning inventory of raw materials, plus purchases, minus the ending inventory of raw materials gives the cost of raw materials used. The beginning inventory of work in process, plus raw materials used, plus manufacturing expenses (labor and factory overhead) minus the ending inventory of work in process gives the cost of goods manufactured. The beginning inventory of finished goods, plus the cost of goods manufactured, minus the ending inventory of finished goods gives the cost of goods sold.

In summary, the inventory method requires the taking of a physical inventory, the pricing of quantities by the use of supplementary cost and market information not available in the books of account, and the computation of cost of goods manufactured and cost of goods sold by deduction.

In most manufacturing companies it is not feasible to take monthly physical inventories, with the result that either the preparation of financial statements takes place only semiannually or annually, or records are kept so that inventory figures can be obtained without the necessity of taking a physical inventory. Such records are called perpetual inventory records and may cover all or only part of the inventory. At the close of an accounting period the quantity of any inventory not covered by the perpetual inventory records must be established by physical count or by estimation. In a complete perpetual inventory system it is customary to maintain a card for each type of raw materials, semi-finished goods, and finished goods. Among other things, an inventory card provides space for recording the input, output, and balance on hand for the item being covered.

In many companies it is customary to carry perpetual inventory figures in quantities only, while in others both quantity and cost are recorded. When quantities only are carried, it is necessary to price the quantity of each item on hand at the close of the accounting period to obtain inventory figures for the financial statements. Having established the closing inventories, the cost of goods manufactured and cost of goods sold can be found by deduction. This procedure is still essentially the inventory method, the only difference being that inventory quantities are established by records rather than by taking a physical inventory.

If perpetual inventory records are kept for both quantity and cost of goods, it is possible in many types of business to find the

cost of goods sold by direct methods. Thus in a wholesale business a summary of the output figures on the perpetual inventory cards for the month would provide the cost of goods sold. In some wholesale establishments perpetual inventory cards are maintained for quantities only, but the per unit cost is stated on each card. These unit costs are used in computing the cost of goods sold in each sale, or the cost of the total of each type of product sold during the month. The cost computations are then summarized to determine the total cost of goods sold for the month. The primary purpose of such detailed computations is for managerial control. For example, the cost computations when subtracted from sales figures could be used to determine, in so far as gross profit is concerned, the profitability of each type of product, each sale, each class of customer, each sales division, and each salesman. Under these conditions the computation of the total cost of goods sold for use in the income statement is incidental. Unless the figures can be used for other purposes, there is no point in computing the cost of goods sold by direct methods for use in the income statement. The figure can be found much more easily by deduction.

In a manufacturing business the cost of goods sold includes not only the cost of raw materials in the goods sold, but also the labor and factory overhead expended in producing them. It is possible by means of perpetual inventory records of raw materials to compute directly the cost of raw materials entering production during the accounting period. The methods used are similar to those described above for determining the cost of goods sold in a wholesale business. However, accounting by direct methods for the cost of labor and factory overhead in the cost of goods sold is much more involved and requires the use of procedures that come under the heading of cost accounting. As a matter of fact, any method of finding the cost of goods sold directly, as distinct from the process of deduction used in the inventory method, is known as the cost accounting method.

It is not desired to explain cost accounting procedure in full in this case, nor, indeed, in the first-year course in Accounting. Certain of the essentials will be indicated, however, and it should be understood at the outset that cost accounting is primarily an instrument of control. An incidental part of cost accounting is the finding of the cost of goods sold by direct methods.

There are two major systems of cost accounting. One, known as job costing, involves the costing of each job or production lot as it passes through the factory. A job cost sheet is used on which are recorded the cost of materials and labor expended on the job and a charge or charges for the estimated factory overhead that should be borne by the job. The cost of goods sold can be found directly by summarizing the job cost sheets on jobs completed and shipped to customers during the accounting period. The cost of the finished goods inventory can be found by summarizing the job cost sheets on jobs completed but not shipped as of the close of the accounting period. The cost of work in process at the close of the accounting period can be found by summarizing the job cost sheets of jobs in process.

The other major system of cost accounting is known as process costing. This system is used where the products are alike, at least with respect to the operations performed upon them. Under this system a cost sheet is used for each process on which is recorded the cost of materials, labor, and factory overhead expended in the process for a definite period of time, such as one month. The number of units handled is also recorded on the process cost sheet, and the unit cost is found by dividing the total cost of the process for the period by the number of units processed during the period. Due allowance must be made for goods only partially processed, but the procedure for this is too involved for discussion here. By means of the process cost sheets it is possible to find the cost of goods that have passed from one process to another and the cost of goods manufactured during the period. In turn, it is possible to find the cost of the goods which have entered the finished goods storeroom during the month and the cost of goods sold during the month.

The allocation of costs under either job costing or process costing involves judgment, particularly in the allocation of factory overhead. The description of the cost accounting procedure in the Hastings and Eau Claire Print, described below, shows how this company allocated its factory overhead to products on a machine-hour basis. Various bases of allocation are in use, the machine-hour rate being a common basis, as also are the labor-hour rate, and overhead charged as a percentage of the direct labor cost. Such rates must be used either because there is no other way of determining the actual cost, or because the actual cost is

not currently ascertainable. The use of various bases of cost allocation and overhead rates results in discrepancies between the total material, labor, and overhead costs of a period and the total material, labor, and overhead charged on the cost sheets. These discrepancies arise from changes in prices of material and labor rates without corresponding changes in charges to products, differences in yield, and variations in the efficiency and volume of operations. The analysis of these variations to determine and correct their causes is one of the major aspects of cost accounting control. In many companies these variances are closed to cost of goods sold, while in others they are shown as separate items in the income statement below the computation of gross profit.

Hastings and Eau Claire Print operated under a simple but effective job cost system. The principal feature of this system was a cost sheet (Form 1) prepared for each job put through the shop. Briefly, this cost sheet showed the following items: (1) in the supplies column, the cost of all paper and other materials issued for the job; (2) in the column headed labor, the cost of all hand composition and other direct labor done on the job; (3) in the same column, the cost of all work done on the job by the various machines. Items 2 and 3 were charged at hourly rates which had been carefully figured out to include hand labor plus all manufacturing expenses.[1]

These expenses were divided into two groups: Those in the first group were called space charges, which included all the expenses of providing room in which to work, such as depreciation, taxes, insurance, interest, and maintenance and upkeep of the building. Those in the second group were called machine charges and included the same items of expense for the machine itself, together with the labor of operating the machine. In the former group, the total amounts of the expenses named were found for the entire building, after which a proper share of the total expense was allocated to the machine. Thus if the total expenses of a shop amounted to $12,000 and the area was 2,400 sq. ft., the charge was $5 per square foot; if, then, a machine occupied 180 sq. ft., the space charge for it would be $900 for a year. If the machine charges allocated directly amounted to $1,500, the total annual

[1] The combining of labor and manufacturing expenses into one rate was peculiar to this company. Though some companies follow this procedure, the use of separate rates is more common.

charge would be $2,400. If this machine was, on the average, operated for 2,000 hours per year, the hourly rate would be $1.20. This amount represented the cost of owning and operating the machine for one hour. All work which was done on the machine would therefore be charged at this rate for the number of hours which the machine was occupied.

Form 1 shows the typical items commonly included in the cost sheet for a job. In the supplies column was an item Body Stock, $3.12; the explanation indicates that this was the charge for 650 sheets of canary bond paper at 15 cts. per pound. The figures 17 × 22—16 indicate that the paper was in sheets measuring 17 by 22 in. and weighing 16 lb. to the ream of 500 sheets. Ink was charged at 50 cts., and small operations like punching and wrapping at 75 and 40 cts., respectively. In the labor column, the first item was for Hand Composition, the work of setting type by hand; the rate charged for this was $2.55 per hour which included the labor of the man who actually did the work, plus a proportionate share of manufacturing expenses. On this job, there was no actual typesetting by hand, since the type was set by machine, as shown below. There were, however, a number of adjustments to be done by hand, which were charged at the hand-composition rate as follows: The time was stated in hours and tenths of an hour; thus for Office Corrections, the time was $\frac{3}{10}$ hour and the cost therefore was 75 cts. For Make Up, that is, preparing the frame of type to go in the press, 2 hours were charged amounting to $5.10. At the botton of this column was Machine Composition, that is, setting type on a linotype machine. The rate for this was $3.50 per hour, which included the direct labor charges, the expenses of the machine, and a proper share of all the manufacturing costs or factory overhead. For 5.4 hours the cost was $18.90. Office Corrections required $\frac{3}{10}$ hour, or $1.05. The actual printing was done on cylinder presses 7 and 8, the rate for which was $3 an hour. Make Ready, or preparing the press to run, took 1.3 hours, costing $3.90; actually running the machine took 2 hours, costing $6. When all these costs were added together, the total cost of job 20135 was found to be $41.22; the customer was quoted $56.75 for the job, which would therefore show a profit of $15.53.

In order to find the cost of goods sold for a month, the cost sheets for all jobs completed and billed during the month were

taken. The total cost of each was listed, and the total of all jobs was the cost of goods sold.

All these charges were entered promptly on the cost sheets when the various time tickets and material requisitions came into the office from the shop; the cost sheets, therefore, represented a continuous and up-to-date record of the cost of all work in process in the shop. Whenever a job was completed and the work shipped to the customer, the cost sheet was totaled and provided the basis for debiting Cost of Goods Sold and crediting Work in Process. This was made on the work sheet only, at the end of every month, in preparation of the monthly statements, by using in the work sheet a manufacturing section entitled "Operations for year." Closing entries were not made monthly in the ledger accounts, because it was desired to let them accumulate until the end of the year and thus show the yearly totals.

Similarly the amounts of paper and other materials used on jobs, as recorded in the cost sheets, were totaled every month to give the amounts which were shown on the work sheet as credits to the Paper and Other Materials account and debits to Work in Process. At the same time, the two Purchases accounts were also closed out to Paper and Other Materials in the work sheet. In the same way, all strictly manufacturing expense accounts were closed out monthly in the work sheet to the Work in Process account. But none of these transfers were made in the ledger until the end of the year, for the reason given above.

As already stated, the summation of the cost sheets for jobs finished gave directly the cost of all goods sold. When this amount had been credited to Work in Process, the balance in that account should represent the inventory of work still in the shop. This balance, however, could be checked by adding up the costs so far recorded in the cost sheets for unfinished jobs still in the shop. In the preparation of both monthly and annual financial statements the cost as shown by the summary of the job cost sheets on unfinished jobs was taken as the inventory of Work in Process. At the close of the year the difference between the balance in the Work in Process account and the inventory revealed by the cost sheets was closed to Cost of Goods Sold.

FORM 1

JOB NO. 20135 CUSTOMER'S ORDER NO. ..... DATE April 5, 1933

QUANTITY 2500

NAME Haskell and Wilson DESCRIPTION Price List

LABOR	Rate	Hours	Cost	Cost Total	SUPPLIES	Cost	DESCRIPTIVE
HAND COMPOSITION	2 55				Mono & Lino		
Office Corrections		3	75		"		
Author's Alterations							
Make Up		2	5 10		Cover Stock		
Lock Up		3	75	6 60			
Total					Body Stock	3 12	650 sheets 17 × 22 — 16 Canary Bond 15¢
JOB PRESSES					"		
Make Ready					"		
Running					Cartage & Hdl.		
Total					Stock Cutting		
					Ink	50	
AUTOMATIC					"		
Make Ready					Electros		
Running					"		
Total					Engraving & Draw.		
					"		
VERTICAL					Ruling		
Make Ready					Binding		
Running					Mailing		
Total					Numbering		
					Bindery Cartage		
CYLINDER PRESSES							
1-6 Make Ready					Blocking		
" Running					Collating		
Total					Die Out		
2-3-4-5-9 Make Ready					Folding		
" Running					Perforating		
Total					Punching	75	
7-8 Make Ready	3 00	1 3	3 90		Round Corner		BILL AS FOLLOWS:
" Running		2	6 00	9 90	Wrapping 2	40	
Total					Postage		
MACHINE COMPOSITION	3 50	5 4	18 90		Delivery		
Office Corrections		3	1 05	19 95	Total Supplies Costs	4 77	
Author's Alterations					Total Labor Costs	36 45	
Total					Total Costs	41 22	
TOTAL LABOR COSTS				36 45		56 75	Quoted

HASTINGS AND EAU CLAIRE PRINT
TRIAL BALANCE, JUNE 30, 1932

Cash	$ 22,000	
Accounts Receivable	45,000	
Reserve for Bad Debts		
Paper	20,000	
Other Materials	5,000	
Work in Process	15,000	
Land	5,000	
Buildings	15,000	
Machinery and Equipment	65,500	
Reserve for Depreciation		$ 21,000
Accounts Payable		28,500
Notes Payable		5,000
Mortgage on Real Estate		10,000
Capital Stock		100,000
Surplus		33,000
Loss and Gain		
Sales		215,500
Sales Discounts and Allowances	4,250	
Cost of Goods Sold		
Purchases—Paper	70,000	
Purchases—Other Materials	11,300	
Labor—Pay Roll	70,000	
Depreciation	5,000	
Property Taxes	3,000	
Insurance	300	
Heat, Light, and Power	3,250	
Other Manufacturing Expenses	6,500	
Salaries—Officers'	13,000	
Office Expense	7,400	
Sales Salaries	8,000	
Selling Expense	12,500	
Advertising	6,000	
Loss from Bad Debts		
	$413,000	$413,000

LIST OF JOBS UNFINISHED, JUNE 30, 1932

Job number	Materials charged	Labor and burden charged	Total
864	$ 860	$ 850	$ 1,710
867	600	870	1,470
871	700	200	900
873	1,500	800	2,300
877	700	800	1,500
879	200	.....	200
880	725	565	1,290
881	975	675	1,650
882	535	260	795
884	175	160	335
885	375	180	555
886	875	375	1,250
887	195	255	450
889	650	.....	650
890	117	128	245
Totals.....	$9,182	$6,118	$15,300

When the cost sheets were summarized for the year on June 30, 1932, the following information was obtained:

Paper transferred to process	$ 75,000
Other materials transferred into process.....	13,000
Total cost of all work completed and billed to customers.....	174,550

The summation of the jobs unfinished on June 30, 1932, was as shown above.

In addition, it was desired to provide a reserve for bad debts amounting to 5 per cent of the total accounts receivable outstanding.

Depreciation had already been recorded by regular monthly entries.

1. Prepare a work sheet for June 30, 1932, using the cost accounting method as described above. For this purpose a work sheet, arranged as shown on page 207, is most convenient.

Under Operations for year, which really shows only the manufacturing operations for the year, show the debits and credits (*a*) to add the purchases of paper and other materials to the respective inventories at the beginning of the year; (*b*) to transfer paper and other materials used, direct labor, and all the other manufacturing expenses to Work in Process; (*c*) to credit Work in Process and charge Cost of Goods Sold with work billed to customers;

(*d*) to adjust Work in Process to agree with the total cost as shown in the List of Jobs Unfinished, June 30, 1932, and to make a concomittant adjustment to Cost of Goods Sold; and (*e*) to charge Loss from Bad Debts and credit Reserve for Bad Debts.

2. Prepare an income statement for the year ended June 30, 1932, and a balance sheet as of that date.

	Trial balance		Operations for year		Loss and gain		Balance sheet	

HARMON COAL COMPANY

INVENTORY RECORDS

The Harmon Coal Company was located in a New England city where it owned a wharf, storage yards and bins, delivery trucks, and other equipment necessary to its business. It sold anthracite coal, bituminous coal, and coke to a wide variety of buyers both large and small. Any user of coal in the territory was a potential customer.

This case is concerned for the most part with problems in establishing the inventory value of bituminous coal and the cost of such coal sold during the accounting period.

Much of the difficulty lay in the fact that bituminous coal was stored in huge piles out in the open, different kinds and sizes being kept in separate piles,[1] from which deliveries were made each day and to which new purchases were added as received. Until a pile was worked down to a very low point, which happened only infrequently, it was impossible to take an accurate physical inventory. Some times the company operated for a period of over two years before a given pile was worked down to a point where it could be physically inventoried. At the end of the month when inventory figures were necessary for balance sheet purposes, and

[1] Coal is named according to the area and seam from which it is obtained. The coal from each area has its own particular characteristics. The sizes of bituminous purchased by the Harmon Coal Company were run of mine—nut and slack, and slack.

the company was trying to determine the cost of coal sold during the month, the various piles might be 400 or 500 ft. long, might vary in width, and might have many peaks and valleys in contour. Coal near the bottom of a pile would be more solidly packed than that near the top. The extent to which the weight was affected by the accumulation of moisture was unknown. These factors combined made the physical inventory largely a matter of guesswork, although the estimate of an experienced and capable coalyard superintendent was more accurate than that of an inexperienced person.

At one time the company had called in consulting engineers to survey the quantity of coal on hand as a means of establishing the physical inventory in preparing the annual financial statements. This was quite expensive and since the management did not have much more confidence in the results than when the figures were pure estimates, the method was abandoned.

Under the conditions stated above, it was decided that book figures for inventories were more accurate than physical inventories for purposes of monthly and annual financial statements. At any time when a given pile was worked down to a low point, it was physically inventoried and the inventory records were adjusted to agree with the physical inventory. After some experience under this procedure, it was found that such adjustments were not large in the case of bituminous coal because losses, which resulted from handling and from coal being blown away, were offset to a considerable extent by increased weight through absorption of moisture between the time of purchase and the time of sale.

In addition to a general ledger control account for bituminous coal, the company kept inventory sheets, one for each kind and size of coal, which represented in effect a subsidiary ledger (Form 1). The cost of coal recorded on this form in the first main column represented the cost at the loading point which, for bituminous coal, was either Newport News or Norfolk, Va. The weight recorded was the railroad weight, established by the railroad which brought the coal from the mine to the loading point, and this weight was accepted by both buyer and seller. Quantities less than a ton were expressed in decimals. The price per ton was the price f.o.b. loading point. In other words, it represented the mine price plus railroad freight to tidewater.

The freight column in Form 1 represented the ocean freight and the insurance was marine insurance while the coal was aboard ship. The cost alongside was the total cost of the coal at the discharging point. (In this case the Harmon Coal Company's wharf.) The column entitled Discharging was for recording the cost of discharging the coal from the boat and was computed by applying a standard rate per ton to the tonnage discharged. The total cost of the coal, then, included cost at mine, plus railroad freight to tidewater, ocean freight, marine insurance, and cost of discharging.

The inventory subsidiary ledger was started each year with new sheets and the first item recorded was the inventory as of January 1. For this item only the following columns were used: Tons, Cost alongside (amount and per ton), Discharging (amount and per ton) and Total cost (amount and per ton). Each shipment received was entered on the sheet as soon as possible after the load had been discharged. All columns except that for discharging were filled out for each load received. After all receipts had been recorded for a month, the discharging cost was computed by applying the standard rate per ton to the total tons received. After this item had been recorded, totals were computed for all amount columns to show the total receipts for the month. Average per ton costs were then figured on cost alongside and total cost. The beginning inventory was then added to the monthly totals to arrive at totals for beginning inventory plus purchases. Using these totals the average per ton costs were figured on cost alongside and total cost.

During the month, daily sales sheets were prepared for statistical and control purposes, and at the end of the month these were summarized to obtain the total tons sold for the month by kind and size of coal. The tons sold were then entered on the inventory sheets and priced by applying the average per ton cost computed for the beginning inventory plus purchases. In this way the cost of coal sold was computed. The quantity and amounts for coal sold were then subtracted from the totals of the beginning inventory plus purchases to arrive at the closing inventory.

The following figures apply to one item known as New River bituminous of a size entitled "nut and slack." The inventory January 1 was as follows:

Tons	Cost alongside		Discharging		Total cost	
	Amount	Per ton	Amount	Per ton	Amount	Per ton
1,790.00	$8,745.22	$4.8856	$240.58	$0.1344	$8,985.80	$5.02

Receipts during the month were as follows:

Date	Tons	Price	Amount	Freight rate per ton	Insurance
4	1,696.50	$4.20	$7,125.30	$1 00	$47.03
12	1,562.00	4.20	6,560.40	0.70	7.22
18	448.00	4.20	1,881.60	1.00	12.42
26	653.00	4.1384	2,702.37	1.00	17.84

The standard rate for discharging was $0.1344 per ton.

Sales during January amounted to 3,187.10 tons.

These figures, together with cost computations, appear in the illustrative inventory sheet, Form 1.

---

1. What would have been the cost of January deliveries and the cost of the inventory of January 31 had the first-in first-out method been used instead of average cost?

2. What account would be credited at the time the inventory was debited for the cost of discharging?

3. Assume that at a later date the pile of this kind and size of coal has been worked down to a point where a physical inventory is practicable and the physical inventory shows a shortage of 15 tons. Assuming the average cost per ton on the books to be $5.15, prepare the journal entry to make the proper adjustment.

4. What other types of business might find it difficult to establish accurate physical inventories?

5. What factors would have to be taken into consideration in deciding upon the quantity of coal that should be on hand at any given time?

6. The Harmon Coal Company was one of the subsidiaries of a company that owned other subsidiaries operating coal mines and boats carrying coal. In what respects might this intercompany relationship affect the inventory control problems of the Harmon Coal Company?

FORM 1

Coal Inventory _____ Location _____ Kind of Coal New River Bituminous Size Nut and Slack

Date	Cost of coal			Freight		Insurance	Cost alongside		Discharging		Total cost	
	Tons	Price	Amount	Amount	Rate	Amount	Amount	Per ton	Amount	Per ton	Amount	Per ton
1937												
Inv. Jan. 1	1790.00	$.....	$.....	$	$.....	$.....	$ 8,745.22	$4 885597	$240.58	$0.1344	$ 8,985.80	$5 020000
4	1696 50	4 20	7,125 30	1,696 50	1 00	47 03	8,868 83	5 227721	.....	.....	8,868 83	5 227721
12	1562 00	4 20	6,560 40	1,093 40	0 70	7 22	7,661 02	4 904622	.....	.....	7,661 02	4 904622
18	448 00	4.20	1,881 60	448 00	1 00	12 42	2,342 02	5 227723	.....	.....	2 342.02	5 227723
26	653 00	4.1384	2,702 37	653 00	1.00	17 84	3,373 21	5 165712	.....	.....	3,373.21	5 165712
Discharging	.. ...	.....	..... .	... . .	.....	... ..	.... . .	.... .	585 92	0 1344	585 92	0 1344
Total for Month	4359 50	.....	18,269.67	3,890 90	.....	84 51	22,245 08	5 102667	585 92	0 1344	22,831 00	5.237068
Beg. Inv. plus Purch.	6149 50	.....	.....	.....	.....	.....	$30,990 30	5 039482	$826 50	0.1344	$31,816.80	5 173884
January Deliveries	3187 10*	.....	.....	.....	.....	.....	16,061 33*	5 039482	428.35*	0 1344	16,489 68*	5.173884
On Hand Jan. 31	2962.40	.....	.....	.....	.....	.....	$14,928 97	5 039484	$398.15	0.1344	$15,327.12	5.173548

* Deduction. January deliveries priced at weighted average cost of beginning inventory, plus purchases.

CHURCHILL PUBLISHING COMPANY—NO. 2

DEPRECIATION ON A PER UNIT OF PRODUCTION BASIS

The largest asset of the Churchill Publishing Company was its investment in printing plates. This was slightly larger than the investment in inventories and was nearly twice as large as the investment in plant, including both buildings and equipment. The proper amortization of the investment in plates presented one of the most acute problems in operating the business. It was of importance both from the viewpoint of sound valuation for balance sheet purposes and in the determination of the operating profit or loss for a specific period. It was also an important factor in the measurement of the success or failure of a given book. That is, inadequate amortization of plate cost during the early years of a given book title resulted in an overstatement of the profitableness of the book during those years. This not only meant that the title would be carried along for several years under a false impression as to its profitability but also the apparent profitability encouraged the production of additional books of a similar type.

The investment in plates was carried under the account title, Plate Cost, which was somewhat of a misnomer in that it included not only the cost of the plates but all of the cost in bringing out a new publication. For instance, it included such items as the cost of illustrations, the cost of permission to reprint copyright material, and experimental work. Plate Cost did not include any of the cost of the company's editorial department, however, since much of the work of this department was negative in character, involving rejections and corrections that would be difficult to apportion to any one book. The cost of this department was, therefore, charged off to operations each year and appeared as a separate item in the income statement after the computation of gross profit. In other words, it was not treated as part of the cost of goods sold and no part of it entered the valuation of inventories.

For many years it had been the custom of the company to depreciate plate cost on a straight-line basis. Rates used were 10 per cent for high school and elementary school books, and 20 per cent for college books. In 1934 government income tax agents questioned the justification of these rates. The company cooperated with the agents in an investigation to determine what the

actual life of representative plates had been. It was discovered that the actual physical life was something over 30 years. Accordingly, the government agents insisted upon a depreciation rate of 3½ per cent.

The company objected to this rate in part because there had been a tendency in the past to carry plates in storage longer than was warranted, but more because the economic life of the plates and not their physical life was the important factor. Plates were scrapped not because they could no longer be used physically, but because there was no longer any demand for the books printed by them. The company came to the conclusion that regardless of the size of the rate, the straight-line basis of depreciation was not a satisfactory basis for amortizing the cost of a plate over its economic life.

After some study it was decided to amortize this cost on a per unit of production basis and after investigation by government tax authorities, this basis was allowed for tax purposes.

The unit of production selected was 1,000 books. The method involved an estimate of the lifetime production in thousands of each book (the estimated number of books that would be published during the economic life of the plates). The cost of the plates for a given book, divided by its estimated lifetime production in thousands, gave the unit charge. The number of units produced during the year, multiplied by the unit charge, gave the amount of the plate cost of this particular book to be charged to the operations for the year. For example, the computations of plate cost on one book were as follows:

Year	Cost and additions	Lifetime production, in thousands	Plate charge per thousand	Annual production in thousands	Annual charge	Remaining cost at end of year
1934	$6,374.98	40	$159.37	18	$2,868.66	$3,506.32
1935		22		10	1,593.70	1,912.62
1936		12		4	637.48	1,275.14
1937		8		4	637.48	637.66
		4				

In explanation of the above figures, the plates for this book were made in 1934 at a total cost of $6,374.98. The financial

department of the company, with the aid of the editorial department, estimated at that time that during the economic life of the plates, 40,000 books would be published. The total cost of $6,374.98 divided by 40 gave a rate per 1,000 books of $159.37. There were 18,000 of these books produced in 1934. The plate charge rate of $159.37 multiplied by 18 gave the plate charge for this book for the year 1934. This amounted to $2,868.66, and, when this figure was subtracted from the cost of $6,374.98, there remained $3,506.32 to be amortized in future years in accordance with the production of those years.

Since the company prepared financial statements only once a year, it was not necessary to break down the plate charge to cover shorter periods.

The annual plate charges computed on the cards as shown above were summarized and the total was entered in the books of account as a debit to Plate Charges and a credit to Plates (the asset account).

---

1. Should the unamortized investment in plates have been included as a part of the inventory in preparing the balance sheets?

2. Should the expense, Plate Charges, have been included as a manufacturing expense, and thus as a component element in the cost of the inventory of goods in process and finished goods?

Grant Rubber Company

THE MEANING OF COST OF WORK IN PROCESS AND FINISHED GOODS WHEN INVENTORIES ARE VALUED AT COST OR MARKET, WHICHEVER IS THE LOWER

The purpose of this case is to raise certain questions pertaining to cost and to illustrate the various elements of cost and the difficulties involved in determining cost in the specific case of the Grant Rubber Company, manufacturer of some 3,000 types of rubber footwear such as rubber boots, rubbers, sneakers, and overshoes. A brief description of the production processes is presented to facilitate an understanding of the operations from which costs arise.

Milling, Compounding, Mixing.—Raw rubber was washed and dried and then run many times between two rolls (milling) to make it more plastic and in a better condition to take up the chemicals with which it was later to be compounded. The milling process also served as a means of blending rubber from the various lots purchased.

Compounding consisted of weighing out the rubber and various chemicals called for in the formula for the particular rubber compound required. The quality of the finished product depended to a considerable extent upon the formulas used for the various parts that went into it. The chemicals made it possible for the shoe to be vulcanized in a later process, lengthened its life, and supplied the desired color and other qualities of appearance.

In the mixing operation the rubber was placed in a mill or mixer consisting of two rolls side by side but running in opposite directions, one roll traveling faster than the other. The mill was heated by steam and hot or cold water could be run through the rolls, which were hollow, to keep the mill at a certain temperature. The combination of heat and friction kneaded the rubber and when it was in proper condition the chemicals were added and the whole mass was kept on the mill until a thorough mixing had taken place.

Calendering.—From the mills the mass of plastic compounded rubber was fed to the calenders where it passed through a series of three or more rolls and came out in flat sheets from which the different patterns and shapes were later cut. The rolls were

adjustable so that sheets of different thickness might be produced. For certain products the calenders included impression rolls which marked out on the finished sheets the outline of the patterns or shapes to be cut.

In this department also fabric for the upper parts of shoes, and insoles, was coated with rubber compound. Thin sheets of rubber compound were rolled onto the fabric under heat and pressure, by which the rubber compound was pressed firmly into the cloth.

Cutting.—The sheets of gum and rubberized fabric were then ready for cutting, an operation performed either by machine or by hand; in general, the machine method was tending to supplant hand cutting, which was done chiefly on a few special kinds of work where the volume of work was not enough to warrant the setting up of a machine.

All gum scrap remaining after cutting was thrown back into the calendering process; so long as the rubber had not been vulcanized, it could be used again. All labor for cutting, both machine and hand cutting, was paid on piece rates.

Making.—After being cut, the various parts went through preparatory processes such as cementing and stitching and were then sent to the making department where they were allotted to the makers in accordance with a production schedule of manufacturing orders. Lasts were also furnished to the workers who, working singly or in groups, pieced together the various parts on a last.

The lasts containing the shoes were placed on a bar and after inspection the bars of lasts and shoes were placed on trucks for transportation to the curing room where the rubber was vulcanized.

The labor in the making process was in most instances paid on piece rates.

Curing, or Vulcanizing.—In the curing of the shoes, dry heat and steam under pressure were used. Most of the company's products required curing in large ovens in which the trucks containing the bars were placed. Certain types of rubber boots needed to be cured both on the inside and on the outside; these were made on hollow lasts which could be connected to a steam line. This method of curing was faster than the slow process of curing in the ordinary ovens.

Before the shoes were cured, they were varnished or dusted with talc, depending upon whether the finish desired was bright

or dull. The dusting was done by hand; varnishing was done by placing the shoe bar on a revolving drum which dipped it into the varnish solution. After curing and before packing, each shoe was inspected thoroughly.

Labor in the curing room was paid mostly on a day basis, though some of the operations, such as varnishing and dusting, were paid on piece rates.

Packing.—After the curing had been completed, the shoes were ready for packing. Each pair was wrapped in tissue and then packed in individual boxes, one pair to a box; the boxes were then packed into cases. From the packing room, the cases went to the finished goods warehouse, where they were stored until wanted for the filling of customers' orders.

Packers were paid on piece rates.

Cost Accounting.—The company could have operated under a system of job order costs similar to the system described in the Hastings and Eau Claire Print case. This, however, would have involved a prodigious amount of record keeping and consequent expense. The company wished to keep the expense of gathering historical cost data to a minimum and was more interested in spending time and money on cost accounting for control purposes. For example, no record was kept of the actual cost of the fabric parts of a particular type cut for a given production order. Cutting records were kept, however, showing the quantity of material furnished to the cutter on this order, the quantity returned uncut, the quantity used, the number of parts cut, the number of parts that the quantity used should have yielded in accordance with predetermined standards, the standard percentage of waste, and the actual percentage of waste. Thus a considerable body of cost and statistical data was built up for control purposes.

Cost Entries in the Books of Account.—Perpetual inventory records were maintained for raw materials and finished goods by a material control department. At the close of each month this department supplied cost and quantity figures on materials which had entered production during the month.

Pay-roll records were summarized by departments to provide figures for the cost of labor.

The various items of factory overhead were allocated each month to both direct producing departments and to indirect (service) departments. The costs of the indirect departments

were then reallocated to the direct producing departments. The bases of allocation for the various items of burden are presented later in the case.

Records were kept of shoes completed and monthly summaries were prepared to show the total number of pairs of each type of shoe completed during the month. The cost of goods manufactured was then computed by applying predetermined unit costs to these quantities. The method of establishing these unit costs will be described below. Suffice it to say here that although they were standard costs they were changed frequently, in line with changes in actual costs of materials or labor and with changes in methods of production, and were looked upon by the management as the actual costs of the products concerned.

This computation provided the debit to the finished goods account, but because the company wished for control purposes to localize variations between the cost of goods manufactured as established by the use of predetermined unit costs, and the actual material, labor, and overhead costs for the month, it was necessary to establish several credits. This was done by computing, by the use of a breakdown of the predetermined unit costs, the cost of material, the cost of labor by departments, and the cost of overhead by departments, in the goods produced. An entry could then be made as follows:

Dr. Finished Goods
  Cr. Raw Material In Process
    Labor in Process—Dept. A
    Dept. B
    Overhead in Process—Dept. A
    Dept. B
    Etc.

At this stage the Raw Material in Process account would show a debit for the raw material cost of the beginning inventory of work in process; a debit for the total raw material that had entered production during the month; and a credit for the raw material element of cost in the goods completed during the month. It was then necessary to establish the value of the raw material in the closing inventory of work in process. The production process was of short duration and at the close of work on any day there was only a small quantity of work in process. At the close of each month it was not difficult for the company to take a physical inventory of the work in process and to price it by the use of

predetermined unit costs in accordance with the stage of completion. The value of the closing inventory was then credited to the Raw Material in Process account and a corresponding debit was entered below the account as the beginning inventory for the new period. Since the two credits to the account were based on predetermined unit costs, there was likely to be a balance in the account representing raw material cost underabsorbed or overabsorbed by the charges to goods completed and to goods remaining in process. This balance was closed to the Cost of Sales account and was shown as a separate item of loss or gain in the cost of sales section of the income statement.

Values for the cost of labor and overhead in the closing inventory of work in process in each department were also computed by the application of predetermined unit costs to the quantities established by a physical inventory. The balances in these accounts, representing labor and overhead costs underabsorbed or overabsorbed by charges to production were likewise closed to the Cost of Sales account and were shown as separate items in the cost of sales section in the income statement. Apart from the books of account, the manufacturing variances were subjected to analysis and were reported in detail to departmental foremen who had to explain the variances with the assistance of the cost accounting department. By this method the various causes and responsibility for over- or underabsorption were established.

Establishing Unit Costs.—The unit on which costs were established was 100 pairs of the average size. The average size was a weighted average determined by a study of sales records. The average sizes used were as follows:

	Canvas shoes	Boots	All other gum shoes
Men's	8	9	9
Boys'	4½	5	5
Youths'	13½	13	13
Women's	5	6	6
Misses'	13½	13	11½
Children's	9	9	10½

Specifications.—The cost department received printed specifications from the factory covering the various parts and operations called for in making each type of shoe. All changes in specifica-

tions were sent to the cost department and unit costs were refigured in line with the changes.

Scheduled Material Prices.—Price schedules were prepared for fabrics and rubber compounds called gum and were changed periodically in line with significant changes in the cost of materials purchased. The scheduled fabric prices represented for each kind of fabric the average invoice price per running yard, before cash discounts, plus freight and dye charges and a charge for purchasing and warehousing.

Similarly scheduled gum prices were figured on a pound basis which included: (1) average dry invoice price of rubber, before cash discounts, plus freight charges and a charge for purchasing and warehousing; (2) compounds at average invoice price, before cash discounts, plus freight charges and a charge for purchasing and warehousing; (3) a charge for mixing labor and overhead.

Cost Cards for Gum-coated Fabrics.—A cost card was prepared for each type of gum-coated fabric. The scheduled prices for the type of fabric and gum required were entered on this card. Fabrics purchased by weight were first entered at the scheduled cost per pound which was then converted to the cost per running yard. Gum was first entered at the scheduled cost per pound which was then converted to the cost per running yard, taking into account the width of the completed coated fabric and the thickness of the gum coating required. A credit was then entered on the card to allow for the estimated quantity and scrap value of scrap to arrive at a net cost per running yard. This cost was then transposed to the cost per 100 sq. ft. Since the credit for scrap stated above assumed ideal cutting conditions, the cost per 100 sq. ft. was increased to allow for normal cutting conditions.

Computing the Fabric Parts Cost per Unit of 100 Pairs of Shoes.—All patterns for fabric parts had a factor in square feet of material required per 100 pairs of shoes. The specifications for each shoe showed the types of coated fabric required and the patterns to be used in cutting them. For a given pattern the factor applied to the cost per 100 sq. ft. of the particular coated fabric required gave the cost of this fabric part per 100 pairs of the shoe being costed.

A separate unit cost sheet was used for each type of shoe and the cost of each of the fabric parts called for per 100 pairs of shoes was entered thereon, as were the remaining costs described below.

Gum Parts.—The 100-pair unit cost of each gum part required (outsoles for example) was computed by applying the scheduled gum price per pound to the weight of the gum parts called for per 100 pairs of shoes according to the specifications.

Extra Material.—Extra materials were findings and packing material. Examples of these items were as follows:

Buckles	Eyelets
Rivets	Laces
Paper	Thread
Carton	Bindings
Can	Tape
Sealing Tape	Buttons

The cost of extra materials per 100-pair unit was the quantity of each item called for in the specifications, priced at the average invoice price before cash discounts, plus freight, plus a charge for purchasing and warehousing, plus a charge for estimated waste.

Direct Labor.—Mixing labor was included in gum material costs as stated above. All other direct labor costs were figured departmentally on a 100-pair basis using established time standards furnished by the time study department and established piece rates or hourly rates of pay.

Indirect Labor.—All labor costs that could not be computed on a unit basis were classed as indirect labor and were figured departmentally on the unit cost sheet by applying a percentage to the direct labor cost computed as stated above. The percentage used in figuring the unit cost in a given department was based on past experience with respect to the percentage relation between the total direct labor and total indirect labor of that department.

Overhead.—This element of cost was considered to be very important because unit costs could vary considerably depending upon the methods of overhead allocation used. At the Grant plant it had been found practical and necessary to apply overhead by departments. Results obtained had proved that in this way a more correct unit cost could be obtained.

In some of the departments it was found necessary to go even further and apply overhead by sections within a department. For example, the calender department was separated into four sections:

1. Fabric calender.
2. Outsole calender.
3. Upper and plain sheet calender.
4. Spreader.

It had been found that, in applying overhead on a direct labor basis for the entire department, fabric calendering was charged unduly, resulting in a higher cost on waterproof footwear calling for many fabric parts and reducing calender costs on outsoles and plain sheets.

Again, calender speeds varied with the gauges and number of operators called for in producing each type of stock and this caused considerable variation in unit costs for one shoe compared to another. In order to arrive at as true a unit cost as possible, machine-hour rates were established for calenders and mills.

Basis of Overhead Allocation.—For each six months' period a production estimate was made based on a sales forecast for the same period. This production estimate was broken down departmentally in dollars of direct labor. Overhead expenses fell in one of three classes: variable, semi-variable, and fixed. From past experience and analysis, estimates were made of expected overhead expenses by departments for the coming six months' period. Schedules were then set up departmentally showing the percentage relations of the dollars of overhead to the dollars of direct labor. These scheduled percentages were used in computing the unit overhead cost by departments. The schedules were checked very carefully against actual performance and were revamped from time to time.

Each department had its own overhead account with a column for each type of overhead expense incurred by or chargeable to the department. Columnar headings of these accounts are shown below at the left, and the explanation or basis of allocation is shown at the right:

Salaries	Superintendents
Stationery and Supplies	Office supplies used directly by the department
Travel Expense	Travel expense chargeable directly to the department
Experimental Expense	Cost of labor on experiments
Industrial Trucking and Elevators.	All trucking labor, trucking overhead, including maintenance of trucks, etc. Same on elevators.
Auto Trucking	Chargeable direct to department
Wrappers Expense	Chargeable direct to department. Used for interlaying in rolls of stock
Engineering Service	Engineering service required by the department, charged directly for service rendered
Moulds Expense	Repair and maintenance of moulds
Dies and Patterns	Repairs and maintenance on dies and patterns

Moving Expense	Charged directly, covers cost of rearranging departments
Lubrication	Lubricating the machines in a department, includes material, labor and overhead
Rents and Royalties	On machines and processes used in or by the department
Tools and Supplies	Wax paper, tools, knives, etc. Miscellaneous material not chargeable to Direct or Extra Material
Last Expense	Repairs and cleaning of lasts
Industrial Relations	Charged on an employee basis direct to department.
Insurance	Chargeable to department
Taxes	Chargeable to department
Power and Light	Chargeable to department
Steam	Charged directly to department. Metered in some cases, prorated in others
Water and Air	Same as Steam
Rent Equivalent	Charged directly to departments on basis of floor space used. Includes building depreciation and repairs, and all costs incidental to buildings, such as sanitation, insurance, taxes, cleanliness, police and fire protection, etc.
Standards or Rate Setting	Charged directly as service is required
Depreciation of Machinery and Equipment	Charged directly to the department on machines and equipment in the department
Depreciation of Moulds	Cost of moulds is set up in a special mould account and depreciated according to a set schedule.
Depreciation of Lasts	Cost of lasts is set up in a special last account and depreciated according to a set schedule.

Administration.—This included all other items of overhead not mentioned above and not chargeable to sales expense. Items chargeable to labor and overhead were as follows:

Cost Department
Pattern Department
Style Design
Laboratory
Technical Service
Waste Department
New Dies and Patterns
New Engraved Rolls
Factory Pay Roll Department
Factory Accounting
Telephone and Telegraph
Engineering Process Service
Special Machine Shop
Special Experimental Work

These were applied to direct producing departments on a percentage of direct labor basis.

Waste.—There were two kinds of waste:

1. Defective Waste
   a. Process Scrap. This was an allowance for fabric that had been processed but was defective as received from the manufacturer, or fabric that was spoiled because of poor workmanship. This loss was determined as a percentage of the cost of direct material.
   b. Condemned Stock. This represented gum stock losses from burnt or lumpy stock, loss caused by the use of a more expensive gum then specified, and loss incurred by the necessity for recalendering or remilling. This loss was determined as a percentage of the gum stock cost, exclusive of gums used for processing fabric parts.
   c. Lacking or Odd Shoes Handling. This was the added cost of completing cases that were not filled on the originally scheduled packing date. This loss was determined as a percentage of the list price.
2. Finished Goods Waste
   a. Loss on Seconds. This was the estimated loss of imperfectly finished articles. This loss was determined as a percentage of the list price.
   b. Loss on Returned Goods. This was the loss on goods defective either in wear or appearance. These defects generally were not detectable in the regular factory inspection. This loss was determined as a percentage of list.

Note.—Natural waste was not considered as a defective loss and was therefore included in the direct material cost.

Example of Establishing Cost of a Specific Product.—The specific product to be costed is a common men's black rubber, known in the trade as a men's plain gum shoe over.

The production of this shoe called for eight separate fabric parts, namely, lining, quarter, strip quarter, collar, toe tip, insole, heel filler, and friction filler. The shoe required five gum parts, namely, toe cap, binder, upper, collar, and outsole. Rubber cement was applied to the parts prior to assembly. Extra materials were paper, carton, case, sealing tape, and glue.

Fabric Cost.—The computation of cost per yard and cost per 100 sq. ft. for the coated fabric used in the lining was as follows:

Material	Weight per running yard, pounds	Price	Unit on which price is based	Cost per running yard
Net	0.64	$0.6651	Pound	$0.4257
No. 1001	0 64	0.1483	Pound	0.0949
Total yard cost	1.28			$0.5206
Scrap credit	0.26	0.0200		0.0052
Net yard cost	1.02			$0 5154
Cost per 100 sq. ft		(Factor 0.0749)		$3.86

(The cloth used was a type of net, 55 in. wide. The gum was a mixture of rubber and compounds known as No. 1001.)

The factor 0.0749 was the figure used to convert the cost per running yard 55 in. wide to a cost per 100 sq. ft. and included a 3 per cent cutting allowance.

On the unit cost sheet for the men's plain gum shoe over, the factor 0.92 was applied to the coated fabric cost per 100 sq. ft. of $3.86 to arrive at a cost of $3.56 for the linings required per 100 pairs of shoes. The factor 0.92 represented the percentage of 100 sq. ft. of material called for by the given pattern to produce linings for 100 pairs of shoes.

The cost of the seven remaining fabric parts was computed in the same manner. Each part called for a different type of coated fabric, and each pattern for each part had a different factor. The parts and their costs were listed on the unit cost sheets, the total fabric parts cost per 100 pairs of shoes being $10.33.

Gum Parts.—The cost of each gum part was computed by applying the scheduled gum price of particular type required, to the weight of the parts necessary for 100 pairs of shoes. Thus the 200 outsoles required in our example weighed 40.5 lb., and the gum had a scheduled cost of $0.1342 per pound, giving $5.43 as the 100-pair-unit cost of outsoles.

The total cost of gum parts was $9.55. This together with the fabric parts cost of $10.33 made the cost of direct materials $19.88.

Labor and Overhead.—Labor and overhead unit costs were computed in accordance with the procedures described earlier in the case. This involved a considerable amount of detail which need not be reproduced here. In summarizing these costs a

separate summary was made of calendering and aproning[1] costs as follows:

	Calender	Apron	Total
Direct labor	$0.52	$0.22	$0.74
Total overhead	3.10	1.25	4.35
	$3.62	$1.47	$5.09

The cost up to the cutting operation was as follows:

Direct material	$19 88
Calender and apron	5 09
	$24 97

Unit direct labor costs in remaining departments:

Cutting	$ 1.75
Preparatory	1.20
Making	5.85
Vulcanizing	1.04
Packing	0 76
	$10.60

Unit indirect labor costs in remaining departments:

Cutting	$0.68
Preparatory	0.14
Making	0 65
Vulcanizing	0.26
Packing	0.42
	$2.15

Unit overhead costs in remaining departments:

Cutting	$ 2 81
Preparatory	0.84
Making	4.02
Vulcanizing	2.42
Packing	0.84
	$10.93

[1] "Aproning" was the title applied to certain handling and preparatory steps between calendering and cutting.

Unit cost of extra materials:

Paper	$0.08
Carton	1.90
Case	0.70
Sealing tape	0.03
Glue	0.02
	$2.73

Unit costs of waste:

Defective waste	$0.41
Condemned stock	1.15
Total defective waste	$1.56
Total finished goods waste	0.75
	$2.31

Summary of unit costs:

Direct material, plus calender and apron		$24.97
Extra material		2.73
Waste		2.31
Direct labor		10.60
Overhead		10.93
Indirect labor		2.15
Total factory cost		$53.69
List price	$100.00	
Percentage of list	53.7	

1. In what respects would the problems in determining the cost per unit of product have differed had the company been manufacturing only one type of product?

2. How do seasonal and cyclical variations in sales affect the actual cost of production per unit of product? What effect might these variations have upon the production and cost accounting policies of a company such as the Grant Rubber Company?

3. Did the unit costs constitute a satisfactory basis for establishing the cost of work in process and finished goods inventories at the close of an accounting period? Under what conditions might these unit costs represent both cost and market?

4. What differences as between one production process and another caused differences in the nature of the costs involved and complicated or facilitated the computation of departmental costs per unit of product?

5. The Grant Rubber Company had found it necessary to apply overhead by departments. Why? How else might overhead have been applied?

6. The Grant Rubber Company developed departmental overhead rates based on the percentage relationship between the estimated overhead expense and the estimated direct labor for the coming six months' period. In some companies the percentages used are based on the average direct labor and overhead costs under average or normal conditions, rather than on the forecasted expenses for the coming period. What differences would this make in the computation of unit cost? Comment upon the justification of one method as against the other with respect to (*a*) inventory valuation, (*b*) computation of net income, (*c*) control of operations.

7. What are the differences between natural waste, defective waste and finished goods waste in the Grant Rubber Company? Should the unit product costs have included charges for each of these types of waste?

8. How frequently should the unit product costs have been recomputed?

D. THE BASE STOCK METHOD AND INVENTORY RESERVES

National Lead Company

THE NORMAL STOCK METHOD OF INVENTORY VALUATION[1]

The general policy of conservatism underlying the normal stock method used by this company was expressed in the following statement of the late William P. Thompson, who until his death in 1896 was president of the National Lead Trust, organized in 1887, and president of the National Lead Company, which developed out of the Trust:

> The policy of this company remains precisely as it has been since its inauguration, and is very simple. First, the unqualified protection of the property in all its departments and in its business, and second, to make fair and reasonable profits, and distribute same among its shareholders whenever deemed wise and prudent to do so.[2]

One of the principles of the normal stock method is that the normal quantity of stock, which must be on hand in one form or another in order to keep operating, shall be priced at an amount which is below future expectations of either cost or market. Although no mention was made of a normal stock until a later date, the annual reports of the company, beginning with the report for 1904, indicated unusual conservatism in pricing inventories. For example, we find in the report for 1904, "Inventories have been taken on a basis so conservative that adequate provision is made for fluctuations in the value of raw material."

Naturally, when assets are understated, claims to the assets on the liabilities side of the balance sheet must also be understated; corresponding reserves are automatically created. Recognition of this was made in the annual report for 1905:

> While raw materials advanced 20% during the year, all inventories were taken on the basis of former values. Our practice in this respect has the effect of creating a reserve which safeguards against depreciation and ensures future profits.

During the year 1906 raw materials continued to advance and reached the highest point in the history of the company up to that time. Nevertheless inventories were again maintained at con-

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[1] Also known as the base stock method of inventory valuation.
[2] Annual report, 1894.

servative figures with the result that though prices fell during 1907 the president could state in his annual report at the close of that year:

The shrinkage in the value of raw material makes no difference in the exhibit, as for a number of years the great stocks which it is necessary to carry have been inventoried at protective figures, and today they could not be replaced at such values.

The first explanation given to the stockholders regarding the normal stock method appeared in the report for 1920 as follows:

INVENTORY

Our Normal Stock system of taking inventories has been followed in the preparation of this statement, with the exception noted below.

Prior to the war, the National Lead Company divided its inventories into Normal Stocks and Excess Above Normal. The Normal Stocks were valued at the lowest price reached by metals in the year 1914. The Excess Above Normal were valued at cost. The Normal Stocks never change—either in quantity or value placed thereon. The Excess Above Normal vary in quantity and value according to the facts. In case of an encroachment upon the Normal Stock at any branch creating a deficiency, a reserve is created in the Normal Stock Inventory sufficient to buy the amount of such deficiency at the replacement value of the metal at that time—the first metal purchased being used to make good the deficiency in the Normal Stock.

In fixing the amount of Normal Stocks, we determine the amount of metal (whether lead, tin, copper or antimony) in the following manner:—

1. The amount of metal normally in transit to our factories.

2. The amount of raw metal necessary in the factories to prevent possible stoppage of manufacturing, due to transportation or other difficulties.

3. The amount of metal in process of manufacture, which in case of White Lead extends over several months.

4. The amount of manufactured products necessary to be carried in stock at factories and warehouses, in order to make prompt deliveries.

The result is that about 80% of our total inventories is in Normal Stocks. Inasmuch as the purchases of raw material from month to month approximately equal our sales of metal in the form of manufactured products from month to month we adopt the fiction—that the metal sold in the form of manufactured products during any given month was made out of the metal bought during that month, and the Normal Stock is never touched, and our inventories, therefore, are valued at cost.

For all practical purposes, the Normal Stock is like a piece of machinery which the company has to have always on hand in order to

operate. When the price for Pig Lead, for instance, went to 11¢ a pound, the National Lead Company could not make an actual profit thereon without selling its Normal Stocks but, in that event, it would either have to buy back such Normal Stocks at the then market, or go out of business. . . .

This being true we do not deceive ourselves by marking up inventory values and taking book profits, upon which we could not realize, to be followed later by book losses of like amount. Bookkeeping is likely to affect policy. By taking book profits on ascending markets of raw material, a company is likely to be led into extravagance and wastefulness. On the other hand, book losses during a period of declining market are likely to be discouraging and may become embarrassing. Our stockholders are also likely to be deceived by apparent high earnings followed by severe losses, if such book profits and losses are reported in our published statements.

The advantage to the company of this safe and conservative method of taking inventories has been made manifest during the last few years. For instance, the market price of Pig Lead advanced from the low price of $3.40 per hundred pounds, at which our normal stock of lead is inventoried, to $11 (or higher) during the war years, and on December 31, 1920, it had fallen to $4.75, inasmuch as we have never taken any book profits, we do not now have to take any book losses. It would have been just as reasonable to mark up the value of our plants and machinery to the replacement value thereof during the war years (with a consequent showing of book profits), and then write them down to present replacement values (with a consequent showing of book losses), as to make similar variations in our Normal Stock.

Of course, as to our Excess Above Normal Stocks—which have always been inventoried at actual cost until written down to the market on December 31, 1920—we have like all others who have inventoried at market or cost (whichever is lower), made profits and losses. But these, while serious, are relatively unimportant.

The government has not allowed the use of the normal stock method in statements presented to it in connection with the income tax.[1] Explanation of this appeared in the annual report of the company for 1922. After dealing with another matter the president stated:

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[1] In the Revenue Act of 1938 permission was granted to tanners and to processors and fabricators of nonferrous metals to use the last-in first-out basis of inventory valuation, a basis which, though not exactly similar, follows essentially the normal stock principle of income determination. Permission was limited to these industries at the request of the Treasury Department because of the impossibility of estimating the effect on revenue and the impossibility of drafting adequate safeguarding regulations if this new basis were allowed indiscriminately to a wide group of taxpayers. Permission was further restricted within these industries to inventories of raw material not yet included in goods in process or finished goods.

It (the government) also refused to approve of our Normal Stock system of valuing inventories, in which we adopt the fiction that the merchandise we sell in any month is made out of the raw material we buy that month; and therefore the material (both raw and in process of manufacture) in stock when an inventory is taken consists of the same Normal Stock that the company has had in its possession since the year 1913, and that the price at which it was inventoried in that year represents the "cost" of such Normal Stock for the purpose of inventories since that date. The government, for the purpose of taxation, requires us to adopt the opposite fiction; *i.e.*, that the merchandise sold in any month was made out of the oldest raw material that the company had in its possession. This ruling of the government will cause great fluctuation in apparent profits from year to year but, in the long run, will not affect the amount of taxes the company must pay. The reason given by the Bureau for the rejection of the Normal Stock system of valuing inventories for tax purposes is, that to allow it in the very few companies that have adopted it would result in any given year in unequal taxation.

The following paragraph appeared in the report for 1924, with a schedule which is presented in the case as Exhibit 1:

For the purpose of the income tax, the reports made to the Department of Internal Revenue show inventories valued at cost or market, in accordance with the rules of that department. Hence, reports to the government include profits and losses due to changing inventory prices. How misleading this may be is illustrated by the table on page 235 showing profits and losses on 96,000 tons of lead included in our normal stock, if valued at market price.

Exhibits 2 and 3 are presented to give some indication of the difference in profits shown under the normal stock method as compared with profits when inventories are priced at the average market for the year (an approximation of the lower of cost or market). Exhibit 2 is an adjustment of the normal stock of lead to an average market for the years shown. It should be realized that the company also carries large quantities of tin and antimony at low prices. No adjustment has been made for these two metals in the exhibits, for the quantity carried in stock was not indicated except in the later reports beginning with 1930. If adjustment were made for these two metals in the exhibits, the differences would be even more marked. This is particularly true of tin for according to the company's report for 1923:

. . . the National Lead Company is importing about 1,500 tons of pig tin a month, which it consumes in the manufacture of babbitt,

solder, type-metals, tin pipe, etc., making it the largest consumer of tin in the world—unless it is exceeded by the United States Steel Corporation in its manufacture of tin plate.

Exhibit 2 also shows stated earnings adjusted to reflect profits with lead inventories priced at an average market, and Exhibit 3 shows in chart form a comparison of earnings on the two bases. The first impression one gains in looking at Exhibit 3 is that the method operated according to expectations for the years 1915–1925 but failed to fulfill its purpose for the period from 1925 through 1930. This impression is erroneous. The company did not state the amount of non-operating profits in 1926 and 1929 but indicated that they were quite substantial. If these were removed, the peaks would not be so marked. In the report for 1926, for example, the following statement appeared regarding net earnings:

> Net Earnings: A large part of the Net Earnings reported in the foregoing statement may be classified as "Non-recurring." They consist of the profits realized from the sale of the physical assets of the United States Cartridge Company that had been depreciated on our books; the net earnings of that company during the year prior to the sale; funds received in liquidation of that company; the profits on sale of other investments; the profits earned by reason of inventories being reduced at many points below normal; and the exceptionally high profits in the lead mining and smelting departments during the year by reason of the very high price of pig lead.

The adjusted earnings for 1926 are affected by the lower prices prevailing at the close of the year. In fact, in its returns to the government for tax purposes, the company reported a loss of approximately $2,000,000 in the value of the inventory based on the lower of cost or market.

In the report for 1929 it was stated that:

> The net earnings for the year 1929 were the largest in the history of the company. After deducting non-recurring profits derived from the sale of capital assets, they are still the largest in the history of the company.

The increased volume of sales during that year was responsible in a large measure for the increased profits.

In spite of the peak in stated profits for 1929, it is to be noted that the degree of change from 1928 to 1929, and from 1929 to 1930, was much less for the stated profits than it was for the adjusted profits.

The use of the normal stock method does not require that inventories shall be kept at fixed quantities. The exercise of judgment is still called for in reducing the quantity when prices are high and building it up when prices are low. It is a policy of the National Lead Company to exercise judgment in this respect, as can be seen in the following paragraph which appeared in the report for 1927:

> The company reduced its inventories during the period of high pig lead prices to the lowest point possible without impairing prompt deliveries; this reduction at times being (in lead) as much as 20,000 tons. Between the period of high prices in 1926 and the relatively low price at the end of 1927, when such deficiencies were replaced, the company received a profit of approximately $800,000 by reason of the lower replacement cost of such deficiencies. This fact will be of interest to those of our stockholders and others who have inquired regarding the Normal Stock System of valuing inventories, and erroneously believed that a normal stock system of valuing inventories necessitated fixed amounts of inventories, regardless of market prices. Of course, such profits are nonrecurring and, in case of bad judgment, losses could occur.

If the market falls below the unit price established for the normal stock of an item of inventory, it is necessary to establish a new base price at or below market if the normal stock method is to be continued; otherwise the inventory would be priced above market, which would defeat the conservative purposes of the normal stock method. Thus on December 31, 1930, the market price of tin was 26.25 cts. per pound and the company stated in its report for that year:

> Inasmuch as the Normal Stock of tin has for many years been inventoried at 27½ cts. per pound, it has been deemed proper to reduce the inventory price, for the purpose of Normal Stock, to 25 cts. per pound; the loss resulting therefrom being a charge against net earnings for the year 1930.

In 1931 the price used for tin in the normal stock system was further reduced to 21 cts. a pound, and in 1932 the price used for lead was reduced to 3 cts. a pound from 3.4 cts. which had been used since 1913. These prices continued to be used in the company's report for 1933 and it was evident that the company expected to continue its use of the normal stock method of inventory valuation.

EXHIBIT 1
NATIONAL LEAD COMPANY
(000 omitted)

Date of Price Change	Nor. Stock Invent'y Tons	Com'n Lead Price per 100 lb. N. Y.	Mkt. Value of Normal Stock Inv.	Book Profit or Loss upon Basis of Mkt.	No. of Days Since Last Price Ch'g
12- 1-23	96	$ 7 00	$13,440	$	
12- 5-23	96	7 25	13,920	480	4
12-19-23	96	7 40	14,208	288	14
12-29-23	96	7 50	14,400	192	10
1- 2-24	96	7 75	14,880	480	4
1-10-24	96	7 90	15,168	288	8
1-18-24	96	8 00	15,360	192	8
2- 1-24	96	8 15	15,648	288	14
2- 7-24	96	8 25	15,840	192	6
2-14-24	96	8 40	16,128	288	7
2-15-24	96	8 50	16,320	192	1
2-21-24	96	8 70	16,704	384	6
2-27-24	96	8 90	17,088	384	6
2-28-24	96	9 00	17,280	192	1
	Total Book Profit from 12-1-23 to 2-28-24			$3,840	89
4- 3-24	96	8 75	16,800	480*	35
4- 9-24	96	8 50	16,320	480*	6
4-11-24	96	8 25	15,840	480*	2
4-24-24	96	8 00	15,360	480*	13
5- 5-24	96	7 75	14,880	480*	11
5- 7-24	96	7 50	14,400	480*	2
5-15-24	96	7 25	13,920	480*	8
5-22-24	96	7 00	13,440	480*	7
	Total Book Loss from 2-28-24 to 5-22-24			$3,840*	84
7-23-24	96	7 25	13,920	480	62
7-29-24	96	7 50	14,400	480	6
8-11-24	96	7 75	14,880	480	13
8-15-24	96	8 00	15,360	480	4
10-20-24	96	8 25	15,840	480	66
10-23-24	96	8 40	16,128	288	3
10-25-24	96	8 50	16,320	192	2
10-27-24	96	8 65	16,608	288	2
12- 8-24	96	8 75	16,800	192	42
12-10-24	96	8 90	17,088	288	2
12-11-24	96	9 00	17,280	192	1
12-15-24	96	9 25	17,760	480	4
12-18-24	96	9 35	17,952	192	3
12-23-24	96	9 50	18,240	288	5
12-26-24	96	9 60	18,432	192	3
1- 2-25	96	9 75	18,720	288	7
1- 5-25	96	10 00	19,200	480	3
1- 8-25	96	10 25	19,680	480	3
1-12-25	96	10.50	20,160	480	4
	Total Book Profit from 5-22-24 to 1-12-25			$6,720	235
1-21-25	96	10 00	19,200	960*	9
1-30-25	96	9 75	18,720	480*	9
2-13-25	96	9 50	18,240	480*	14
2-17-25	96	9 25	17,760	480*	4
	Total Book Loss from 1-12-25 to 2-17-25			$2,400*	36

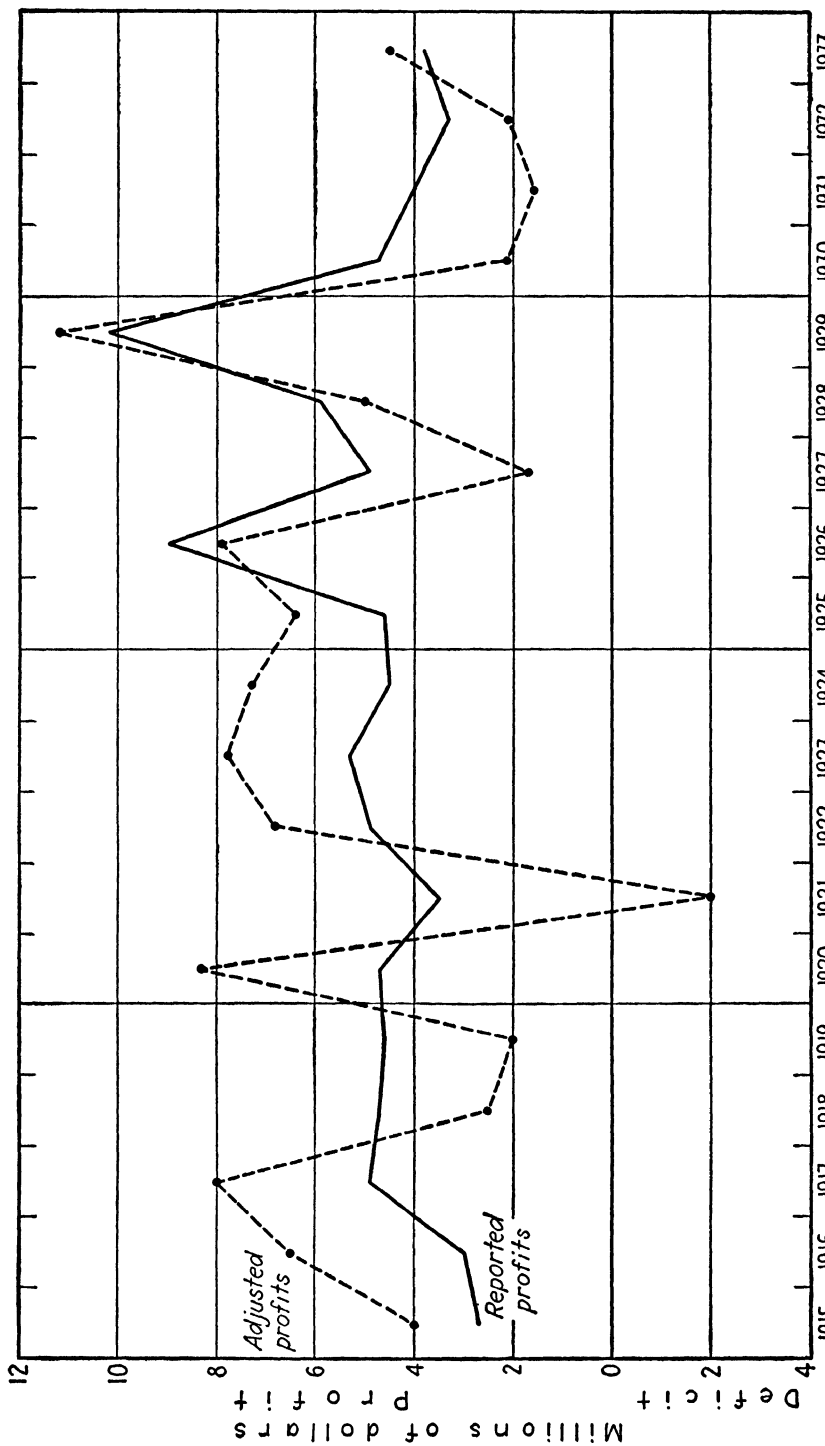
* Loss.
Source: Company report.

EXHIBIT 2
NATIONAL LEAD COMPANY
ADJUSTMENT OF INVENTORIES AND PROFITS FROM NORMAL TO COST OR MARKET BASIS
(000 omitted)

Year	Basic inventory lead*	Wholesale price of lead per lb. yearly average†	Basic inventory at year's average price	Excess over basic value	Total inventory as reported	Total inventory adjusted	Reported net profits	Net profits inventory at average market
1913	$5,440	$0 0437	$ 7,000	$ 1,500	$ 7,300	$ 8,800	$.....	$.... .
1914	5,440	0 0386	6,200	700	7,200	7,900	2,500	1,700
1915	5,440	0 0467	7,500	2,000	6,300	8,300	2,700	4,000
1916	5,440	0 0686	11,000	5,500	7,300	12,800	3,000	6,500
1917	5,440	0 0879	14,100	8,600	8,200	16,800	4,900	8,000
1918	5,440	0 0741	11,900	6,400	15,000	21,400	4,700	2,500
1919	5,440	0 0576	9,200	3,800	16,000	19,800	4,600	2,000
1920	5,440	0 0796	12,700	7,300	19,600	26,900	4,700	8,300
1921	5,440	0 0455	7,300	1,800	20,600	22,400	3,500	2,000*d*
1922	5,440	0 0573	9,200	3,700	19,600	23,300	4,900	6,800
1923	5,440	0 0727	11,600	6,200	19,400	25,600	5,300	7,800
1924	6,528	0 0810	15,600	9,000	18,500	27,500	4,500	7,300
1925	6,528	0 0902	17,300	10,800	17,700	28,500	4,600	6,400
1926	6,528	0 0842	16,200	9,700	16,400	26,100	9,000	7,900
1927	6,528	0 0676	13,000	6,400	17,300	23,700	4,900	1,700
1928	6,528	0 0631	12,100	5,600	18,200	23,800	5,900	5,000
1929	6,528	0 0683	13,100	6,600	18,300	24,900	10,200	11,200
1930	6,401	0 0552	10,400	4,000	17,400	21,400	4,700	2,100
1931	6,401	0 0424	8,000	1,600	14,100	15,700	4,000	1,600
1932	2,981	0 0318	3,200	200	14,300	14,500	3,300	1,900
1933	2,981	0 0387	3,900	900	16,200	17,100	3,800	4,500

* In short tons: 1913–1923, 80,000 at $0 034 per pound; 1924–1929, 96,000 at $0.034 per pound; 1930–1931, 94,133 at $0 034 per pound; 1932–1933, 49,687½ at $0.03 per pound.
† Desilverized, New York.
d = deficit.
Sources: Company reports; U. S. Department of Commerce, *Survey of Current Business*, 1936.

EXHIBIT 3
NATIONAL LEAD COMPANY—PROFITS



Swift & Company

RESERVE FOR INVENTORY PRICE DECLINE

In 1933 the company adopted a policy of carrying a reserve against future declines in inventory. The policy is described in quotations from the annual reports, which in the case of this company are called year books, and from the prospectus of the First Mortgage Sinking Fund 3¾% Bonds of 1950.

Inventory Profits

Some of our products made profits due to rising inventory prices. While the prices of our products were lower on an average than in previous years, some products advanced during the year, enabling us to earn a profit on part of the inventory. Properly speaking, such profits are capital gains rather than merchandising profits and should be preserved to take care of inventory losses. We have therefore set up a reserve of $4,267,000 on our Balance Sheet against possible future losses due to declining inventory prices.

I think it would be well, in explaining this subject further, to point out, as I have on previous occasions, that Swift & Company always has to keep on hand, in process of cure, in storage, and at distributing centers, a sufficient quantity of meat, produce, and other items to take care of the requirements of our customers. As our products are sold seasonally, they must be replaced seasonally. We cannot sell our goods and then take our profits in cash and discontinue buying livestock. We have to put a part of all cash profits obtained through rising inventory prices back into new inventories, which may or may not be stable in value.

Years of experience in the packing business have shown conclusively that profits due to rising inventory prices should be treated as capital gains and not as real earnings of the business.

We believe our action in establishing a reserve against future declines in inventory values is constructive and conservative.[1]

Profits

This year our total profit on shareholders' investment was 5.25 per cent, which is a slight improvement over last year. Owing to the rise in meat prices and the increase in inventory values, your directors have thought it wise to add $6,500,000 to our inventory reserve.

I wish particularly to stress the point that profits on inventory, due to rising prices, disappear quickly when prices fall. Experience

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[1] Year Book, 1934, which included a report on the fiscal period ending October 28, 1933.

has shown that they can go as unexpectedly as they come. During the period they stand on our books, they provide no additional cash for the payment of dividends, for the maintenance of property, or for plant extensions. On the asset side of our balance sheet, they are in the inventory account in the form of higher-valued products. While it is true that inventories are constantly being sold and cash is realized, the cash so obtained must be reinvested in new inventories at the higher level of prices if our trade is to be taken care of.

We are, of course, glad to have inventory profits; in fact, we must have them in a period of rising prices if our working capital is to be preserved. But inventory profits are really capital gains, part of which should remain in the business as insurance against losses resulting from falling prices. Had the financial and business community given proper recognition years ago to the real nature of inventory profits and the distinction between such profits and cash profits, all of us would be better off to-day.

What we need and are seeking most of all is cash profits, profits that can be paid out in dividends or reinvested in the business as occasion requires.[1]

Earnings

In accordance with the fundamental principle that a large portion of the profits on inventory due to a rise in prices should be retained in the business until they automatically disappear as the result of falling prices and inventory losses, your directors have transferred $6,000,000 of the year's profits to the account known as "Reserve for Inventory Price Decline."[2]

Auditor's Notes Appended to Statements

The quantities and condition of the inventories were ascertained by the employees of the companies and were certified to by responsible officials of the companies. The prices and computations were tested by us. The product items, where cost was not ascertainable, and which represent approximately three-fourths of the whole product inventory were valued at or based on approximate market prices allowing for estimated selling expense, and the other items of product and ingredients and supplies were valued at cost or market, whichever was lower.

The inventory values based on market take up most, if not all, of the profit that may be realized on ultimate sale. They allow, in large part, for the cost of distribution and sale through the margin allowed below the quoted market price and by taking wholesale markets. The selling branches under average conditions are able to

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[1] Fiftieth Anniversary Year Book, which included a report on the fiscal period ending October 27, 1934.

[2] Year Book, 1935, which included a report on the fiscal period ending October 26, 1935.

absorb their expenses without loss. This basis of inventory valuation followed is similar to that followed by the industry generally. It has been consistently followed for the beginning and end of each of the three fiscal years ending with October 27, 1934.

This method of valuing inventory in a period of rising prices has produced an unrealized profit in the inventory of October 27, 1934 to the extent of the commodities included therein purchased at a lower market than prevailed at the inventory date. This method increases profits in a period of rising prices and decreases profits in a period of declining prices.

In this connection, reference is made to the appropriations made out of profits by the Company for price decline of $4,267,000 in the fiscal year ending in 1933 and $6,500,000 in the fiscal year ending in 1934. These reserves were not made as against inventory carrying values at the close of the fiscal year to bring these values to cost, thus eliminating unrealized profits contained therein. They were primarily made as an appropriation out of profits earned in a period of rising prices as a carry forward to offset future losses or reduced profits in a period of declining prices when and if such a condition should eventuate.[1]

Inventories were shown as follows in the balance sheet for October 30, 1937, and this was typical of the practice from 1933 to 1937.

Inventories—Products where cost was not ascertainable were valued at approximate market prices, allowing for estimated selling expenses; other products and ingredients and supplies at the lower of cost or market—	
Product	$101,631,434
Ingredients and supplies	7,664,461
	$109,295,895

During the period from 1933 to 1937, the reserve was shown on the liability side of the balance sheet under the general heading of Reserves with the title, Reserve for Inventory Price Decline. In Exhibit 1 inventories and net income are given for 1919–1937 and the reserve for the years in which it was carried. Figures from the Department of Labor, Bureau of Labor Statistics Index of Wholesale Meat Prices are given to indicate changes in the prices of products which constituted a large part of the inventory. Income statements are given in comparative form for the years 1932–1935. There was no provision for the reserve in 1936 or 1937.

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1. What are the significant differences between the inventory reserve policy of Swift & Company and the normal stock policy

[1] Prospectus, March 27, 1935; $43,000,000 First Mortgage Sinking Fund 3¾% Bonds.

of the National Lead Company in terms of the effect on the current position and the net income?

2. On what facts should decisions as to the amount of the reserve and of debits and credits thereto be based?

3. Would you advise a continuance of the reserve policy in its present form or in a modified form?

SWIFT & COMPANY
COMPARATIVE CONSOLIDATED INCOME ACCOUNTS

	Oct. 29, 1932	Oct. 28, 1933	Oct. 27, 1934	Oct. 26, 1935
Sales	$.....	$.....	$	$767,227,313
Cost of Goods Sold, including operating costs, buying and selling expenses, advertising and general administrative	.....	.....	.....	732,308,689
Operating Income before Depreciation and Interest	$5,379,647	$21,093,392	$22,721,739	$ 34,918,624
Deduct:				
Taxes—other than income and processing taxes	.....	.....	.....	3,414,538
Depreciation	7,539,770	7,470,892	7,078,751	6,565,345
Contributions to Pension Trust	.....	.....	.....	2,585,214
Provision for Doubtful Accounts	.....	.....	.....	899,216
Total Deductions	$7,539,770	$ 7,470,892	$ 7,078,751	$ 13,464,313
Operating Income before Interest and Other Income	$2,160,123*d*	$13,622,500	$15,642,988	$ 21,454,311
Add: Other Income	.....	1,533,135	1,637,924	1,186,759
	$2,160,123*d*	$15,155,635	$17,280,912	$ 22,641,070
Deduct: Interest Charges	3,177,666	2,870,501	2,620,430	2,479,977
	$5,337,789*d*	$12,285,134	$14,660,482	$ 20,161,093
Less: Provision for Income Taxes.	.....	1,987,756	3,058,326	2,509,641
	$5,337,789*d*	$10,297,378	$11,602,156	$ 17,651,452
Add Special Credits:				
Discount on Funded Debt Retired through Sinking Fund	.....	21,659	31,465	.....
	$5,337,789*d*	$10,319,037	$11,633,621	$ 17,651,452
Deduct: Special Debits:				
Loss on Sale of Securities	.....	43,471	195,627	.....
Loss on Disposal of Fixed Properties, Net	.....	125,984	5,502	.....
Write-off—Unamortized Balance of Discount and Expense on Funded Debt Retired This Year	.....	.....	.....	1,962,835
Write-off—All Intangible Assets Contained in Acquisition of Properties and Businesses in Prior Years	.....	.....	.....	921,315
Total Special Deductions.	$.....	$ 169,455	$ 201,129	$ 2,884,150
Net Income for Year	$5,337,789*d*	$10,149,582	$11,432,492	$ 14,767,302
Less: Appropriation for Inventory Price Decline	.....	4,267,000	6,500,000	6,000,000
Balance to Surplus	$5,337,789*d*	$ 5,882,582	$ 4,932,492	$ 8,767,302

d = deficit.
Source: Company reports.

EXHIBIT 1
SWIFT & COMPANY

Date	Inventories	Reserve for inventory price decline	Net profits before dividends	Index of wholesale meat prices*
Nov. 1, 1919	$191,890,849	$.....	$13,870,181	117.6
Oct. 30, 1920	151,305,085	.....	5,170,382	108 0
Nov. 5, 1921	93,771,464	.....	7,812,292*d*	77.4
Nov. 4, 1922	86,424,829	.....	13,049,217	76.6
Nov. 3, 1923	90,653,967	.....	13,184,619	74.1
Nov. 1, 1924	105,124,252	.....	14,125,988	80.6
Oct. 31, 1925	106,251,565	.....	15,379,152	104.2
Nov. 6, 1926	113,655,387	.....	15,645,242	99.0
Nov. 5, 1927	115,239,516	.....	12,202,493	100 9
Nov. 3, 1928	124,236,196	.....	14,813,182	108.7
Nov. 2, 1929	127,561,147	.....	13,076,815	102.5
Nov. 1, 1930	101,764,921	.....	12,491,189	91.4
Oct. 31, 1931	75,464,777	.....	8,235,301	67.7
Oct. 29, 1932	56,746,680	.....	5,337,789*d*	53.7
Oct. 28, 1933	72,981,625	4,267,000	5,882,582†	48.2
Oct. 27, 1934	100,506,172	10,767,000	4,932,492†	68.4
Oct. 26, 1935	97,983,420	16,767,000	8,767,302†	94.3
Oct. 31, 1936	105,064,272	16,767,000	12,103,751	85.2
Oct. 30, 1937	109,295,895	16,767,000	8,880,496	98.3

* U. S. Department of Labor, Bureau of Labor Statistics; average of monthly figures 1919–1922; November figures, 1923–1937.
† After appropriation for inventory price decline.
d = deficit.
Sources: Company reports; U. S. Department of Commerce, *Survey of Current Business*, Annual Supplements, 1932, 1936, March issues, 1937, 1938.

INTERNATIONAL HARVESTER COMPANY—NO. 1

INVENTORY AND GENERAL CONTINGENCY RESERVES

Prior to 1931 there was no reference to an inventory reserve either in the financial statements or in the text of the annual reports. Thereafter there was a development, both in the policy with respect to the reserve and in the degree of disclosure, as indicated in excerpts from the annual reports.

Reserves established in prior years for the protection of the business in adverse times were drawn upon to the extent of $11,000,000, thus limiting the call upon Surplus Account to $4,412,000, for the payment of dividends declared in 1931.

. . . . . .

The physical inventories of raw materials and supplies, work in process of manufacture, and finished goods have been priced at cost or market, whichever was lower, and substantial reserves, accumulated from earnings in prior years, have been deducted from the values so determined.[1]

The deficit for the year made it necessary to transfer $10,000,000 from general reserves to surplus. These reserves, on which we also drew heavily in 1931, were established from earnings of prior years as a blanket protection against market declines in inventories throughout the world, decline in dollar exchange value of current assets in foreign countries, and other unforeseen contingencies. Years of experience have shown that a world-wide business such as ours is subject to many contingencies and losses not predictable as to time, place, nature or extent. This policy of providing general blanket reserves has seemed to the management the best protection against such contingencies, and we are fortunate in having them available at this time; they are necessary insurance, operating for the benefit of both stockholders and customers and should be renewed when earnings again permit. The balance of these blanket reserves not yet used is $15,000,000. This has been applied in the balance sheet as a deduction from inventories, such inventories having been valued at cost or market, whichever was lower. How much of these reserves may be required to meet further declines in prices and foreign exchange rates depends, of course, on the economic conditions prevailing during the next few years.

. . . . . .

The inventories of raw materials and supplies, work in process of manufacture, and finished products, have been priced at cost or market,

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[1] Annual report, 1931.

whichever was lower, and from such valuation there has been deducted the remainder (after transfers of $3,800,000 to the reserves for losses on receivables during the current year) of general blanket reserves provided from earnings of prior years for possible decline in market values and foreign exchange, the remaining amount so deducted being $15,000,000.[1]

Following the policy pursued in the two preceding years, $10,000,000 was transferred from general reserves to surplus. This course appeared to be warranted by the cessation of declines in raw material prices and in foreign exchange rates, and by the apparent upward trend in business. There now remains $5,000,000 in the general or blanket reserves, and this amount is applied in the balance sheet as a deduction from inventory values.

. . . . . .

The inventories of raw materials and supplies, goods in process of manufacture, and finished products have been priced at the lower of cost or market, and from such valuation there has been deducted the $5,000,000 remainder of general blanket reserves provided from earnings of prior years for possible declines in market values and foreign exchange.[2]

The Company's inventory reserve of $5,000,000 has been increased to $8,500,000, making the total reserve about 8% of the closing inventory, valued at cost or market. Material and labor costs have increased and low-cost goods in the inventory have been and are being replaced by similar higher-cost goods. This apparent profit in the constant minimum inventory which must be maintained to carry on business can never be realized and experience has shown that it is ultimately wiped out when the economic pendulum swings in the other direction. Sound accounting requires the building up of an adequate inventory reserve during periods of rising costs to offset the inevitable inventory shrinkage during periods of falling costs and prices. Recognition of this fact has been largely responsible for the Company's ability to weather the several economic crises in its history, and this policy will be continued.[3]

The Company has continued its practice of building up a general inventory reserve during years of advancing material prices and production costs to provide against corresponding inventory shrinkage to be expected and heretofore experienced during periods of falling costs and prices. The amount provided out of 1935 earnings for this purpose is $5,000,000, bringing the total inventory reserve to $13,500,000.[4]

Owing to the necessarily slow turnover in our business, the Company must constantly maintain a large investment in inventories of

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[1] Annual report, 1932.
[2] Annual report, 1933.
[3] Annual report, 1934.
[4] Annual report, 1935.

raw materials and finished products. Consequently, the effect of commodity price fluctuations is more severe in our industry than in many other lines of business. We have followed the policy for many years of building up general inventory reserves during periods of price advances to meet losses which are inevitably experienced during periods of falling costs and prices. No provision for general inventory reserve was made from 1936 earnings, inasmuch as the reserve was increased as of October 31, 1936, by special adjustments resulting chiefly from the change in fiscal year as set out in the surplus account. The total general inventory reserve at October 31, 1936, amounted to $22,500,000.[1]

Inventories were reported on the balance sheets for the six-year period as shown below:

	December 31		
	1931	1932	1933
Raw Material, Work in Process, Finished Products, etc.	$ 78,658,932	$ 76,347,673*	$ 85,690,105*

	December 31		October 31, 1936
	1934	1935	
Raw Material, Work in Process, Finished Products, etc., at lower of cost or market	$100,768,358	$111,743,686	$139,329,070
Deduct: Inventory Reserve	8,500,000	13,500,000	22,500,000
	$ 92,268,358	$ 98,243,686	$116,829,070

* At lower of cost or market, less reserves.

The income and surplus statements for 1931 are reproduced in full. In 1932 and 1933 there was no reference to the reserve in the income statement, reserve released being shown in each year as an addition to surplus. In 1934 provision for the reserve in the amount of $3,500,000 was included as an expense on the income statement before net profit, which was $3,948,637. In 1935 a similar procedure was followed, but in 1936 there was no charge before net profit, an addition of $9,000,000 to the reserve being shown as a deduction from surplus.

[1] Annual report, 1936.

INTERNATIONAL HARVESTER COMPANY
INCOME ACCOUNT FOR 1931

Gross Earnings before deducting Interest on Loans, Depreciation, etc.		$12,859,391
Deduct:		
Interest on Loans	$ 75,713	
Ore and Coal Depletion	113,017	
Plant Depreciation	5,639,987	
Special Maintenance	232,322	
Provision for Losses on Receivables	5,451,814	$11,512,853
Profit for year 1931		$ 1,346,538
Add:		
Reserves from prior years' earnings for decline in market values, etc., released to Income		11,000,000
Balance carried to Surplus		$12,346,538

SURPLUS DECEMBER 31, 1931

Balance at December 31, 1930		$59,108,107
Add:		
Profit for year 1931	$ 1,346,538	
Reserves released, as shown above	11,000,000	12,346,538
		$71,454,645
Deduct:		
Cash Dividends:		
Preferred Stock	$ 5,735,947	
Common Stock	11,022,962	16,758,909
Surplus at December 31, 1931		$54,695,736

Source: Company report.

1. Determine the amount of reserve deducted from inventory in 1931, by figuring back from the first year for which the balance in the reserve was given. Determine the amount of inventory in that year before the deduction of the reserve.

2. What are the significant differences between the inventory reserve policy of the International Harvester Company and that of Swift & Company? If the International Harvester Company is to continue its inventory reserve, should it use a method more similar to that of Swift & Company? Should the inventory reserve be continued?

XII. BUDGETARY CONTROL OF FUNDS

Glenway Company

CASH BUDGETS

Until 1933, the Glenway Company had prepared its cash budget on the customary basis of estimating total receipts and total disbursements for the period of the forecast. The executives took into consideration all factors of receipts and disbursements indicated in the expected profit and loss operations for the period of the budget, as well as those factors indicated by the expected changes in the balance sheet position of the business from the beginning to the end of the budgetary period. This general procedure gave rise to a form for the cash budget substantially as shown in Exhibit 1.

In connection with the form, a Daily Operation Sheet, illustrated in Exhibit 2, was used to assist in checking the progress of the budgetary estimates during the course of the period of the forecast.

EXHIBIT 1
GLENWAY COMPANY
Cash Budget Month of January 1936

Banks	Amount	Transfers	Adjusted Balance	
XXX	$	$	$	
XXX				
XXX				
Total	$	$	$	Annual Budget $
Expected Collections:				
Cash Balance at beginning of year (See report of Credit Department)		$		
1–10				
10–20				
20–end				
Total		$		Annual Budget $
Total Cash Available		$		Annual Budget $
Cash Requirements:				
Pay Rolls		$		
Administrative Cash				
Raw Materials				
Supplies				
Fuel				
Capital Expenditures				
Maintenance				
Cash Investments				
Notes Payable				
_____				
_____				
_____				
Total Estimated Disbursements		$		Annual Budget $
Cash Balance		$		Annual Budget $
Balance Required		$		Annual Budget $
Loans		$		Annual Budget $
Remarks:				

EXHIBIT 2
GLENWAY COMPANY
Daily Operation Sheet

Cash in Banks	Notes Payable to Banks	Due This Week	Due This Month
X .... $_____	X... . $_____	_____	_____
Y..... _____	Y..... _____	_____	_____
Z . ... . _____	Z. . _____	_____	_____
Total . $_____	Total . $_____		

Budget Month End $_____ Budget Month End $_____

Vouchers Payable			Collections (Cumulative for Month)
Amount	Due This Week	Due This Month	
$_____	$_____	$_____	Today ..... $_____
			Cumulative... $_____
			Budget for Month..... $_____

Disbursements to Date for Month		Sales—Billings	
Pay Roll	$_____	Budget for Month.....	$_____
Raw Materials... . ..	_____	Actual to Date.....	_____
Supplies, Fuel.... . .	_____	Receivables Outstanding....	_____
Payments on Loans.. .	_____	Short-term Investments.....	_____
_____.....	_____	Maturing This Week..... .	_____
_____.....	_____	Inventory Month End	_____
Total	$_____		
Budget for Month.....	$_____		

Late in 1933, however, it was decided to change the principle on which the main cash budget was constructed, in accordance with a so-called differential short-cut or balance sheet method for cash planning. This method took into consideration only net profit from the profit and loss budget, adding plus or minus variations in the items of the balance sheet, as indicated by the balance sheet changes from the beginning to the end of the period for which the budget was prepared. The form chosen to reflect this

change in policy as to the construction of the cash forecast was as follows:

EXHIBIT 3
GLENWAY COMPANY

Forecast of Cash by Weeks for Four Months Ended _____ 19____

	1st Week	2d Week	15th Week	16th Week	4 Mos. Ended _____ 19____
Cash, U. S. Securities, and Other Marketable Securities at beginning of period					
Less: U. S. Securities					
Other Marketable Securities					
Cash Position at beginning of period (including time deposits, etc.)					
Receipts:					
Net Income					
Increase in Reserve for Depreciation (Gross)					
Increase in Reserve for U. S. Income Taxes					
Sale of U. S. Securities					
Sale of Other Marketable Securities					
Miscellaneous					
Total Receipts					
Disbursements:					
New Construction					
Payment of U. S. Income Taxes					
Preferred Dividend					
Common Dividend					
Purchase of U. S. Securities					
Purchase of Other Marketable Securities					
Miscellaneous					
Total Disbursements					
Changes in Working Capital Accounts:					
Decrease in Notes Receivable					
Decrease in Accounts Receivable					
Decrease in Inventories					
Increase in Accounts Payable					
Increase in Accrued Liabilities					
Total Changes in Working Capital Accounts					
Cash Position at end of period (including time deposits, etc.)					
Add: U. S. Securities					
Other Marketable Securities					
Total Cash, U. S. Securities, and Other Marketable Securities at end of period					
Previous Forecast of Total Cash and Cash Investments					
Desirable Minimum Cash Balance					

The form shown as Exhibit 3, which was prepared monthly, was used for projecting the cash operations, by weekly intervals, for four months in advance of the budgeting date. Each week, the cash account was brought up to date as indicated in Exhibit 4.

EXHIBIT 4
GLENWAY COMPANY
Weekly Cumulative Consolidated Cash Account

Figures from beginning of month through _____ (date)

	Current Estimate	Previous Forecast	Variance of Estimate from Forecast
Cash at beginning of month			
Receipts:			
Net Income			
Increase in Reserves:			
Depreciation (gross)			
Sale of Cash Investments			
Miscellaneous			
Total Receipts			
Disbursements:			
New Construction			
Payment of U. S. Income Taxes			
Payment of Dividends			
Purchase of Cash Investments			
Miscellaneous			
Total Disbursements			
Balance			
Changes in Working Capital Accounts:			
Decrease in Notes Receivable			
Decrease in Accounts Receivable			
Decrease in Inventories			
Increase in Accounts Payable			
Increase in Accrued Liabilities			
Balancing Figure			
Total Working Capital Changes			
Cash at Close of Week			
Total Cash and Cash Investments			

(Front)

EXHIBIT 4.—(*Continued*)
GLENWAY COMPANY
Net Working Capital Estimated

As of _____ (date)

Current Assets:	
Cash	
U. S. Securities	
Other Marketable Securities	
Total Cash and Cash Investments	
Notes Receivable	
Accounts Receivable	
Inventories	
Balancing Figure	
Total Current Assets	
Current Liabilities:	
Accounts Payable	
Notes Payable	
Taxes, Pay Rolls and Sundry Accrued Items	
U. S. Income Taxes	
Accrued Dividends on Preferred Stock	
Total Current Liabilities	
Net Working Capital	
Forecast of Inventories at _____ (date)	

(Reverse side)

As will be seen, this form provided for comparing the current estimate with the previous forecasts taken from the regular four-monthly projection. In the use of the second procedure in the control of cash, the company set up what it called automatic local controls, such as maximum and minimum inventory limits, collection time control, control as to time for paying invoices, and the like. The so-called automatic local controls were counted on to make purchases, production, payments on accounts payable, and collections vary as sales varied, to the end that the only variations affecting cash were such changes in the balance sheet position as were possible within the leeway established by such controls.

Discuss the advantages, if any, which you may see in the change adopted for budgetary control of cash operations.

XIII. AN INTRODUCTION TO SPECIAL JOURNALS

KIRKWELL MANUFACTURING COMPANY—NO. 1

THE USE OF A SPECIAL JOURNAL IN RECORDING SALES

The Kirkwell Manufacturing Company made abrasives of several specialized types which were sold from stock to wholesalers and large industrial users. Practically all sales were made on account to regular customers. The company carried 122 active accounts, although half the sales were made to 30 of these accounts. Ninety per cent of the purchases were made from five vendors.

The bookkeeping system of the company was essentially similar to thousands of other systems, but in some particulars it was different. It was developed by the executives in conference with the auditors who examined the books every three months and was devised to meet the needs of this particular business.

FORM 1

KIRKWELL MANUFACTURING COMPANY

Bill of Lading Number 15312

Date Received 7/11/32 Our No. 1619

For T. H. Rogers

Terms 2/10 n/30 Wisconsin Avenue, Milwaukee, Wis.

How Shipped N. Y. C.—Chi., M., & St. P. R R. When AfterAug. 1

Sold by Swanson Their No. A 143 Date of Shipment 8/2/32

			Price Per Doz.	Ext.	Total
10	Doz.	Kirkwell "Special"	at 2.50	25 00	
10	Doz.	Kirkwell #3	at 2.00	20 00	45 00

Approved by H. M.
Billed by E. R.
Packed by F. N.
Examined by G. W.
Shipped by J. B.
Weight 250

The company was small enough so that all the books were kept by a single bookkeeper who was directly under the supervision of the treasurer. The books of original entry consisted of a general journal and four special journals, one being provided for each of the following types of transactions: sales, purchases and expenses, cash receipts, and cash disbursements. Postings were made to a general ledger and an accounts receivable ledger. Each of the seven books was a separate loose-leaf volume which could be

expanded or contracted at will by putting in or taking out appropriate forms, except that a locking device prevented the insertion or removal of sheets without the approval of the treasurer, who held the key. The bookkeeper recorded each day on an average, 11 transactions in the sales book, 5 in the purchase and expense book, 12 items of cash receipts, and 7 of cash disbursements. Entries in the general journal averaged less than one a week.

When an order was received, a shipping order (Form 1) was made out in triplicate. In the upper part of this form were entered the name and address of the customer, his order number, the date received, the date shipment was to be made, the name of the salesman taking the order, and the terms; and, in the lower part, a description of the items to be shipped, the amount of each item, the price, and the extension, that is, the amount times the price. The extended amounts were then added to give the total. Each shipping order had a serial number which appeared on all copies. One copy was retained in the accounting department as a record of orders to be shipped, another was sent to the shipping clerk, and a third, which was used only for statistical purposes, was filed in a geographical file, through the use of which information could be obtained as to the business done in any particular city simply by running a total of the shipping orders for that city.

FORM 2

KIRKWELL MANUFACTURING COMPANY

August 2, 1932 — No. 4844

Sold to T. H. Rogers

TERMS: 2 Per Cent, 10 Days; Net 30 Days: from Date of Invoice

Bill of Lading No. 15312

Wisconsin Avenue, Milwaukee, Wis.

The count and condition of this invoice of goods have been verified. No Allowance for Shortage

10	Doz.	Kirkwell "Special" at 2.50	25.00	
10	Doz.	Kirkwell #3 at 2.00	20.00	45.00

The detailed information regarding the shipment, that is, as to packing, route, etc., which was called for on Form 1 was entered only on the shipping room copy. The most important item to be entered was the number of the bill of lading, which was prepared in triplicate by the shipping clerk at the time of shipment. The bill of lading was signed by the carrier's agent, who retained one carbon copy. The original and the other carbon were attached to the shipping order and sent to the office. The bookkeeper then prepared an invoice (Form 2) in duplicate, the original being mailed to the customer. If requested, the original bill of lading was also mailed; otherwise both the original and the carbon were filed with the shipping order. The invoice was the only billing made to the customer unless payment was not received within 60 days, at which time a complete statement of his account (Form 3) was mailed.

From the office copy of the invoice, the sale was entered in the sales book. The invoice was then filed alphabetically.

FORM 3

Peter Monks — August 1, 1932
Olive St., St. Louis, Missouri
In Account With
KIRKWELL MANUFACTURING COMPANY
Terms: 2 Per Cent. 10 Days; Net 30 Days from date of invoice

April	30	2 Doz. Kirkwell #6	10	00		
May	13	4 Doz. Kirkwell #3	8	00	18	00

The sales book, which is illustrated as Form 4, was simply a summary of sales. Columns were provided for the date of the invoice, the name of the customer, the invoice number, the account number, and the total amount of the bill. Sales were entered daily so that the record was kept up to date.

The items were currently posted to the debit of the customers' accounts in the accounts receivable ledger, and the account number

was entered in the sales book to show that the item had been posted and also to show where the full account might be found. The accounts receivable ledger is illustrated in Form 5.

At the end of the month, the total of the amount column was posted to the general ledger as a credit to Sales and a debit to Accounts Receivable. At the time of posting, the numbers of these accounts in the general ledger were entered in the appropriate column, preceded by the letter *G* to show that they referred to the general ledger.

FORM 4
SALES BOOK

Page 98

Date 1932	Customer	Sales Invoice No.	Account No.	Amount
Aug 1	Bidwell & Company	4841	123	$ 132.00
	McSweeney, Jones & Company	4842	257	4.28
	Glasdale-Hope, Inc.	4843	201	134.25
Aug. 31	T. Rozzini & Son	5102	306	27.44
	Accounts Receivable, Dr.		G 18	$8,341.81
	Sales, Cr.		G 32	8,341.81

FORM 5
ACCOUNTS RECEIVABLE LEDGER
Account No. 123

Rating AA Name Bidwell & Company
Business Hardware Wholesaler Address Pine Street, Philadelphia, Pennsylvania

Date 1932	Items	Invoice No.	Debits	Date 1932	Items	Credits
Aug. 1		4841	132.00			

On September 1, 1932, four typical customers had debit balances as follows:

	Account number	Debit balance
T. H. Rogers	343	$181.00
Wadsworth & Hening	511	46.00
Packard Machine Tool Company	294	246.72
Eliot Hardware Company	158	16.41

The sales account had been closed as of August 31 and had no balance.

During the month, sales to these customers were as follows:

		Invoice number	Amount
September 3	Packard Machine Tool Company	5136	$107.32
8	Wadsworth & Hening	5168	21.72
11	Eliot Hardware Company	5184	16.11
20	Packard Machine Tool Company	5217	9.94
26	T. H. Rogers	5286	96.13

1. Open accounts for these customers in the accounts receivable ledger and for Sales and Accounts Receivable in the general ledger, and enter the indicated balances in these accounts. Set up a sales book according to the form used and enter the sales. Post to the accounts receivable ledger, take a total as of the end of the month and post to the general ledger. Ignore sales to other customers and collections on account. The latter will be considered in a subsequent case.

2. If the treasurer wished to know, as of the first of any month, the total amount of Accounts Receivable outstanding, where might the information be found?

3. If he wished to know the amount of any particular account, where might the information be found?

4. If a question arose as to the amount of a particular item shipped to a customer, how might the information be found?

5. What is the relation between the balance of Accounts Receivable in the general ledger and the balances of the several accounts in the accounts receivable ledger?

6. Can the books be kept in balance when there are two debits posted, one to the individual account and one to Accounts Receivable, and a single credit, that to Sales, for each transaction?

7. How may a trial balance be taken when books are kept in this way?

8. What are the advantages and the disadvantages of this method as compared with a simple two-column journal? Are the relative advantages affected by the number of open accounts, or by the number of sales per day?

9. Assume that the product was divided into six different lines and that it was desired to keep a record of the sales of each line. Set up a sales book adapted to this purpose.

KIRKWELL MANUFACTURING COMPANY—NO. 2

THE USE OF A SPECIAL JOURNAL IN RECORDING PURCHASES AND EXPENSES

The customary procedure of the Kirkwell Manufacturing Company in purchasing raw material was to issue a purchase order, illustrated as Form 1, after receiving quotations on the

FORM 1

KIRKWELL MANUFACTURING COMPANY
Oak Harbor, N. Y.

August 2, 1932

PURCHASE ORDER NO. 1843

TO Atwood Container Corporation

PLEASE FURNISH US THE FOLLOWING

SHIP VIA P. M. & Q. R. R. WHEN Immediately

10 gross special crates—our specification #140—quoted July 26 at 19.80 per gross	198.00

Our order number must appear on invoices and shipments
Please acknowledge receipt of this order and state when you will ship

KIRKWELL MANUFACTURING CO.
By J. Sherwood

material desired. A copy of this was filed in the office, but no entry was made in the books when a purchase order was issued.

When an invoice was received from the vendor, it was held until the arrival of the goods and was then checked against them as to amount and condition of the shipment and was checked against the original quotation as to price and terms of discount. The extensions and additions were then checked, and the purchase was entered in the purchase book, illustrated as Form 2. Extensions were made to the raw material columns depending on the kind of material included on the invoice. After being entered, the invoices

FORM 2
PURCHASE BOOK

(Left Page)

	Date 1932	Explanation	Total (To Accounts Payable)	Raw Material No. 1	Raw Material No. 2	Packing Materials	Labels and Printing	Supplies	Sundries
1	Aug. 1	J. Marsden Sales Corporation	150 98	150 98					
2		Johnson and Seligman	132 46	40 00	92 46				
3		Rochester Telephone Corporation	23 80						
4		S. Pearson and Company	23 20			23 20			
5		Daily Journal	2 40						
6	Aug. 2	Manufacturers Supply Company	44 84			33 64	11 20		
7		Hartwell, Bates, and Hartwell. Charge Legal Expense	50 00						50 00
			6344 65	1824 88	840 40	213 64	25 30	210 50	50 00
			(30)	(101)	(102)	(146)	(147)	(105)	
		Recapitulation of Sundries:							
		Legal Expense							(161) 50 00

FORM 2.—(*Continued*)

(Right Page)

Auditing	Advertising	Light, Heat, and Power	Factory Expense	Auto and Delivery Expense	Office Expense and Stationery	Freight On Purchases	Freight On Sales	General Expense	Telephone and Telegraph	Salesmen's Expense Auto and Selling	Salesmen's Expense Commission	
												1
												2
									23 80			3
												4
												5
	2 40											6
												7
	152 40	219 74	499 67	62 36	287 46	218 63	342 71	201 60	23 80	615 26	556 30	
	(129)	(111)	(106)	(145)	(120)	(148)	(149)	(122)	(121)	(132)	(130)	

were filed in a tickler file under date of payment, which was usually the last day on which discounts were available. Invoices were entered at the gross amount, cash discounts, if any, being handled at the time of payment.

Purchases of packing materials, labels and printing, and supplies were entered in a manner similar to that used for raw material.

Although this was called a purchase book, expenses were entered and classified here when they were incurred. Bills were checked as to amounts and were entered and extended to the appropriate columns as illustrated in Form 2 in the case of the telephone bill, entry being made upon receipt of the bill. Bills were then filed in the tickler file under date of payment.

When a purchase was made or an expense was incurred for which there was no appropriate column, it was entered in the total and extended to the sundries column.

No posting of the individual items was made to a subsidiary ledger as in the case of accounts receivable. At the end of the month, each column was totaled; the first was posted to the credit of Accounts Payable in the general ledger, the others, except that for sundries, were posted to the debit of material or expense accounts in the general ledger as indicated by the headings of the columns. In each case, the account number was entered immediately below the total posted.

A recapitulation of the items in the sundries column was made below the totals in order to provide for the posting of these items. In each case the account to be charged was entered in the explanation column, the amount in the sundries column and the account number immediately to the left.

---

1. Draw up a purchase journal in this form and enter the following transactions. It may be assumed that the invoices have been checked and are ready to enter. Titles in parentheses are those of accounts to be charged. Post to appropriate accounts in the general ledger.

September

1. Received invoice from Sells and Company, terms 2/10, n/30, for cartons, $105. (Packing Materials.)

1. James Rose presented a bill for $14.50 for hauling several shipments to the freight station. (Freight on Sales.)

2. Received bill from Bowers Furniture Company for office chair—$20. (Furniture and Fixtures.)

2. Received invoice from May Manufacturing Company, $210. (Raw Material No. 1—$60; Raw Material No. 2—$150.)

2. Received bill from City Power and Light Company for electricity furnished in August, $74.60. (Light, Heat, and Power.)

3. Received bill from Mid-way Garage for gasoline and oil, $95.60. In accordance with the company's request, the name of the person signing for each purchase was furnished. The bill showed purchases by salesmen amounting to $64.10, and by the company driver to $31.50. (Salesmen's Expenses—Autos; Auto and Delivery Expense.)

2. Should the company carry a subsidiary accounts payable ledger?

3. Can you suggest desirable changes in the methods used?

Kirkwell Manufacturing Company—No. 3

The Use of Special Journals to Record Receipts and Disbursements of Cash

Most of the cash received by the Kirkwell Manufacturing Company was in payment of accounts receivable and usually such payments covered a particular invoice. This permitted the use of a simple cash receipts book, which is illustrated as Form 1. Typical entries were made as shown for Bigelow and Dawson.

The Kirkwell Company offered terms of 2 per cent 10 days, net 30, that is, 2 per cent would be deducted from the amount of the invoice if the customer paid within 10 days of the invoice date. This introduced a slight complexity, for Accounts Receivable in the general ledger and the individual account in the accounts receivable ledger had to be credited for the full amount of the invoice, since the customer's debt to the company was fully extinguished. On the other hand, Cash was debited only for the amount received. The difference was a debit to Discount on Sales, which was often referred to as a part of collection expense.

A column was provided for the date of the invoice in order that this might be compared readily with the date of payment. The debits were then divided between the cash and discount columns and the credit was entered in the accounts receivable column.

In the case of payments not of this type, as illustrated by the tax refund, the amount was entered under cash received and extended to the general column.

FORM 1
CASH RECEIPTS BOOK

Date	Name	Date of Invoice	Account No.	Total Cash Received	Discount	Accounts Receivable	General	
Aug. 1	Bigelow & Dawson	July 22	124	24 50	0 50	25 00		
	Ames Hardware Company	July 24	104	17 15	0 35	17 50		
	Refund on City Taxes—							
	Cr. Surplus		G 37	14 38			14 38	
	Sosnick Bros.	July 1	334	13 50		13 50		
				9774 22	138 25	9898 09	14 38	
				(1)	(137)	(14)	(V)	

FORM 2
CASH DISBURSEMENTS BOOK

Date	Name	Check No.	Total Cash Disbursed	Discount	Accounts Payable	Pay roll	Salesmen's Traveling Expenses	Account No.	General	
Aug. 1	New York Telephone & Telegraph Company	7157	23 80		23 80					
	Hart Manufacturing Company	7158	543 28	5 48	548 76					
	A. C. Carey—salary 7/25–7/31	7159	50 00			50 00				
	F. W. Hopson—traveling expense	7160	40 00				40 00			
	Payroll—factory 7/25–7/31	7161	325 00			325 00				
	Interest on time loan	7162	15 00					G 22	15 00	
			8961 24	93 76	5513 10	2504 60	512 30		525 00	
			(1)	(150)	(30)	(108)	(131)		(✓)	

All cash received, whether in the form of checks or currency, was deposited daily in the bank. After the payments were all entered, the bookkeeper prepared a deposit slip in duplicate. One copy was kept by the bank; the other was initialed by the teller and returned to the company where it was filed by date. The deposit slip and the records of the bank thus gave a valuable check on the cash receipts record which assisted the public accountants in their quarterly audit.

Postings of the credits to customers' accounts in the subsidiary ledger were made currently, and it is important to observe that the proper amount to be posted was that in the accounts receivable column. The account number was entered as a check to show that the posting of that item was complete. Items appearing in the general column were posted currently to the general ledger.

At the end of the month, the total of cash received was posted to the debit of Cash, the total of discounts was posted as a debit to Discount on Sales, and the total of the accounts receivable column was posted as a credit to Accounts Receivable. In each case, the account number was entered under the total when posting was completed.

All disbursements of cash were made by check and each check had a printed serial number, which had to be accounted for even if the check was later voided.

In a previous case, the filing of bills by date of payment was described. Each day the bookkeeper took from this file the bills to be paid that day, which had already been verified as to amounts, extensions, and additions, and prepared the checks to cover them. The checks were signed by the treasurer, who also initialed the accompanying bills.

After the checks were signed, and before they were sent out, each one was entered in the cash disbursements book (Form 2). In the case of a bill on which a discount was taken, the gross amount of the bill was entered in the accounts payable column, the net amount, which was the amount of the check, in the cash column, and the difference in the discount column.

Since no accounts payable ledger was kept, there was no current posting from this journal, except in the case of items entered in the general column. When these items were posted, the account number was entered in the column at the left of the general column. At the end of the month, the totals of the columns were posted to

the credit of Cash and Discount on Purchases and to the debit of Accounts Payable, Pay Roll, and Salesmen's Traveling Expenses. It was not the custom of this company to enter pay rolls and salesmen's traveling expenses in the purchase and expense journal when they were incurred; therefore they were not entered here as a debit to Accounts Payable.

In addition to the special journals described in this and the preceding cases, the company maintained a general journal illustrated as Form 3 in which entries were made which did not fall into any of the classes for which provision was made in the special journals. Only occasional entries were made in the general journal.

FORM 3
GENERAL JOURNAL

Date	Account	Folio	Debit	Credit
Aug. 1	Reserve for Bad Debts	62	63.10	
	Accounts Receivable	14		63.10
	James Roswell Company $ 63.10	A.R. 426		
	To charge off account deemed uncollectible			
Aug. 16	Notes Receivable	15	200.00	
	Accounts Receivable	14		200.00
	Campbell Brothers $200.00	A.R. 143		
	Received 90-day note of Campbell Brothers dated Aug. 15, 1932, rate 6%			
Aug. 31	Depreciation	57	362.00	
	Reserve for Depreciation	26		362.00
	Provision for August, 1932			

1. Open a cash book in the form described above, enter the following transactions, and post to the accounts receivable and general ledgers. Assume for purposes of posting that these were all of the transactions to be entered during September and take totals and post as of the end of the month. The debit balances of the customers' accounts which were affected by the transactions were on September 1:

	Account number	Debit balance
Eliot Hardware Company	158	$ 16.41
Thompson and Best	389	123.55
Wadsworth and Hening	511	46.00

September

1. Issued check 7448 for $14.50 to James Rose in payment of charges for hauling (see entry—Kirkwell Manufacturing Company—No. 2).

1. Paid invoice of Swift Manufacturing Company, $96, less 1 per cent (check 7449).

1. Received payment from the Eliot Hardware Company on invoice dated August 24, $16.41, less 2 per cent.

2. Drew check 7450 to meet factory pay roll for week, $265.

2. Gave F. W. Hopson, salesman, check 7451 in payment of commissions earned by him in August, $176.43.

2. Received $12 cash from sale of scrap material.

3. Received check for $24.71 from receiver for Thompson and Best, who owed the Kirkwell Manufacturing Company $123.55, in final settlement of the claim.

3. Received check for $45.08 from Wadsworth and Hening in payment of following invoices:

August 24	$30.20
August 25	11.44
August 30	4.36

2. If the treasurer wished to obtain the balance of cash on hand as of the third of the month, how could this information be obtained?

3. Devise a change in this form of cash book whereby a daily balance of cash will appear.

4. Can you suggest any improvements in this method of accounting for cash?

DAVIS AND WALL, INC.

SPECIAL JOURNALS

Davis and Wall, Inc., manufactured two types of industrial goods. For the purposes of this case, it is sufficient to designate these two product groups as *A* and *B*, manufactured in Divisions *A* and *B*, respectively. All of the products were sold as fabricated parts, supplies, or fixtures to industrial users. Occasionally, job orders were received for such items as castings, which were handled as special orders.

The accounting was performed by the office manager with the assistance of two clerks. The books of original entry consisted of a general journal and four special journals, one for each of the following types of transactions: sales, purchases and expenses, cash receipts, and cash disbursements. A petty cash system was also used.

SALES BOOK

When goods were shipped to a customer, the accounting department prepared an invoice in duplicate. The original was sent to the customer and the duplicate was posted to the customer's account in the accounts receivable subsidiary ledger. The dupli-

FORM 1

SALES SUMMARY

Month of September

	Invoice No.	Accts. Rec.	Division A	Division B	Castings	Misc.	Shipping	Office
J. P. Smith	1106	241 05	240 00				1 05	

cate was then filed permanently in an invoice book. This invoice book was called a sales book by the company because it represented the details of sales that had been made. At the convenience of the accounting department, the invoices were entered on a summary sheet (Form 1) for the purpose of classifying the sales according to types. At the end of each month, the totals of the columns in the summary sheets were posted to the accounts affected in the

general ledger. The columns for shipping and office on Form 1 were for shipping expenses or postage paid by the company and included in the invoice. The totals of the columns were credited to the Shipping Expense and Office Expense accounts.

ACCOUNTS PAYABLE REGISTER

Upon the receipt of goods by the shipping clerk, the items and quantities were compared with those shown on the duplicate copy of the purchase order in his possession. Any discrepancies were noted and the duplicate was sent to the accounting department. When the invoice was received from the vendor, the quantities and extensions were checked and the total was then entered in the accounts payable register (Form 2). The page and line of the register on which the entry was made were indicated on the invoice, and the invoice was filed with other unpaid bills. No subsidiary accounts payable ledger was maintained.

The accounts payable register provided space for entering the date of the transaction and the name of the vendor at the left of each page. The next column, headed accounts payable, was for the entire amount of the transaction and was the credit entry. The remaining columns were debit columns and served to distribute or classify the total purchase according to type. All expenses, even though paid immediately, were entered in the accounts payable register. The purpose of this was twofold: first, to have uniformity in recording purchases and expenses and, second, to provide a distribution of purchases and expenses so that they might be summarized and posted in total at the end of each month.

CASH BOOK AND PETTY CASH RECORD

All receipts and disbursements of cash by Davis and Wall, Inc., were entered in a bound book called the cash book. The left-hand pages of this book were for receipts (Form 3), and the right-hand pages were for disbursements (Form 4).

The majority of cash received came from customers; therefore, a column was provided for accounts receivable, the total of which was posted at the end of the month as a credit to Accounts Receivable in the general ledger. Individual postings to the customers' accounts were also made from the cash book. These postings

FORM 2 (Left Page)

Page 48 — ACCOUNTS PAYABLE REGISTER — Month September, 1932

Line	Date	Name	Accounts Payable	Division A Material	Division B Material	Foundry Material	Woodshop Material	Direct Labor	Division A Expense	Division B Expense
1	24	Factory Supply Company	480 00							
2	24	Heany and Company	206 20	206 20						
3	26	Atlantic Insurance Company	104 00							
4	26	James Manufacturing Company	120 00							
5										
Etc.										

FORM 2 (Right Page)

Foundry Expense	Woodshop Expense	General Manufacturing Expense	Factory Superintendence	Salesmen's Salaries & Expense	Shipping Expense	Office Expense	Advertising Expense	Miscellaneous		
								Account	Folio	Amount
								Maintenance		480 00
								Insurance		104 00
								Mach. and Equip.		120 00

were made daily since it was important to keep the customers' accounts up to date.

Since customers were allowed a 2 per cent discount if they made payment within 10 days from the date of the invoice, a column was provided in the cash book to cover such discounts. This was necessary, for the customer was given full credit for payment and the debit to cash plus the debit to discounts brought the entry into balance. Occasionally, cash was received from sources other than customers, such as receipts from the sale of scrap, bank interest, and cash returned from advances to salesmen. The general ledger column was used for the credit of these items and they were posted individually at the end of the month. To indicate that posting had been made, the number of the page in the general ledger containing the account it was posted to was placed in the folio column beside the item posted. The bank column was used as a book record of bank deposits, though duplicate deposit slips were kept for future reference. It started with the balance of cash in the bank at the beginning of the period. Each deposit was shown in this column, as was bank interest, and at the end of the period it was totaled and the total of cash disbursements was subtracted from it in arriving at the balance of cash that should be in the bank at that time. This balance was reconciled with the bank statement by adding to it the amount of any checks outstanding.

All disbursements were paid by check, with the exception of petty cash items which will be considered later. The office manager saw to it that all invoices on which a cash discount could be taken were paid within the time allowed. The checks were signed by either Mr. Davis or Mr. Wall. The check number for each disbursement was entered in the cash book as was the net amount of the check, the discount taken, if any, and the total debit either to accounts payable or to an account in the general ledger. The cash, discount, and accounts payable columns were posted in total at the end of the month to accounts bearing the same names in the general ledger. Inasmuch as no individual accounts were kept with creditors, no individual postings of accounts payable were made. When an invoice was paid, it was stamped as paid and the check number and page number of the cash book were placed upon it. After invoices were paid, they were filed under the creditors' names. Pay-roll sheets were treated as invoices

FORM 3

Month September Year 1932 Cash Book—Receipts

Date	Name	Cash	Discounts	Accounts Receivable	Folio	General Ledger	Bank
Sept. 1	James Sawyer	100 00		100 00			
1	Milton Hill	147 00	3 00	150 00			
2	Kennie Manufacturing Company	196 00	4 00	200 00			
2	Grossman Salvage Company	26 00			32	26 00	
	Bank Deposit						469 00

and after payment were filed for later reference. Occasionally, payment was made for some item that did not pass through the accounts payable register, such as advances to salesmen and the purchase of major plant equipment. In these instances, the items were entered in the general ledger column and posted individually to the account affected in the general ledger. The folio column was used to indicate the number of the page in the general ledger to which such posting had been made. When a salesman returned from a trip, he turned into the accounting office an expense sheet and any money that he had left. The money was deposited in the bank, the offsetting credit being to the account for advances to salesmen. The total of the expense sheet was entered in the general journal as a debit to Salesmen's Expense and a credit to Advances to Salesmen.

FORM 4

Month September Year 1932 Cash Book—Disbursements

Date	Name	Check No.	Cash	Discounts	Payable	Folio	General Ledger
1	Murphy Manufacturing Company	2156	128 00		128 00		
2	Factory Supply Company	2157	25 00		25 00		
2	White Brothers, Inc.	2158	61 64	1 36	63 00		
3	Harrison Machine Shop	2159	159 00			46	159 00

PETTY CASH

Small local expenditures were accounted for by the petty cash fund, or imprest, system. A small amount of cash was kept by the office manager and paid out by him in return for vouchers signed by the persons making the expenditures. This fund was started originally by drawing a check and setting up a Petty Cash account for the amount drawn. At the end of each month, or more often if necessary, the office manager entered the vouchers on a petty cash disbursements sheet (Form 5) and entered the totals of this sheet in the accounts payable register just as though the sheet were an invoice from an outside company. A check was then drawn to reimburse the petty cash fund and this check was entered in the cash book. Form 5 was then filed for future reference.

FORM 5

Petty Cash Disbursements for the Month Ending September

Date	Explanation	Total	Office	Shipping	Factory	Factory Super.
Sept. 1	Car fare	20	20			
1	Postage	2 00	2 00			
3	Local Express			1 50		
3	Oil for Shafts				80	

On the following pages appear transactions which occurred during the first 10 days of September, 1932.

1. Enter the transactions in the journals required.

2. Assume September 10 is the end of the month. Make all necessary postings to general and subsidiary ledgers.

September 1 Started with a cash balance of $8,470.
Sales made to A. R. Parrish, including $5 shipping expense, $1,005; Division *A*, Invoice No. 1001.
Sales made to Jordan Jones Company, $600; castings, Invoice No. 1002.
Purchased from Hughes Lumber Company lumber for woodshop, $250.
Received from customer, Parkman Manufacturing Company, $196; discount amounting to $4 had been taken.
Received interest on bank deposit, $9.52.
Paid M. Douglas Company $280 due them, less 2 per cent discount; check No. 2160.

September 2 Paid Hughes Lumber Company $250 due them, less 1 per cent discount; check No. 2161.
Received from J. Roisen $28 for scrap sold to him. (This item did not pass through the sales book.)

Received $200 from Budd Insurance Company in settlement of damages caused by a small fire in the woodshop.

Deposited $424 in the bank.

Factory pay roll for week ended September 1. Direct labor $450. Indirect labor: Division *A*, $36; Division *B*, $36; Foundry, $36; Woodshop, $36; Factory Superintendence, $70; Shipping Expense, $25.

Purchased materials from Canton Supply Company for Division *A*, $1,600.

Sales made to Oakland Supply Company, $202.50, including office expense of $2.50; Division *A*, Invoice No. 1003.

Sales made to Carl Peterson, $300; Division *B*, Invoice No. 1004.

September 3 Paid Dow Materials Supply Company $1,100 due them, less 2 per cent discount; check No. 2162.

Received from customer, Hope Manufacturing Company, $500; no discount allowed.

Received from customer, C. A. Bonney, $156.80; discount amounting to $3.20 had been taken.

Sales made to Pinkham Company, $150; castings, Invoice No. 1005.

Sales made to Horgan Supply Company, $450; Division *B*, Invoice No. 1006.

September 5 Received bill from New England Telephone and Telegraph Company, $34.

Received bill from Harrison Power and Light Company for electric light and power, $94.

Paid factory pay roll, $689; check No. 2163.

Received from J. L. Rollins, salesman, $23, representing residue of money advanced to him for travel.

Sales made to P. J. Pestoni & Company, $505, including $5 shipping expense; castings, Invoice No. 1007.

Sales made to Arthur Stockton Company, $753.50, including $3.50 office expense; Division *A*, Invoice No. 1008.

September 6 Paid New England Telephone and Telegraph Company $34 due them; check No. 2164.

Paid Harrison Power and Light Company $94 due them; check No. 2165.

Purchased materials from General Metals, Inc., for foundry, $4,000.

Received from Lloyd Brothers, Inc., $400; no discount.

Received from customer, A. A. Hobson Company, $507.50 in settlement of note for $500 held by Davis and Wall, Inc. The $7.50 represented interest on the note.

Deposited in bank $1,587.30.
Sales made to Harrison Company, $100; castings, Invoice No. 1009.
Sales made to C. A. Bonney, $210; Division *A*, Invoice No. 1010.

September 7 Purchased materials from Canton Supply Company for Division *B*, $2,000.
Received from customer, Carl Peterson, $294; discount amounting to $6 had been taken.
Sales made to A. Collamore Company, $375; Division *B*, Invoice No. 1011.
Sales made to Henshaw Electric Company, $650; castings, Invoice No. 1012.

September 8 Received from Walton Supply Company $56 for purchases returned to them.
Purchased new machine from Hood Machine Shop for use in Division *B*, $600.
Purchased stationery from Cullman Print for office use, $40.
Sales made to Appleton & Harvey, $1,251, including $1 for office expense; Division *B*, Invoice No. 1013.
Sales made to J. P. Smith & Company, $75; Division *A*, Invoice No. 1014.

September 9 Received bill from Cullman Print for advertising folders, $60.
Factory pay roll for week ended September 8. Direct Labor, $450. Indirect labor: Division *A*, $36; Division *B*, $36; Foundry, $36; Woodshop, $36; Factory Superintendence, $70; Shipping Expense, $25.
Sales made to E. G. Paige, $50; castings, Invoice No. 1015.

September 10 Purchased materials from Dwyer & Company for Division *A*, $600.
Purchased materials from Duxbury Brothers for Division *B*, $1,000.
Purchased from Davis Oil Company oil for lubricating machinery and driving shafts, $10.
Purchased fire insurance from Budd Insurance Company, $1,000.
Received from customer, Orde Manufacturing Company, $500; no discount.
Received from customer, Jordan Jones Company, $588; discount of $12 had been taken.
Deposited in bank $1,418.
Paid Canton Supply Company, $2,000 due them, less 2 per cent cash discount; check No. 2166.

Paid Budd Insurance Company $1,000 aue them, no discount; check No. 2167.
Paid Carpenter Construction Company for repairs to woodshop, $200; check No. 2168.
Reimbursed Petty Cash Fund, $25; check No. 2169, for following expenditures:
Office, $7
Shipping, $10
Factory, $2
Factory Superintendence, $6
Sales made to Walker & Edy, $480; Division *A*, Invoice No. 1016.
Sales made to Haskins & Ball, $260; Division *B*, Invoice No. 1017.

Mayberry Bag Company

VOUCHER SYSTEM

The company manufactured paper and cloth bags, printed tags, and other specialties such as napkins and paper dishes, and small cartons of the types which were delivered flat and folded in the plant of the customer. About half of the sales were made from stock, the rest being on special order. Ninety per cent of the business was done on open account, and this included all large orders, but many small sales of stock items were made to regular customers and others for cash.

Purchases were usually made on orders issued by the purchasing department, one copy being filed in the office as a record of orders outstanding. No entry was made in the books until the invoice was received from the vendor, when a voucher was made out as illustrated in Form 1. As soon as the goods were received, the approvals indicated were obtained, except that for payment. The voucher was then entered in the voucher register (Form 2). The amount of the invoice was entered in the vouchers payable column and also in one or more of the debit columns according to the distribution indicated on the voucher.

The amount of the invoice for materials purchased for use in manufacture was entered in the materials column. Expense items were also recorded in the voucher register. When an expense was incurred, a voucher was prepared and recorded in a manner similar to that used for purchases, except that the extension was to an expense account. Whenever an account for which there was no

FORM 1

MAYBERRY BAG COMPANY

Voucher No. 693

Invoice of Thomas Watkins & Co.
Philadelphia, Penn.

Dated Aug. 28, 1932

Date Due Sept. 30, 1932

Vendor's Invoice No. H 9146

Terms 2/30 e.o.m.

Description	Amount
Goods as per invoice attached	1,128.00

Date Received Aug. 26, 1932

Purchase Order No. 1208

Approved:

Prices C. F. A.
Purchasing Dept.

Extensions J. S. G.
Chief Clerk

Material Received P. M. F.
Storekeeper

Distribution T. C. H.
Asst. Comptroller

Payment
Asst. Comptroller

Charge

Title of Account	Amount
Materials	1,128.00

Date Paid

Check No.

debit column was to be charged, the title of the account and the amount were entered in the miscellaneous accounts section.

Just before the expiration of the discount period, the voucher was presented to the proper officer for approval of payment. A check (Form 3) was then issued, ordinarily on the last date on which the discount was available, the date of payment and check number were entered in the voucher register, and the paid voucher was filed alphabetically.

Checks drawn were entered in the check register (Form 4). Ordinarily checks were drawn only in payment of vouchers, but occasionally, as illustrated by the advance to J. S. Mayberry,

Form 2
Voucher Register
Record of Approved Vouchers for the Month of August, 1932

Voucher No.	Date	Creditors—Explanation	Due	Terms	Credit	Debit						Paid	
					Vouchers Payable	Material	Factory Wages	Light Heat & Power	Selling Expense	General Administrative Expense	Miscellaneous Accounts: Account Title / F / Amount	Date	Check No.
		Balances forwarded			6248 92	2612 70	1634 70		1140 87	860 65			
684	8/16	Thomas Hartwell & Company	8/25	1%	43 40	43 40							
685	8/17	Ames Machine Company	8/31	2%	62 00						Machinery & Eqpt. — 62 00		
686	8/22	Miller Press	8/31	net	24 30						Advertising — 24 30		
687	8/23	Pay roll	8/24	net	844 10		844 10						
688	8/24	H. M. Hathaway	8/31	net	15 00	15 00							
689	8/24	Silsley Supply Corporation	9/7	3%	128 46	128 46							
690	8/28	Kelso Paper Company	9/6	2%	74 40	74 40						8/29	2914
691	8/29	S. Petersen—plumbing repairs	8/29	net	61 00						Maintenance & Rpr. — 61 00	8/29	2913
692	8/29	Pennsylvania Railroad	9/8	net	137 48						Freight Out — 137 48		
693	8/29	Thomas Watkins & Company	9/30	2%	1128 00	1128 00							
694	8/30	P. Simone & Sons—coal	9/8	2%	196 00			196 00					

FORM 3

By Endorsement this check is accepted in full payment of the following account

Date	Invoice No.	Amount
Aug. 27, 1932	9732	74 40
Total of Invoices		74 40
Less 2% Discount		1 49
Less Freight		
Total Deductions		1 49
Amount of Check		72 91

If incorrect please return
No receipt necessary

NO. 2914

CANTON, OHIO August 29, 1932

Pay to the Order of

Kelso Paper Company $72.91

Seventy-two and 91/100 Dollars

To The

STARK TRUST COMPANY

CANTON, OHIO

MAYBERRY BAG COMPANY

Peter Falvey Treasurer

FORM 4
CHECK REGISTER OF AUGUST, 1932

Day		Voucher No.	Debit					Credit					Check No.	Amount		Bank Withdrawals
			Vouchers Payable	General Ledger				Purchase Discount	General Ledger							
				Name of Account	F	Amount			Name of Account	F	Amount					
29	Balance forwarded		10929 13					160 38						10768 75		10768 75
29	S. Petersen	691	61 00										2913	61 00		
29	Kelso Paper Company	690	74 40					1 49					2914	72 91		
29	J. S. Mayberry—loan			Advance—J. S. Mayberry		300 00							2915	300 00		433 91

checks were drawn without covering vouchers. In cases of this nature, the title of the account to be charged and the amount were entered in the general ledger debit section.

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1. Set up a voucher register and a check register, take totals of the columns in Forms 2 and 4, and bring these forward to the new sheets. Enter the following transactions and do all posting indicated, both in detail and in total at the end of the month.

ADDITIONAL TRANSACTIONS DURING AUGUST, 1932

30. Issued check to Pennsylvania Railroad Company in payment of voucher 692.

30. Received invoice dated August 27 from Joseph Perry and Company for cardboard stock, $245.50, terms 2/10, n/30. Voucher 695 prepared and approved.

31. Weekly summary sheet for factory pay roll prepared and voucher 696 issued. Voucher approved and check for $810.60 issued to the cashier. (Enter on the thirty-first.)

31. Paid vouchers 684, 686, 688.

31. Prepared vouchers covering commissions due salesmen for sales through August 25. Approved and checks mailed. (Charge Selling Expense.)

Voucher number	Salesman	Amount of check
697	Harry Biller	$154.30
698	John A. Parsons	104.28
699	Grover C. Carr	194.56

31. Received invoice from Philip Hale and Company for typewriter purchased, $65, terms 2/10, n/30. Voucher 700 approved.

31. Received freight bill from Pittsburgh and Lake Erie Railroad for shipment to Stern Brothers, amount $22.10, due September 5, terms net. Voucher 701 prepared and approved.

31. Received invoice dated August 30 from Ames Machine Company for one stapling machine, $85, subject to 2 per cent discount if paid on or before last day of September, and a credit memorandum for $62. Inasmuch as the machine previously delivered (Voucher 685) had been found to be too small, the Ames Machine Company had delivered a new machine and picked up the old one, on August 29. (Determine how this transaction should be entered and assume approval of the necessary documents.)

What is the purpose of the information to be filled in on each of the blanks provided in the voucher form? Is any of this infor-

mation unnecessary? Should anything be added to the form?

2. Is Vouchers Payable a controlling account?

3. How can information be obtained as to the total amount owed to a particular vendor?

4. Does this system provide a thorough internal check on the disbursement of cash?

5. Should the practice of drawing checks not covered by vouchers be continued?

6. Is this method preferable to that used by the Kirkwell Manufacturing Company?

R. G. Clarkson and Sons

VOUCHER SYSTEM

R. G. Clarkson and Sons began business on January 20, 1936. The sales book, cash receipts book, check register, and voucher register are reproduced herewith, with all transactions for the month of January entered therein. No postings from these books have yet been made, either in detail or in total.

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1. Set up ledger accounts for both general and subsidiary ledgers, and do all posting which would be necessary.

2. Take off a trial balance of the general ledger accounts concerned. Reconcile accounts receivable and vouchers outstanding with the balances shown on the general ledger.

R. G. Clarkson and Sons
Sales Book
For the Month of January, 1936

Date	Customers	Invoice Number	F	Amount
20	Howard Archer	2420		1,203.00
20	P. T. Badger	2421		1,659.75
21	Longman and Scott	2422		2,440.25
22	Atkins Company	2423		1,345.22
24	Howard Archer	2424		225.15
27	R. O. Linton	2425		2,005.25
29	Atkins Company	2426		890.65
30	James Hanna	2427		645.32
31	Longman and Scott	2428		710.85
				11,125.44

R. G. Clarkson and Sons
Cash Receipts Book
For the Month of January, 1936

Date	Name	F	Accounts Receivable	General Ledger			Sales Discount	Freight Allowance	Cash Received
				Account	F	Amount			
24	Howard Archer		1,203.00				24.06	53.13	1,125 81
25	L. A. Tooker			Misc. Income		155.00			155 00
29	P. T. Badger		1,659 75				33.20	40 65	1,585 90
30	Horn and Hardt			Misc. Income		52.25			52.25
30	Longman and Scott		2,440.25				48.81		2,391.44
31	Atkins Company		1,345 22				26.90		1,318 32
31	W. A. Sutcliffe			Rent Income		175 00			175 00
			6,648 22			382 25	132 97	93 78	6,803 72

R. G. Clarkson and Sons
Check Register
For the Month of January, 1936

Date	Name	Cash Paid	Check Number	Voucher Number	Vouchers Payable	Purchase Discount
24	H. R. Eaves	45.09	619	4113	45.09	
25	Pay Roll	105.75	620	4114	105.75	
29	Atwell and True	1,460.79	621	4111	1,490.60	29.81
30	Richmond Manufacturing Company	3,538.39	622	4110	3,610.60	72.21
31	E. R. Stiles	16.95	623	4116	16.95	
		5,166.97			5,268.99	102.02

R. G. Clarkson and Sons
Voucher Register
For the Month of January, 1936

Date	Creditors	Voucher Number	Purchases	Salaries	Selling Expense	Administrative Expenses	General Ledger			Vouchers Payable	Vouchers Paid	
							Account	F	Amount		Date	Number Check
20	Richmond Manufacturing Company	4110	3,610.60							3,610.60	1/30	622
20	Atwell and True	4111	1,490.60							1,490.60	1/29	621
22	Hayes Supply Company	4112				28.50				28.50		
23	H. R. Eaves	4113			45.09					45.09	1/24	619
25	Pay Roll	4114		105.75						105.75	1/25	620
27	Barr Machine Company	4115					Office Furniture		56.10	56.10		
29	E. R. Stiles	4116			16 95					16.95	1/31	623
30	World Insurance Company	4117					Insurance Prepaid		110.00	110.00		
31	Richmond Manufacturing Company	4118	1,730 35							1,730.35		
			6,831.55	105.75	62.04	28 50			166.10	7,193.94		

PART IV

ACCOUNTING FOR PERMANENT ASSETS, FUNDED DEBT, AND PROPRIETORSHIP

XIV. PLANT AND DEPRECIATION

A. THE MEANING OF COST

NORTHERN ELECTRIC MANUFACTURING COMPANY—NO. 1*

PURCHASE OF LAND

In the spring of 1937, the Northern Electric Manufacturing Company purchased a plot of land adjacent to one of its plants. The total area acquired was made up of two lots purchased from separate owners, the Larson Company and a private individual named J. O. Sartig. The Larson lot included 10,921 sq. ft. and the Sartig lot 11,322.9 sq. ft.

On March 25, 1937, before making the purchase, the Northern company acquired options on the two lots. Each option cost $1,500.00 and each contained an agreement that the amount paid for the option was not to be considered as a part payment in the event that the company exercised the option and took the property.

The Northern company paid $36,687.90 to the Larson Company on April 23, which completed the settlement for that lot, and the title was transferred the same day. An old building, which could not be used by the Northern company, stood on the lot. Arrangements were made with the Arrow Wrecking Company to demolish and remove this structure. The wrecking company agreed to remove the building, clean up the site, and pay $150.00 for the right to the materials taken therefrom. This amount was received on May 14.

The Sartig property carried a first mortgage of $30,693.00 upon which both back interest and accrued interest were due. It was agreed that the Northern company would meet these interest payments in addition to the purchase price set by the owner.

On April 28 accrued interest of $598.51 and back interest of $460.40 on the Sartig mortgage were paid. On May 24 the purchase price of $36,488.25 plus additional interest of $133.00 completed payment for the Sartig lot, and title was transferred. At that time, J. O. Sartig paid the mortgage in full, so that the North-

* Fictitious name.

ern company received a clear title. Legal fees involved in acquiring the two lots were $670.09, and were paid May 29.

During June and July of the year of purchase, after the Arrow Wrecking Company had cleared off the old building, seven elm trees were planted at a cost of $245.73, and sidewalk and curbing were laid at an expense of $1,230.45. The bills were paid upon the completion of the work on July 22 and 28, respectively.

The record on land maintained by the Northern company consisted of a loose-leaf binder. Data concerning land purchases were typed on unruled sheets which were added to the proper section in the binder. The information so preserved in the records covered the following points:

a. Description of land, dimensions, and location.
b. Nature of the deed.
c. Name of vendor.
d. Date of transfer of title.
e. Amounts and dates of payments.
f. Amount and nature of all other expenditures and receipts incurred in connection with the purchase.
g. Nature and cost of all expenditures relating to land which increased the intrinsic value thereof.
h. Cost per square foot of each plot of land was computed and recorded, and for purposes of comparison, costs per square foot of near-by plots of land owned by the company were recorded. In this case the costs of the new land were less than similar figures for land already owned.
i. Full plans and blueprints were filed, and the sheets in the loose-leaf binder carried references to the file number and listed all plans filed.

The Northern Electric Manufacturing Company used the Uniform Accounting Manual[1] for the electrical manufacturing industry. The Manual gave the following instructions on the subject of land:

CLASSIFICATION OF ACCOUNTS
GROUP 1—ASSETS
Definitions
Sub Group 11—Manufacturing Plant

111 Land

(*a*) Purchase price of land including buildings acquired therewith which will not be used less the salvage value of such buildings.

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[1] Uniform Accounting Manual for the Electrical Manufacturing Industry, 6th ed., National Electrical Manufacturers Association, New York, August 1, 1931.

(*b*) Expenditures for reclaiming submerged land.

The charges to this account for the acquisition of land should not exceed the lower of the following:

Cost of adjoining land owned by the company of equal desirability (unless such cost is known not to be a real indicator of value, *e.g.* donated land).

The fair market value.

Excess cost, if any, is chargeable to 3399—Other Manufacturing Expenses or, if the expenditures are sufficient to warrant and where the benefits appear to extend beyond the year in which incurred, to an account under 174—Other Deferred Charges and liquidated over a reasonable period of years by charges to 3399—Other Manufacturing Expenses.

Does not include expenditures incident to acquisition. See No. 112.

Does not include expenditures for the disposal of refuse even though the result of such disposal is usable land. . . .

112 Grading and Assessments

Expenditures relating to land which increase the intrinsic value thereof, such as:

Payments of damages and fees for surveying and other expert services, incidental to the purchase of land.

Cost of easements and rights of way.

Assessments due at time of purchase and for specific improvements.

Cost of clearing purchased land.

Cost of removing or demolishing buildings acquired therewith.

Expenditures for the initial grading of land but not those incidental to the ordinary disposal of refuse.

Note: Expenditures which do not increase the intrinsic value of land may be charged direct to indirect manufacturing expense, 3399—Other Manufacturing Expenses, or if they are sufficient to warrant and where the benefits appear to extend beyond the year in which incurred, they may be charged to 174—Other Deferred Charges and liquidated over a reasonable period of years by charges to 3399—Other Manufacturing Expenses.

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1. Following the instructions presented in the National Electrical Manufacturers Association Manual, prepare journal entries to record the land acquisition described above.

2. Do the methods followed provide adequate accounting records with respect to plant?

Lincoln Company

ACCOUNTING FOR NEW BUILDING AND EQUIPMENT

During 1937 a contracting firm constructed for the Lincoln Company a concrete and steel building of modern design with the most recent type of equipment available for factory buildings. The building contract was on a fixed fee and guaranteed maximum basis under which the Lincoln Company paid the cost of labor and materials, plus a fixed fee as compensation for the services of the contractor, who guaranteed that costs would not exceed a specified limit.

The costs of constructing the building and equipping it for operation were as follows:

Building Materials	$181,056
Labor	132,829
Fixed Fee Commission	33,213
Architects' Fee	13,938
Two Elevators	22,124
Heating System	36,142
Sprinkler System	8,946
Lighting Fixtures	10,572
Lockers	3,400
	$442,220

Since the labor item referred to labor on the main structure only, amounts for items such as the sprinkler system and heating system included labor costs.

The company had previously carried equipment like elevators, heating systems, and wiring systems in the Building account. At the time the new building was built, however, an issue arose as to whether this practice should be continued or whether separate accounts should be set up for these items. The company owned three other buildings which had been built some time previously and it did not have complete figures as to the cost of comparable types of equipment in the other buildings.

HALSTEAD COMPANY[1]

PURCHASE AND INSTALLATION OF MACHINERY

In August, 1937, the Halstead Company purchased and installed a new planer. The expenses involved were as follows:

1. Acquisition of Planer		
60″ × 48″ × 25′ Branton Widend Pattern, Hypra Double Housing Planer with 2 heads on the cross part and 2 side heads with dual control, tool lifter for all heads, power cross-feed, 2 side heads, herringbone gear transmission, reversible steel tie plates, one-piece table and two-piece bed, arranged for reversing motor drive. Includes motor for elevating crossrail but does not include main drive motor and control equipment		$24,502.50
Freight on 1 table, 1 rail, 1 motor base, 1 detail box, and 1 end section	$ 264.79	
Freight on planer and 2 leveling blocks	257.26	
Express on motor	1.21	
Total		$ 523.26
2. Construction of Guards and Steel Floor to Go around Planer		
Sheet metal	$ 32.03	
125 lb. No. 11 gauge sheet iron	5.11	
Miscellaneous	2.01	
Material	$ 39.15	
Machine shop—126.4 hours[2]	160 10	
Total		$ 199.25
3. Construction of Foundation		
Lumber	$ 11.55	
Machine steel	3.72	
⅝ reinforcing rods	21.38	
21 yards stone and sand	40.98	
80 bags of cement	52.51	
Miscellaneous	1 64	
Material	$ 131.78	
23.0 hours engineering	$ 43.30	
92.6 hours carpenter	116.93	
104 8 hours yard laborers	97.05	
4 5 hours yard autos	5.52	
7.6 hours maintenance labor	6 83	
Labor and Burden	$ 269.63	
Total		$ 401.41

[1] All figures in this case have been multiplied by a constant for purposes of disguise, but the proportionate relationship of the figures was not affected.

[2] In this and similar items below the amount included direct labor, and burden or overhead applied as a percentage of direct labor.

4. Motor				
1	35 hp. semienclosed D.G. reversing motor, 230 Volts, 200-1200 r.p.m., P.O. 66484, frame 50 P., Type T, 133 Amp., Serial 366765	$3,718.00		
2	Switches (1-200 amp. + 1-30 amp.)	28.94		
1	Safe to fuse unit 200 amp., 250 volts	20.46		
	Wire	132.28		
	Miscellaneous	14.37		
	Material	$3,914.05		
25.0	hours machinist	$ 33.46		
222.0	hours electrician	285.40		
11.0	hours yard laborers	13.46		
.8	hours maintenance labor	.78		
	Labor and Burden	$ 333.10		
	Total		$ 4,247.15	
5. Installation of Planer				
	Steel	$ 13.91		
	Conduit pipe	31.77		
18	No. 6312 plater	52.86		
40	gal. machine oil	9.28		
1¼	Gate valve	1.33		
	Miscellaneous	20.35		
	Material	$ 129.50		
7.5	hours machine shop	$ 8.62		
4.0	hours electrician	5.40		
11 2	hours piping	15.32		
10.4	hours yard laborers	12.37		
105 0	hours carpenter	111.08		
11.7	hours planing	14.70		
357.5	hours maintenance	341.31		
7.5	hours chipping	5.40		
8.2	hours toolmaking	10.87		
6.5	hours heat-treating	9.68		
15.5	hours planing and demonstrating	19.75		
	Labor and Burden	$ 554.50		
	Total		$ 684.00	

In this case a description of the accounting system used by the company has intentionally been omitted, in order that the problems presented by the acquisition and installation of this machine may be considered in terms of the nature of the facts involved and the accounting structures and procedures necessary to preserve the records needed by the management.

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1. Trace the probable source of representative items in the accounts. At what point and on what evidence were the initial entries made in the books? What intermediate accounting steps,

if any, were necessary in obtaining the amounts? For instance, if metal under No. 2 was taken from stock, what records were necessary in order to obtain the amount?

2. What accounting structure and procedures were necessary in order to obtain the figures as to labor and burden?

3. In what account or accounts in the general ledger should the addition to assets arising from the acquisition of the planer be recorded?

4. What detailed records in the form of plant ledger cards or otherwise were advisable?

Harvard Cooperative Society

The cost of land and buildings. The distinction between maintenance and improvements

Two buildings were erected by the Harvard Cooperative Society in 1924 and 1925, a combined store and office building on Massachusetts Avenue and a garage and warehouse at 8–10 Palmer Street, immediately behind the store property. The costs of constructing these buildings are indicated in Exhibit 1. They were built on a cost-plus contract. The costs of each building were kept separate, and a distinction was drawn between the buildings and their equipment. Equipment included such items as the heating, plumbing, and electrical systems. Showcases and similar items were included under Fixtures.

In 1906 the Society bought the land on which the front of the present building rests, with a building thereon which was used from 1906 until it was torn down to make way for the new building in 1924. In 1913 the Society bought a lot on which the rear of the present building rests, and in 1921 it bought the property at 8–10 Palmer Street. When construction started in 1924, real estate appeared on the books as follows. There was at that time no reserve for depreciation since all depreciation had been credited directly to real estate.

Land and Buildings, Massachusetts Avenue	$60,000.00
Land and Buildings, 8–10 Palmer Street	12,002.50
	$72,002.50

The directors decided that, of the $60,000 at which the property on Massachusetts Avenue was carried, $51,600 represented the

value of the land and $8,400 the value of the old building. Similarly they decided that the land at 8–10 Palmer Street was worth $5,300 and that a portion of the old warehouse, which was to be retained and made part of the new building, had a value of $3,900. The latter amount is included on Exhibit 1 as part of the cost of the new building. The figure of $56,900 for the land was conservative, for negotiations were opened with the Society in 1924 for the purchase of the property by an offer of $100,000 for the land. The Society was not interested and it was not known how much more might have been received if the sale had gone through.

In order to carry out the decision of the directors, the two Land and Buildings accounts were closed out and two accounts for land were opened.

Land, Massachusetts Avenue	$51,600.00
Land, 8–10 Palmer Street	5,300.00

The value of the old warehouse, $3,900, was added to new construction as mentioned above, and the balances of the two old accounts were written off by charging $11,202.50 to Surplus as a book loss due to the removal of old buildings. The cost of tearing down the old building, $1,200, was charged to the cost of the new building as one of the audited statements of the builders. After the new buildings were completed, separate accounts were carried for each of the two plots of land, for each building, and for the equipment in each building.

It had been the policy of the management to charge all expenditures on the old building and its equipment as maintenance, an expense of the year in which the expenditures were made. The management expected to apply the same policy in dealing with the new buildings, but the disposition of the following items as between a charge to the asset or to maintenance raised some question.

A. After the building was completed, moisture came through the ceilings immediately below the roof. Investigation revealed that there were no leaks, but that the difficulty was caused by salt in seaweed used for insulation. The surface of the roof was removed, the seaweed insulation was replaced with cork, and the roof was relaid. The cost of approximately $6,000 was charged to maintenance.

B. Moisture seeped through the north wall. The difficulty was partly caused by the contraction of the mortar in drying which left cracks between the bricks and mortar. Also, there were a few overburned bricks in the wall which were cracked.

The wall was sprayed with an oil mixture at a cost of $400, but the treatment proved ineffective. The wall was then pointed[1] and a few of the worst bricks were removed, the cost being $750. This stopped the seepage of moisture.

C. In order to prepare the building for use at the opening of college, the interior was painted two weeks after plastering was completed. Both the builders and the management knew that paint applied before the plaster was thoroughly dry would peel. The interior was repainted the next year and again four years later, and in each case the cost of approximately $2,500 was charged to maintenance. The first painting was charged to the cost of the building.

D. The matter of a finish for the cork floors proved to be a troublesome problem. The floors were finished soon after completion of the building at a cost of $400, and very soon thereafter $50 was spent to remove the finish. A certain section of the basement floor was then set aside for experimental purposes. Contractors who had the one and only finish for cork floors were permitted to work on the experimental section at their own expense, and the cost of removing the materials applied was absorbed as maintenance. One such experiment succeeded and the contractor was engaged to refinish all the cork floors.

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1. Were the types of items included in the cost statement properly a part of the cost of the new building?

2. Did the figures arrived at by the directors with respect to land record the cost of the land?

3. Should the expenditures after completion have been treated as improvements or as maintenance?

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[1] Pointing means the reworking of the mortar joints by the application of a thin coating of fresh mortar.

EXHIBIT 1
HARVARD COOPERATIVE SOCIETY
ANALYSIS OF CONSTRUCTION COST TO DECEMBER 31, 1925

	Total	Builders' audited statements 1 to 56 inclusive	Builders' profit	Architect's fees	Equipment fees engineers retained by us	Auditing expense and miscellaneous surveying, lawyers' fees etc.	Net value of old warehouse as per vote of directors	Dividend on insurance from Mutual Liability Insurance Company	Lighting fixtures
Building—Massachusetts Avenue	$311,253	$266,018*	$24,157	$19,692	.....	$2,063	.....	$677	.....
Equipment—Massachusetts Avenue	35,881	30,831	.....	.....	$1,794	117	.....	....	$3,139
Total Store and Office	$347,134	$296,849	$24,157	$19,692	$1,794	$2,180	.....	$677†	$3,139
Building—8–10 Palmer Street	$ 55,630	$ 43,046	$ 2,900	$ 5,801	.....	$ 116	$3,900	$133†	.....
Equipment—8–10 Palmer Street	14,238	13,459	.....	.....	$ 779	.....	.....	....	.....
Total Warehouse	$ 69,868	$ 56,505	$ 2,900	$ 5,801	$ 779	$ 116	$3,900	$133†	.....
Total Cost as at December 31, 1925	$417,002	$353,354	$27,057	$25,493‡	$2,573	$2,296	$3,900	$810†	$3,139

* Including $1,200 for cost of demolishing the old building.
† Red.
‡ There was a small balance due for architect's bill not yet rendered (January 11, 1926).

NORTHERN ELECTRIC MANUFACTURING COMPANY—NO. 2

DETAILED PLANT LEDGER RECORDS

As indicated in a previous case, the company used the Uniform Accounting Manual[1] for the electrical manufacturing industry. In accounting for plant, a distinction was drawn between catalogued and uncatalogued items with reference to the type of detailed records maintained. For machinery a separate card was

FORM 1

Cat. Machine No. (B)		Description of Machine				
3355		Jackson A-4 Geared Press				
Date Purchased (C)		Maker				0
February 8, 1938		Jackson Corporation				
First Cost (D)		Purchased from				1
$2,101		Forsythe and Briggs				2
Bldg. No. (E)	Dept. No. (F)	Maker's No.	Transferred from			
			Bldg. No.	Dept. No.	Date	3
14	6	15164				
Voucher No.		B.W. No.				4
4-2108		1174				5
Connected to						6
5 hp. 1800 r.p.m. motor No. 827						
Machine Code No. (A)						7
6-48						

	(A) Code	(B) Cat. No.	(C) Yr. Pur.	(D) First Cost	(E) Bldg. No.	(F) Dept. No.
1 2 3 4 5 6 7 8 9 10 11	12 13 14	15.....68	69 70	71 72 73 74	75 76 77	78 79 80

provided for each machine which was thus treated, for purposes of accounting, as a unit of property. Land and buildings were similarly handled by parcels of land and separate buildings. Thus

[1] Uniform Accounting Manual for the Electrical Manufacturing Industry, 6th ed., National Electrical Manufacturers Association, New York, August 1, 1931.

portions of total plant which were handled in this way, that is, by separate units of property, were referred to as catalogued items. This type of property accounting is illustrated in the present case with respect to machinery.

For types of property such as small tools the company did not carry detailed records because of the clerical expense involved in the vast amount of bookkeeping which would be required. These types of property were referred to as uncatalogued and were accounted for by classes in a manner described in a later case.

The plant ledger maintained by the Northern company for catalogued machinery consisted of Hollerith cards kept on file in each department. Form 1 is an illustration of these records. Information was listed under the appropriate headings both in writing and through a series of punched holes which made it possible to summarize the information recorded on a large number of cards by running them through tabulating machines.

The catalogue machine number was the accounting identification number and corresponded to the number appearing on a brass tag attached to the machine. First cost was taken from the invoice and corresponded to the first cost described in the Uniform Accounting Manual. Building number and department number gave the location of the machine. Voucher number referred to the authorization of the expenditure incurred in purchasing the machine. The term, connected to, applied to the motor which furnished power to the machine. Machine code number was an identification mark which served to classify the machine according to its function. Other sections on the card served the purposes indicated by their titles.

Motors were catalogued separately on cards identical in form to those used for machinery but differentiated by a green stripe along the upper border.

The Uniform Accounting Manual contained six main divisions of accounts. Of these the first was Assets which contained subgroups broken down into divisions. Each division included several accounts. For example, Subgroup 11 under Assets was entitled Manufacturing Plant and contained nine divisions of which No. 114 was Machinery and Tools. Among the eight accounts listed under Division 114 was Machinery, account No. 1141. The detailed instructions concerning No. 1141 and certain other related accounts are furnished below.

1141 Machinery

(*a*) First cost, including cost of transportation, of standard machines which have comparatively long useful lives, including only attachments which are necessary for the proper functioning of the machine, such as centers and oil and water feeds and safeguards which are a permanent and integral part thereof.

(*b*) The sound utility value of special machines built by the company using them, or designed by the company and built by outside machinery manufacturers, when put into service. The excess cost is chargeable to 172—Unliquidated Development and Complaints to be liquidated against the lines of product for which the machinery was designed.

Does not include:

Permanent installations of conveying apparatus which according to the fifth and prior editions of this manual were here included.
See 1144—Conveyor Equipment

Attachments and auxiliary devices of a semidurable character purchased with units, the specific use of which is not necessary to their proper functioning.
See 1145—Small Tools

Safeguards for machines (unless an integral part), hoods over grinders, nor oil and water feeds which are not integral parts of the machines.
Charge 1161—Factory Fixtures and Equipment

Rolling stock.
See 1173—Rolling Stock

Automobiles and electric vehicles.
See 1174—Automobiles and Trucks (Gas)
See 1175—Electric Vehicles and Trailers

Motors used with but not inseparably attached to machinery.
See 1142—Electrical Apparatus

Does not include the cost of foundations nor the expenditures for installation. See 115—Foundations and Installation Machinery and Electrical Apparatus.

. . . . . .

1142 Electrical Apparatus

First cost, including cost of transportation, of substantial and expensive electrical apparatus, used for testing or general manufacturing purposes, such as:

Generators
Induction regulators, 20 KW and over
Motors (1 HP and over), direct connected, geared, belted and shaft connected
Motor-generator sets
Marine engine generator sets
Rotary converters
Switchboards (power station)

Transformers, 20 KW and over
Turbo-generator sets
Does not include:

. . . . . .

Motors which are inseparably attached to machinery, electric hoists and other portable tools, rolling stock and electric vehicles.

. . . . . .

1146 Electrical Accessories

(*a*) First cost, including cost of transportation and installation, of electrical accessories of a semidurable character but which have a comparatively long term of effective life.

(*b*) First cost of wiring and wiring devices used to connect tools and benches with main outlets; also that incidental to the installation of specific machines and units of electrical apparatus.

. . . . . .

115 Foundations and Installation—Machinery and Electrical Apparatus

1151 Foundations for Machinery and Electrical Apparatus

First cost of foundations for machinery and electrical apparatus, as defined in 1141—Machinery and 1142—Electrical Apparatus.

Note: The cost of removing old foundations preparatory to the installation of new ones should be charged to 3391—Rearrangement of Equipment.

1152 Installation of Machinery and Electrical Apparatus

First cost of installation (including engineering) of machinery and electrical apparatus as defined in No. 1141 and No. 1142.

Does not include the cost of wiring in connection with the installation of units. See 1146—Electrical Accessories.

Note: The cost of reinstalling units incidental to the rearrangement of equipment is chargeable to 3391—Rearrangement of Equipment.

. . . . . .

3391 Rearrangement of Equipment

Cost, including transportation, new foundations and reinstallation of rearranging equipment within a department or building, of transferring individual units of equipment between departments and of dismantling equipment removed from service; also cost, including transportation, but exclusive of new foundations and reinstallation, of moving a department or line of products from one location to another within the same plant, or from one city to another. . . .

Note: The cost of new foundations and reinstallation in connection with moving an entire department or line of products is chargeable to manufacturing plant accounts under 115—Foundations and Installation—Machinery and Electrical Apparatus.

The cost of original foundations and installation, less depreciation accrued thereon, should be charged as a part of the cost of moving.

On June 15, 1938, the Northern Electric Manufacturing Company made the following additions to its machinery:

1 No. 2 Universal Milling Machine complete, exclusive of motor, control, arbors, and cutters	$ 5,275.00
1 15-hp. motor and control separate from milling machine	65 00
Freight in	28.00
Cost of installation (no special foundation required)	22.00
Cost of wiring	31.00
1 Universal Cutter Grinder with built-in motor and control	1,245.00
Cost of installation (no special foundation required)	14 00
Freight in	13 00
1 No. 2, 4 Spindle Upright Drilling Machine with built-in motor and control	3,186.00
Cost of installation (no special foundation required)	16.00
Cost of wiring	24 00
Freight in	17 50
1 84 in. Vertical Boring Mill, exclusive of motor and control	10,435 00
1 50-hp. motor and control	154 00
Cost of preparing foundation	1,180 00
Wiring costs	178.00
Freight in	75.00
Installation costs	336.00
Expenditures incurred in clearing space and relocating other facilities in connection with installation of new boring mill	2,118.00

Prepare journal entries to record the purchase of new machinery in a manner consistent with the instructions given in the National Electrical Manufacturers Association Manual.

Edinburgh Gas and Electric Company

ACCOUNTING FOR IDLE PLANT

The Edinburgh Gas and Electric Company manufactured gas in a coke oven plant with a daily capacity of 3,500,000 cu. ft. and a book value of $2,500,000. Condensed accounting statements are given to show the relation of this plant to the general assets of the business, and the relation of the retirement expense to other expenses. The company rendered both gas and electric service, and both types of plant were recorded on the balance

Edinburgh Gas and Electric Company
Condensed Balance Sheet as of December 31, 1934

Assets

Current Assets	$ 555,965
Fixed Assets	16,621,008
Unamortized Debt Discount, etc.	304,305
	$17,481,278

Liabilities

Current Liabilities	$ 313,945
Funded Debt	5,092,820
Retirement Reserve	1,281,882
Miscellaneous Credits	161,526
Preferred Stock	2,141,520
Common Stock	2,153,600
Capital Surplus	5,948,179
Surplus	387,806
	$17,481,278

Condensed Income Statement
For the Year Ending December 31, 1934

Operating Revenues:		
Electric		$1,821,061
Gas		646,017
Total Operating Revenues		$2,467,078
Maintenance	$ 237,793	
Retirement Expense*	196,021	
Other Operating Expenses	1,675,454	2,109,268
Operating Income		$ 357,810
Other Income		1,657
Gross Income		$ 359,467
Interest and Amortization Expense		311,160
Net Income		$ 48,307
Preferred Dividends		139,544
Deficit after Preferred Dividends		$ 91,237

* 1931, $213,337; 1932, 202,594; 1933, 195,943.

sheet. It used retirement accounting, with a retirement reserve which was a provision for future retirements, but was not allocated to any particular assets.

The Edinburgh territory was near the edge of one of the large natural-gas districts of the United States. Natural gas had been used extensively for several years within 60 miles. In 1930 natural gas was discovered within 15 miles of Edinburgh by the Caledonia Gas and Oil Company, a subsidiary of a large corporation with extensive holdings of natural gas and oil properties in different parts of the country. As a result of experience in other fields, it was possible to estimate with some confidence that this field would supply the entire requirements of the Edinburgh company for 15 to 20 years. In making such estimates, engineers relied on rock pressures and changes in rock pressure after a certain volume of gas had been reclaimed.

The Caledonia field was not tied in with other fields at that time, but the Caledonia company would have to lay only 60 miles of pipe line to make reserves in other fields owned by the same parent company available, and it was expected that this line would be completed within a few years. When that was done, the supply of natural gas would probably be sufficient for 50 years or longer.

Negotiations were opened relative to a contract to supply the entire requirements of the Edinburgh area. There were three reasons why the executives of the Edinburgh company were reluctant to change to natural gas. There were more heat units in natural gas—1,028 B.t.u. per cubic foot instead of 537—so that a customer would need less cubic feet to do the same amount of cooking or water heating. For that reason, the volume of gas consumed in the area would decline unless the customers extended their use of gas. If rates per thousand feet remained at or near the level of the manufactured gas rates previously used, gross revenue would decline because of a decrease in the volume of consumption. This would be offset in part by increased use as a result of decreased cost of heat units. If rates per thousand were raised, the customers might still be getting a reduction in the cost of 1,000 B.t.u., but they did not understand such matters fully and probably would object to an increase in rates per thousand feet. With rates which were feasible in the light of public

opinion, the return on the property of the company was likely to be unreasonably low.

In addition, the change required an adjustment of all gas apparatus in the community, and the customers could not be expected to stand this charge. The company would probably have to absorb the cost of $3 to $4 per customer. If any of the appliances failed to work well after the change, the customers would hold the company responsible. Adjusting the appliances was a considerable task because it had to be done for the entire group of customers in a very short time. A similar adjustment would be necessary if the company ever changed back to manufactured gas.

Furthermore, the change would require shutting down the manufactured gas plant and throwing 125 men out of work.

In 1932 the Edinburgh company entered into a contract to purchase gas for one part of its area near the gas wells and the change to natural gas worked out favorably. Negotiations with respect to gas for the rest of the area were intentionally delayed in the hope that it would not be necessary to make the change, but in the fall of 1933, the Caledonia company obtained a right of way for a pipe line to the city limits of Edinburgh, and indicated that gas would be offered to the city at very low wholesale rates in such a way that the public would draw unfavorable comparisons between the rates actually being charged and those at which natural gas was available.

A franchise prevented actual competition within the city, but the effect on public opinion would have been unfortunate, and the Caledonia executives used this fact in negotiation.

A contract was signed in March, 1934, to take effect in August. The contract provided for the supply of gas required by the Edinburgh company at stipulated rates and was to run for 10 years. At that time a new contract was to be negotiated.

The manufactured gas plant was shut down in August, 1934. Every effort was made to keep the plant in condition to be serviceable at the expiration of the contract in 1944. The brickwork of the coke ovens was sealed with asphalt to eliminate contact with the air as much as possible. The piping equipment and structures were painted to reduce corrosion. Approximately $25,000 was spent the first year in this way and it was estimated that the same amount would have to be spent on maintenance

of the idle plant each year. This maintenance and taxes of about $18,000 per year were the principal expenses anticipated with respect to the idle plant.

It was the intention of the management in 1934 to attempt to keep the plant in condition to reopen in 1944 when the contract expired, since otherwise the utility would be in a weak bargaining position in negotiating a new contract. The president believed that the utility commission of the state would permit the adoption of any policy which would be wise from the point of view of the company and its customers. Several proposals were advanced as to the best method of accounting for the property. One was that the gas plant should be retained in the accounts and reported in the statements as if it were in active use. A second was that it should be segregated and reported as idle plant and that a reserve should be set up from surplus to absorb the entire charge when and if it became necessary to write the plant off. A third suggestion went further, indicating that from an economic point of view the value of the plant was already exhausted because of unusual obsolescence, and that it might as well be charged off immediately. The proponent of this plan also urged that all portions of the plant which could not be used for other purposes should be retired physically to get the advantage of any salvage and to reduce annual costs of maintenance and taxes.

Trundell Power Company

THE COST OF PLANT AND EQUIPMENT

During 1908 a group of small operating electric companies, locally controlled and managed, opened negotiations with the Endler Management Company, with a view to selling their properties. At that time, the management company was engaged in buying such properties for the public utility holding company with which it was affiliated.

After extensive investigations, D. J. McClellan, acting as agent for the Endler Company, obtained options on the properties in question and prepared a plan for certain transmission lines and other construction necessary to make a single operating unit of the group.

McClellan and two associates organized the Trundell Power Company and as agents for the Endler Management Company, which held a majority of the common stock, elected the board of directors. McClellan became the treasurer and general manager of the new corporation.

In October, 1909, McClellan offered to transfer to the Trundell Power Company the properties and new construction for cash and securities as indicated in the following schedule. The offer was accepted by the directors and the plant account of the Trundell Power Company was debited $8,067,626 to record the acquisition.

CONSIDERATION CHARGED TO PLANT AND INVESTMENT ACCOUNT FOR PROPERTIES ACQUIRED UNDER THE McCLELLAN PROPOSITION ($8,067,626)

Paid to D. J. McClellan and/or Endler Management Company:			
Securities of the Trundell Power Company:			
Common Stock	$3,000,000		
Preferred Stock	3,000,000*		
First Mortgage Bonds	1,350,000	$7,350,000	
Cash:			
Cash paid to Endler Management Company for additional construction at Ontario power plant, and for "tying in," not contemplated under the McClellan Proposition		377,678	
Total paid to D. J. McClellan and/or Endler Management Company			$7,727,678
Liabilities Assumed:			
Liabilities of Beulah Power Company Assumed			
Funded Debt		$ 345,000	
Less: Sundry net assets		4,284	340,716
Salvage:			
Miscellaneous salvage from sale of certain property of Genesee Light and Power Company			768†
Total charged to Plant and Investment account			$8,067,626

* *Note.*—Of the $3,000,000 par value of preferred stock issued, $1,996,100 par value was subsequently returned to the Trundell Power Company, but said returned stock was not credited back to the Plant and Investment account; $100,000 par value of bonds also were subsequently returned, but we are unable to determine that they were credited back to Plant and Investment account.

† Figures in red.

In 1931 the public service commission of the state audited the books of the company to determine the cost of its plant. The facts of this case were taken from the audit report. The expenditures made to acquire the property sold to the Trundell Power Company are indicated in the following schedule:

Outlays of Endler Management Company or McClellan in Cash or Securities to Acquire and Construct the Properties Turned over to the Trundell Power Company under the "McClellan Proposition," which are shown in the records at Monroe:

1. To acquire property of Monroe Light, Power and Water Company:		
Under the contract for acquisition of this property the purchase price was to be paid in bonds of the company or one to be organized to the par value of		$ 120,000
2. To acquire property of Genesee Light and Power Company:		
Under the contract for acquisition of this property the purchase price was		34,902
3. To acquire property of Beulah Power Company:		
In addition to the liabilities of this company which were assumed by the Trundell Power Company there were delivered to the stockholders of this company the following securities of the Trundell Power Company which were received under the McClellan Proposition:		
Common Stock	$300,000	
Preferred Stock	200,000	
First Mortgage Bonds	100,000	600,000
4. To acquire four parcels of land:		
The deeds from the grantors of these parcels show the following considerations:		
Ontario site	$ 14,400	
Riga site	500	14,900
5. For construction of Ontario and Riga Plants:		
The construction ledgers and supporting vouchers covering construction of these plants are on file at Monroe and have been audited by us. The total construction costs, as determined from this audit (including construction costs for additional construction and for "tying in," for which reimbursement was made by the Trundell Power Company in cash) were		1,000,402
Total Outlays, Cash, and Securities recorded at Monroe, by Endler Management Company or McClellan		$1,770,204
Outlay by Trundell Power Company:		
Liabilities of Beulah Power Company assumed (net)	$340,716	
Salvage realized from property of Genesee Light and Power Company	768*	339,948
Total†		$2,110,152

* Red.

† *Note.*—In addition to the outlay recorded at Monroe, Endler Management Company undoubtedly made expenditures for preliminary investigations, engineering and legal services, and for similar purposes, which are not shown in the records at Monroe.

1. What was the meaning of cost of plant assets which was applied when the plant account of the Trundell Power Company was debited $8,067,626 to record the acquisition of these assets?

2. Is it possible to frame a definition of the cost of assets acquired through the issuance of stock, which would lead to a sound determination of cost in a case such as this?

BLAW-KNOX COMPANY

ACQUISITION OF PROPERTY FOR STOCK

A.

The Board of Directors of the Company at a meeting on April 26, 1937 approved a contract of April 8, 1937 between the Company and the Peoples-Pittsburgh Trust Company of Pittsburgh, Pennsylvania, pursuant to which, and for the consideration of $252,000 therein stated, the Company is purchasing from said bank all of the real estate, plant, equipment, inventory, supplies, uncomplete contracts and other assets heretofore operated by Power Piping Company and Power Piping Construction Company, as going concerns, excepting only the corporate franchises of said concerns, their notes and accounts receivable and such of their assets, if any, as may not be inherently a part of or necessary incidents to the business of designing, producing, marketing and erecting power and process piping and sprinkler systems. All assets heretofore owned by Power Piping Company and Power Piping Construction Company and all properties heretofore operated by those concerns are being turned over by them to their sole stockholder and principal creditor, namely, the bank mentioned above which will apply the assets and properties to the satisfaction of their indebtedness to the bank and others, settle their corporate affairs and surrender their franchises. Title to those assets above described as being acquired from the bank will be taken by the applicant Company in the name of a newly organized and wholly owned subsidiary incorporated in Pennsylvania under the name of Power Piping Corporation. Everything so being acquired, at the time of acquisition, will be free of liens, encumbrances, indebtedness, taxes and other obligations of any other nature of the Power Piping Company and of Power Piping Construction Company now in liquidation.

The aforesaid consideration of $252,000 is to be paid in no par capital stock of the Company figured at $27.50 per share, that is, 9,163 shares and $17.50 cash in lieu of a fractional share. The 9,163 shares are to be drawn from heretofore authorized but unissued stock of the Company and on April 26, 1937 the Board of Directors of the Company authorized issuance of that number of fully paid and non-assessable shares and directed delivery thereof together with $17.50 cash in exchange for the real and personal property being acquired under the aforesaid contract of April 8, 1937. No other authority is required for issuance of these shares.[1]

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[1] New York Stock Exchange Listing Application, A-10892, April 26, 1937.

Power Piping Corporation
Pro-forma Balance Sheet as at April 8, 1937

Reflecting purchase for cash by Blaw-Knox Company of authorized capital stock, namely, 10,000 shares par value $1.00 a share, and the contribution by Blaw-Knox Company of additional capital represented by properties formerly operated by Power Piping Company and Power Piping Construction Company.

Assets	
Cash	$ 10,000
Inventories	62,568
Land, buildings and equipment	190,000
Prepaid insurance, expense, etc	1,059
Total assets	$263,627
Liabilities and Capital	
Reserve for uncompleted contracts	$ 1,627
Capital Stock (authorized and issued, 10,000 shares, par value $1.00 each)	10,000
Capital surplus (paid-in)	252,000
Total liabilities and capital	$263,627

Source: New York Stock Exchange Listing Application, A-10892.

BLAW-KNOX COMPANY AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEET AS AT MARCH 31, 1937*

ASSETS

Current assets:		
Cash on hand and in banks		$ 762,543
Securities		33,162
Notes receivable—Trade	$ 121,778	
Accounts receivable—Trade	1,942,167	
	$ 2,063,945	
Less—Reserve for doubtful notes and accounts receivable—Trade	54,518	
		2,009,427
Accrued interest receivable		200
Inventories (lower of cost or market)		2,606,335
Other current assets		14,559
		$ 5,426,226
Investments:		
Unconsolidated foreign subsidiaries (Stated at net worth in foreign currency at exchange rates at December 31, 1936)	$ 412,382	
Other	15,551	
		427,933
Fixed assets:		
Property, plants and equipment[1]	$17,857,757	
Less—Reserve for depreciation	4,983,017	
		12,874,740
Patents, trademarks and development (at cost)	$ 655,019	
Less—Reserve for amortization	67,825	
		587,194
Advances to employees and due from officers and employees under stock purchase plan		9,821
Deferred charges		64,750
Total assets		$19,390,664

* Footnotes 2–5 omitted.

[1] Property, plants and equipment are stated at appraised values for Blaw-Knox Company and Hoboken Land Company (1924), Lewis Foundry and Machine Company, Union Steel Casting Company, and Pittsburgh Rolls Corporation (1926); with subsequent additions at cost.

BLAW-KNOX COMPANY AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEET AS AT MARCH 31, 1937.—(*Continued*)

LIABILITIES AND CAPITAL

Current liabilities:		
Accounts payable	$ 742,890	
Accrued expense	123,166	
Accrued social security taxes, and Federal and Pennsylvania State capital stock and income taxes	554,489	
Dividends payable	264,479	
Total current liabilities		$ 1,685,024
Other liabilities:		
Miscellaneous reserves	$ 79,867	
Minority interest, Pittsburgh Rolls Corporation	10,513	
		90,380
Reserve for contingencies		261,717
Capital stock and surplus:		
Capital stock	$11,019,970	
Earned surplus	2,291,037	
Capital surplus	4,042,536	
Represented by 1,322,395 shares of no par value stock outstanding (authorized 1,500,000 shares)		17,353,543
Total liabilities and capital		$19,390,664

Source: New York Stock Exchange Listing Application, A-10892.

EXHIBIT 1
BLAW-KNOX COMPANY
PRICE RANGE OF CAPITAL STOCK

	High	Low
1934	16¼	6
1935	17	9⅝
1936	24⅞	14½
1937		
January	26⅜	22¾
February	28⅜	25⅜
March	29⅞	25¾
April	28⅞	22

Source: *Bank and Quotation Record.*

B.

On August 27, 1937, the Board of Directors of the Company approved a contract of August 2, 1937 and supplement of August 12, 1937 between the Company and R. M. Gordon and Company pursuant to which the Company is purchasing all of the assets, business and goodwill of R. M. Gordon & Company as a going concern engaged in

manufacturing and selling devices for automatic pressure lubrication of machinery. On the same date the Board of Directors directed the payment of 1,900 shares of no par Capital Stock of the Company to R. M. Gordon & Company as the consideration agreed in said contract and supplement to be paid for the assets, business and goodwill which are being acquired subject to all liabilities of R. M. Gordon & Company except liabilities for taxes. . . . [1]

The value of the assets acquired as determined by the Board of Directors and to be set up in the books of the Company are as follows:

Debits to:	Cash	$ 6,582 65
	Accounts receivable	470.92
	Inventories	6,663 48
	Patents, patterns, moulds, etc	8,043 08
	Goodwill	28,702 94
Credits to:	Accounts payable	2,874 88
	Taxes	88.19
	Capital stock (1,900 shares at stated value of $8.33⅓ per share)	15,833 33
	Capital surplus	31,666.67*

* New York Stock Exchange Listing Application, A-11008, August 27, 1937.

1. Prepare journal entries to record the transactions described in *A* above on the books of the Blaw-Knox Company and on the books of the Power Piping Corporation.

2. If, after the terms of the contracts of acquisition in *A* and *B* had been established, you had been asked to determine the figure at which each of the several assets involved was to be taken up on the books, either of the parent or of the subsidiary, how would you have proceeded?

[1] The price range of Blaw-Knox stock from May through August was for May, 25½–22½; June, 25⅜–22½; July, 25½–22⅞; August, 25¼–21¾.

B. THE MEANING OF COST OF REPRODUCTION

CHELMSFORD KNITTING COMPANY—NO. 2

APPRAISAL OF PLANT ON A REPLACEMENT COST BASIS

The company was organized shortly after the Civil War and from that time until 1920 had a record of successful operation in the production of women's seamless hosiery. Beginning about 1916, styles of women's hosiery changed, with growing demand for full-fashioned hosiery, principally in silk, and decreasing demand for staple seamless cotton hose in the production of which the Chelmsford company had specialized. A technical note on the difference between the two types is included below as Exhibit 3.

The following figures indicate the changes in the volume of full-fashioned and seamless hosiery produced in this country from 1919 to 1927 inclusive. The figures for the seamless type include children's and infants' hosiery because the Census of Manufactures did not give separate figures on women's seamless hosiery before 1927.

DOMESTIC HOSIERY PRODUCTION[1]
(Dozen pairs)

Women's full-fashioned hose		Seamless hose[2]	
1919	6,323,934	45,101,406	
1921	7,589,913	44,490,667	
1923	9,817,996	49,797,393	
1925	12,291,219	47,306,165	
1927	19,771,030	45,918,828	
		1927 in detail	
		Women's	24,945,998
		Children's	14,169,137
		Infants'	6,803,693

[1] TAYLOR, G. W., *Significant Post-War Changes in the Full-Fashioned Hosiery Industry* University of Pennsylvania Press, Philadelphia, 1929, pp. 12 and 15. Derived from Biennial Census of Manufactures for the years indicated.
[2] Includes women's, children's, and infants' hose.

The management of the company was conservative and since it had specialized in staple lines, it did not immediately follow the trend toward the new type. In 1926 its plants had a gross

book value of $4,164,367, reserve for depreciation was $1,136,923, and net book value, $3,027,444. All of the machinery was designed for the production of seamless hosiery, except for one installation of full-fashioned machinery, costing $88,121, which had been put in for experimental purposes.

The company had heavy losses in 1920 and 1921, which continued after the recovery in business in 1922 and 1923. Delayed adaptation to the underlying change in the industry toward full-fashioned production was an important factor, but not the sole factor involved. Costs, even in staple cotton lines, were high relative to those of competitors, and the company had been slow in adapting its merchandising methods to changes in market conditions.

The continuing losses in operation were so severe that a group of directors proposed in 1926 that the business be liquidated. The company was financed largely by common stock, so that even with a very low recovery in liquidation no loss would fall on creditors. The decision therefore affected primarily the stockholders and the personnel engaged in the enterprise.

In order to obtain a basis for a decision on the question of liquidation, the directors engaged the Eastern Appraisal Company[1] to appraise the entire fixed assets. The records of the Chelmsford company were very incomplete as to units of plant on hand, dates of acquisition, and original cost, so incomplete in fact that it had frequently been necessary to book retirements of machinery at estimated cost because no records of cost were available.

The Eastern Appraisal Company recommended a complete detailed appraisal on a reproduction cost basis, and it was authorized to proceed. The first step was the preparation of a complete plan or map of the plants and detailed blueprints of all buildings. A careful inventory was then taken of all component parts of the buildings, such as the cubic yards of excavation, number of brick in walls, and board-feet of lumber of various types. Each item in the inventory was then priced on an original cost basis by estimating the date of acquisition, when it was not known, and applying a cost per unit which in the opinion of the appraisers represented probable cost at that time. For example, the inventory gave the number of common brick in certain walls built in

[1] Fictitious name.

1884. By applying a figure representing the cost of brick laid in walls of that type in 1884, the original cost of the brickwork was determined. Each item was also priced at replacement cost by applying current costs per unit for similar work in 1926. A rate of depreciation was set by inspection, and depreciated value was determined by applying this rate to the replacement cost. The results are illustrated by excerpts shown in Exhibit 1 from the schedules for building No. 1.

A similar inventory was taken of machinery and equipment, and each unit was priced on estimated original cost where actual cost was not known, and on the cost of replacement for new machines of the same type. The extent of depreciation was estimated by inspection and a rate was applied to replacement cost to obtain depreciated value. The results are illustrated in Exhibit 2 as applied to 280 Scott and Williams knitting machines.

The results of the appraisal were summarized as follows and indicated a depreciated value somewhat above the $3,027,444 at which the plants were carried on the books of the Chelmsford company.

	Original cost	Replacement cost	Depreciated value
Buildings and Building Equipment	$1,118,970	$2,202,423	$1,285,419
Machinery and Equipment	2,368,974	3,358,039	1,843,856
Railroad Siding and Trestle	9,818	15,340	11,875
Water Power Development	57,247	115,660	62,936
Tenements	215,512	525,952	315,337
Automobiles	23,837	24,901	17,945
Total	$3,794,358	$6,242,315	$3,537,368

1. Did this appraisal give the directors a substantial basis of fact for a decision as to liquidation?

2. Would another type of appraisal have been more serviceable?

EXHIBIT 1
CHELMSFORD KNITTING COMPANY

Classification CONSTRUCTION
Building No 1 Floor No. Dept.

Orig. date of acquisition	Quantity	Description	Original cost	Replacement cost	Depreciation	Depreciated value
1884		Material and labor used in the construction of a five (5) story & basement brick building, 46′ 0″ × 188′ 6″ six (6) story & basement stair and elevator tower, 20′ 0″ × 23′ 0″			%	
		UNBURNABLE PORTION				
		MASON WORK				
	1,260	cu. yd. area excavation	441	1,890		
	320	cu. yd. wall trench & pier excavation	128	560		
	8,544	cu. ft. rubblestone in wall pier footings	1,281	3,418		
	4,965	cu ft rubblestone retaining walls (laid dry)	745	1,986		
			2,595	7,854		
		Designing & Supervision	156	471		
			2,751	8,325	77	1,915
		INSURABLE PORTION				
		MASON WORK				
		Basement				
	164,000	common brick in walls	1,968	9,020		
	8,464	cu. ft. rubblestone, laid in lime and cement mortar in walls	1,270	3,809		
	239	lin. ft. 3′ 0″ × 10″ granite underpinning	311	956		
	1,330	sq. ft. brick floor, laid flat	93	332		
	100	sq. ft. tar concrete floor	6	18		
		First Floor				
	183,000	common brick in walls	2,196	10,065		
	42	sq. ft. Mastic floor in Toilets	10	13		
		Second Floor				
	178,500	common brick in walls	2,142	9,817		
	42	sq. ft. Mastic floor in Toilets	10	17		
			8,006	34,047		

EXHIBIT 1.—(*Continued*)
CHELMSFORD KNITTING COMPANY

Classification CONSTRUCTION
Building No. 1 _____ Floor No. _____ Dept. _____

Orig. date of acquisition	Quantity	Description	Original cost	Replacement cost	Depreciation	Depreciated value
		CARPENTER WORK				
1884		TIMBER & LUMBER			%	
	16,800′	b.m. 14″ × 16″ yellow pine floor beams	806	2,016		
	360′	b.m. 6″ × 8″ yellow pine floor beams	14	34		
	360′	b.m. 8″ × 8″ yellow pine posts	14	34		
	320′	b.m. 10″ × 10″ yellow pine posts	13	32		
	20,400′	b.m. 3″ plank floor	653	1,632		
	6,850′	b.m. ⅞″ d m. & b. pine sealed ceiling	233	582		
	800′	b.m. ⅞″ d.m. & b. sealed walls	27	68		
		STAIRS				
1922	1	flight of stairs from Basement to First Floor, 16–2″ × 6′6″, maple treads and winders, 1″ × 7″ risers, 10″ diameter, yellow pine center post, 1–3″ × 12″ stringer, 1 line 1″ pipe railing, posts and fittings, 1 line 1¼″ pipe rail, fastened to wall, painted lead and oil (2 sides)	53	105		
		PAINTING				
	5,230	sq. yd. lead & oil painting	1,046	1,831		
	204	squares cold water painting	204	306		
			1,250	2,137		
		Brought forward	44,527	125,193		
		Designing & Supervision	2,672	7,511		
			47,199	132,704	77	30,522
		Unburnable Portion	2,751	8,325		1,915
		Insurable Portion	47,199	132,704		30,522
		Total Building #1	49,950	141,029		32,437

Date	Quantity	Description	Original cost	Replacement cost	Depreciated value
		(Headings of the Credit Side of the Plant Ledger)			

EXHIBIT 2
CHELMSFORD KNITTING COMPANY

Classification MACHINERY 6
Building No. 1A Floor No. 4 Dept. Knitting

Orig. date of acquisition	Quantity	Description	Original cost	Replacement cost	Depreciation	Depreciated value
	280	Scott and Williams hose knitting machines, Model Q5, size 3¾", 220 needles,			%	
1915		fashion mark attachment (numbers omitted)	53,200	107,800		
		Freight & Installation	2,240	4,200		
		1–10" × 3" steel pulley	526	1,338		
		7'–¾" single leather belt	137	294		
			56,103	113,632	55	51,135

EXHIBIT 3
CHELMSFORD KNITTING COMPANY
TECHNICAL NOTE[1]

For Seamless or "Round-knit" Hosiery, the machines are small individual knitters or auxiliary machines, not sensitive to floor alignment. The ribbed tops of the seamless hose are knit on a "ribber" in the form of a continuous tube with dropped stitches at intervals showing where the rib is to be cut. These ribbed tops are cut off and set up on the circular knitting machine, sometimes called the "footer." This automatically knits the cylindrical leg, the heel and the foot, sometimes knitting in a "high splice," and a double or triple sole. It does not close the toe, and this joining or looping is done on the "looper," a circular machine which joins the edges of the open-knit toe. If a doubled-over top or "welt" is provided, as it is on some women's hosiery, this doubling is done on a special sewing machine called a welter. These operations are followed by trimming off threads, inspecting and mending, dyeing, usually in a specially adapted dyeing machine, boarding, where the stockings are stretched and dried on a form shaped like a conventionalized foot and leg, sometimes pressing between pressboards in a hydraulic press, and finally pairing, stamping, folding and boxing.

There are four general types of circular knitting machines for producing women's seamless hosiery, classified according to the fineness of the knitting process. They are known as 176-needle, 220-needle, 260-needle, and 300-needle (the number of needles in the circumference of the machine, and therefore, the number of horizontal threads in the leg of a pair of hose). Most purchases of recent years have been in 260- and 300-needle types to meet the tendency on the part of women to wear sheerer hosiery. It is impossible to knit a fine cotton or rayon, (as well as silk), hose on a coarser machine than a 220-needle.

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[1] Notes on the Hosiery Industry, IM 802a; a case prepared by the Industrial Management Department of the Harvard Business School.

Circular knitting machines for men's hosiery are of two types and two gauges (176-needle and 220-needle), one type capable of knitting plain hose and the other both plain and fancy hose. Most of the new equipment is 220-needle of the latter type.

The Full-Fashioned Knitting Machine is strikingly different from the round or seamless knitting machine. Full-fashioned hose are knit flat, and the flat knitting machines making them are of two kinds, the "legger" and the "footer."[1] Each is a long, heavy composite machine of many sections, each of which is in fact an individual knitting machine working in synchronism with all the other sections. As many stockings are knitted simultaneously as there are sections, and all the sections have in common certain actuating and controlling parts, so that all the stockings on one machine are at the same stage of advancement at any given time. It takes about three times as long to knit the leg as to knit the foot. "The full-fashioned machine is probably the most delicate and complicated piece of mechanism now in use in any type of industrial establishment. The machine has 50,000 parts and all of them must be in perfect order or the stockings will have a defect and will lack the proper appearance."[2] Each unit of four machines (3 leggers and 1 footer) involves an investment of $25,000 to $30,000.

The legger knits the stocking flat from the top to the widest part of the ankle, narrowing to the desired conformation. Commonly the top starts with a "welt" involving doubling. The finished leg is removed and sent to the footer; there the operator called a "topper" places the last course of the leg stitch by stitch on the needles of a bar that will be so placed as to transfer the leg to the needles of the footer. This operation requires high skill, sensitive fingers and good eyesight. The foot is formed flat with both heel and toe open, and the next operation is closing these on the looper, quite as was done with the toe of seamless hose. The stocking is next sent to the seamer, which is a highly special sewing machine that forms the seam up the back, that converts the previously flat leg and top fabric into a stocking. The next operations are much as in seamless—trimming, inspecting and mending, dyeing, boarding, pairing, stamping, folding, and boxing.

In order to meet the demand for sheer hosiery, the full-fashioned equipment in recent years has been of finer gauges. The 42- and 45-gauge equipment (needles to each 1½ inches of the needle bar) predominates whereas the 39-gauge used to be common. "Service" weight can be produced on the 42-gauge whereas only the cheapest service type can be knit on the 39-gauge. The 42-gauge can also produce a fairly satisfactory "service sheer" by the use of finer silk although the best service sheer is produced on 45-gauge. "Sheer"

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[1] Combined leggers and footers have been built, but they are slow and so far have received no commercial acceptance. Frequent announcements have been made of circular knitting machines producing form-fitting hosiery, but nothing that has been produced has been practicable.

[2] Quoted from Gustave Geiges, Bulletin of the Taylor Society for June, 1927.

hosiery is usually made on 48-gauge, although 45 can be utilized to some extent for this also. There is some 54-gauge equipment in use for sheerest chiffons retailing about $3.50 per pair.

The legger is usually constructed in 18, 20, or 24 sections while the footer may have as many as 28 or 30 sections. Recent purchases by hosiery mills have been mostly in the leggers with 20 or 24 sections. The additional number of sections per machine tends to reduce the knitting labor cost.

C. METHODS OF DETERMINING DEPRECIATION

Boren Steamship Company—No. 1

DEPRECIATION OF STEAMSHIP

The Boren Steamship Company of San Francisco, Calif., owned and operated a fleet of ships which were engaged in carrying freight and passengers in Pan-American trade. The fleet consisted of 75 ships of various types such as tankers, refrigerated boats for carrying agricultural products, and ships designed to carry freight, passengers, and mail at faster schedules than those assigned to ordinary freight boats. These ships represented an investment of $82,541,650 and constituted the major portion of the fixed assets owned by the company.

The Boren company was founded in 1903 and began the operation of four ships under the supervision of the man responsible for its organization, Mr. Adolf Boren. The business of ocean transportation was more profitable at the beginning of the century than it is today, and the company experienced very satisfactory returns. As the result of the conservative inclination of the first president, in relation to accounting, the original ships of the company were assigned service lives of 10 years and were depreciated on a straight-line basis with no allowance for salvage.

In 1910 the estimated service life to be assigned to new ships was extended to 15 years, although ships in service remained on a 10-year basis. This change was brought about through the insistence of other executives that a service life of 10 years was far too conservative. By 1910 it had become evident that soundly designed and well-constructed ships would be serviceable for a period of time considerably in excess of the estimated life originally adopted.

For similar reasons, a second revision in depreciation accounting took place in 1916 when the estimated service life was extended to 20 years. At this time the government was becoming more and more stringent in its control of accounting practices used in the development of income figures for tax purposes. The adoption of a 20 year life brought the books of the company more nearly into line with the depreciation charges allowed by the government, but a small discrepancy still existed. In 1921 the company decided to incorporate into its own books the depreciation used for government reports, and in accordance with this decision the service life applicable to new boats was extended to 25 years.

During the years previous to 1921 the Boren company had not found it necessary to engage in extensive overhauling of its ships. Each ship had been dry-docked at regular intervals for cleaning, repainting, and repairs. The cost of such work had been charged as maintenance against the income of the period during which it was performed. This procedure was altered in 1921 and the practice of distinguishing between repairs and renewals or additions was adopted. In accordance with the new practice all ordinary repairs and replacements of small equipment were charged to maintenance. The cost of major replacements and additions, such as the installation of a new propellor shaft or the addition of refrigeration equipment, was capitalized. These additions to the asset accounts were depreciated over the remaining service life assigned to the ship unless the expenditures were of such a nature as to extend that life. In the latter case, the general manager estimated the extended service life, and the total of undepreciated cost on the books plus the cost of the new additions and/or replacements was depreciated on a straight-line basis over the extended life so estimated. A system of detailed record cards was set up so that all information pertaining to original cost, depreciation, repairs, betterments, additions, and retirements on each ship in service was readily accessible. Estimated scrap value was not considered in any calculation of depreciation charges.

The new procedures did not eliminate the cost of replaced parts from the asset accounts. However, government income tax representatives were constantly objecting to the inclusion of items which had been physically retired. Partly as a result of this pressure and partly because of a natural desire to improve

its accounting procedure, the company instituted in 1931 the practice of eliminating such items. The cost of replaced parts was estimated by the general manager. These costs were then eliminated from both the asset account and the depreciation reserve. In the event that the ship was not fully depreciated, a percentage of the costs corresponding to the ratio of the depreciation reserve to the asset account for the ship as a whole was charged against the reserve, and the balance was included in the expenses of the period during which the retirements took place.

The decision to rebuild a ship for further service rested upon several considerations. Costs of operation were an important factor. The older ships were more expensive to operate, but shipbuilding costs had increased so tremendously since the early part of the century that depreciation charges on the new ships exerted no small influence upon cost comparisons. At various times the government surveyed the ships of the Boren company and reclassified them according to marine regulations. If a ship no longer met the standards for one class of service (for example, passenger service), the company had to decide whether to rebuild her to meet the standards or shift her down to a lower classification and allow her to wear out completely. Such decisions were made by the general manager in consultation with the controller.

The following material presents the accounting history of one of the original ships of the Boren company. In Exhibit 1, gross book value, depreciation charges, reserve for depreciation, and net book value are listed for the years 1904–1938.

Name: S. S. Adolf Boren
Type: Freight
Date: Completed and placed in service January, 1904
Cost: Fully equipped and ready for service, $446,000
Specifications:

Capacity	151,000 cu. ft.
Length	330 ft.
Width	44 ft.
Moulded depth	31 ft.
Plimsoll line*	23 ft.
Dead-weight tonnage	3,470 tons
Fuel consumption	24 tons per day
Speed	12.5 knots

* In shipbuilding, a conspicuous mark required by law to be placed on the outside of the hull of a vessel to indicate what depth of submergence will be allowed.

The S. S. Adolf Boren was assigned a 10-year life and was depreciated on a straight-line basis so that its net book value

ran out at the end of 1913. No depreciation was taken on the ship from the end of 1913 to the middle of 1922. In June, 1922, a reconditioning job on the S. S. Adolf Boren was completed. This job included a complete refitting, new plating, new decks, and a general overhauling at a cost of $214,760. This expenditure was capitalized and the general manager estimated the extension of service life resulting therefrom at seven years.

In 1926 the S. S. Adolf Boren was changed from a coal burner to an oil burner. The cost of this change was $97,500, which amount was capitalized. The change to oil-burning equipment did not of itself extend the life of the ship, but the management was influenced in its decision by the fact that the ship might last beyond 1929. The cost of conversion to oil fuel was depreciated over the remainder of the life assigned in 1922.

In June, 1929, the book value of the S. S. Adolf Boren ran out again, and no depreciation was taken for the next 3½ years. In 1931, however, when the company adopted the policy described above, of eliminating from the asset account the cost of parts retired in the course of rebuilding operations, $75,280 was credited to the asset account for the S. S. Adolf Boren and charged to the reserve accumulated on the ship.

During 1932 a second though less thorough reconditioning job was performed. The cost of this work was $115,440 and the estimated cost of retirements involved was $38,460. Retirements were again charged against the reserve for depreciation, and the general manager estimated the extended service life and set it this time at six years.

Depreciation on the new life began in January, 1933, and was to continue up to December 31, 1938. By the spring of 1938, it was evident that the S. S. Adolf Boren was approaching the end of her life. The chief accountant stated that in his opinion the general manager would allow her to wear out in the least exacting type of freight service and then retire her some time in 1940 or 1941.

1. When may a ship be said to be at the end of its life? Upon what factors does this condition depend?

2. To what extent were the factors affecting the termination of the economic life of the S. S. Adolf Boren known or reasonably foreseeable in 1904?

3. Should the relative profitableness of the shipping business of the Boren company at the several stages in the life of this vessel have affected the amount of depreciation charged? Should the earnings on the operation of this particular vessel have affected the charge for depreciation?

4. Did the great increase in the cost of construction of new ships over the period from 1904 to 1938 affect the actual depreciation which occurred on this vessel?

5. Considering the facts which were available when the several decisions were made affecting the gross and net book value of the S. S. Adolf Boren, were these decisions sound?

EXHIBIT 1
BOREN STEAMSHIP COMPANY
BOOK RECORD OF S. S. ADOLF BOREN

End of year	Gross book value	Annual depreciation charges	Reserve for depreciation	Net book value
1904	$446,000	$44,600	$ 44,600	$401,400
1905	446,000	44,600	89,200	356,800
1906	446,000	44,600	133,800	312,200
1907	446,000	44,600	178,400	267,600
1908	446,000	44,600	223,000	223,000
1909	446,000	44,600	267,600	178,400
1910	446,000	44,600	312,200	133,800
1911	446,000	44,600	356,800	89,200
1912	446,000	44,600	401,400	44,600
1913	446,000	44,600	446,000	.....
1914	446,000	.....	446,000	.....
1915	446,000	.....	446,000	.....
1916	446,000	.....	446,000	.....
1917	446,000	.....	446,000	.....
1918	446,000	.....	446,000	.....
1919	446,000	.....	446,000	.....
1920	446,000	.....	446,000	.....
1921	446,000	.....	446,000	.....
1922	660,760	15,340	461,340	199,420
1923	660,760	30,680	492,020	168,740
1924	660,760	30,680	522,700	138,060
1925	660,760	30,680	553,380	107,380
1926	758,260	46,930	600,310	157,950
1927	758,260	63,180	663,490	94,770
1928	758,260	63,180	726,670	31,590
1929	758,260	31,590	758,260	.....
1930	758,260	.....	758,260	.....
1931	682,980	.....	682,980	.....
1932	682,980	.....	682,980	.....
1933	759,960	19,240	663,760	96,200
1934	759,960	19,240	683,000	76,960
1935	759,960	19,240	702,240	57,720
1936	759,960	19,240	721,480	38,480
1937	759,960	19,240	740,720	19,240
1938	759,960	19,240	759,960	.....

BOREN STEAMSHIP COMPANY—NO. 2

DEPRECIATION AND REVALUATION OF A NEW STEAMSHIP

Early in 1932 construction of a new steamship was completed. The S. S. Karl Boren, as the new ship was christened upon launching, had been constructed in the United States with the specifications listed below:

Length	415 ft.
Moulded depth	60 ft.
Plimsoll line	43 ft.
Cargo capacity	176,000 cu. ft.
Passenger capacity	113
Gross tonnage	6,983 tons
Speed	18 75 knots

The S. S. Karl Boren had been designed and built specifically for use in carrying United States mail, a service for which the Boren company had obtained government contracts. She was a relatively fast boat, modern in every respect, and possessed commodious passenger accommodations. Construction of a boat of this type had been necessary to meet the requirements of government mail contracts.

The contract price for the S. S. Karl Boren was $4,762,000. Before she had been put into service on May 1, 1932, the company had added certain special equipment at a cost of $7,000. This brought the total investment in the new ship to $4,769,000, and she was entered in the books at that figure. In accordance with the policy of the Boren company with regard to new ships, she was assigned a 25-year life and was depreciated on a straight-line basis with no allowance for scrap value. Exhibit 1 furnishes a record of depreciation up to December 31, 1937.

Many of the ships owned by the Boren company were constructed in European shipbuilding yards because costs there were considerably lower than they were for comparable work in the United States. Mail boats, however, had to be built in this country to meet government standards. The Boren company estimated that the cost of building the S. S. Karl Boren abroad would have been approximately $3,200,000.

In cases of this nature where the original cost of a ship was considerably larger than its replacement cost, the Boren company had adopted the practice of setting up a revaluation reserve to bring net book value down to a more representative figure. This

reserve was set up out of earned surplus and appeared on the balance sheet, along with the reserve for depreciation, as a deduction from the related fixed assets. Depreciation was calculated, as described above, on the gross book value. But, after the regular entry debiting depreciation expense and crediting reserve for depreciation had been made, a second entry was recorded which credited depreciation expense and debited the revaluation reserve for a proportional amount. This so-called proportional amount was calculated by dividing the original amount set up in the revaluation reserve by the number of years or months in the estimated service life of the ship. In this manner the revaluation reserve was reduced so that it would be completely extinguished at the end of the estimated service life. The effects of this procedure may be traced in Exhibit 1.

The S. S. Karl Boren was kept in constant service and up to December 31, 1937, no extensive repairs, replacements, or additions had been necessary. Twice a year she had been placed in dry dock, cleaned, repainted, and given a complete going over. Unless her service life should be extended through rebuilding sometime in the future, her book value would expire on April 30, 1957.

---

1. Show journal entries for 1937 affecting the reserve for depreciation, the reserve for revaluation, and depreciation expense.

2. Was this use of a revaluation reserve sound in terms of its effect on the book value of the asset and the amount of depreciation expense?

EXHIBIT 1
BOREN STEAMSHIP COMPANY
BOOK RECORD OF S. S. KARL BOREN

End of year	Gross book value	Reserve for depreciation	Gross depreciation	Net book value	Net depreciation	Revaluation reserve assigned to future years
1932	$4,769,000	$ 127,173.34	$127,173 34	$4,641,826 66	$ 85,333 34	$1,527,160 00*
1933	4,769,000	317,933 34	190,760 00	4,451,066 66	128,000 00	1,464,400 00
1934	4,769,000	508,693 34	190,760 00	4,260,306 66	128,000 00	1,401,640 00
1935	4,769,000	699,453 34	190,760 00	4,069,546 66	128,000 00	1,338,880 00
1936	4,769,000	890,213 34	190,760.00	3,878,786 66	128,000 00	1,276,120.00
1937	4,769,000	1,080,973 34	190,760 00	3,688,026 66	128,000 00	1,213,360.00

* The ship was acquired May 1, 1932. The revaluation reserve at that time was $1,569,000.

NORTHERN ELECTRIC MANUFACTURING COMPANY—NO. 3

DEPRECIATION ON MACHINERY

The company used in depreciation the rates indicated below in an excerpt from the National Electrical Manufacturers Association Manual.[1]

NORMAL RATES OF DEPRECIATION

The rates shown in this table are the recommended, normal,[2] annual rates and should be applied to the first costs of facilities in the respective asset accounts.

. . . . . .

		Per Cent
	Land	0
	Grading and Assessments	10
	Building and Structures	
1131	Buildings, wood, sheet iron, and stucco	10
	Buildings, brick and wood	4
	Buildings, steel and concrete	2½
1132	Structures	8⅓
1134	General Service Piping and Wiring	6¼
	Machinery and Tools	
1141	Machinery	8⅓
1142	Electrical Apparatus	8⅓
1143	Ovens and Furnaces	10
1144	Conveyor Equipment	16⅔
1145	Small Tools	20
1146	Electrical Accessories	16⅔
1147	Molds, Jigs, Dies, and Special Tools	*
1148	Metal Flasks	
	Cast Iron and Steel	12½
	Channel and Rolled Steel	20
	Aluminum	10
	Foundation and Installation	
1151	Foundations—Machinery and Electrical Apparatus	16⅔
1152	Installations—Machinery and Electrical Apparatus	16⅔
	Furniture and Fixtures	
1161	Factory Fixtures and Equipment	20
1162	Furniture and Appliances in Factory Offices	10
	Transportation System	
1171	Roads and Sidewalks	12½
1172	Railway Tracks and Overhead Equipments	6¼
1173	Rolling Stock	6¼
1174	Automobiles and Trucks (Gas)	25
1175	Electrical Vehicles and Trailers	16⅔
1176	Other Conveyances	25

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[1] Uniform Accounting Manual for the Electrical Manufacturing Industry, 6th ed., National Electrical Manufacturers Association, New York, August 1, 1931.

[2] In the case of extraordinary wear and tear due to regular multiple shift operations the manual provided for the use of special rates. *See* National Electrical Manufacturers Association Manual Part I, Sec. 4, p. 6.

	Per Cent
Patterns and Drawings	
1181 Patterns	*
1182 Drawings	*
Unfinished Plant	0

* It is contemplated that the cost of molds, jigs, punches, dies, and special tools and costs of patterns and drawings will be charged to 172—Unliquidated Development and Complaints and liquidated by charges to the cost of production to which they apply. At the option of the company, these expenditures may be entered direct against indirect manufacturing expense under the proper headings.

On January 1, 1937, the Machinery account of the Northern company carried a balance of $4,248,738.58. During the year additional machinery was installed at a cost of $202,599.25, and retirements were made to the extent of $128,266.42. Net salvage realized from these retirements came to $7,468.50.

In accordance with the recommendations of the Manual, depreciation on machinery was based upon an estimated life of 12 years. On January 1 of each year a beginning balance was recorded which represented the balance of the previous year adjusted for additions and retirements. This formed the depreciation base for the following 12 months, each one of which was charged with one-twelfth of the annual depreciation calculated as 8⅓ per cent of the base figure. Additions to the Machinery account were not depreciated until the year following their acquisition. This practice did not distort depreciation charges to any large extent because retirements made during the year remained in the depreciation base until they were eliminated on January 1 following, so that depreciation charged on the retired units approximated that not charged on additions.

The National Electrical Manufacturers Association Manual included the following instructions on the subject of depreciation:

Sub Group 25—Reserves for Depreciation

251 Depreciation on Manufacturing Plant

Amounts entered periodically to provide for depreciation of manufacturing plant on account of exhaustion, wear and tear, and obsolescence, less amounts representing the first cost (less salvage value, if any) of items of manufacturing plant scrapped or retired from service.

Note: Offsetting charges to the credits to this account are to 361—Depreciation. . . .

252 Depreciation on Property Other than Plant

Amounts entered periodically to provide for depreciation of property other than manufacturing plant. . . .

Note: Offsetting charges to the credits to this account are to 564—General Expenses—Depreciation.

. . . . . .

361 Depreciation

Pro rata amount, applicable to current period, of accrued depreciation on account of manufacturing plant used by direct and indirect manufacturing departments, as credited to 251—Depreciation on Manufacturing Plant, except amounts chargeable to specific accounts, such as depreciation of:

Hospitals
Power plants
Restaurants
Fire protective equipment
Telegraph and telephone equipment

. . . . . .

Part I, Section 4, Page 9
Accounting for Fixed Assets Scrapped or Sold

. . . . . .

Inasmuch as the reserve for depreciation has been credited with amounts determined by the application of a composite rate of depreciation to the total value in the account for a group of assets, rather than by use of an individual rate for each unit (*e.g.*, each building or machine) applied to the cost of that unit, it follows that when units are removed from service, because of wear and tear, obsolescence or inadequacy, the entire first cost (or value at which capitalized) less salvage value, should be charged to such reserve.

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1. Using the instructions taken from the Manual and other information given above, prepare journal entries to adjust the Machinery account for the correct balance as at January 1, 1938, and to record depreciation on machinery as at January 31, 1938.

2. Would a more detailed classification improve the depreciation accounting?

3. Does the practice of charging the full difference between cost and salvage to the reserve, regardless of the amount accumulated with respect to the machines retired, introduce an element of distortion of the reserve?

NORTHERN ELECTRIC MANUFACTURING COMPANY—NO. 4

ACCOUNTING FOR SMALL TOOLS

As explained in a previous case, uncatalogued units were those for which the company did not maintain detailed records by separate units of property. Methods used in accounting for property of this type are illustrated with respect to small tools.

When small tools were acquired, the asset account of that name was charged to record the cost, the total acquisitions of each year being kept separate in the records. At the beginning of the fifth year after the year of acquisition, the tools were assumed to have been disposed of and the asset account was credited for the total amount of acquisitions in the year in question regardless of whether individual tools had been discarded or not. No entry was made when tools were scrapped. Any salvage arising from discards was treated as a deduction from the gross expenditure for small tools of the current year.

Depreciation was charged in the amount of 25 per cent of the total acquisitions in a year, beginning the year after the acquisition and continuing for four years. The total charge for depreciation and credit to the reserve in any year was thus based on the acquisitions of four years. In agreement with the practice described above, on January 1 of each year the net additions of the fifth year preceding were charged against the reserve. The entire method was an approximation based on the assumption that it was not worth while to keep records of individual units.

At times a departure was made from the practice of charging only normal depreciation on small tools. This occurred when certain departments, which used large numbers of small tools, carried on operations for more than the normal number of hours per day over a long period of time. Double-shift operations over the greater part of one year were considered sufficient to justify special depreciation charges. These charges were run through expense in the usual manner and served to increase the reserve for depreciation. At other times it was thought advisable to charge less than the normal depreciation. Such variations from the normal charge were comparatively small and infrequent, however.

Acquisitions and salvage for a series of years ending in 1933 are given below for the Bronson division, one of the three plants operated by the company.

Year	Acquisitions	Salvage	Net additions
1928	$189,587 97	$205 80	$189,382.17
1929	220,081 07	267 15	219,813 92
1930	204,804 10	241 29	204,562 81
1931	176,494 06	185 80	176,308.26
1932	44,554 81	64 76	44,490.05
1933	42,171 85	75 42	42,096.43

Quotations from the Uniform Accounting Manual[1] for the electrical manufacturing industry are given below.

MANUFACTURING PLANT CATALOG

. . . . . .

Uncataloged units are those for which it is impractical to maintain individual records because they may be difficult to identify after once installed. Electrical accessories and various items of factory equipment may be of this type. Others are difficult to identify because they are moved about frequently or their values are too small to warrant the expense of maintaining the records. Small tools[2] may be of this type.

. . . . . .

Uncataloged Units[3]

It is impractical to obtain a record of all units of uncataloged equipment removed from service and to ascertain the original cost thereof, and the date put in service. Hence, the following procedure is necessary to adjust the ledger accounts so that their balances will represent only the cost of assets in service.

Each class of assets subject to this method of procedure has been found by experience to have average lengths of life as follows:

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[1] Uniform Accounting Manual for the Electrical Manufacturing Industry, 6th ed., National Electrical Manufacturers Association, New York, August 1, 1931.

[2] Small tools are defined in Sec. 3, Assets—Sub Group 11 of the Manual as, "the smaller and less important standard tools and equipment of a portable character, which have a comparatively long term of effective life, either purchased separately or as attachments and auxiliary devices to machine units, the specific use of which is not necessary to their proper functioning."

[3] Part 1, General Accounting, Sec. 4, p. 9.

	Years
Grading and Assessments	10
Buildings and Structures	
1132 Structures	12
1134 General Service Piping and Wiring	16
Machinery and Tools	
1144 Conveyor Equipment	6–8
1145 Small Tools	4
1146 Electrical Accessories	6
1148 Metal Flasks	
Cast iron and steel	8
Channel and rolled steel	5
Aluminum	10
Foundations and Installation—Machinery and Electrical Apparatus	
1151 Foundations for Machinery and Electrical Apparatus	6
1152 Installation of Machinery and Electrical Apparatus	4
Furniture and Fixtures	
1161 Factory Fixtures and Equipment	5
1162 Furniture and Appliances in Factory Offices	5
Transportation System	
1171 Roads and Sidewalks	8
1172 Railway Tracks and Overhead Equipment	16
1175 Electric Vehicles and Trailers	6
1176 Other Conveyances	4

The accounts for such uncataloged assets should be so maintained that the acquisitions for each year are kept separate. When uncataloged units are scrapped, the salvage value, if any, should be credited to the ledger account concerned. However, as the year of acquisition of the unit scrapped is seldom known, the credit for salvage will apply to the year in which the unit is scrapped.

The charge for acquisitions for any year is thus reduced by the salvage value of the units scrapped during the year. The balance is designated as the net value of additions.

Credits to the reserve for depreciation for any year are determined as follows: The amount of the net additions for the preceding year is multiplied by the rate of depreciation applicable to the type of assets under consideration. The amount thus determined is the portion of the total credit that pertains to that year. Similarly the portion of the credit for the second preceding year is determined.

Thus amounts are obtained for each of the years on which the depreciation rate is based. Obviously no amounts are computed for the net additions of years prior to the earliest year included in the normal length of life contemplated by the rate. Such practice would result in allowances for depreciation in excess of the total value of the net additions.

The total credit to the reserve for depreciation for the year is thus made up of the separately determined amounts for each of the several years included in the normal life.

Each year the reserve for depreciation is charged with the total of the net additions of the year which by the process just described has become fully depreciated, *i.e.*, for the first of the series of years making up the normal life of the particular class of assets.

A specific illustration is as follows:

First-Cost Account	1926	1927	1928
Gross expenditure	$42,000	$40,000	$ 21,000
Salvage or scrap value of equipment disposed of during year	2,000	8,000	1,000
Net Additions	$40,000	$32,000	$ 20,000
	1929	1930	Total
Gross expenditure	$34,000	$25,000	$162,000
Salvage or scrap value of equipment disposed of during year	2,000	5,000	18,000
	$32,000	$20,000	$144,000
At December 31, 1930, credit 1145—Small Tools with amount of net additions in 1926 which have become 100% depreciated. The balance will represent the cost of small tools in service on January 1, 1931			40,000
			$104,000

The reserve 251—Depreciation on Manufacturing Plant will show the following:

Net Additions	Annual accruals each year 1927*	1928	1929	1930	Total Depreciation Accrued at Dec. 31, 1930
1926 ($40,000)	$10,000	$10,000	$10,000	$10,000	$40,000
1927 ($32,000)		8,000	8,000	8,000	24,000
1928 ($20,000)			5,000	5,000	10,000
1929 ($32,000)				8,000	8,000
1930 ($20,000)					0
	$10,000	$18,000	$23,000	$31,000	$82,000
At December 31, 1930, charge 251—Depreciation on Manufacturing Plant with the net additions in 1926					40,000
					$42,000

* Depreciation allowances commence in the year following that in which additions were made.

1. Determine the amount standing in the asset account and in the reserve with respect to small tools of the Northern Electric Manufacturing Company at January 1, 1933, after all entries called for.

2. Show summary journal entries to record the acquisitions of small tools in 1933 and salvage realized. Show entries as of December 31 to record depreciation for 1933, and determine the balance of the asset and reserve accounts as of that date.

3. Show entries to record the retirements to be booked as of January 1, 1934, and determine the balance of the asset and reserve accounts after the retirements.

New England Telephone and Telegraph Company

The Determination of Depreciation Expense on Exchange Pole Lines

The company followed in accounting the Uniform Classifications prescribed by Federal regulatory bodies.[1] The methods used in determining the rates of depreciation differ somewhat among the several classes of depreciable assets; they are described in the case as applied to exchange pole lines. The total cost of both exchange and toll pole lines owned by this company at December 31, 1936, was $30,313,059.80. Assets in this classification included the original cost[2] of poles, crossarms, guys, other material, and labor and other expenses used in the construction of pole lines.[3]

The intent in determining the depreciation rate on pole lines was to record on a straight-line basis in each year's operating cost

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[1] Uniform System of Accounts for Telephone Companies Prescribed by the Federal Communications Commission. Issue of June 19, 1935. Effective January 1, 1937.

[2] Instruction 3, S. 1, p. 5, F.C.C. Uniform System of Accounts. "Original Cost or Cost as applied to telephone plant, franchises, patent rights, and right-of-way means the actual money cost of (or the current money value of any consideration other than money exchanged for) property at the time when it was first dedicated to the public use, whether by the accounting company or by a predecessor public utility."

[3] Account No. 241—Pole Lines is given in detail in Exhibit 1.

the amount of loss in service value.[1] The depreciation rates were based on estimates of average service life and average net salvage expected to be realized at time of retirement expressed as a percentage of original cost. Percentage net salvage was the difference between the estimated percentage gross salvage and the estimated percentage cost of removal. The depreciation rate as a percentage basis was

$$\frac{\text{100 per cent (original cost)} - \text{percentage net salvage}}{\text{Average service life}}$$

These estimates upon which the depreciation rates were based were developed by the general engineering department which maintained a staff of employees at work upon the preparation of statistical analyses. Depreciation rates were reviewed annually by the chief executives.

The first step in the determination of the rate was an exhaustive analysis of experience with respect to poles already retired in relation to the poles still in service. The purpose of this study was to determine the average life of poles during the past experience of the company. Appendix I contains exhibits and descriptive material pertaining to this analysis.

It was impossible to base the depreciation solely on an examination of physical life experience because other factors had to be considered. For example, types of poles had changed considerably since the decade of the twenties. Up until about 1929 the company had used cedar and chestnut poles, the butts of which had in some cases been treated to make them more resistant to decay. Since 1929 many of the new and replacement poles had been of creosoted southern pine.

Poles of southern pine were treated over their entire length by forcing into the wood under pressure an average of 6 lb. of creosote per cubic foot. Experience with experimental lines had indicated that the expected physical life of this type of pole should be

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[1] Instruction 81-A, p. 23, F.C.C. Uniform System of Accounts. "Charges for currently accruing depreciation shall be made monthly to account 608, 'Depreciation' and to clearing accounts, as appropriate, and corresponding credits shall be made to account 171 'Depreciation Reserve.' In computing the current monthly charges, one-twelfth of the composite annual percentage rate applicable to the primary accounts covering depreciable telephone plant shall be applied to the average of the balances, as of the first and last of the current month, in each such primary account."

approximately 35 years, a figure well in excess of the life experienced with cedar and chestnut poles.

The company did not expect that the average service life of these pine poles would equal the estimated physical life. For one thing the account, Pole Lines, included in addition to poles other items, such as crossarms, which had a shorter life than poles and therefore caused the average life applied to the composite whole to be lower than that for poles alone. In addition retirements were made necessary by factors other than age and decay.

Storms often shortened the service life of poles. If a storm characterized by sleet or wet snow and a sudden drop in temperature was followed by a wind, the effect on pole lines of the accumulated weight and added air resistance was often disastrous. Accidents and floods were other unforeseeable causes of early retirements.

In some cases it was necessary to relocate entire pole lines in order to make way for some public work such as a new highway. In certain instances this required only the moving of existing poles where the change of a few feet in the location was involved. For other changes the original poles were retired and returned to storage if reusable.

Public requirements exerted no small influence upon retirements. It was often required that only one pole line border a particular highway. In case the electric light company operating in that area had a pole line which was more suitable, the telephone company removed its poles altogether and transferred its wires or cables to those of the other utility.

Conditions which might require the company to place a larger part of its lines underground would affect the service life of poles.

Growth of the telephone business frequently affected the service lives of poles. When the traffic in any particular district became so heavy that an excessive number of aerial wires had to be installed to carry the load, cables were used to eliminate the necessity for too great a number of overhead wires. When this was done, new poles were installed when required.

On the other hand, it was possible at times to extend the life of poles. If changes in the clearance of aerial wire permitted, the decayed butt of the pole was cut off and the remaining portion which was still sound was set up again in the original position.

The executives in the general engineering department who were in charge of setting depreciation rates were well acquainted with the various influences bearing upon the length of service life which could be expected from pole lines. They realized that the weight of the majority of these influences could not be assessed through mathematical computations. Consequently, they employed the average life determined from mortality studies as a starting point and made adjustments for the other factors which in their judgment influenced the situation.

A pole reached the end of its service life when it was removed for any of the above reasons and was not sufficiently sound to warrant reinstallation or when decay had progressed to a point where an adequate margin of safety was not afforded. At regular intervals inspectors looked over all poles, removed decayed wood and measured the sound wood remaining. If a pole was not safe for its load for at least two years, it was scheduled for retirement.

The capitalized value of a new pole was made up of its cost laid down at the location where it was to be installed plus the cost of labor for installation, other expense, such as vehicles, board and lodging, and a charge for general overhead. When retirements were reported to the accounting department by the foreman, however, the poles were credited out at a predetermined unit cost. This predetermined figure represented a moving average of the cost of poles installed in that particular area.

Poles removed with the intention of re-using them elsewhere were credited out of the plant account as retirements and the corresponding debit was made to the reserve for depreciation.[1] Their value for re-use was then determined and entered as a debit to poles in storage and a credit to the reserve. This procedure included only the material worth of the poles as salvage value.

Maintenance was recorded by charging the expenses involved to accounts designed to give a breakdown which would facilitate control. Federal regulatory bodies had drawn a very definite

[1] Instruction 83, F.C.C. Uniform System of Accounts. "The service value of depreciable telephone plant retired shall be charged in its entirety to account 171 'Depreciation Reserve.' If the cause of retirement is not a recognized factor in depreciation and the loss is not covered by insurance, the company may upon proof that the charge to the depreciation reserve will result in undue depletion thereof, and with the approval of this commission, credit account 171 'Depreciation Reserve' and charge account 138 'Extraordinary Maintenance and Retirements' with the unprovided for loss in service value and distribute it from that account to account 609 'Extraordinary Retirements,' over such period as this commission may approve."

line of distinction between items which should be capitalized and those which should be charged to maintenance. Units of property were established and when a whole unit, such as a pole, was retired, it was charged to the reserve for depreciation, and the new pole was capitalized. Items not classified as units of property were charged to maintenance, when replaced.[1]

The company maintained no breakdown of the depreciation reserve according to the accounts for depreciable assets. It was possible that a breakdown of the reserve would be made sometime in the future. To accomplish this an estimate upon a historical basis involved the consideration of all additions, betterments, retirements, and rates of depreciation which had applied to a particular classification of assets. Changes which had occurred in the past made this difficult to accomplish for all but a very small part of the total. Also, it had been proposed that the criterion for division should be reserve requirements. These requirements at any date represented the proper provision for service loss at current rates of depreciation. Using this method, the reserve balance would be allocated to the various classes of depreciable assets in the proportion that the estimated reserve requirement of each such asset bore to the total reserve requirement of all. In its 1937 report to the Massachusetts Department of Public Utilities, the New England Telephone and Telegraph Company presented the following explanation of its position with regard to a breakdown of the depreciation reserve:

The respondent has over the years maintained a composite depreciation reserve in respect of its investment in depreciable property as a whole. In maintaining such a reserve, accounting procedures have

[1] Instruction 25, Item A-2, F.C.C. Uniform System of Accounts, Minor Items. "This group includes any part or element which is not designated as a unit of property. The original cost of any minor item of property retired and not replaced shall be credited to the plant account and charged to account 171, except that if the original cost of a minor item of property is accounted for through the retirement of units of property, no separate credit to the telephone plant account is required when such an item is retired. Except as provided in note under account 231 'Station Apparatus,' if minor items of property are retired and replaced (apart from the unit of property of which they form a part or with which they are associated) no adjustment shall be made in account 171. The cost of the replacement shall be charged to the account appropriate for the cost of repairs of the property, except that if the replacement effects a substantial betterment (the primary aim of which is to make the property affected more useful, of greater durability, of greater capacity, or more economical in operation) the excess cost of the replacement over the estimated cost at current prices of replacing without betterment the minor items retired shall be charged to the appropriate telephone plant account."

tion parallel to that applied to the assets, so that the reserve applicable to pole lines could be compared with that asset?

If a breakdown of the reserve were to be undertaken, should it be based on a reclassification of all debits and credits to the reserve since the beginning, or should it be a segregation of the present gross reserve on the basis of an analysis of reserve requirements?

2. Was the method used in estimating depreciation on pole lines sound in view of the characteristics of the property concerned?

3. To what extent was a method comparable to this applicable to other classes of utility and industrial property?

EXHIBIT 1

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY

ACCOUNT NO. 241—POLE LINES

This account shall include original cost (note Instruction 3—S.1) of poles, cross arms, guys, and other material used in the construction of pole lines.

Items

Anchors
A and H fixtures
Bolts
Braces, pole and back
Bridge fixtures
Cable arms
Clearing routes and tree trimming except maintenance of previous clearings
Crossarms
Extension arms
Guard arms
Guy clamps
Guy stubs
Guy wire or strand
Painting, treating, gaining roofing, shaving, and stenciling poles
Permits and privileges for construction
Pins
Pole brackets, wooden
Poles
Pole steps
River crossing and long span fixtures
Strain insulators
Towers

Source: Uniform System of Accounts for Telephone Companies Prescribed by the Federal Communications Commission. Issue of June 19, 1935.

EXHIBIT 2
NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY
SELECTED DATA FROM PLANT ACCOUNTS, 1922–1936
(000 omitted)

Year	Pole Lines—Exchange and Toll Combined								Total Figures					Depreciation	
	Balance at end of year	Additions	Book retirements	Cost of removal	Salvage and insurance	Depreciation*	Depreciation expense on pole lines as per cent of asset—pole lines†	Retirements in pole lines as per cent of asset—pole lines†	Plant investment	Reserve for depreciation	Operating revenue	Depreciation	Retirements	Reserve as per cent of plant†	Expense as per cent of plant†
1922	$15,319	$2,168	$ 692	$417	$ 81	$ . . .	....	4 1	$135,110	$35,583	$41,437	$ 6,568	$ 3,889	26.35	4 9
1923	16,566	1,831	468	228	56	. . .	....	2 8	157,829	39,441	44,209	7,117	3,799	24 99	4 5
1924	17,922	2,138	782	177	96	. .	...	4 4	187,781	41,440	47,565	8,269	6,512	22 06	4 4
1925	19,547	2,529	896	235	171	. . .	. . .	4 6	212,655	45,642	54,406	9,718	7,418	21 47	4 6
1926	20,915	2,349	980	350	190	. .	..	4 7	229,563	47,207	62,638	10,406	10,341	20 56	4 5
1927	22,234	2,357	961	281	105	. . .	..	4 3	240,283	48,546	65,294	10,929	11,243	20 20	4 5
1928	23,458	2,995	1,160	298	21	.....	. . .	4 9	247,774	50,927	69,393	11,423	11,215	20.55	4 6
1929	25,322	3,241	1,227	317	35	. . .	....	4 8	265,819	54,320	73,339	10,984	10,102	20 43	4 1
1930	27,947	4,435	1,673	349	45	.....	. . .	6 0	284,866	55,112	75,177	11,747	14,726	19 35	4 1
1931	28,773	3,007	1,969	420	80	....	....	6 8	298,899	55,320	75,420	12,444	14,509	18 51	4 3
1932	29,674	2,597	1,520	367	70	.....	....	5 1	305,315	60,096	69,750	12,864	11,178	19 68	4 2
1933	29,613	1,466	1,453	308	102	1,575	5 32	4 9	306,721	64,631	65,151	11,973	11,286	21 07	3 9
1934	29,914	1,616	1,374	300	106	1,576	5 27	4 6	304,131	70,131	66,758	11,951	6,534	23 06	3 9
1935	30,078	1,663	1,492	295	118	1,587	5 28	5 0	306,440	75,914	67,787	12,093	9,466	24 77	3 9
1936	30,313	1,765	1,529	298	135	1,599	5 27	5 0	310,334	82,629	71,655	12,162	5,585	26 62	3 9
1937	30,290	2,135	1,844	346	147	1,613	5 32	6 1	311,202	86,537	74,613	12,057	8,164	27 81	3.8

* Figures not available prior to 1933.
† Figures in these columns do not appear in annual reports to Department of Public Utilities.
Source: Annual reports to Department of Public Utilities, Commonwealth of Massachusetts.

APPENDIX I

The New England Telephone and Telegraph Company began the analysis of life expectancy with relation to pole lines in 1924.[1] Records which had been maintained on pole lines were sufficiently detailed to permit compilation of the necessary statistics.

All pole lines were recorded on forms which gave the location of each pole, its identification number and the date of its installation. When removals were made, the field engineer drew up a report of the poles to be removed, their size and wood characteristics, and the dates of their installations. The foreman in charge of the job also made out a report when poles were actually removed, and the number of these poles were compared with the number estimated to be removed by the engineer in charge. From these reports and from its records of new poles installed, the accounting department prepared an annual summary of poles in service and removed, the latter being broken down according to dates of installations. This summary was forwarded to the general engineering department which was charged with the task of preparing the life tables. Exhibit *A* shows the basic summary of these data.

In Exhibit *A* the upper figure in each rectangle (in column *O*) represented the poles installed during the year and (in other columns) the poles remaining in service the first, second, third, etc., year after installation. The lower figure represented poles retired in each year following installation. For example, Exhibit *A*, rectangle *a*, shows that in 1929, $1,684,624 of poles were installed and that of these $3,466 worth had to be removed during the year of installation. Moving horizontally away from 1929 on this chart and through the rectangles *b*, *c*, *d*, *e*, *f*, and *g*, it was possible to determine the number of the original 1929 replacements remaining in service the beginning of each year and the number removed during any given year. In rectangle *g* the data given showed that of all placements made in 1929, $1,613,172 remained at the beginning of 1935 and $18,008 was removed during the year 1935.

The dollar figures used in Exhibit *A* resulted from the application of unit costs to the poles in service and removed, grouped according to size and wood classifications. Since the mortality data do not include 100 per cent of the pole plant because of incomplete installation dates, and since items such as crossarms and guys are excluded, the value of pole lines in service shown on the mortality study differs from the value placed on the same asset in the balance sheet.

It may be seen in Exhibit *A* that the total value of all poles in service in 1935 could be obtained by adding together all the upper figures in the rectangles on the bottom of the band of figures and moving away from 1935 at an angle of 45 degrees in the direction indicated by the letters *r*, *s*, *t*, *u*, *v*, *w*, *g*, *x*, *y*, and *z*. Likewise these figures gave the age distribution of all poles in service at the beginning of 1935. Using these facts but basing the studies upon bands of three years rather

[1] In the books of the company pole lines were handled in two divisions—exchange and toll. The material here described pertains to exchange poles only.

than upon a single year, the general engineering department derived charts such as that shown in Exhibit *B*.

These charts were prepared for overlapping bands of years. The chart preceding Exhibit *B* was for 1927–1929 and that following Exhibit *B* covered the years 1931–1933. This practice was followed to eliminate any marked variations caused by changing conditions.

The dark line in Exhibit *B* represented actual experience and was developed from Exhibit *A* as follows. Starting with the years 1929, 1930, and 1931 (column *O*, Exhibit *A*) and following this band diagonally upward at an angle of 45 degrees, retirement rates (ratio of retirements to in service for the three years combined) were determined for poles of each age. Then starting with the initial placement of 100 per cent and applying the retirement rate for year 0, the percentage remaining at the end of year 0 (or at age ½ year, assuming all placements concentrated at the middle of the year) was obtained. Similarly by applying to the latter the retirement rate for the year 1, the percentage remaining at the end of year 1 (age 1½ years) was found. This operation was continued until all known data were exhausted. Each one of these percentages was plotted on the grid of Exhibit *B* and the solid curve was constructed connecting them.

The dotted line in Exhibit *B* represented the mortality curve for the years 1929–1931. This curve was derived from the actual experience curve through mathematical calculations based upon the Gompertz-Makeham formula. It was necessary to develop this theoretical curve because data were not available for an actual experience curve covering the complete life span.

From the theoretical mortality curve (dotted line on Exhibit *B*) the average life was developed. This was accomplished by dividing the total "per cent years" by an initial placement of 100 per cent. The total "per cent years" is the summation of the computed percentages remaining for all years up to the year 45, the point where the theoretical curve reaches the horizontal axis. The result was expressed in years and represented the average life for the band of years under consideration. In Exhibit *B* this computation produced an average life of 17.2 years.

The average lives obtained for different bands of years were plotted on Chart *A* of Exhibit *C* and were connected by the heavy solid line. On Chart *B* of Exhibit *C* the retirement rates for each band of years as determined from the life study data were plotted and connected by a heavy solid line. Retirement rates developed from accounting data for actual retirements were also plotted on Chart *B* and connected with a broken line. The variation between the two lines was caused principally by the fact that only poles with known placement dates were included in the study data while all poles as well as crossarms, guys, etc., were included in the accounting data.

Using the broken line of Chart *B* an adjustment was made in Chart *A* to correct the solid line. The broken line in Chart *A* which resulted from these procedures represented the final mathematical determination of indicated average lives.

EXHIBIT A

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY—FINAL SUMMARY OF HISTORICAL DATA FOR MORTALITY STUDY

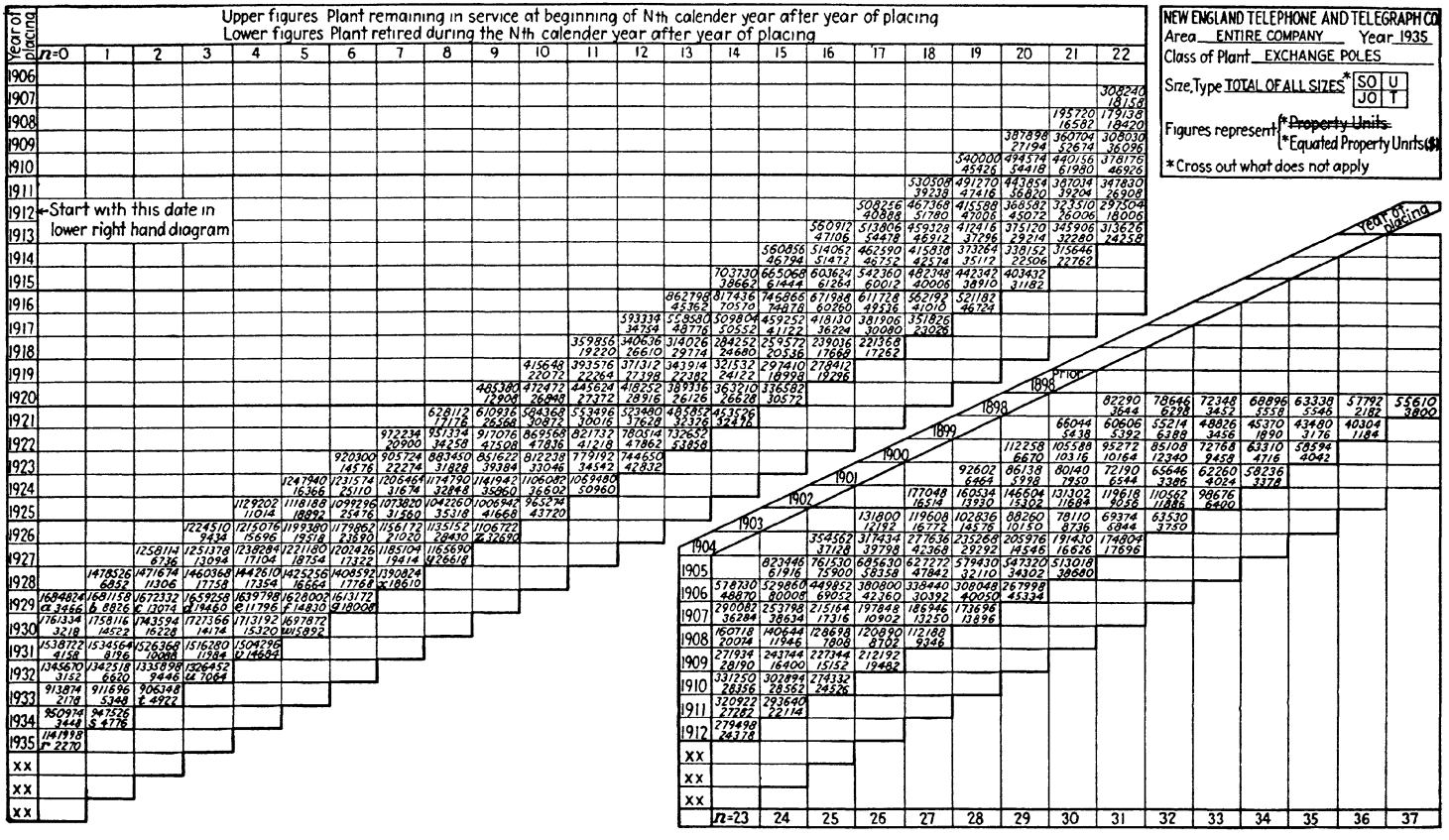


EXHIBIT B
NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY
EXCHANGE POLES—LIFE TABLE

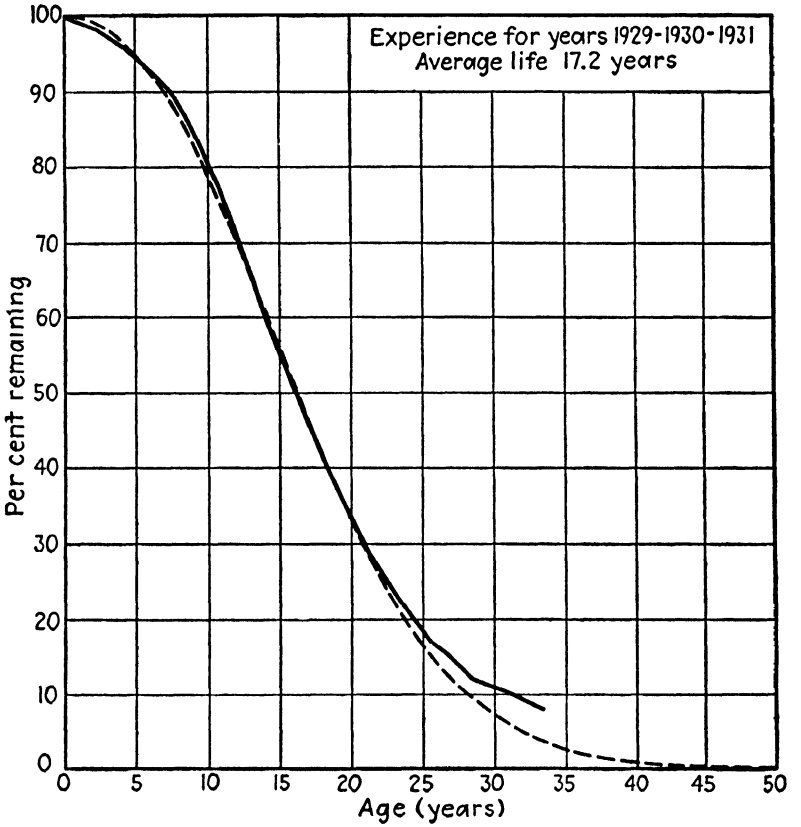
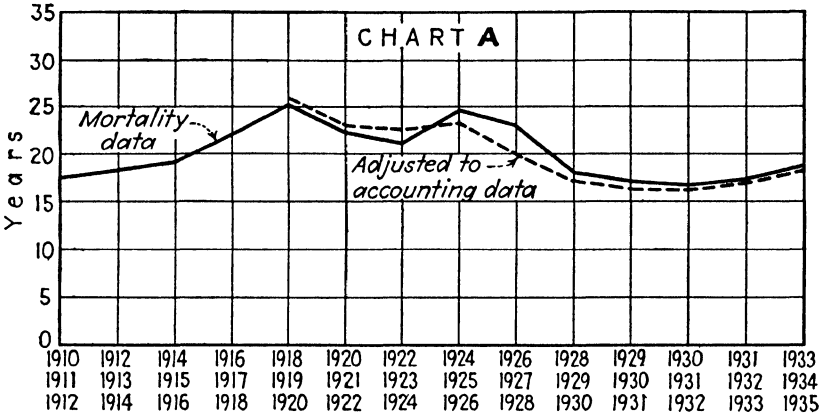


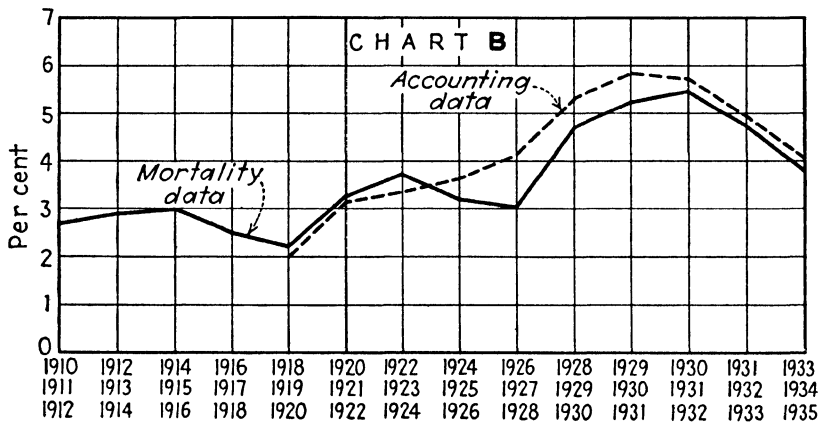
EXHIBIT C

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY

EXCHANGE POLES*

RESULTS OF ANALYSES OF MORTALITY DATA OF SUCCESSIVE THREE-YEAR PERIODS





* Excludes crossarms.

Henley Radio Company

THE DETERMINATION OF THE RATE OF DEPRECIATION UNDER CONDITIONS OF RAPID OBSOLESCENCE

Since the entry of the Henley Radio Company into the radio tube manufacturing business in 1928, there had been an unusually rapid development in the processes and machines involved in production. Originally, most of the operations had been performed by hand, but, as is typical of a new mechanical process, machines were soon devised which were capable of performing many of these hand operations. These machines were then outmoded by others which combined several operations into one, and the latter equipment in its turn became obsolete because of its inability to meet new standards for quality and productivity.

Most of this machinery had a physical life of at least 15 years but it became outmoded so rapidly that in many cases the equipment was replaced after 18 months, and the average service life experienced was only three years. Not only were new machines constantly being introduced, but the cost of each successive design exceeded the capital expenditures necessary to carry on production under the old methods. In one particular instance, the original equipment necessary for a group of hand operations had cost $1,000. New machines had been installed at this point in the production process on three occasions and the cost, which had jumped from $1,000 to $6,000, and then to $16,000, had been $22,000 for the last installation.

The speed of technical and manufacturing development was reflected in the product price changes. The Henley Radio Company had maintained a record of the prices which had applied to its line of products, and an index is presented on page 352 which represents these prices in terms of the 1928 price taken as 100.

In order to reduce costs sufficiently to meet this drastic decline in prices and to maintain a margin of profit, the company had to keep in the forefront of technical advance in products and in manufacturing processes. To accomplish this objective, it maintained a well-equipped and well-staffed research laboratory and had developed well-defined procedures for coping with the complex problems arising in connection with design and acquisition of machinery, retirement of old machinery, depreciation, and cost control.

Date		Price Index
Average	1928	100.00
January	1929	86.00
February	1930	76 54
June	1930	53.58
July	1930	42 86
April	1931	30.00
May	1931	27.30
October	1931	21.57
July	1932	22.44
January	1933	20.42
March	1933	18 79
June	1933	17 10
December	1933	16.59
July	1934	14 10
April	1935	12.69

The company used blanket depreciation rates which applied to the various groups of depreciable assets. In the case of manufacturing machinery, the blanket rate applied to the gross amount in the asset account with no allowance for salvage. Although additions were depreciated only over the remaining service lives of the machines to which they were attached, they were debited to the asset account for manufacturing machinery and were subject to the regular blanket depreciation rate. During the years from 1928 through 1930, the company had charged depreciation upon manufacturing machinery at the rate of 33⅓ per cent annually. As this field became more thoroughly explored, however, the speed with which new processes and new equipment were introduced slowed down perceptibly, and the rate of depreciation was adjusted accordingly. In 1931 a reduction to 25 per cent was made, and this figure was cut to 20 per cent in 1932. The last rate reduction was made in 1935 when depreciation on manufacturing machinery was established at 16 per cent. In all this series of reductions the effort was to record in the depreciation charged the extent to which the service capacity of the machinery was being exhausted by obsolescence. No attempt was made to relate depreciation charges to the average service life of similar equipment used in the past. The management realized that the rapid technical advances taking place rendered any comparison between the old and the new unsuitable for the purpose of policy formation. The Henley Radio Company was also definitely opposed to the establishment of any relationship between earnings and depreciation rates. The executives believed that accounting practices

should be designed to determine income and should not be altered to fit the earning capacities of various periods. Since the company based its determination of depreciation upon such a realistic approach supported by complete records, and because machinery actually was retired within the span of service life indicated, the rates used by the company were almost all allowed by the tax authorities.

In setting rates on tube manufacturing equipment, no allowance was made for salvage. Machines retired were broken up and any junk value was carried to other income. When retirements took place, the full cost was charged to the depreciation reserve even though the individual machine was not fully depreciated.

In its accounting records the Henley Radio Company grouped its assets according to function. This resulted in the eight classes which are listed below:

1. Land
2. Buildings
3. Building equipment
4. General machinery
5. Manufacturing machinery
6. Factory fixtures
7. Office furniture and fixtures
8. Engineering laboratory and equipment

The distinction drawn between general machinery and manufacturing machinery was based upon a real need for difference in accounting treatment. General machinery applied to the auxiliary, nonfabricating machinery which, in a general way, was common to all factories. Manufacturing machinery included all those machines which were engaged in the actual fabrication of the product and which, therefore, presented the most difficult problems to the management.

In the plant records machines which cost over $1,000 were listed on cards. One card was made out for each machine showing the date of purchase, original cost, and cost of any additions made after the time of the original installation. All cards for one type of asset were filed, together with a card bearing the various rates of depreciation which had been applied to that class of equipment and the date when each rate had gone into effect.

Using this information, the accountant was able to calculate the reserve for depreciation accrued upon any one machine as at any particular time.

The invoices on all equipment purchases were kept on file and indexed according to a number system which was also used to identify the machines. Whenever it was necessary to book the retirement of equipment for which a record card was not maintained, it was possible to obtain the necessary information from the purchase invoice.

The central feature of the control exercised over plant was a plant budget which was prepared for each calendar year and which was revised whenever circumstances warranted. In preparing this budget, the works accountant consulted the plant engineers and foremen in order to draw up preliminary figures on new equipment to be installed in the ensuing year. Since most of the new equipment was intended to displace machines then in service, the budget included figures on the gross book value of estimated retirements. These figures were then revised in a conference of the general manufacturing superintendent, the superintendent of the plant, and the works accountant. Research engineers described new methods proposed or in the development stage and sought to estimate when their use would become advisable. Operating men who were qualified to advise on questions of capacity and product quality were also freely consulted during these conferences. The works accountant, in certain instances, prepared cost studies designed to show costs of production with new machinery as compared to costs with the old. Thorough consideration was given to all sides of the problem before the revised figures were drawn up.

These revised estimates were next examined by the vice-president in charge of manufacturing who went over each item of new equipment proposed in the light of trends and general conditions prevailing in the industry.

Final approval rested with the directors. All but one of these men were operating executives and their familiarity with all branches of the business enabled them to consider the proposals from all points of view. For example, the sales manager, who was a director, might object to the proposed purchases on the ground that they would increase capacity when a decline in sales volume was expected. In such instances, the budget provision for new

machinery was revised downward and the depreciation rates adjusted accordingly. The management of the Henley Radio Company believed that the thorough and well-rounded consideration of all decisions affecting purchases of new equipment and depreciation, which centered around the preparation of the plant budget, was of the utmost importance in the maintenance of the firm's competitive position.

At the end of 1937 the investment of the Henley Radio Company in tube manufacturing machinery was $1,545,000, and a reserve for depreciation had been accrued to the extent of $1,114,500. The budget for 1938 provided for new equipment purchases totaling $154,600 and retirements of $84,500. This budget had been finally approved late in the fall of 1937 when it was generally expected that the "recession" would end in a sharp upturn early in 1938. By March of 1938, it became apparent to the executives that an immediate upswing in business activity was not probable and the budget estimates were revised pending developments in the business situation. The revised estimates provided for new equipment amounting to $32,000, which would involve retirements with a gross book value of $19,000. Both additions and retirements were to be booked as of June 1, 1938, and the additions were to be depreciated over the remaining six months. With these changes and with the depreciation rate of 16 per cent applying through the remainder of 1938, the net book value of tube manufacturing machinery would be $214,260.

When the revised plant budget for 1938 was adopted, the general manufacturing superintendent raised a question as to the advisability of revising the depreciation rate. He believed that although the net book value at the end of 1937 was a very conservative figure, it was not unreasonable. A continuance of the 16 per cent rate would give a figure in 1938 which would be unjustifiably low. He believed the net book value at that time should be somewhat lower than the 1937 figure but not much lower. As a result of these considerations, the general manufacturing superintendent recommended that a rate of 12 per cent be used for depreciation on manufacturing machinery during the remainder of 1938.

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1. Should the rate have been reduced?
2. Was the method of determining depreciation used by this company sound?

UNITED STATES STEEL CORPORATION—NO. 1

POLICIES IN THE DETERMINATION OF THE COST OF PLANT AND THE AMOUNT OF DEPRECIATION

One may distinguish in the history of the United States Steel Corporation, as far as problems in accounting for plant are concerned, five episodes which are related but bear evidence of a gradual change in corporation policy over a period of 36 years. The five episodes were: the acquisition of plant and properties in 1901 in connection with the organization of the corporation; the later acquisition of a group of companies in 1930; the practice followed for a number of years of writing off intangible values against earned surplus and of the construction of plant through the appropriation of surplus; the increase in depreciation and related reserves through a charge of $270,000,000 to surplus in 1935; and the segregation of a remaining intangible element in plant in 1936 and its proposed elimination in 1938 through an adjustment of the stated value of common stock. These episodes are described in sections I–V below.

The United States Steel Corporation was organized in 1901 as a holding company, its securities being exchanged for those of a group of steel companies already in operation. The first report of the new corporation was issued as of November 30, 1901. The balance sheet and a portion of the text describing the exchange of securities are reproduced below, at page 359. The basis used in determining the cost of plants in 1901 was not described fully in the first report, but the following statement appeared in later reports:

> The Gross Property Investment Account, inclusive of Intangibles . . . as carried in the consolidated balance sheet, is based on the amount of capital stock and bonds of the Corporation issued for the acquirement of the subsidiary companies and cash, plus cash expenditures made for additional property acquired since the organization of the Corporation. . . . [1]

Only in one year since 1901 has stock been issued in the acquisition of property. In that year the Atlas Portland Cement Company, the Columbia Steel Corporation, and the Oil Well Supply Company were acquired. Excerpts from the reports for

[1] Annual report, 1935.

1929 and 1930 describing these transactions are included at page 364.

During the years preceding 1929, the corporation wrote off $508,302,500 for intangible values, the charge being to earned surplus. It is difficult to trace these transactions in the reports, but evidently what occurred was a series of entries on the books of the holding company debiting surplus and crediting investments in subsidiaries, the results being reflected in the consolidated balance sheets as a decrease in surplus and in plant. It is interesting to observe that the amount $508,302,500, written off for intangible values and charged to earned surplus, was equal to the amount of common stock in the period from 1901 to 1927. The intangible value had previously appeared in plant on the consolidated balance sheet so that this process was in substance a write-down of plant against earned surplus.

The corporation had also constructed plant through appropriations of earned surplus. The amount increased to $270,000,000 in 1926, at which figure it was carried until the restatement in 1935. Stated in other terms, this meant that funds arising from earnings had been invested in plant extensions in the amount of $270,000,000. The corresponding credit in the surplus account might have been allowed to stand in earned surplus or a stock dividend might have been declared, transferring the credit from surplus to capital. Instead the corporation set up the amount as Surplus Appropriated for and Invested in Capital Expenditures. The effect of the appropriation was to express the intention of the management not to pay dividends therefrom. The amount was as much a part of earned surplus after the appropriation as before, and was so recorded on the balance sheet. The annual report of 1934 included for the first time a comprehensive statement as to the basis of valuation used in reporting property investment. This statement is given on page 367, together with plant and surplus as reported on the consolidated balance sheet for 1934 and a schedule giving additional detail with respect to property investment. It may be observed that the three phases in the development of plant accounting by the corporation described so far occurred before the depression or in its very earliest phases. The next two phases were part of the adjustment of corporation policy to new conditions brought about by the depression and by resultant changes in the steel industry.

In 1935 the net book value of plant was reduced $270,000,000 by transferring that amount from appropriated surplus to reserve for depreciation and other offset reserves. This adjustment was a recognition of the fact that depreciation had occurred in prior years in an amount greater than had been reflected in the depreciation charges of those years and that additions to the reserves were therefore needed to show fully the extent of depreciation. Excerpts from the report for 1935 describing this adjustment are included on page 369.

In 1936 intangibles in the amount of $260,557,544 were shown as a separate element in the property investment section of the balance sheet, as indicated at page 371.

In a letter from the chairman of the board to the stockholders prior to the meeting of stockholders on April 4, 1938, it was proposed that the stated value of the stock be reduced and that the intangible elements be written off against surplus so created. A summary of the proposed capital change, from the annual report for 1937, is given at page 373. In a sense this proposed elimination of intangibles in 1938 completed a cycle, because it was related to the occurrences of 1901 and was the culmination of a change which began in the early years of the corporation when a portion of intangibles was written off against earned surplus.

It is the intention at this point to raise issues only in connection with plant accounting. In later chapters other issues involved in the facts will be raised in connection with capital and surplus, consolidations, and the determination of income.

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1 Upon what basis was the cost of plant acquired in 1901 determined? Was the same basis used in determining the cost of plant acquired through the issuance of stock in 1930? Should the corporation in 1901 have set up its plant on the basis of the tangible values involved?

2. If, after the elimination of a large amount of initial surplus in 1902, and the writing off of intangibles against surplus in the period prior to 1929, a substantial amount of intangibles still existed in plant, what was the probable amount of the tangible element in plant in 1901?

3. Did the charge to surplus of $270,000,000 in 1935 indicate that depreciation expense in prior years had been understated? What was the effect on reported income?

4. Were the several changes in policy with respect to plant and depreciation from 1901 to 1938 wise? In view of the situation existing in 1938, what action should the management have taken in establishing policies concerning plant and depreciation for the ensuing period?

I. THE ACQUISITION OF PLANT AND PROPERTIES IN 1901

These acquisitions were described in the first annual report of the corporation.

BALANCE SHEET

The date of this report renders it impracticable to give a complete balance sheet as of December 31, 1901, and consequently a balance sheet showing the condition of the companies at November 30, 1901, is submitted. It exhibits the assets and liabilities represented by the capital stocks of the Corporation and by outstanding stocks of subsidiary companies except that, for simplicity, it omits indebtedness from one company to another, as such sums though assets of one company are liabilities of some other company.

UNITED STATES STEEL CORPORATION
CONDENSED GENERAL BALANCE SHEET
NOVEMBER 30, 1901

ASSETS

Property Account—Cost of properties owned and operated by the several companies....				$1,437,494,863
Deferred Charges to Profit and Loss—Expenditures for Improvements, Explorations, Stripping and Development at Mines, and for advanced Mining Royalties, which are to be charged to Future Operations of the Properties.....				3,256,774
Investments:				
Outside Real Estate and other property...				429,613
Current Assets:				
Inventories.....			$ 95,603,998	
Stocks, Bonds and Securities of Outside Companies.....			7,251,329	
Accounts Receivable.....	$45,269,453			
Bills Receivable	2,821,464	$48,090,917		
Cash.....		55,315,528		
			103,406,445	206,261,772
				$1,647,443,022

UNITED STATES STEEL CORPORATION
CONDENSED GENERAL BALANCE SHEET.—(*Continued*)
NOVEMBER 30, 1901

LIABILITIES

Capital Stock of U. S. Steel Corporation:			
Common		$508,212,544	
Preferred		510,173,778	$1,018,386,322
Capital Stocks of Subsidiary Companies Not Held by U. S. Steel Corporation (Par Value):			
Common Stocks	$	365,436	
Preferred Stocks		293,300	
Lake Superior Consolidated Mines Subsidiary Companies		113,189	771,925
Bonded and Debenture Debt:			
United States Steel Corporation Bonds	$303,450,000		
Funded Debt of Subsidiary Companies held by the Public		59,349,839	
Debenture Scrip		41,845	362,841,684
Mortgages and Purchase-Money Obligations (Subsidiary Companies):			
Mortgages	$	3,457,038	
Purchase-Money Obligations		15,610,754	19,067,792
Current Liabilities:			
Pay Rolls and Accounts Payable	$	22,228,344	
Bills and Loans Payable (Subsidiary Companies)		12,653,744	
Special Deposits due employees and others		5,435,342	
Accrued Interest and Unpresented Coupons		4,870,410	
Common Dividend No. 2, payable Dec. 20, 1901		5,081,790	50,269,630
Contingent Liability:			
Payment contingent upon retention of leases			525,399
Sinking Funds and Reserves for Depreciation			21,236,041
Surplus of U. S. Steel Corporation and Subsidiary Companies			174,344,229*
			$1,647,443,022

E. SHEARSON,
Comptroller

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* The surplus reconciliation statement of December 31, 1902 showed only $25,000,000 of initial surplus. In the balance sheet of December 31, 1902, plant was reported as follows:

PROPERTY ACCOUNT:			
Properties owned and operated by the several companies		$1,453,635,551	
Less Surplus of Subsidiary Companies at date of acquirement of their Stocks by U. S. Steel Corporation, April 1, 1901	$116,356,111		
Charged off to Depreciation and Extinguishment Funds	12,011,857	128,367,968	
			$1,325,267,583

Note.—The change in 1902 involved a decrease, both in consolidated surplus and in the book value of property, which served to eliminate from consolidated surplus the surplus of subsidiary companies at acquisition.

Organization and the Issue of Stocks and Bonds

The United States Steel Corporation was incorporated under the laws of the State of New Jersey, the original certificate of incorporation having been filed at Trenton, February 25, 1901, and the amended certificate, April 1, 1901. By the amended certificate, the authorized capital stock of the Corporation was fixed at 11,000,000 shares of the par value of $100 each, equally divided into 5,500,000 shares of seven per cent. cumulative preferred stock (preferred as to both dividends and capital), and 5,500,000 shares of common stock.

Of the total authorized capital stock, there have been issued, and at this date (January 10, 1902) are outstanding 5,102,056 shares of preferred stock, and 5,082,273 shares of common stock. The Corporation also has issued $303,450,000 of five per cent. bonds secured by a Trust Indenture, dated April 1, 1901, to the United States Trust Company of New York as Trustee.

Substantially all of these bonds and shares have been issued to acquire the bonds and stocks of the subsidiary companies which were held by the public, as well as considerable amounts thereof, which belonged to members of the Syndicate and to the Syndicate Managers, *viz.:* (1) the bonds and stock of the Carnegie Company and the capital stocks of the several other companies under the original agreement of March 1, 1901, with J. P. Morgan & Co., Managers of a Syndicate which includes among its members and participants officers and directors of this Corporation; (2) the stocks of the American Bridge Company and the Lake Superior Consolidated Iron Mines under the agreement of April 1, 1901, with J. P. Morgan & Co.; (3) the stocks of the Oliver Iron Mining Company and of the Pittsburg Steamship Company; and (4) the stocks of the Shelby Steel Tube Company, for which a contract was negotiated in June, 1901, with representatives of the stockholders of that company.

Details of Issue of Stocks and Bonds

(1) 4,247,688 shares of the common stock and 4,249,716 shares of the preferred stock and $303,450,000 face value of bonds of the Corporation were issued in payment for the $25,000,000 in cash, paid to the Corporation by the Syndicate Managers, and for the stocks and bonds set forth in the following table, excepting 1,644 shares otherwise acquired, and directors' qualifying shares, *viz.:*

Federal Steel Company	Common Stock	$ 46,483,700
	Preferred Stock	53,260,200
National Steel Company	Common	31,970,000
	Preferred	26,996,000
National Tube Company	Common	40,000,000
	Preferred	40,000,000
American Steel and Wire Company of New Jersey	Common	49,981,400
	Preferred	39,999,000
American Tin Plate Company	Common	28,000,000
	Preferred	18,325,000
American Steel Hoop Company	Common	19,000,000
	Preferred	14,000,000
American Sheet Steel Company	Common	24,499,600
	Preferred	24,499,600
Carnegie Company	Common Stock	160,000,000
	Bonds	159,450,000

(2) 722,025 shares of common stock, and 741,915 shares of preferred stock of the Corporation were issued for the acquisition of $29,413,905 par value of stock of the Lake Superior Consolidated Iron Mines and $30,946,400 of common stock and $31,348,000 of preferred stock par values of the American Bridge Company;

(3) 92,500 shares each of common and preferred stock of the Corporation were issued for the acquisition of an outstanding one-sixth interest in the Oliver Iron Mining Company and in the Pittsburg Steamship Company, thus securing the ownership of all of the stock of those two companies not owned by the Carnegie Company except directors' qualifying shares; and

(4) 20,045 shares of common stock and 17,910 shares of preferred stock of the Corporation were issued for the acquisition of $8,018,200 of common stock and $4,776,100 of preferred stock, par values, of the Shelby Steel Tube Company under the contract above mentioned.

The Aragon Iron Mines leasehold and the stock of the Bessemer Steamship Company have been purchased for cash paid and payable by this Corporation or by some of the subsidiary companies above mentioned.

All of the bonds of the Carnegie Company and all of the stocks of the companies acquired as above mentioned by the United States Steel Corporation, have been lodged with the United States Trust Company, as Trustee, for the benefit of the Corporation and its stockholders, and to secure the payment of the $304,000,000 bonds of the Corporation authorized by the deed of trust of April 1, 1901. This deposit affords security to stockholders as well as bondholders against diversion or depletion of these important assets of the corporation.

Circulars, dated March 2, and April 2, and 8, 1901, addressed to the holders of shares of the several companies therein specified were issued and published by the Syndicate Managers. At the rates offered in the circular dated March 2, 1901, the Syndicate acquired

the common stocks and preferred stocks of the seven companies (other than the Carnegie Company) as above mentioned, and thereupon sold and transferred the same to this Corporation under the contract of March 1, 1901. The Syndicate delivered to the holders of such stocks of said seven companies in the aggregate of 2,694,909 shares of common stock and 2,616,957 shares of preferred stock of this Corporation. The Syndicate acquired sixty per cent. ($96,000,000) of the stock of the Carnegie Company, and $159,450,000 face value of the five per cent. bonds of the Carnegie Company by delivering to the holders thereof said $303,450,000 of bonds of this Corporation and $1,200,000 in cash; and the Syndicate acquired the remaining forty per cent. ($64,000,000) of the stock of the Carnegie Company by delivering to the holders thereof 982,771 shares of preferred stock and 902,790 shares of the common stock of this Corporation.

The residue of the common and preferred stock of this Corporation delivered to the Syndicate under the contract of March 1, 1901, and not used for the acquisition by it of the stocks of the specified companies, being the shares which, as stated in the Syndicate circular of March 2, 1901, were to be retained by and to belong to the Syndicate, amounted to 649,987 shares of preferred stock, and 649,988 shares of common stock. This residue of stock or the proceeds thereof, after reimbursing the Syndicate the $25,000,000 in cash which it paid to the Corporation, and approximately $3,000,000 for other Syndicate obligations and expenses, constituted surplus or profit of the Syndicate.

The transactions between this Corporation and the Syndicate having been concluded, an agreement of final settlement and mutual release, dated January 3, 1902, was executed between this Corporation and the Syndicate Managers.

It will be noted that this Corporation has received and now owns in the aggregate more than ninety-nine and three-fourths per cent. of the shares of all the specified companies. The acquisition of so large a proportion of the shares had enabled the Corporation promptly to enter upon the accomplishment of the principal objects which induced its formation, and has facilitated the fulfilment of the original expectations of large reductions in expenditures for improvements, of increased earnings applicable to dividends, and of greater stability of investment, without increasing the prices of manufactured products.

II. THE ACQUISITION OF A GROUP OF COMPANIES IN 1930

PURCHASE OF THE ATLAS PORTLAND CEMENT COMPANY AND COLUMBIA STEEL CORPORATION PROPERTIES[1]

During the year the Corporation after extended negotiation and investigation entered into contracts for the purchase of the properties, assets and business of The Atlas Portland Cement Company and of the Columbia Steel Corporation. The properties were transferred to the Corporation in January, 1930, and payment was made for same wholly in shares of Common stock of United States Steel Corporation, 176,265 shares having been delivered for the Atlas and 251,771 shares for the Columbia Steel properties. The total cash value of the properties, assets and business of these companies acquired as stated was appraised by the Corporation at not less than $31,137,000 in the case of the Atlas and not less than $41,375,000 in case of Columbia. Further particulars respecting these properties, including the division of the respective total values between fixed property and net liquid assets, will be submitted in 1930 annual report.

The Atlas Portland Cement Company owned and operated six cement plants located at Northampton, Pa., Hudson, N. Y., Hannibal, Mo., Leeds, Ala., Independence, Kan., and Waco, Texas, with many years supply of raw material for manufacture of cement located contiguous to these plants. The plants have an annual capacity of 18,000,000 barrels. The plants, it will be observed, are all located in and serve territories almost wholly far removed from the territories (Pittsburgh, Chicago and Duluth) in which are located the cement plants previously controlled by the Corporation. The acquisition of the Atlas plants, accordingly, broadens widely the territory served by the Corporation in the marketing of Cement and without in any appreciable degree enlarging its product available for distribution in territory heretofore supplied. The Atlas Portland Cement Company was one of the oldest producers of Cement in the United States, its brands and service are highly esteemed by consumers and it is believed that the acquirement of its properties and their operation by the Corporation's subsidiary, Universal Atlas Cement Company, will prove satisfactory in every way to consumers and the Corporation.

The Columbia Steel Corporation owned and operated steel producing plants and rolling mills at Pittsburg, Cal., (30 miles from San Francisco), at Torrance, Cal., (on the outskirts of Los Angeles), a steel foundry at Portland, Ore.; and a blast furnace and by-product coke plant at Provo, Utah, (40 miles from Salt Lake City). It also owned extensive iron ore, coal and limestone deposits in Utah. The annual capacities of these plants are: Coke, 297,000 tons; Pig Iron, 175,000 tons; Steel Ingots, 340,000 tons; Finished Rolled Steel Products, 286,000 tons; Steel Castings, 25,000 tons. The principal rolled steel products manufactured are: Merchant and Reinforcing Bars, Light

[1] Annual report, 1929.

Structural Shapes, Wire Mill products, Sheets (black and galvanized) and Tin Plate.

For several years the United States Steel Corporation has had under consideration the establishment of steel producing and manufacturing operations in Pacific Coast territory, the better to serve its existing trade as well as to prepare for the future growth of both domestic and foreign trade by service from coast plants. The manufacturing operations of substantial character which it had nearest to the Pacific Coast in respect of cost of delivery were at Birmingham, Ala., and in the Pittsburgh, Pa., District. The steel consumption in the Pacific Coast territory is important and it was economically logical, therefore, that the Corporation establish producing plants in that territory.

The properties of Columbia Steel Corporation having been offered to the Corporation on terms considered reasonable and on which it was felt a satisfactory return would immediately be earned by the properties, their purchase was decided upon after an extended and exhaustive examination, inspection and study of the properties and their possibilities. This purchase of the Columbia properties affords a nucleus from which it is confidently believed the productive capacity on the Pacific Coast can be expanded from time to time to the interests of consumers, of the territory and of the Corporation.

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Purchase of Oil Well Supply Company's Properties[1]

The properties and business of the Oil Well Supply Co. (a Pennsylvania corporation) were acquired as of October 1, 1930. These were acquired free from obligations except as to current liabilities which were largely exceeded by current and working assets received in the purchase. Such acquirement furnished to the United States Steel Corporation an established organization operating throughout the United States and abroad as a medium for the distribution to consumers, and under the special conditions attaching to the development and operation of oil and gas properties, of a large quantity of steel pipe, wire rope and other products of the subsidiary companies used in the oil and gas fields. In addition the Oil Well Supply Company handles a complete line of equipment and machinery of its own manufacture and of the production of others, likewise sold for similar use. The Oil Well Supply Company has manufacturing plants at Oil City, Pa., (Imperial Works), Bradford, Pa., Braddock, Pa., (Wilson-Snyder Manufacturing Company), Oswego, N. Y., Poplar Bluff, Mo., Tulsa, Okla. and Los Angeles, Cal. It has also 17 general repair shops and 89 distributing stores located throughout all oil and gas producing fields in United States and Canada. These properties together with the net working assets of Oil Well Supply Company were acquired at the inventoried appraised value of $19,057,930.

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[1] Annual report, 1930.

The gross property investment account was increased during the year by amounts as follows:

Investment cost of fixed properties, plants and business of The Atlas Portland Cement Co., Columbia Steel Corporation and Oil Well Supply Co. acquired by purchase during the year and paid for by issue of Common stock therefor . . . $50,519,537

CAPITAL STOCK

	Shares	Par Value
Issues of additional Common Stock were made in the purchase of properties, plants, business and net current and working assets during the year as follows:		
Atlas Portland Cement Company	176,265	$ 17,626,500
Columbia Steel Corporation	251,771	25,177,100
Oil Well Supply Company	108,402	10,840,200
	536,438	$ 53,643,800
To employes of United States Steel Corporation and its subsidiary companies upon full payment by them for shares subscribed for under the Employe's Stock Subscription Plan	18,157	1,815,700
Total issues in the year	554,595	$ 55,459,500
The foregoing shares were issued in consideration of value received for the same, as follows:		
Value of properties, plants and business of the three companies acquired as above	$50,519,537	
Value of net current and working assets of such companies acquired in their purchase	41,050,798	
Payments made by employes for the subscription price of stock subscribed for as stated	3,029,873	94,600,208
Excess of value received over par value of the shares issued, carried in balance sheet in "Premiums on Capital Stock"		$ 39,140,708
Total Capital Stock outstanding, December 31, 1930:		
Common	8,687,435	$868,743,500
Preferred	3,602,811	360,281,100

III. THE REDUCTION OF INTANGIBLE VALUES

ANNUAL REPORT FOR 1934

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The gross Property Investment Account, inclusive of Intangibles, is stated in the assets as shown by the consolidated balance sheet, based on the valuations represented by capital stock and bonds of the Corporation issued for acquirement of the subsidiary companies and cash, plus cash outlays made for additional property acquired since the organization of the Corporation, and less (*a*) the sum of $508,302,500 written off for Intangible values, as heretofore shown in previous annual reports, and (*b*) credits for investment value or cost of property sold, retired or otherwise disposed of. In addition, as shown in table on page 368, the sum of $833,232,096 has been provided from income for account of accrued depletion, depreciation, obsolescence and amortization of the present gross investment value or cost at which existing property is carried.

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CONSOLIDATED GENERAL BALANCE SHEET

ASSETS

Property Investment Accounts	
Properties Owned and Operated by the Several Companies, per Table on Page 368	
Balance of this account as of December 31, 1934, less Depletion, Depreciation and Amortization Reserves...	$1,626,143,782

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LIABILITIES

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Reserves and Surplus		
Contingent, Miscellaneous Operating and Other Reserves		$ 23,764,236
Insurance Reserves		46,129,371
Earned Surplus		
Undivided Surplus of United States Steel Corporation and Subsidiary Companies.	$258,575,628	
Appropriated for and invested in Capital Expenditures	270,000,000	
		528,575,628*

* This Balance of Surplus is subject to revision upon completion during 1935 of an analysis of Investment in Physical Property now in progress, involving also revision of depreciation accruals for previous years.

That part of the Surplus of Subsidiary Companies representing Profits on sales of materials and products to other subsidiary companies and on hand in latters' Inventories is, in this Balance Sheet, deducted from the amount of Inventories included under Current Assets.

Cumulative preferred Dividends Unpaid at December 31, 1934 amount to 11¼% or $40,531,624.

PROPERTY INVESTMENT ACCOUNT, DECEMBER 31, 1934

Gross Fixed Property Investment Account, December 31, 1933, inclusive of balance of Intangibles but exclusive of Stripping and Mine Development and Structural Erection Equipment		$2,430,633,695
Add: Property Investment accounts of controlled companies which have not heretofore been included in the consolidated organization's accounts (covers principally the minority proportion of the fixed assets of Pittsburg, Bessemer & Lake Erie R. R. Co.)		10,861,259
Net of sundry adjustments to Property Account in 1934		849,807
		$2,442,344,761
Capital Expenditures on Property Account in 1934 (ex. Stripping and Development)	$ 9,777,895	
Less, Realizations from Sales and Dismantlement of property creditable Investment Account	1,511,100	
Net Expenditures for new construction in the year		8,266,795
		$2,450,611,556
Less, Amounts written off in year 1934 to Depletion and Depreciation Reserves for investment cost of natural resources exhausted and of improvements, equipment and facilities abandoned and retired		28,118,515
Gross Fixed Property Investment December 31, 1934		$2,422,493,041
Less, Balances in Depletion, Depreciation, Obsolescence, Amortization and Current Maintenance Reserves, at December 31, 1934		833,232,096
Net Fixed Property Investment December 31, 1934		$1,589,260,945*
Investment in Stripping and Development at Mines and Structural Erection Equipment:		
Balance at December 31, 1933	$37,835,840	
Expended during the year 1934	1,429,386	
	$39,265,226	
Less, Charged off in 1934 in operating expenses	2,382,389	
Balance December 31, 1934		36,882,837
Total of Property Investment Account, December 31, 1934, inclusive of balance of Intangibles, per Consolidated General Balance Sheet		$1,626,143,782

* The reported balance of Net Fixed Property Investment at December 31, 1934, is subject to possible adjustment of depreciation accruals upon completion during 1935 of the Analysis of Physical Property Investment now in progress.

IV. THE ADJUSTMENT OF PROPERTY INVESTMENT THROUGH A CHARGE TO APPROPRIATED SURPLUS

The following statement appeared in the annual report of the United States Steel Corporation for December 31, 1935:

There was completed during the year a detailed analysis of the investment in depreciable property, which, as stated in the annual report for 1934, had been undertaken by the subsidiary companies. This analysis resulted in adjustments of the Property Investment account effecting a reduction of net book values. Broadly, these adjustments are attributable to the developments in the art and mechanics of steel making which have operated to reduce the normally expected life of such facilities, and to changes in plant location based upon shifting markets and transportation facilities. The factors involving present or prospective abandonments of obsolete units, from time to time, impose unusual depreciation charges which the property survey has attempted to record as reflecting present conditions. The above adjustment, amounting to a net of $88,720,028, has been effected by transferring that amount from the Surplus account termed "Appropriated for and Invested in Capital Expenditures," which heretofore was carried at $270,000,000. The remainder of the account, $181,279,972, has been transferred to and converted into a general reserve for amortization of property investment valuations.

In view of the fact that the surplus account "Appropriated for and Invested in Capital Expenditures" was invested in fixed property, it was considered advisable that the adjustment and transfer as described should be made as indicated. Capital investment expenditures to the amount of $181,279,972 having heretofore been financed specifically by such segregated surplus account, it follows that future depreciation allowances should not be made therefor in reporting consolidated net income. This reduction in annual depreciation allowances will, however, be offset, in part at least, by increased allowances in calculated future depreciation charges which will result from the revised depreciation rates indicated by the analysis above mentioned.

The gross Property Investment Account, inclusive of Intangibles, . . . as carried in the consolidated balance sheet, is based on the amount of capital stock and bonds of the Corporation issued for the acquirement of the subsidiary companies and cash, plus cash expenditures made for additional property acquired since the organization of the Corporation and less (*a*) the sum of $508,302,500, heretofore written off for Intangible values which was provided from Earned Surplus, and (*b*) credits for investment value of property sold, retired or otherwise disposed of. . . . the balance of the reserves provided from income and surplus for accrued depletion, depreciation, obsolescence and amortization of the present gross investment in plant and property amounts at December 31, 1935, to an aggregate of $1,124,107,708.

These reserves include the adjustments of $88,720,028 and the transfer of the $181,279,972 mentioned in the preceding paragraphs.

The following quotation is from the *Wall Street Journal*, April 4, 1936:

The steel plants of the United States should be replaced every 18 or 20 years, President W. A. Irvin of U. S. Steel Corp., told the Senate Interstate Commerce Committee Friday. Although his company last year set aside $47,000,000 for obsolescence and depletion, in the past companies have been rather remiss in failing to lay aside sufficient funds for rebuilding and replacing plant and equipment.

This was just one of the many phases of the industry that the president of the world's largest steel company discussed with committee members. Primary purpose of the meeting was to ascertain his views on the effect of outlawing the basing point system.

V. THE SEGREGATION AND ELIMINATION OF INTANGIBLES IN THE PLANT ACCOUNT

A statement from the text relative to plant, excerpts from the balance sheet, and a detailed schedule on the property investment account are given for 1936.

The gross Property Investment Account (inclusive of Intangibles) as shown in table on page 372 and as carried in the consolidated balance sheet, is based on the amount of capital stock and bonds of United States Steel Corporation issued for the acquirement of the subsidiary companies and for cash, plus expenditures made for additional property acquired since the organization of the Corporation and less (*a*) the sum of $508,302,500 which was provided from earned surplus and heretofore written off for account of intangible values, and (*b*) credits for investment value of property sold, retired or otherwise disposed of. As shown also in table on page 372, the balance of the reserves provided from income and surplus for accrued depletion, depreciation, obsolescence and amortization of the present gross investment in plant and property, amounts at December 31, 1936, to an aggregate of $1,142,337,830.

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UNITED STATES STEEL CORPORATION AND SUBSIDIARY COMPANIES
COMPARATIVE CONSOLIDATED GENERAL BALANCE SHEET

	December 31, 1936
ASSETS	
Property Investment Account	
Properties Owned and Operated by Subsidiary Companies, per Table page 372	
Tangible	$2,231,817,568
Intangible	260,557,544
	$2,492,375,112
Less, Depletion, Depreciation, Obsolescence, Amortization and Current Maintenance Reserve Balances	1,142,337,830
	$1,350,037,282
. . . . .	
LIABILITIES	
. . . . .	
Reserves and Surplus	
Contingent, Miscellaneous Operating and Other Reserves	$ 32,120,693
Insurance Reserves	45,937,646
Undivided Earned Surplus of U. S. Steel Corporation and Subsidiary Companies	252,660,717
	$ 330,719,056

UNITED STATES STEEL CORPORATION AND SUBSIDIARY COMPANIES
PROPERTY INVESTMENT ACCOUNT
DECEMBER 31, 1936

Property Classifications	Gross Property Investment December 31, 1935	Capital Expenditures on Property Account in 1936 (Net)	Write-offs to Depletion, Depreciation and Amortization Reserves and Other Adjustments	Gross Property Investment December 31, 1936
Real Estate	$ 108,218,056	Cr. $ 463,397	$ 145,557	$ 107,609,102
Plant, Mineral and Manufacturing Properties and Equipment (a)	1,720,453,500	60,801,637	32,684,703	1,748,570,434
Transportation Properties—Railroads, Lake and Ocean Steamships	337,918,302	12,394,508	6,844,379	343,468,432
Intangibles (see note)	260,579,477	Cr. 19,523	2,409	260,557,544
Total	$2,427,169,335	$72,713,225	$39,677,048(b)	$2,460,205,512

Less, Balances at December 31, 1936, . . . in Depletion, Depreciation, Obsolescence, Amortization and Current Maintenance Reserves		1,142,337,830
Net Fixed Property Investment December 31, 1936		$1,317,867,682
Investment in Stripping and Development at Mines and Structural Erection Equipment:		
Balance at December 31, 1935	$35,461,231	
Expended during the year 1936	2,139,976	
	$37,601,207	
Less, Charged off in 1936 to operating expenses	5,431,607	
Balance December 31, 1936		32,169,600
Property Investment Account, December 31, 1936 (inclusive of Intangibles) per Consolidated General Balance Sheet		$1,350,037,282

(a) Includes Dock and River Transportation equipment auxiliary to and a part of manufacturing properties.

(b) Includes:

Write-offs to Depletion, Depreciation and Amortization Reserves		$38,441,150
Write-offs charged to Profit and Loss and/or operating expense for facilities abandoned or retired and not replaced		1,402,903
Net of Sundry Adjustments to Property Account	Dr.	167,005
		$39,677,048

Note.—Following the completion of the detailed analysis of the investment in depreciable property, which was referred to in the annual report for the year ended December 31, 1935, a calculation has been made of the amount which is comprehended in the combined assets of the Corporation and the subsidiary companies as represented in the Consolidated Balance Sheet, for the investment cost of the capital stocks of the subsidiary companies in excess of their own investments in tangible assets. This calculation is based in part on the valuations assigned to the tangible assets as estimated by the United States Bureau of Corporations in its survey and report on the formation of the Corporation in 1901, and in part upon net book values of the tangible assets of companies subsequently acquired. It is subject to possible adjustment as further continuing investigations under way indicate may be necessary.

ANNUAL REPORT, 1937

Changes Proposed In Capital Structure

At the annual meeting on April 4th, 1938, the stockholders of the Corporation will be asked to authorize certain changes in the Corporation's capital structure. In a letter dated February 21, 1938, addressed to the stockholders, the object and scope of the proposed changes were set forth. The changes are in the form of two amendments to the certificate of incorporation, and may be summarized as follows:

1. To change each share of authorized common stock of the Corporation with par value ($100) into one share of common stock without par value; to decrease the capital of the Corporation by reducing to $75 the capital represented by each share of the issued and outstanding common stock as so changed; and to increase the authorized common stock as so changed from 12,500,000 shares to 15,000,000 shares.

2. Without impairing any of the charter restrictions as to the issuance of secured obligations, to confer on the Board of Directors authority to issue, at such times and for such consideration as the Board of Directors may determine, bonds, debentures and other obligations of the Corporation convertible into common stock of the Corporation.

The Board of Directors believes it is important and in the best interests of the stockholders that the capital structure of the Corporation be made more flexible so as to give the Board a wider choice in selecting from time to time the method of financing most suitable to the particular occasion. The Board cannot now authorize the issue and sale of the common stock for less than $100 per share or the issue and sale of any bonds, debentures or other obligations convertible into common stock. When the proposed amendments shall have become effective, the issue and sale of common stock without par value or of bonds, debentures or other obligations convertible into common stock will be legally possible at such price as the Board may, from time to time, deem advisable. However, the common stockholders will have pro rata subscription rights as to any common stock or any obligations convertible into common stock hereafter issued and sold for cash.

Although it is proposed that the now outstanding 8,703,252 shares of common stock with a par value of $100 per share be changed into common stock without par value, share for share, it is necessary to name some amount as the stated capital for each such share of common stock without par value. The Board of Directors have accordingly proposed that such stated capital for the outstanding common stock without par value shall be $75 per share. This will effect a decrease of the capital of the Corporation to the extent of $217,581,300, this sum being the difference between the capital represented by the 8,703,252 shares at the stated value of $75 per share and the aggregate par value of the now outstanding 8,703,252 shares of common stock of the par value of $100 each. This decrease of $217,581,300 in capital

will add an equal amount to the capital surplus of the Corporation (which now amounts to $81,250,021, representing the premium above par heretofore received by the Corporation upon the issuance of certain shares of its par value common stock), thereby increasing the capital surplus to $298,831,321.

It is contemplated that as soon as the amendment with respect to common stock without par value has become effective, the item of intangible assets which appears as $260,368,522 in the consolidated balance sheet at December 31, 1937, will be reduced to $1.00, the difference of $260,368,521 to be charged against the above-mentioned capital surplus of $298,831,321. The value of these intangible assets will not be affected by the change of the amount at which they are carried on the consolidated balance sheet; nevertheless it seems advisable in view of their intangible character, to carry them on the consolidated balance sheet, at the nominal value of $1.00. When such readjustment shall have been made, the balance sheet will show a capital surplus of $38,462,801, in addition to earned surplus, which at December 31, 1937, amounted to $280,356,144.

The proposed amendments will effect no change in the intrinsic value of the Corporation's assets or in the number of shares or intrinsic value of the common stock now outstanding. No change is made in the preferred stock. However, additional common stock without par value or obligations convertible into common stock, to which the common stockholders will have the right to subscribe if sold for cash, may thereafter be issued and sold as above stated.

The adoption of each of these amendments requires the approval of holders of record at the close of business March 5, 1938, of two-thirds of each class of the then outstanding shares of preferred and common stock. These amendments have been declared advisable by the Board of Directors, who recommend that they be approved and adopted by the stockholders at the annual meeting.

Exhibit 1 gives figures relative to the stock outstanding, earnings, dividends, and market prices. Exhibit 2 has been prepared to show certain figures concerning plant on as nearly comparable a basis as possible. At a number of points, especially in the earlier years, a different interpretation of the data available would have yielded somewhat different figures. The figures are all taken from the reports and anyone interested in a more detailed analysis may trace therein those selected. Subject to these qualifications, it is possible to obtain for the United States Steel Corporation data on the administration of plant for a longer period than is possible for most other large corporations.

EXHIBIT 1
UNITED STATES STEEL CORPORATION
(000 omitted)

Year	Common stock	Preferred stock	Net income before dividends	Dividends, preferred	Dividends, common	Surplus	Preferred		Common	
							Yearly high and low, New York Stock Exchange			
							High	Low	High	Low
11/30/01	$508,212	$510,174	$ 61,420	$26,753	$15,228	$174,344	101 7/8	69	55	24
1902	508,302	510,281	90,307	35,720	20,333	77,875	97 3/4	79	46 3/4	29 3/4
1903	508,302	360,281	55,417	30,404	12,707	66,097	89 3/4	49 3/4	39 7/8	10
1904	508,302	360,281	30,268	25,220	.....	61,365	95 5/8	51 1/4	33 1/8	8 3/8
1905	508,302	360,281	68,585	25,220	.....	84,738	107	90 3/4	43 1/4	24 7/8
1906	508,302	360,281	98,129	25,220	10,166	97,721	113 1/4	98 3/4	50 1/4	32 5/8
1907	508,302	360,281	104,566	25,220	10,166	122,645	107 3/4	79 1/8	50 3/8	21 7/8
1908	508,302	360,281	45,729	25,220	10,166	133,415	114 5/8	87 1/2	58 3/4	25 3/4
1909	508,302	360,281	79,074	25,220	20,332	167,735	131	107 1/4	94 7/8	41 1/4
1910	508,302	360,281	87,407	25,220	25,415	204,143	125 3/8	110 1/2	91	61 1/8
1911	508,302	360,281	55,300	25,220	25,415	173,691	120 7/8	103	82 1/8	50
1912	508,302	360,281	54,240	25,220	25,415	176,716	117	107	80 3/4	58 1/4
1913	508,302	360,281	81,217	25,220	25,415	206,798	110 3/4	102 1/2	69 1/8	49 7/8
1914	508,302	360,281	23,497	25,220	15,249	190,204	112 3/4	103 1/4	67 1/4	48
1915	508,302	360,281	75,834	25,220	6,354	235,025	117	102	89 1/2	38
1916	508,302	360,281	271,532	25,220	44,476	436,361	123	115	129 3/4	79 3/4
1917	508,302	360,281	224,220	25,220	86,411	541,661	121 1/4	102 3/4	136 5/8	79 1/2
1918	508,302	360,281	137,532	25,220	71,162	577,787	113 5/8	108	116 1/2	86 1/2
1919	508,302	360,281	76,795	25,220	25,415	603,947	117 1/2	111 1/4	115 1/2	88 1/4
1920	508,302	360,281	109,694	25,220	25,415	664,354	115 3/4	104 1/8	109	76 1/4
1921	508,302	360,281	36,617	25,220	25,415	649,826	115	105	86 1/2	70 1/4
1922	508,302	360,281	39,653	25,220	25,415	640,038	123	113 3/8	111 1/2	82
1923	508,302	360,281	108,707	25,220	29,227	693,650	123 1/2	116 1/8	109 5/8	85 1/2
1924	508,302	360,281	85,067	25,220	35,581	717,960	123	118 3/8	121	94 1/4
1925	508,302	360,281	90,603	25,220	35,581	761,863	126 5/8	122 1/8	139 1/4	112 3/8
1926	508,302	360,281	116,667	25,220	35,581	823,502	130 3/4	124 1/2	160 1/2	117
1927	711,623	360,281	87,897	25,220	49,814	633,045	141 1/4	129	160 1/2 †	111 3/8 †
1928	711,624	360,281	114,174	25,220	49,814	680,277	147 1/4	138 5/8	172 1/2	132 3/8
1929	813,284	360,281	197,592	25,220	63,849	704,711	144 1/4	137	261 3/4	150
1930	868,744	360,281	104,422	25,220	60,366*	741,783	151 1/4	140	198 3/4	134 3/8
1931	870,325	360,281	13,038	25,220	36,984	691,837	150	94	152 3/8	36
1932	870,325	360,281	71,176*d*	20,716	.....	599,100	113	51 1/2	52 5/8	21 1/4
1933	870,325	360,281	36,501*d*	7,206	.....	557,331	105 1/2	53	67 1/2	23 3/8
1934	870,325	360,281	21,668*d*	7,206	.....	528,576	99 1/2	67 1/4	59 7/8	29 3/8
1935	870,325	360,281	1,147	7,206	.....	252,517	119 1/4	73 5/8	50 5/8	27 1/2
1936	870,325	360,281	50,583	50,439	.....	252,661	154 3/4	115 1/2	79 7/8	46 3/8
1937	870,325	360,281	94,944	58,546	8,703	280,356	150	100 1/4	126 1/2	48 1/2

* Includes $11,373.25 for March 30, 1931, dividend on common stock issued in January and February, 1931, under Employes' Stock Subscription Plan.

† This represents new common after 40% stock dividend. Stock dividend paid June 1, 1927.

d = deficit.

Sources: Company reports and *Bank and Quotation Record.*

EXHIBIT 2
UNITED STATES STEEL CORPORATION
(000 omitted)

Year	Gross fixed property	Reserves	Stripping	Net property investment	Deprec. depletion amort., etc.	Maintenance	Capital expenditures excl stripping	Retirements	Surplus approp. a/c plant	Reserve to gr. plant %	Deprec. to gr. plant %	Maint. to gr. plant %	Total dep. and maint. %	Retire. to plant prev. yr. %	Additions to plant prev. yr. %
11/30/01	$1,437,495	$ 21,236	$ 3,257	$1,416,259	$.	$.	$ 16,586	$.	$. . . .	1 5		.		.	.
1902	1,325,268	22,755	3,179	1,302,513	27,814	21,230			. . .	1 7	2 10	1 60	3 70	. .	1 15
1903	1,357,394	29,262	4,820	1,328,132	29,293	21,845	31,042	12,199	. . .	2 2	2 16	1 61	3 77	0 92	2 34
1904	1,373,967	37,084	5,560	1,336,883	18,207	18,155	17,958	3,623	. . .	2 7	1 33	1 32	2 65	0 27	1 32
1905	1,380,031	49,933	7,214	1,330,098	27,405	23,977	24,395	3,218	. . .	3 6	1 98	1 74	3 72	0 23	1 77
1906	1,378,186	63,830	5,722	1,314,356	34,707	29,317	32,155	3,470		4 6	2 52	2.13	4 65	0.25	2 33
1907	1,435,540	72,865	10,297	1,362,675	31,770	35,504	66,981	5,253	163,694†	5 1	2 21	2 47	4 68	0 38	4 67
1908	1,458,206	80,620	15,937	1,377,586	21,015	27,329	49,423	4,552		5 5	1 44	1 87	3 31	0 32	3 44
1909	1,479,998	98,584	20,094	1,381,414	27,768	34,002	33,759	5,413	15,000	6 7	1 88	2 30	4 18	0 37	2 31
1910	1,524,781	117,671	23,104	1,407,110	30,198	40,819	50,091	5,138	25,000	7 7	1 98	2 68	4 66	0 35	3 38
1911	1,566,557	130,972	24,719	1,435,585	25,980	37,883	47,815	5,586	. .	8 4	1 66	2 42	4 08	0 37	3 14
1912	1,576,227	151,164	23,112	1,425,063	31,099	43,853	15,387	5,801		9 6	1 97	2 78	4 75	0 37	0 98
1913	1,614,035	170,435	21,899	1,443,600	31,861	52,552	43,212	5,832	15,000	10 5	1 97	3 26	5 23	0 37	2 74
1914	1,622,511	186,981	22,324	1,435,530	25,143	40,345	22,746	3,281	. .	11 5	1 55	2 49	4 04	0 20	1 40
1915	1,636,946	213,745	20,099	1,423,201	32,428	39,877	17,562	3,095		13 0	1 98	2 44	4 42	0 19	1 08
1916	1,689,308	235,752	19,069	1,453,556	39,548	63,314	65,711	13,352	. . .	14 0	2 34	3 75	6 09	0 81	4 01
1917	1,773,568	271,004	19,273	1,502,564	50,553	84,667	91,334	7,188	55,000	15 3	2 85	4 77	7 62	0 42	5 40
1918	1,851,699	307,325	19,563	1,544,374	40,719	96,658	79,621	2,748	. . .	16 6	2 20	5 22	7 42	0 15	4 48
1919	1,895,829	344,069	21,901	1,551,760	45,546	110,244	48,406	2,375	.	18 1	2 40	5 82	8 22	0 13	2 61
1920	1,970,647	388,342	24,454	1,582,305	46,684	147,468	75,112	1,763	30,000	19 7	2 37	7 48	9 85	0 09	3.96
1921	2,038,576	423,200	29,419	1,615,376	36,768	92,480	67,014	1,902	.	20 8	1 80	4 54	6 34	0 10	3 40
1922	2,061,031	461,598	32,146	1,599,433	42,689	85,983	26,844	6,026		22 4	2 07	4 17	6 24	0 30	1.32
1923	2,104,703	496,576	31,031	1,608,127	51,470	127,159	61,878	6,126	40,000	23 6	2 45	6 04	8 49	0 30	3 00
1924	2,261,285	617,179	34,102	1,644,106	48,893	124,793	76,549	8,677	20,000	27 3	2 16	5 51	7 67	0.41	3 64
1925	2,295,818	042,096	38,475	1,653,722	56,087	119,140	69,573	32,620	39,101†	28 0	2 44	5 19	7 63	1 44	3 09
1926	2,351,248	722,026	38,169	1,629,222	64,220	119,559	76,366	22,578	73,955	30 7	2 73	5 09	7 82	0 98	3 32
1927	2,427,716	757,191	39,255	1,670,525	58,906	113,736	96,500	20,206		31 2	2 43	4 69	7 12	0 86	4 10
1928	2,435,264	812,795	38,656	1,622,468	67,237	103,147	47,746	25,070	30,205	33 4	2 76	4 24	7 00	1 03	1 97
1929	2,174,557	670,006	36,942	1,504,550	63,274	105,435	61,043	26,627	271,348†	30 8	2 91	4 85	7 76	1 09	2 51
1930	2,349,104	709,668	37,891	1,639,436	58,550	95,373	143,491	19,929	. .	30 2	2 49	4 06	6 55	0.92	6.59

EXHIBIT 2.—(*Continued*)
UNITED STATES STEEL CORPORATION
(000 omitted)

Year	Gross fixed property	Reserves	Stripping	Net property investment	Deprec. depletion amort., etc.	Maintenance	Capital expenditures excl. stripping	Retirements	Surplus approp. a/c plant	Reserve to gr. plant %	Deprec. to gr. plant %	Maint. to gr. plant %	Total dep. and maint. %	Retire. to plant prev. yr. %	Additions to plant prev. yr. %
1931	$2,379,559	$ 733,621	$38,044	$1,645,938	$ 47,317	$ 59,230	$ 59,602	$29,630	$	30 8	1 99	2.49	4 48	1.26	2 54
1932	2,378,008	766,033	38,842	1,611,974	39,322	28,276	7,169	12,152	..	32 2	1 65	1.19	2 84	0.51	0 31
1933	2,430,634	814,546	37,836	1,616,088	43,195	39,207	9,639	19,064	21,000	33 5	1 78	1 61	3.39	0.80	0 40
1934	2,422,493	833,232	36,883	1,589,261	45,497	51,920	9,778	29,630	. ..	34 4	1 88	2.14	4.02	1.22	0 40
1935	2,427,169	1,124,108*	35,461	1,303,062	47,222	58,410	35,313	30,552	*	46 3	1 95	2.41	4 36	1.26	1 45
1936	2,460,206	1,142,338	32,170	1,317,868	56,819	85,406	73,197	39,677	.....	46.4	2 31	3.47	5.78	1.65	3 01
1937	2,531,793	1,148,240	26,879	1,383,554	60,861	111,425	130,567	57,320	.....	45.4	2.40	4.40	6.80	2.40	5 31
				Total	$1,506,065	$2,489,718									

* Surplus charged and reserves credited $270,000,000 in 1935.
† Not given in surplus statements but computed from other schedules. $163,694,000 in 1907 is the total for years prior to 1908.
Source: Company reports.

American Telephone and Telegraph Company—No. 2

The Relation between Depreciation and Working Capital

The following statement was made concerning the dividend policy of the company during the period from 1932–1935:

Despite charges against surplus of approximately $55,800,000, $67,600,000, $56,800,000, and $35,000,000 in 1932, 1933, 1934, and 1935 respectively, as a result of dividend payments in excess of earnings, consolidated net working capital of the company showed increases in the last two years. On December 31, 1935, cash and temporary cash investments alone totaled more than $267,000,000 as compared with $219,000,000 at the end of 1933 and $204,000,000 at the end of 1932. That maintenance of the regular dividend rate did not bring about any depletion of the company's working capital was a result of the fact that the annual provisions for depreciation were in excess of the amounts by which the company failed to earn its full dividend requirements.

A consolidated income statement for the Bell System for 1935 is given at pages 552–553 and a consolidated surplus statement at page 554.

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1. Did each item of income recorded on the income statement imply an equivalent increase in working capital? Did each item of expense which appeared there imply that working capital decreased in an equivalent amount?

2. As far as the facts recorded on the income statement are concerned, what was the indicated amount of change in working capital during 1935?

3. How were these facts related to the ability of the American Telephone and Telegraph Company to pay dividends in excess of net income?

PULLMAN, INC.

THE RELATION OF DEPRECIATION POLICY TO WORKING CAPITAL AND CAPITAL STRUCTURE

Pullman, Inc., is engaged in the operation of sleeping and parlor cars, in the manufacture and repair of cars for its own use, and in the manufacture of cars for sale to railroads. It has pursued consistently for many years a policy with respect to depreciation which led to a reserve in 1936 of 51.9 per cent of total plant. The policy in depreciation has differed radically from that of the railroad industry with which the company is closely associated. The company has also operated without funded debt and in 1936 had no securities outstanding other than common stock. At that time common stock and surplus were 87.1 per cent of total assets.

The balance sheet, income statement, and surplus statement of Pullman, Inc., for 1936, together with the certificate of the public accountants from the annual report of that year, are shown below.

Pullman, Inc., was organized in 1927 in pursuance of a plan of reorganization to take over the Pullman Company and the Pullman Car and Manufacturing Company.[1] There was an adjustment of plant upward, based on appraisal, when the new corporation was formed, which was related to the Initial Surplus of $101,095,746 shown in the balance sheet for December 31, 1927. A write-down of plant and of certain other assets occurred in 1932. Excerpts from the annual report of 1932 concerning the write-down of that year are shown below.

Each of the annual reports included a schedule in comparative form giving traffic and operating statistics for Pullman Company. These figures are included in Exhibit 1 on an annual basis for 1932–1936 and triennially for 1923–1929.

Several exhibits below give amounts taken from the annual statements relative to the construction and retirement of plant, depreciation, dividends, and the accumulation of surplus. The figures are not entirely comparable for different years because of the reorganization in 1927 and the acquisition of the Standard

[1] Annual report, 1927.

Steel Car Company and Osgood Bradley Car Company in 1929, but they reflect the changes involved in the development and application of the depreciation policy. The figures are relatively complete for the four years 1933–1936. As in the case of most other companies, it is difficult to obtain from the reports readily comparable figures for earlier years. This is in large part a reflection of developments in plant accounting and the reporting of financial condition in recent years. In Exhibits 2 to 5 figures taken from the annual reports or computed from figures therein are given. Many of the figures are not available for earlier years. Data for the years during and immediately after the war are not comparable and for that reason are not included. In developing these exhibits from the annual reports, those figures were selected which indicate the broad effects of the depreciation policy and the relation of depreciation to other policies.

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1. If in preceding years the charges for depreciation had been lower so that with the same retirements the reserve had been 20 per cent of gross plant in 1936 and other things such as the dividend policy had remained the same, how would the balance sheet of 1936 have been affected?

2. If with a reserve of only 20 per cent, sufficient additional dividends had been paid to reduce surplus to the figure actually shown in 1936, how would the balance sheet have been affected?

3. What relations, if any, exist between the policy of this company in not carrying funded debt, its dividend policy, and its depreciation policy?

4. Did the fact that a reserve of 51.9 per cent had been accumulated make the task of the management easier in adapting the business to the changed conditions existing after 1929?

PULLMAN, INC.
CONSOLIDATED BALANCE SHEET
DECEMBER 31, 1936
ASSETS

Current Assets:	
Cash	$ 26,857,608
U. S. Government Securities (1936—Market value $14,087,820)	12,774,475
Accounts and Notes Receivable	9,024,522
Equipment Trust and Other Deferred-Payment Car Accounts	9,705,700
Marketable Securities (1936—Market value $2,392,198)	2,385,877
Inventories at Cost	12,463,849
	$ 73,212,031
Investment in Affiliated Companies and Other Securities at Cost	3,990,341
Special Deposits with Various States under Compensation Acts	238,390
Reserve Fund Assets:	
U. S. Government Securities held to fund Pension and Insurance Reserves	8,854,200
Deferred Charges Applying to Future Operation of the Properties	582,293
	$ 86,877,255
Equipment and Property:	
Balance, beginning of Year	$364,490,222
Additions during Year	9,727,833
	$374,218,055
Less:	
Retirements during Year	3,526,377
	$370,691,678
Deduct	
Depreciation Reserves:	
Balance, beginning of Year	$180,080,566
Additions during Year	14,342,180
	$194,422,746
Less: Charges on Account of Retirements during Year	2,088,627
	$192,334,119
Balance, end of Year, less Depreciation Reserves	$178,357,559
	$265,234,814

PULLMAN, INC.
CONSOLIDATED BALANCE SHEET
DECEMBER 31, 1936.—(*Continued*)
LIABILITIES

	Shares	
Current Liabilities:		
Current Accounts Payable and Pay Rolls		$ 9,547,782
Accrued Taxes, not yet due, including provision for Federal Income and Undistributed Profits Taxes		5,755,478
		$ 15,303,260
Reserves:		
Pension and Insurance Reserves		$ 8,956,164
Reserve for Contingencies		3,350,000
Other Reserves		3,193,956
		$ 15,500,120
Deferred Credits Applying to Future Operation of the Properties		$ 3,456,468
Capital Stock:		
Pullman Incorporated		
1936		
Authorized	3,875,000	
Unissued	485	
Issued		
At stated value of $50 per share	3,874,515	$193,725,750
Reacquired		
(In Treasury) at stated value of $50 per share	54,359	2,717,950
Outstanding		
At stated value of $50 per share	3,820,156	$191,007,800
The Pullman Company (a subsidiary)		
Outstanding		
At par value of $100 per share	88.105	8,810
		$191,016,610
Surplus:		
Excess of value of property acquired by issue of shares of capital stock over the stated value of $50 per share, less subsequent write-downs on said property out of this surplus as authorized by the Board of Directors		$ 88,419,519
Net profits earned since April 30, 1927 (date of reorganization)		64,287,254
		$152,706,773
Deduct: Dividends paid during the period from April 30, 1927 to date		112,748,417
Balance, at December 31		$ 39,958,356
		$265,234,814

PULLMAN, INC.
CONSOLIDATED SURPLUS ACCOUNT
YEAR ENDED DECEMBER 31, 1936

Balance of surplus, as at December 31		$39,556,495
Balance from income account for year ended December 31	$6,347,107	
Adjustment on account of disposition of Lyndora Hotel property	29,207	
		6,376,314
		$45,932,809
Less:		
Adjustment on revalued property units retired	$ 243,857	
Dividends declared and paid	5,730,596	
		5,974,453
Balance of surplus, as at December 31		$39,958,356

PULLMAN, INC.
CONSOLIDATED INCOME ACCOUNT
FOR THE YEAR ENDING DECEMBER 31, 1936

Earnings:		
From sleeping car business of The Pullman Company after deducting all expenses incident to operations		$16,032,327
Less: Charges and allowances for depreciation		11,839,003
		$ 4,193,324
From all manufacturing business, Pullman Railroad, and other miscellaneous properties, after deducting expenses incident to operations		$ 5,247,953
Less charges and allowances for depreciation		2,503,177
		$ 2,744,776
From security investments, etc., less administration expense of Pullman Incorporated		$ 892,598
Total earnings from all sources		$ 7,830,698
Less: Provision for Federal Income Tax		$ 1,414,319
Provision for Federal surtax on undistributed profits		69,272
Balance carried to surplus		$ 6,347,107

Source: Company report.

To The President and Board of Directors, Pullman, Incorporated:[1]

We have made an examination of the Consolidated Balance Sheet of Pullman Incorporated (a Delaware corporation) and Subsidiary Companies as at December 31, 1936, and of the Consolidated Income and Surplus Accounts for the year 1936. In connection therewith, we examined or tested accounting records of the Company and its domestic

[1] Annual report, 1936.

subsidiaries and other supporting evidence and obtained information and explanations from officers and employes of these companies; we also made a general review of the accounting methods and of the operating and income accounts for the year, but we did not make a detailed audit of the transactions. We have had submitted to us audit report by independent accountants covering the examination of the accounts of the foreign subsidiary. . . .

The "Equipment and Property" in the Consolidated Balance Sheet are carried at values which represent appraisal for the property acquired under the Plan of Reorganization of 1927 by exchange of capital stock and through purchase by issue of capital stock, less the subsequent write-down of parts of these properties to fair value as authorized by the Board of Directors, with subsequent additions at cost. Depreciation has been provided on all depreciable assets on the same basis as previous years. In respect to the manufacturing properties, depreciation is being provided on the basis of recovering, over usual or normal life expectations, the values carried. In regard to the properties of the carrier subsidiary (The Pullman Company), depreciation is being provided to recover over the period of certain fixed life expectations only the cost of these physical properties to The Pullman Company as per its books, which, at December 31, 1936, was $36,759,636 less than as represented in the said carrying value. In the accounting under the Interstate Commerce Commission rules, depreciation may be provided only to recover the cost of the properties to the carrier, and depreciation on any increased valuation is not deductible as an expense in Federal income tax returns under the regulations of the Internal Revenue Bureau. Under authorizations by the Board of Directors, such excess value has from time to time been reduced by charges to initial surplus (1) in the amount of $7,050,676, being the entire increase in value arising from the 1927 appraisal of all of the composite (wood and steel) general service cars and (2) $5,599,124, representing the increase in value from appraisal of steel cars retired from service. . . .

In our opinion, based upon such examination and subject to the foregoing, the accompanying Consolidated Balance Sheet and Consolidated Income and Surplus Accounts fairly present, in accordance with accepted principles of accounting consistently maintained by the companies, the consolidated financial position at December 31, 1936, and the consolidated results of operations for the year ended that date.

ARTHUR YOUNG & COMPANY,
Chicago, Ill., March 9, 1937. Certified Public Accountants.

ADJUSTMENT OF ASSET VALUES[1]

On recommendation of the Management, supported by opinion of technical advisors on valuation, accounting and legal questions involved, the Board of Directors at its meeting held on March 15, 1933,

[1] Annual report, 1932.

authorized appropriation out of surplus as of December 31, 1932, in total amount of $23,445,016 to adjust the values of assets as nearly as may be to the basis of real worth. It should be understood that this adjustment has no effect upon the relative position of stockholders but in fact benefits all concerned by revising asset values to accord with present conditions.

Summarized, the effect of these adjustments on the valuation basis of the various classes of property and the amount of adjustment on each class of property are as follows:

	Amount of Adjustment
1. Manufacturing Properties	$11,935,260
Plants placed on uniform basis of sound value as determined by outside appraisals for the larger plants and on basis of actual cost for recently built smaller plants, with depreciation reserves properly adjusted to present expectation of useful life.	
Adequate reserves provided against investment in manufacturing facilities, such as dies, patterns, templates, drawings, etc., which may or may not be used in later production.	
2. Carrier Equipment	7,050,676
All composite wood-and-steel Pullman general service cars (1,386 in number) still remaining on active list, placed on basis of original cost less regular depreciation charges, thereby eliminating appreciation on these cars included in Pullman reorganization of April 30, 1927.	
3. Non-operating Real Estate	1,950,482
Property of this nature placed on basis of estimated present value, consisting of (*a*) Pullman Building at Chicago, (*b*) housing and industrial properties of Pullman Land Association, (*c*) labor tenements, hotel and apartment buildings operated in connection with shops, coal lands, etc.	
Total adjustment on equipment and property	$20,936,418
4. Non-marketable Securities	843,154
Investment in affiliated-company and in other non-marketable or not readily marketable securities, acquired in connection with the Pullman reorganization of April 30, 1927, or in the purchase of the Standard-Osgood Bradley subsidiaries as of March 1, 1930, placed on basis of estimated present value.	
5. Marketable Securities	790,547
Listed and readily marketable securities, including U. S. Government issues, placed on basis of cost by elimination of all appreciation included in Pullman reorganization of April 30, 1927. Any further write-down necessary to reduce individual lots to a lower year-end market value charged against 1932 operations.	
6. Treasury Stock	874,897
Company holding of 54,320 shares of its own capital stock acquired in connection with Employe Stock Sale Plans reduced to stated capital value and held in Treasury subject to cancellation or for such use as may be authorized by Board of Directors for benefit of the corporation.	
Total of all adjustments	**$23,445,016**

EXHIBIT 1
PULLMAN, INC.
TRAFFIC AND OPERATING STATISTICS
PULLMAN CO. (1923–1926); PULLMAN, INC. (1927–1936)
YEARS ENDED DECEMBER 31

	1923	1926	1929	1932
Cars operated	7,267	8,639	8,842	5,693
Car miles	890,719,336	1,112,967,022	1,206,767,059	799,484,608
Revenue passengers:				
Berth	21,489,952	22,658,191	21,008,719	10,185,444
Seat	12,759,493	13,415,020	12,425,549	5,564,063
Total	34,249,445	36,073,211	33,434,268	15,749,507
Revenue passenger miles	12,981,609,680	14,407,455,160	14,058,525,111	6,757,760,858
Revenue from cars	$ 73,683,327	$ 83,191,087	$ 83,840,812	$ 44,196,043
Expenses from cars	64,308,084	73,638,331	74,655,613	45,416,077
Net revenue from cars	$ 9,375,243	$ 9,552,756	$ 9,185,199	$ 1,220,034*d*
Traffic averages				
Aver. revenue per car operated	$ 10,139 16	$ 9,629.94	$ 9,482 32	$ 7,763 50
Aver. revenue per passenger	$ 2 15	$ 2.31	$ 2 51	$ 2.81
Aver. net revenue per passenger	$ 0 27	$ 0 26	$ 0 27	$ 0 08*d*
Aver. net revenue per car per day	$ 3.53	$ 3.03	$ 2.85	$ 0.59*d*
Aver. mileage per car operated (miles)	122,567	128,834	136,484	140,438
Aver. journey per passenger (miles)	379	399	420	429
Aver. miles per car per day (miles)	336	353	374	384
Aver. loading per car (passengers)	14 57	12.95	11.65	8.45

EXHIBIT 1.—(*Continued*)
PULLMAN, INC.
TRAFFIC AND OPERATING STATISTICS
PULLMAN CO. (1923–1926); PULLMAN, INC. (1927–1936)
YEARS ENDED DECEMBER 31

	1933	1934	1935	1936
Cars operated	4,944	5,029	5,057	5,355
Car miles	710,747,267	737,167,857	758,554,032	825,945,721
Revenue passengers:				
Berth	9,248,461	10,258,642	10,624,818	12,049,359
Seat	4,468,077	4,846,707	4,853,890	5,148,377
Total	13,716,538	15,105,349	15,478,708	17,197,736
Revenue passenger miles	6,141,986,577	6,891,002,293	7,146,269,648	8,354,840,293
Revenue from cars	$ 39,316,239	$ 44,523,817	$ 46,758,260	$ 52,645,993
Expenses from cars	39,880,665	44,124,174	48,405,241	49,191,772
Net revenue from cars	$ 564,426*d*	$ 399,643*	$ 1,646,981*d*	$ 3,454,221*
Traffic averages				
Aver. revenue per car operated	$ 7,952 31	$ 8,853 77	$ 9,246 43	$ 9,830 82
Aver. revenue per passenger	$ 2 87	$ 2 95	$ 3 02	$ 3.06
Aver. net revenue per passenger	$ 0 04*d*	$ 0 03	$ 0 11*d*	$ 0.20
Aver. net revenue per car per day	$ 0 31*d*	$ 0 22	$ 0 89*d*	$ 1 76
Aver. mileage per car operated (miles)	143,760	146,589	150,004	154,232
Aver. journey per passenger (miles)	448	456	462	486
Aver. miles per car per day (miles)	394	402	411	421
Aver. loading per car (passengers)	8 64	9 35	9 42	10 12

* After provision for Federal taxes.
d = deficit.
Source: Company reports.

EXHIBIT 2
PULLMAN CO. (1900–1926); PULLMAN, INC. (1927–1936)
(000 omitted)

Date	Plant	Reserve for depreciation	Per cent of plant	Depreciation expense	Per cent of plant	Plant retired†	Per cent of plant	Additions‡	Per cent of plant
July 31, 1900	*	*	....	$ 1,699	...	*	...	*	....
1901	*	*	....	1,486	...	*	...	*	....
1902	*	*	....	1,909	...	*	...	*	....
1903	*	*	....	2,739	...	*	...	*	....
1904	*	*	....	2,319	...	*	...	*	....
1905	*	*	....	2,331	...	*	...	*	....
1906	*	*	....	2,609	...	*	...	*	....
1907	*	*	....	2,422	...	*	...	*	....
1908	$ 70,258	$ 5,509	7.8	3,362	4 8	*	...	*	....
1909	70,190	8,809	12.6	3,794	5 4	$ 494	0.7	$ 426	0 6
1910	76,700	10,091	13.2	3,762	4 9	2,480	3.2	8,990	11.7
1911	93,438	14,023	15.0	4,477	4 8	545	0 6	17,283	18 5
1912	102,851	20,497	19.9	6,859	6 7	385	0 4	9,798	9.5
1913	117,013	28,210	24.1	8,729	7 5	1,016	0 9	15,178	13 0
1914	123,836	33,038	26 7	10,553	8 5	5,725	4 6	12,548	10 1
1915	126,596	38,687	30 6	9,731	7 7	4,082	3.2	6,842	5.4
1916	129,060	40,900	31 7	6,467	5 0	4,254	3 3	6,718	5 2
1917	136,059	46,423	34 1	6,171	4.5	647	0.5	7,646	5.6
1921	155,182	65,852	42.4	6,268	4 0	*	*	*	*
1922	156,179	70,301	45 0	7,039	4.5	2,590	1.7	3,587	2.3
1923	158,855	75,696	47.7	7,676§	4 8	2,281	1.4	4,957	3.1

EXHIBIT 2.—(*Continued*)
PULLMAN CO. (1900–1926); PULLMAN, INC. (1927–1936)
(000 omitted)

Date	Plant	Reserve for depreciation	Per cent of plant	Depreciation expense	Per cent of plant	Plant retired†	Per cent of plant	Additions‡	Per cent of plant
July 31, 1924	$168,632	$ 75,375	44.7	$ 8,265§	4.9	$ 8,585	5.1	$18,362	10.9
1925	191,645	83,429	43 5	8,955§	4.7	902	0.5	23,915	12.5
1926	204,352	88,550	43 3	10,148§	5.0	5,027	2.5	17,734	8.7
Dec. 31, 1927	209,287**	*	....	7,526‖	...	*	*	*	*
1928	331,138	125,431	37.9	11,195	3.4	*	*	*	*
1929	347,907	135,766	39 0	11,542	3.3	1,207	0.3	17,976	5.2
1930	401,120	148,649	37.1	13,050	3.3	167	0.0	53,380	13.3
1931	394,238	157,348	39 9	13,105	3.3	4,406	1.1	.....	....
1932	369,189	166,142	45.0	12,759	3.5	27,150¶	7 4	2,101	0.6
1933	356,881	165,139	46 3	11,964	3 4	14,039	3.9	1,731	0.5
1934	362,021	175,913	48 6	11,993	3.3	2,103	0.6	7,243	2.0
1935	364,490	180,081	49 4	13,191	3 6	10,814	3.0	13,282	3.6
1936	370,692	192,334	51.9	14,342	3 9	3,526	1.0	9,728	2.6

* Not available.
† Actual figures for 1909–1931 not available. Figures shown computed as balance in Reserve for Depreciation at beginning of year, plus Depreciation Expense for year, less Reserve at end of year.
‡ Actual figures for 1909–1931 not available. Figures shown computed as increase in Plant for the year over Plant for the preceding year, plus plant retired during the year. This presumably understates new plant by the amount of salvage.
§ Includes special depreciation of $670,633 in 1923 and $1,000,000 in 1924–1926, set aside out of net income to provide for "Excess Cost of Replacement of Cars."
‖ For eight months only, May 1, 1927–December 31, 1927.
¶ Includes $20,936,418 of adjustments made out of Surplus.
** Net plant.
Source: Company reports.

EXHIBIT 3
PULLMAN CO. (1900–1926); PULLMAN, INC. (1927–1936)
(000 omitted)

Date	Carrier Business			Manufacturing Business			Total net	Dividends	Charge to surplus after dividends	Increase in surplus after dividends
	Earnings before depreciation	Depreciation	Net	Earnings before depreciation	Depreciation	Net				
July 31, 1900	$ 8,322	$ 1,699	$ 6,623	*	*	*	$ 6,623	$ 5,520	$.....	$1,103
1901	10,272	1,486	8,786	*	*	*	8,786	5,920	.....	2,866
1902	10,844	1,909	8,935	*	*	*	8,935	5,920	.....	3,015
1903	12,157	2,739	9,418	*	*	*	9,418	5,920	.....	3,498
1904	11,981	2,319	9,662	*	*	*	9,662	5,920	.....	3,742
1905	12,386	2,331	10,055	*	*	*	10,055	5,920	.....	4,135
1906	13,500	2,609	10,891	*	*	*	10,891	5,920	.....	4,971
1907	14,048	2,422	11,626	*	*	*	11,626	7,477	.....	4,149
1908	13,151	3,362	9,789	*	*	*	9,789	7,998	.....	1,791
1909	12,628	3,794	8,834	*	*	$ 2,114†	10,948	7,999	.....	2,949
1910	14,179	3,762	10,417	*	*	3,515†	13,932	8,799	.....	5,133
1911	13,012	4,477	8,535	*	*	2,605†	11,140	9,599	.....	1,541
1912	14,698	6,859	7,839	*	*	2,589†	10,428	9,599	.....	829
1913	17,206	8,729	8,477	*	*	2,664†	11,141	9,600	.....	1,541
1914	17,741	10,553	7,188	*	*	3,657†	10,845	9,600	.....	1,245
1915	17,909	9,731	8,177	*	*	2,369†	10,546	9,600	.....	946
1916	17,918	6,467	11,451	*	*	929†	12,380	9,600	.....	2,780
1917	18,082	6,171	11,911	*	*	1,720†	13,631	9,600	.....	4,031

EXHIBIT 3.—(*Continued*)
PULLMAN CO. (1900–1926); PULLMAN, INC. (1927–1936)
(000 omitted)

Date	Carrier Business			Manufacturing Business			Total net	Dividends	Charge to surplus after dividends	Increase in surplus after dividends
	Earnings before depreciation	Depreciation	Net	Earnings before depreciation	Depreciation	Net				
July 31, 1921	$ 6,441	$ 6,268	$ 173	*	*	$ 5,947†	$ 6,121	$ 9,600	$ 3,479	$.....
1922	7,366	7,039	327	*	*	3,945†	4,272	10,500	6,228	.....
1923	14,925	7,005	7,920	*	*	5,968†	13,888	10,800	.....	3,088
1924	14,964	7,265	7,699	*	*	7,904†	13,602	10,703	.....	2,899
1925	17,337	7,955	9,382	*	*	6,391‡	13,773	10,739	.....	3,034
1926	19,538	9,148	10,390	*	*	5,906‡	14,296	10,750	.....	3,546
Dec. 31, 1927§	15,915	6,748	9,167	$ 4,425	$ 778	3,647	11,502	6,070	.....	5,432
1928	22,478	9,994	12,484	4,126	1,202	2,924	16,397	13,492	.....	2,905
1929	20,765	10,338	10,427	7,365	1,203	6,162	17,679	13,518	.....	4,161
1930	16,367	10,676	5,691	12,420	2,373	10,046	16,943	15,000	.....	1,943
1931	13,783	10,520	3,264	440*d*	2,585	3,025*d*	2,379	14,528	12,149	.....
1932	8,774	9,994	1,220*d*	1,309*d*	2,766	4,075*d*	3,835*d*	11,460	15,295	.....
1933	8,622	9,186	564*d*	1,047*d*	2,778	3,825*d*	2,673*d*	11,460	14,133	.....
1934	9,808	9,211	597	4,075	2,782	1,293	2,958	11,460	8,502	.....
1935	8,906	10,553	1,647*d*	2,867	2,638	229	274*d*	10,028	10,302	.....
1936	16,032	11,839	4,193	5,248	2,503	2,745	6,347	5,731	.....	616

* Not available.
† Returns from Manufacturing, Interest, etc.
‡ Income from investments and dividends from Pullman Car & Manufacturing Corp., formed in 1924 to conduct the manufacturing business of Pullman Company.
§ For eight months only, May 1, 1927–December 31, 1927.
d = deficit.
Source: Company reports.

EXHIBIT 4
PULLMAN CO. (1900–1926); PULLMAN, INC. (1927–1936)
(000 omitted)

Date	Current assets	Net plant	Other assets	Total assets	Current liabilities	Other liabilities†	Common stock	Surplus
July 31, 1900	*	*	*	$ 78,896	*	*	$ 74,000	$ 4,896
1901	*	*	*	81,762	*	*	74,000	7,762
1902	*	*	*	84,778	*	*	74,000	10,778
1903	*	*	*	88,276	*	*	74,000	14,276
1904	*	*	*	92,017	*	*	74,000	18,017
1905	*	*	*	96,152	*	*	74,000	22,152
1906	*	*	*	101,122	*	*	74,000	27,122
1907	*	*	*	105,256	*	*	100,000	5,256
1908	$22,664	$ 64,749	$23,251‡	110,664	$ 3,617	$.....	100,000	7,047
1909	29,224	61,381	23,251‡	113,856	3,861	.....	100,000	9,995
1910	36,039	66,609	23,251‡	125,899	5,384	.....	120,000	515
1911	26,039	79,415	23,251‡	128,705	6,650	.....	120,000	2,055
1912	27,899	82,354	20,136‡	130,389	7,248	256	120,000	2,885
1913	21,394	88,802	20,136‡	130,332	5,624	283	120,000	4,425
1914	22,983	90,798	20,136‡	133,917	7,940	306	120,000	5,671
1915	26,791	87,909	20,136‡	134,836	5,488	330	120,000	6,618
1916	28,842	88,160	20,205‡	137,207	6,521	1,286	120,000	9,399
1917	33,576	89,635	20,178‡	143,389	7,627	2,331	120,000	13,431
1921	53,682	89,330	20,236‡	163,248	20,616	2,433	120,000	20,199
1922	54,178	85,879	36,692‡	176,749	17,900	2,478	135,000	21,371
1923	64,520	83,159	36,776‡	184,455	21,727	3,940	135,000	23,788

EXHIBIT 4.—(*Continued*)
PULLMAN CO. (1900–1926); PULLMAN, INC. (1927–1936)
(000 omitted)

Date	Current assets	Net plant	Other assets	Total assets	Current liabilities	Other liabilities†	Common stock	Surplus
July 31, 1924	$61,363	$ 93,256	$36,859‡	$191,478	$23,831	$ 5,961	$ 135,000	$ 26,686
1925	50,207	108,216	36,803‡	195,226	22,447	8,058	135,000	29,721
1926	48,246	115,802	36,894‡	200,942	22,070	10,605	135,000	33,267
Dec. 31, 1927	87,440	209,287	6,091	302,818	20,965	6,575	168,750	106,528
1928	92,900	205,707	6,923	305,530	20,254	7,093	168,750	109,433
1929	96,176	212,141	7,238	315,555	25,706	7,505	168,750	113,594
1930	92,274	252,471	7,532	352,277	19,538	7,996	193,750	130,993
1931	82,394	236,891	14,945	334,230	14,058	13,857	193,750	112,566
1932	75,171	203,048	10,742	288,961	10,893	12,269	191,034	74,765
1933	73,622	191,743	11,190	276,555	10,669	15,083	191,034	59,771
1934	69,475	186,109	12,854	268,438	10,513	15,998	191,034	50,893
1935	60,411	184,410	13,769	258,590	11,197	16,819	191,018	39,556
1936	73,212	178,358	13,665	265,235	15,303	18,957	191,017	39,958

* Not available.
† Includes reserves except Reserve for Depreciation.
‡ Includes Manufacturing Department, Plants and Investments, and, in 1924–1926, Pullman Car & Manufacturing Corp. Capital Stock.
Source: Company reports.

EXHIBIT 5
PULLMAN CO. (1900–1926); PULLMAN, INC. (1927–1936)
(000 omitted)

Date	Net income	Depreciation	Total funds available from operations	Dividends	Net funds available from operations after dividends	New plant†
July 31, 1900	$ 6,623	$ 1,699	$ 8,322	$ 5,520	$ 2,802	*
1901	8,786	1,486	10,272	5,920	4,352	*
1902	8,935	1,909	10,844	5,920	4,924	*
1903	9,418	2,739	12,157	5,920	6,237	*
1904	9,662	2,319	11,981	5,920	6,061	*
1905	10,055	2,331	12,386	5,920	6,466	*
1906	10,891	2,609	13,500	5,920	7,580	*
1907	11,626	2,422	14,048	7,477	6,571	*
1908	9,789	3,362	13,151	7,998	5,153	*
1909	10,948	3,794	14,742	7,999	6,743	$ 426
1910	13,933	3,762	17,695	8,799	8,896	8,990
1911	11,140	4,477	15,617	9,599	6,018	17,283
1912	10,428	6,859	17,287	9,599	7,688	9,798
1913	11,141	8,729	19,870	9,600	10,270	15,178
1914	10,845	10,553	21,398	9,600	11,798	12,548
1915	10,546	9,731	20,277	9,600	10,677	6,842
1916	12,380	6,467	18,847	9,600	9,247	6,718
1917	13,631	6,171	19,802	9,600	10,202	7,646
1921	6,121	6,268	12,389	9,600	2,789	*
1922	4,272	7,039	11,311	10,500	811	3,587
1923	13,888	7,676‡	21,564	10,800	10,764	4,957

EXHIBIT 5.—(*Continued*)
PULLMAN CO. (1900–1926); PULLMAN, INC. (1927–1936)
(000 omitted)

Date	Net income	Depreciation	Total funds available from operations	Dividends	Net funds available from operations after dividends	New plant†
July 31, 1924	$13,602	$ 8,265‡	$21,867	$10,703	$11,164	$18,362
1925	13,773	8,955‡	22,728	10,739	11,989	23,915
1926	14,296	10,148‡	24,444	10,750	13,694	17,734
Dec. 31, 1927§	11,502	7,526	19,028	6,070	12,958	*
1928	16,397	11,195	27,592	13,492	14,100	*
1929	17,679	11,541	29,221	13,518	15,703	17,976
1930	16,943	13,050	29,993	15,000	14,993	53,380
1931	2,379	13,105	15,484	14,528	956	.....
1932	3,835*d*	12,760	8,925	11,460	2,535*d*	2,101
1933	2,673*d*	11,964	9,291	11,460	2,169*d*	1,731
1934	2,958	11,993	14,951	11,460	3,491	7,243
1935	274*d*	13,191	12,917	10,028	2,889	13,282
1936	6,347	14,342	20,689	5,731	14,958	9,728

* Not available.
† Actual figures for 1909–1931 not available. Figures shown computed as increase in plant for the year over plant for the preceding year, plus plant retired during the year. This presumably understates new plant by the amount of salvage.
‡ Includes special depreciation of $670,633 in 1923 and $1,000,000 in 1924–1926, set aside out of net income to provide for "Excess Cost of Replacement of Cars."
§ For eight months only, May 1, 1927–December 31, 1927.
d = deficit.
Source: Company reports.

D. RETIREMENT ACCOUNTING

Boston Edison Company

THE RELATION BETWEEN DEPRECIATION AND RETIREMENT ACCOUNTING

The Boston Edison Company maintained its books of account in accordance with the instructions issued by the Massachusetts Department of Public Utilities.[1] Although, as in the New England Telephone and Telegraph Company case, accounting methods used differed somewhat for the various classifications of assets, the methods described in this case, as applied to poles, were typical of the company's accounting procedures with respect to plant and depreciation.

Poles were classified in Account E 125—Poles, Fixtures, and Overhead Conductors.[2] The cost of new poles installed was debited to Account E 125 and included the cost[3] of the poles laid down at the point of placement, plus charges for the labor and burden involved in installation.

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[1] Uniform System of Accounts for Gas and Electric Companies Prescribed by the Department of Public Utilities of Massachusetts, revised ed., January 1, 1934.

[2] Exhibit 1 presents Account E 125 in detail.

[3] Uniform System of Accounts, Massachusetts Department of Public Utilities—Basis of Charges to Plant Investment Accounts, Instruction 4, p. 19. "The charges to the accounts of this classification on account of expenditures for the acquisition of property and for improvements shall be based upon the cost of the property and the improvements, and the property shall be carried in the plant accounts at no more and no less than its actual cost unless, or until, such property is abandoned, replaced, reconstructed or converted. When the consideration given for the purchase of property or for the improvement of property chargeable to the accounts of this classification is anything other than money, the money value of the consideration at the time of the transaction shall be charged to these accounts, and the consideration shall be described in the record with sufficient particularity to identify it.

"Charges for materials and supplies shall be based upon the cost thereof at the places where they enter into construction, including cost of transportation and inspection when specifically assignable. If materials and supplies are passed through storehouses, their cost entered in these accounts may include the cost of handling said materials. . . .

"No adjustment of any plant accounts shall be made on the basis of any appraisal value. Should the department at any time find a certain value of the property for rate making or other purposes, such finding does not warrant changing the books of account (unless specifically so directed). The books are intended to show at all times the original cost to the company of its existing property less such credits as may have been made on account of property abandoned, sold, reconstructed or converted."

Credits to Account E 125 for pole retirements involved an estimate of original cost.[1] The company had maintained neither accounting records nor engineering data which enabled it to determine original cost for poles retired. It resorted therefore to an estimate based upon the assumption that the average age of poles removed was 15 years. Annually the company examined price levels in existence 15 years previous to the current year and with reference to these determined removal prices for the various types and sizes of poles in service. These prices were used to book the retirements which took place during the ensuing year.

Removal of poles with the intention of installing them elsewhere was handled in a somewhat different manner. Public requirements in connection with the construction of new highways often made changes necessary in the location of poles, and the accounting treatment followed under these circumstances involved a credit to Account E 125 at current prices. Upon subsequent reinstallation the same account was debited at current prices and the cost of moving was charged to the reserve for depreciation.

Periodic provisions for depreciation were accomplished through an entry debiting Account No. E 678—Depreciation[2] and crediting

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[1] Property Retired, Uniform System of Accounts, Department of Public Utilities of Massachusetts, Instruction 3, p. 19. "When property, the cost of which has been charged to plant accounts, is abandoned, sold or otherwise retired from service, whether replaced or not, the appropriate plant investment account shall be credited with the amount at which such property stands charged therein at the time of retirement. If the books do not show the cost thereof at the time of such retirement, the amount shall be estimated, and that fact and the basis of the estimate shall be noted in the entry. Concurrently, balance sheet Account No. 319—Depreciation Reserve shall be charged to the extent that the total balance in the reserve is sufficient to cover the cost of property retired; proper account shall be taken of salvage and insurance, and the remainder, if any, together with expenses incident to the abandonment, shall be charged to Profit and Loss Account No. 415—Appropriations of Surplus for Depreciation."

[2] Account E 678—Depreciation, Uniform System of Accounts, Department of Public Utilities of Massachusetts. "This account shall include monthly or periodic charges of the amount estimated to be necessary to provide for the retirement of property no longer used or useful in the conduct of the company's business, and for losses in value due to wear and tear not covered by current repairs.

"*Note.*—Until otherwise ordered, the amount estimated to cover the cost of property no longer used or useful in the conduct of the company's business, or for losses in value due to wear and tear, shall be determined by the accounting utility, based upon its best knowledge and experience in operation. A detailed statement of the basis used in determining the amount of such charge will be called for in the annual return to the department."

Account No. 319—Depreciation Reserve.[1] Although the instructions contained in the description of Account E 678 specifically stated that provision should be made for losses in value due to wear and tear, and notwithstanding the fact that the account titles involved indicated that the commission had intended to institute depreciation accounting, during the years preceding 1934 the practice of the company had corresponded more closely to retirement accounting. Credits to the depreciation reserve had been determined with reference to estimated future retirements from the depreciable assets of the company as a composite whole. No statistical records nor mathematical analyses were used to facilitate judgment as to the exhaustion of service life with respect to poles.

In addition to the regulations concerning Accounts E 678—Depreciation and 319—Depreciation Reserve, the Massachusetts Uniform System of Accounts provided for appropriations of surplus to increase the depreciation reserve.[2] The nature of the retirement accounting practiced by the Boston Edison Company is further revealed by the liberal use made of Instruction 415. Exhibit 2 shows that during the years 1921–1934 practically all the credits made to the depreciation reserve were derived from corresponding debits to the surplus account. Determination of the amount to be credited to the reserve was based upon consideration of probable future retirements, current earnings, and dividends. Preservation of capital through adequate provision for exhaustion of service capacity was not the primary objective of this type of accounting. The following statement taken from the company's 1933 return to the Massachusetts Department of Public Utilities is representative of the procedure used to determine credits to the depreciation reserve during

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[1] Account 319—Depreciation Reserve, Uniform System of Accounts, Department of Public Utilities of Massachusetts. "To this account shall be credited the amounts charged to operating expense or other accounts for the retirement of property no longer used or useful in the conduct of the company's business, and for losses in value due to wear and tear not covered by current repairs."

[2] Appropriations of Surplus for Depreciation, Uniform System of Accounts of Massachusetts, Instruction 415. "When the balance shown on balance sheet Account No. 319—Depreciation Reserve, is less than is necessary to provide for the retirement of property no longer used or useful in the conduct of the company's business, and for losses in value due to wear and tear not covered by current repairs, the company may charge this account and concurrently credit balance sheet Account No. 319—Depreciation Reserve, with such amounts as shall be deemed necessary to cover such deficiency."

the period 1921–1934: "The Company has no fixed 'rule' or 'rate' for determining the amount to be credited to the Depreciation Reserve, but at the end of each fiscal year transfers to the credit of this account whatever amount is authorized by the Executive Committee of the Company."

In 1934 the Massachusetts Public Utilities Commission, in connection with a rate case, issued an order requiring the Boston Edison Company to comply with certain regulations regarding accounting for depreciation. Subsequent to the issuance of this order, the company altered its accounting practice and in the 1934 return to the Department of Public Utilities presented the following statement concerning depreciation:

> The Company has agreed with the Department of Public Utilities, until otherwise ordered, to credit its depreciation reserve not less than $865,000 quarterly, beginning with the quarter ended September 30, 1934, before declaration or payment of dividends for the quarter. The Company understands that this credit includes the amortization of an investment in lamps on consumers' premises at the rate of $250,000 per year for a period of approximately ten years. The Company charged operating expenses and credited to its depreciation reserve a total of $1,730,000 in the latter two quarters of the year, and at the close of the year, so charged and credited an additional amount of $1,190,000 bringing the total credited to the reserve for the year to $2,920,000.

The $250,000 item referred to in the statement was not true depreciation, but more closely resembled the amortization of an expense incurred in the past. At one time the company renewed worn-out electric light bulbs with no charge to the customer. An investment of over $2,000,000 had been accumulated in lamps on consumers' premises when the practice was discontinued. The commission allowed the company 10 years in which to write off this investment, and amortization began in the quarter ending with September, 1934.

Since the reserve maintained by the Boston Edison Company was primarily a provision for future retirements, and since its function was principally that of equalizing the charges to expense occasioned by the scrapping or sale of depreciable assets, it was actually a segregation of surplus rather than a reduction in the asset values. Because of these characteristics of the reserve, the company had not considered a breakdown according to property classifications.

Under the circumstances, specific provision of a reserve to apply against Account E 125 would have been of little value. Assets in this account[1] consisted of a very large number of units so that poles removed in any particular year did not constitute a large percentage of the total. Furthermore, in an asset made up of a large number of units, replacements tended to occur in a uniform manner. For these reasons, charges against earnings for pole retirements were of manageable proportions and a reserve was not considered necessary, since the function of the reserve was to equalize charges for retirements over a series of periods.

In the company's own calculations and in its relations with the state commission, depreciation had not been thought of as a set percentage of the cost of depreciable assets. Difficulties had arisen, however, in connection with the depreciation charge to be allowed for Federal income tax returns. To settle this question, the company had gone before the Board of Tax Appeals at Washington to determine what a fair rate would be, and the board had set 2.33 per cent to apply as a composite rate on depreciable assets. Subsequently, in the records maintained for income tax purposes, the company adjusted the annual charge to operations and credit to depreciation reserve in an amount equal to the difference between the product of 2.33 per cent times depreciable assets and $3,460,000, the annual charge set by the state commission.

The Boston Edison Company was one of the largest independent companies operating completely within the boundaries of one state and as such did not fall under the jurisdiction of the Federal Power Commission. However, in its effort to cooperate with the government, it had undertaken the preparation of a report according to forms and instructions issued by the Federal Power Commission. Data called for in this report involved a breakdown of the reserve according to classes of depreciable assets. In the past the company had maintained plant ledgers only with respect to power plants and buildings. It was possible to tell exactly what changes had taken place in these accounts, while it was very difficult to trace transactions and balances in the other asset groups. Therefore the controller was forced to rely upon estimates and judgment to obtain the breakdown

[1] See Exhibit 3.

called for. The Massachusetts commission did not require a reserve breakdown, and the company did not believe that rearrangement of its accounting to accomplish segregation would be expedient.

In what important particulars did the methods used by this company in accounting for poles differ from those of the New England Telephone and Telegraph Company (pp. 338–350)?

EXHIBIT 1
BOSTON EDISON COMPANY
ACCOUNT E 125—POLES, FIXTURES, AND OVERHEAD CONDUCTORS

This account shall include the cost of poles and fixtures used for the purposes of transmission and distribution systems, including the cost of all towers, poles, cross arms, insulator pins, braces, brackets, and other pole fixtures and appliances, guys and other tower and pole supports.

This account shall also include the cost of all cables, wires, lightning arresters, insulators and devices installed on poles or other overhead fixtures and used for transmission and distribution purposes, including wires to the first point of attachment on the customer's premises.

When a company owns a joint interest in any poles and fixtures includible in this account, the amount representing the cost of such interest shall be carried in a subaccount hereunder. This applies only to actual joint ownership and not to payments made for the right to use the property.

Note.—Separate subaccounts shall be set up to show the cost of transmission and distribution lines. The cost of lines constructed subsequent to January 1, 1934, shall be so set up and the cost of lines constructed prior to that time as near as may be.

a. Transmission Lines: Lines used for transmitting electric energy in bulk between stations or between points of generation, purchase, or sale, and points of transformation or distribution.

b. Distribution System Lines:

1. Distribution System Supply Lines: Lines used for receiving electric energy from transmission stations or points of generation for transmission to distribution or customers' stations and lines used to deliver electric energy between distribution or customers' stations.
2. Distribution Lines: Lines used entirely for distributing electric energy from distribution stations to consumers.

c. Poles for multipurpose use, *i.e.*, for supporting conductors of more than one classification.

Source: Uniform System of Accounts prescribed by the Department of Public Utilities of Massachusetts.

EXHIBIT 2
BOSTON EDISON COMPANY
SELECTED DATA ON PLANT, DEPRECIATION, INCOME, AND DIVIDENDS
(000 omitted)

Year	Poles, Fixtures, and Overhead Conductors				Total property as of Dec. 31	Total retirements	Total retirements as per cent of total property	Credits to depreciation reserve	Credits as per cent of total property	Reserve for depreciation	Reserve as per cent of total property	Net profits	Dividends declared
	Balance at beginning of year	Additions	Retirements	Retirements as per cent of beginning balance									
1921	$ 8,456	$ 227	$ 33	0 4	$ 67,347	$ 112	0 2	$ 60	0 09	$ 1,771	2.6	$ 1,455	$1,352
1922	8,546	771	218	2.6	71,542	661	0 9	800*	1 10	1,909	2.7	4,045	3,241
1923	9,100	819	113	1 2	82,530	247	0 3	1,350*	1.60	3,012	3 6	5,216	3,891
1924	9,810	903	173	1.8	103,069	767	0 7	1,800*	1 70	4,045	3 9	6,563	4,668
1925	10,540	892	192	1 8	113,735	1,157	1 0	1,300*	1 10	4,188	3.7	6,704	5,606
1926	11,242	702	214	1.9	120,567	1,688	1.4	2,300*	1 90	4,800	4.0	7,772	5,606
1927	11,731	2,217	306	2 6	131,454	2,131	1.6	3,200*	2 40	5,869	4.5	9,248	6,006
1928	13,642	1,073	787	5 8	138,585	2,359	1.7	3,950*	2 90	7,460	5.4	10,487	6,407
1929	13,927	1,254	418	3 0	149,857	2,348	1.6	3,300*	2.20	8,412	5.6	10,563	6,840
1930	14,880	1,051	132	0 9	160,288	1,806	1.1	2,650*	1.70	9,256	5.8	10,069	7,274
1931	15,832	780	148	0 9	166,400	1,692	1.0	2,750*	1.70	10,314	6.2	10,052	7,274
1932	16,464	781	176	1 1	169,397	1,434	0 8	2,400*	1 40	11,281	6.7	9,033	6,632
1933	17,002	526	172	1 0	170,427	1,358	0.8	3,275*	1 90	13,198	7.7	8,641	5,349
1934	17,356	542	221	1.3	166,305	1,947	1.2	2,920	1 80	14,171	8 5	5,188	4,814
1935	17,678	286	264	1 5	165,072	3,292	2 0	3,710†	2 20	14,589	8.8	5,046	4,279
1936	17,688	304	272	1 5	164,451	2,637	1 6	3,460	2.10	15,412	9 4	5,171	4,773
1937	17,690	39	531	3 0	165,707	2,024	1 2	3,460	2.10	16,848	10.2	5,382	4,937

* Corresponding debit to Surplus.
† $250,000 debit to Surplus.
Source: Annual returns to Massachusetts Department of Public Utilities.

EXHIBIT 3
BOSTON EDISON COMPANY
DISTRIBUTION SYSTEM—OVERHEAD POLES

Height	Owned exclusively by company		Jointly owned*	
	Wooden	Iron or steel	Wooden	Iron or steel
15	24	13	4	9
18	.	36	.....	22
20	202	..	56	..
25	1,322	.	600	..
27	. ....	19	.....	2
30	14,446	12	7,574	2
35	27,296	..	50,158	..
40	4,791	..	6,066	..
45	1,089	..	1,097	..
50	365	.	205	..
55	139	..	76	..
60	80	..	45	..
65	36		16	..
70	16	..	1	..
75	7		. . ..	..
Total† . .	49,813	80	65,898	35
Last Year	51,151	68	62,880	23

* Refers to cooperative use of poles with telephone company. *See* New England Telephone and Telegraph case for explanation of this arrangement.

† Total of poles in distribution system only. Poles for transmission lines and for multi-purpose use constituted a very small portion of the total number of poles in service.

Source: 1937 return of Boston Edison Company to Massachusetts Department of Public Utilities.

Long Point Gas Company

THE EFFECT OF DEPRECIATION POLICY ON THE INTERESTS OF INVESTORS

Although in conformity with Massachusetts practice its reserve was called a depreciation reserve, this company used retirement accounting. The amount of depreciation charged for the last few years has been low in comparison with other companies in the industry, but it has been sufficient to cover all retirements and leave a balance in the depreciation reserve greater than that of 1924.

A condensed balance sheet, income statement, and profit and loss statement are given, together with a series of exhibits, the figures for which have been taken from data on file in the Massachusetts Department of Public Utilities.

In Exhibit 1, figures are given showing depreciation and maintenance charged since 1922, and the relation of these amounts to plant, operating revenues, gross income, and reserve for depreciation.

It is possible from these figures to compute what the results would have been if the company had charged 3, 4, or 5 per cent of its total cost of property as depreciation each year since 1922. For this purpose it is assumed that additions to plant, retirements, maintenance, and other expenses, except interest, remained as shown in Exhibit 1. Presumably the amount of interest would have been changed because the operation of depreciation would have retained more current assets in the business. The results under these assumed conditions are indicated in Exhibit 2.

Exhibit 3 shows income reported, dividend payments, and funds derived from the issue of stocks or bonds. It also gives plant additions and retirements since 1922.

For comparative purposes the plant, operating revenues, maintenance, and depreciation figures in 1934 for 28 other Massachusetts gas companies are given in Exhibit 4.

In 1935, after a re-examination of the depreciation policy, two proposals were made: One was that the company should increase its retirement expense moderately, looking toward the accumulation of a substantial reserve of the order of 30 per cent over a period of approximately 15 years. It was suggested that the

company be somewhat more vigorous during this period in retiring plant items no longer fully useful so that at the end of the period, all property, the economic life of which was exhausted, would be retired physically and credited out of the plant records. A second proposal was that the company should create immediately a reserve sufficient to record accumulated depreciation in full. It was realized that this probably would require a write-down of the par value of the capital stock. It was contemplated under the second proposal that after this change, sufficient depreciation would be charged to keep the reserve at a point at which it would record at all times the full amount of accrued depreciation. Any property no longer useful and which had not yet been retired was to be retired as a part of this restatement. In addition, provision was to be made for keeping the property fully maintained, and all costs connected therewith were to be charged annually to operations.

Many directors objected to both proposals and maintained that the company should continue in maintenance and depreciation the policy it had followed from 1927 to 1934.

What policy should the corporation follow with respect to depreciation and related matters of maintenance and retirement? Consider the effects of the policy you advocate on the book value of assets, income, working capital position, and capital structure.

LONG POINT GAS COMPANY
CONDENSED BALANCE SHEET AS OF DECEMBER 31, 1934

ASSETS		LIABILITIES	
Total Cost of All Property	$6,475,670	Capital Stock	$4,770,320
Other Investments	30,101	Bonds Payable	1,360,000
Total	$6,505,771	Total	$6,130,320
Cash	$ 79,498	Accounts Payable	$ 40,893
Notes and Accounts Receivable	264,393	Consumers' Deposits	10,439
Materials and Supplies	282,050		
Total Current Assets	$ 625,941	Total Current Liabilities	$ 51,332
Prepaid Accounts and Other Unadjusted Debits	$ 15,682	Accrued Liabilities and Unadjusted Credits	$ 20,829
Unamortized Debt Discount and Expense	14,600	Other Reserves	59,984
		Depreciation Reserve	308,678
		Profit and Loss Balance	590,851
	$7,161,994		$7,161,994

Condensed Income Statement
For the Year Ending December 31, 1934

Operating Income	
Operating Revenues	$1,415,898
Operating Expenses	927,535
Net Operating Revenues	$ 488,363
Uncollectible Operating Revenues	$ 16,000
Taxes	209,655
Net Operating Income	$ 262,708
Nonoperating Income	470
Gross Income	$ 263,178
Interest on Bonds	55,293
Amortization of Discount	8,550
Miscellaneous Deductions	6,101
Income Balance	$ 193,234

Profit and Loss Statement
For the Year Ending December 31, 1934

Credit Balance at Beginning of Fiscal Period	$659,929
Credit Balance Transferred from Income Account	193,234
Miscellaneous Credits	1,010
	$854,173
Dividend Appropriations of Surplus	263,322
Balance Carried Foward to Balance Sheet	$590,851

EXHIBIT 1
LONG POINT GAS COMPANY

Dec. 31	Total assets	Total cost of all property	Operating revenues	$ of property per $ of operating revenues	Gross income (before interest)	Rate of return on total assets	Maintenance	Per cent of operating revenues	Per cent of total cost of all property
1922	$4,138,880	$3,367,533	$1,509,403	$2 23	$372,043	8 99	$ 93,056	6 17	2 76
1923	4,438,430	3,413,690	1,493,741	2 29	383,206	8 63	106,269	7 11	3 11
1924	4,628,429	3,581,882	1,459,238	2 45	284,058	6 14	98,470	6 75	2 75
1925	4,734,917	3,870,914	1,470,430	2 63	296,992	6 27	101,456	6 90	2 62
1926	5,097,888	4,264,285	1,481,453	2 88	285,354	5 60	121,301	8 19	2 84
1927	5,531,738	4,396,189	1,531,280	2 87	329,842	5 96	163,982	10 71	3 73
1928	6,089,538	4,958,240	1,598,387	3 10	293,688	4.82	137,506	8 60	2 77
1929	6,750,989	5,740,429	1,749,685	3 28	395,166	5 85	173,134	9 90	3 02
1930	7,335,395	6,171,749	1,849,261	3 34	420,730	5 74	221,675	11 99	3 59
1931	7,338,699	6,375,680	1,807,406	3 53	436,320	5 95	188,934	10 45	2 96
1932	7,491,795	6,425,862	1,665,917	3 86	409,901	5 47	160,480	9 63	2 50
1933	7,142,154	6,452,182	1,492,541	4 32	347,379	4.86	126,789	8 49	1 97
1934	7,161,994	6,475,670	1,415,898	4 57	263,178	3.67	156,733	11 07	2.42

Dec. 31	Depreciation	Per cent of operating revenues	Per cent of total cost of all property	Maintenance and depreciation	Per cent of operating revenues	Per cent of total cost of all property	Reserve for depreciation	Per cent of total cost of all property
1922	$ 63,840	4.23	1 90	$156,896	10 39	4 66	$150,122	4.46
1923	62,405	4.18	1 83	168,674	11 29	4.94	138,453	4.06
1924	132,626	9.09	3 70	231,096	15 84	6 45	251,970	7 03
1925	132,960	9 04	3.43	234,416	15 94	6.06	371,338	9 59
1926	150,720	10.17	3 53	272,021	18 36	6.38	495,395	11 62
1927	43,069	2.81	0 98	207,051	13 52	4 71	528,499	12 02
1928	46,419	2.90	0.94	183,925	11 51	3 71	519,019	10 47
1929	34,099	1.95	0 59	207,233	11 85	3.61	432,101	7 53
1930	2,427	0 13	0 04	224,102	12 12	3 63	353,552	5 73
1931	36,320	2 01	0 57	225,254	12 46	3 53	323,613	5 08
1932	31,867	1 91	0 50	192,347	11 55	2.99	347,203	5 40
1933	5,232	0 35	0 08	132,021	8 85	2.05	321,382	4 98
1934	2,389	0 17	0 04	159,122	11 24	2.46	308,678	4 77

EXHIBIT 2
LONG POINT GAS COMPANY

Dec. 31	Depreciation	Gross income	Rate of return on total assets	Reserve for depreciation	Per cent of reserve to total cost all property	Total cost of all property net of reserve
Depreciation at 3 Per Cent of Total Cost of All Property						
1922	$101,026	$334,857	8.09	$ 187,308	5.56	$3,180,225
1923	102,411	343,200	7.73	227,314	6.66	3,186,376
1924	107,456	309,228	6.68	202,144	5.64	3,379,738
1925	116,127	313,825	6.63	185,311	4.79	3,685,603
1926	127,929	308,145	6.04	162,520	3.81	4,101,765
1927	131,886	241,025	4.36	251,337	5.72	4,144,852
1928	148,747	191,360	3.14	353,665	7.13	4,604,575
1929	172,213	257,052	3.81	491,779	8.57	5,248,650
1930	185,152	238,005	3.24	674,504	10.93	5,497,245
1931	191,270	281,370	3.83	829,454	13.01	5,546,226
1932	192,776	248,992	3.32	990,363	15.41	5,435,499
1933	193,565	159,046	2.23	1,178,696	18.27	5,273,486
1934	194,270	71,297	1.00	1,370,577	21.17	5,105,093
Depreciation at 4 Per Cent of Total Cost of All Property						
1922	$134,701	$301,182	7.28	$ 220,983	6.56	$3,146,550
1923	136,548	309,063	6.96	295,126	8.65	3,118,564
1924	143,275	273,743	5.91	305,441	8.53	3,276,441
1925	154,837	275,115	5.81	327,318	8.46	3,543,596
1926	170,571	265,503	5.21	347,169	8.14	3,917,116
1927	175,848	197,063	3.56	479,948	10.92	3,916,241
1928	198,330	141,777	2.33	631,859	12.74	4,326,381
1929	229,617	199,648	2.96	827,377	14.41	4,913,052
1930	246,870	176,287	2.40	1,071,820	17.37	5,099,929
1931	255,027	217,613	2.97	1,290,527	20.24	5,085,153
1932	257,034	184,734	2.47	1,515,694	23.59	4,910,168
1933	258,087	94,524	1.32	1,768,549	27.41	4,683,633
1934	259,027	6,540	0.09	2,025,187	31.27	4,450,483
Depreciation at 5 Per Cent of Total Cost of All Property						
1922	$168,377	$267,506	6.46	$ 254,659	7 56	$3,112,874
1923	170,685	274,926	6.19	362,939	10.63	3,050,751
1924	179,094	237,590	5.13	409,407	11.43	3,172,475
1925	193,546	236,406	4.99	469,993	12.14	3,400,921
1926	213,214	222,860	4.37	532,487	12.49	3,731,798
1927	219,809	153,102	2.77	709,227	16.13	3,686,962
1928	247,912	92,195	1.51	910,720	18.37	4,047,520
1929	287,021	142,244	2.11	1,163,642	20.27	4,576,787
1930	308,587	114,570	1.56	1,469,802	23.81	4,701,947
1931	318,784	153,856	2.10	1,752,266	27.48	4,623,414
1932	321,293	120,475	1.61	2,041,692	31.77	4,384,170
1933	322,609	30,002	0.42	2,359,069	36.56	4,093,113
1934	323,784	58,217*d*	0.81*d*	2,680,464	41.39	3,795,206

d = deficit.

EXHIBIT 3
LONG POINT GAS COMPANY

Dec. 31	Net income (after interest)	Dividends paid	New capital stock issued	Bonds issued	Additions to total cost of all property	Retirements from total cost of all property
1922	$ 329,886	$ 110,664	$.....	$.....	$ 213,394	$ 3,043
1923	338,883	159,848	.....	.....	120,534	74,379
1924	237,869	196,736	.....	.....	184,526	16,333
1925	267,454	213,133	819,840	.....	302,784	13,752
1926	275,482	262,323	.....	.....	420,707	27,336
1927	307,574	262,323	.....	.....	211,149	79,245
1928	262,403	262,323	1,225,440	.....	592,587	30,536
1929	371,771	365,528	86,160	.....	908,906	126,717
1930	367,826	367,251	.....	.....	518,421	87,099
1931	378,742	367,251	.....	.....	279,048	75,118
1932	334,598	377,917	179,680	1,200,000	59,499	9,315
1933	275,358	333,922	....	.....	62,122	35,802
1934	193,234	263,322	.... ..	160,000	40,128	16,640
Total	$3,941,080	$3,542,541	$2,311,120	$1,360,000	$3,913,805	$595,315

EXHIBIT 4
LONG POINT GAS COMPANY

Companies	Total cost of all property	Operating revenues	$ of property per $ of operating revenues	Maintenance	% of operating revenues	% of total cost of all property	Depreciation
Purchased Gas							
Boston Cons. Gas	$46,798,700	$10,734,142	$4 36	$981,931	9.15	2.10	$336,758
Arlington Gas Lt	3,049,246	952,727	3 20	39,848	4.18	1 31	84,000
Old Colony Gas	2,601,776	548,014	4 75	25,808	4.71	0.99	29,400
Suburban Gas & Elec	1,273,251	437,739	2 91	28,912	6.60	2.27	1,604
Beverly Gas & Elec	1,271,806	288,429	4 41	25,434	8.82	2.00	7,988
Dedham & Hyde Park Gas & Elec. Lt	840,291	245,858	3 42	24,589	10.00	2.93	20,000
Attleboro Gas Lt	581,598	191,490	3.04	6,649	3.47	1 14	14,359
Marlborough-Hudson	547,253	161,204	3 39	7,305	4.53	1 33	18,630
N. Attleboro Gas	232,447	79,077	2 94	5,609	7.09	2 41	2,156
Haverhill Elec	275,503	77,153	3 57	4,164	5.40	1.51	3,547
Norwood Gas	301,965	75,965	3 98	2,963	3.90	0 98	10,824
Plymouth Gas Lt	345,012	72,518	4.76	1,587	2.19	0.46	13,076
Coal Gas Made							
Springfield Gas Lt	9,384,244	1,889,402	4.97	238,347	12 61	2.54	29,388
Cambridge Gas Lt	4,251,152	1,379,604	3.08	149,331	10.82	3.51	102,759
Lowell Gas Lt	3,563,546	741,805	4 80	71,522	9.64	2.01	49,556
Fitchburg Gas & Elec	1,172,133	253,411	4.63	31,761	12.53	2.71	2,280
Water Gas Made							
Haverhill Gas Lt	2,396,876	570,709	4.20	36,655	6.42	1.53	35,000
Pittsfield Coal Gas	1,925,908	425,252	4 53	32,813	7.72	1.70	36,000
Gloucester Gas Lt	686,409	184,666	3 72	17,462	9.46	2.54	18,000
Northampton Gas Lt	729,727	193,208	3.78	12,555	6.50	1.72	18,000
Webster & Southbridge Gas & Elec	715,899	178,623	4.01	12,666	7.09	1.77	12,000
Greenfield Gas Lt	632,018	142,294	4 44	8,158	5.73	1.29	4,552
Leominster Gas Lt	552,285	118,393	4.66	13,915	11.75	2.52	12,000
Coal & Water Gas							
Worcester Gas Lt	10,003,686	2,012,723	4.97	207,426	10 31	2.07	125,916
Lynn Gas & Elec	5,546,851	1,173,072	4 73	133,704	11 40	2 41	94,512
Fall River Gas	3,819,119	886,687	4 31	71,574	8.07	1 87	65,667
Salem Gas Lt	1,904,217	560,961	3.39	50,769	9.05	2.67	14,502
Taunton Gas Lt	1,883,081	503,711	3.74	62,646	12.44	3.33	64,780

EXHIBIT 4.—(*Continued*)
LONG POINT GAS COMPANY

Companies	% of operating revenues	% of total cost of all property	Maintenance and depreciation	% of operating revenues	% of total cost of all property	Reserve for depreciation	% reserve to total cost all property
Purchased Gas							
Boston Cons. Gas	3 14	0 72	$1,318,689	12 28	2 82	$1,889,525*	4 04
Arlington Gas Lt	8 82	2 75	123,848	13 00	4 06	566,151	18 57
Old Colony Gas	5 36	1 13	55,208	10 07	2 12	750,883	28 86
Suburban Gas & Elec	0 37	0 13	30,516	6 97	2 40	265,560	20 86
Beverly Gas & Elec	2 77	0 63	33,422	11 59	2 63	118,257	9 30
Dedham & Hyde Park Gas & Elec. Lt	8 13	2 38	44,589	18 14	5 31	177,108	21.08
Attleboro Gas Lt	7 50	2 47	21,008	10 97	3 61	144,470	24.84
Marlborough-Hudson	11 56	3 40	25,935	16 09	4.74	92,291	16.86
N. Attleboro Gas	2 73	0 93	7,765	9.82	3 34	58,259	25 06
Haverhill Elec	4 60	1 29	7,711	10 00	2 80	44,116	16 01
Norwood Gas	14 25	3 58	13,787	18 15	4 57	52,413	17.36
Plymouth Gas Lt	18 03	3 79	14,663	20.22	4 25	54,151	15 70
Coal Gas Made							
Springfield Gas Lt	1 56	0 31	267,735	14 17	2 85	81,261	0.87
Cambridge Gas Lt	7 45	2 42	252,090	18 27	5 93	1,503,607	35 37
Lowell Gas Lt	6 68	1 39	121,078	16 32	3 40	642,094	18 02
Fitchburg Gas & Elec	0 90	0 19	34,041	13 43	2.90	178,845	15 26
Water Gas Made							
Haverhill Gas Lt	6 13	1 46	71,655	12 56	2 99	438,867	18 31
Pittsfield Coal Gas	8.47	1 87	68,813	16 18	3 57	273,240	14 19
Gloucester Gas Lt	9 75	2.62	35,462	19 20	5 17	161,630	23.55
Northampton Gas Lt	9 32	2 47	30,555	15 81	4 19	222,504	30.49
Webster & Southbridge Gas & Elec	6 72	1.68	24,666	13 81	3 45	201,384	28.13
Greenfield Gas Lt	3 20	0.72	12,710	8 93	2 01	110,724	17.52
Leominster Gas Lt	10 14	2.17	25,015	21.89	4 69	178,361	32.30
Coal & Water Gas							
Worcester Gas Lt	6 26	1.26	333,342	16 56	3 33	1,103,530	11.03
Lynn Gas & Elec	8 06	1.70	228,216	19.45	4 11	1,357,338	24.47
Fall River Gas	7 41	1 72	137,241	15 48	3 59	545,014	14 27
Salem Gas Lt	2.59	0.76	65,271	11 64	3.43	119,518	6 28
Taunton Gas Lt	12 86	3.44	127,426	25 30	6 77	892,019	47.37

* Special Retirement Reserve, $1,629,346, appropriation of surplus; Depreciation Reserve, $260,179.
Sources: Annual returns to Massachusetts Department of Public Utilities.

Detroit Edison Company—No. 2

DEPRECIATION ACCOUNTING POLICY

The Detroit Edison Company was incorporated under the laws of the State of New York in January, 1903, for the purpose, among other things, of engaging in the manufacture, distribution, and sale of electricity in the City of Detroit, the State of Michigan and elsewhere; in the same month it was licensed to do business in Michigan. In 1937 the operations of the company were carried on solely by the Detroit Edison Company, certain of its subsidiaries having been merged with the parent company and certain others existing as inactive subsidiaries owning electric distribution franchises.

The capitalization of the company was represented in 1937 (1) by common capital stock which had been sold in most part for cash at its par value of $100 per share and (2) by general and refunding mortgage bonds secured by a lien on all the properties of the company under an "open end" indenture; there was no preferred stock nor any subsidiary or underlying stocks or bonds except $320,000 bonds of Great Lakes Power Company due in 1941. This simplicity in capitalization reflected a series of steps consolidating and refunding earlier issues. For all security issues since 1909 the regulatory body had set a minimum price and required (1) the showing of necessity for the issue and (2) an accounting for the proceeds.

The franchise area of the company in 1937 was about 7,630 sq. miles and the population served approximated 3,000,000. The company properties included four large steam-electric plants and 164 electric substations, together with the necessary transmission and distribution lines, four steam heating plants in downtown Detroit, and a gas plant supplying gas service in Port Huron and St. Clair River towns.

In 1915 the Michigan Railroad Commission ordered an appraisal of all company properties for its guidance in considering security issues. When an inventory and valuation were made by engineers employed by the commission, several differences in detail appeared, but in total the appraised value somewhat exceeded the book value, and no change of the books was ordered or made. Subsequently the company had reported to the commission in

detail at six-month intervals all additions to the property investment account and all retirements of property items. Thus there was a complete record on file with the commission by reference to which the property investment account could be verified or reconstructed.

The plant investment figure shown upon the balance sheet as at December 31, 1936, represented largely historical cost to the present company, approximately nine-tenths of the total plant having been purchased or installed by it. The property account was, however, not entirely a record of the cost of physical items of property, new, less retired items, since the company had during its life purchased some 40 going concerns, the price in each case including going value and goodwill as well as physical assets. The practice had been to examine all physical assets purchased in such cases and value them, item by item, according to expectancy of their continuing usefulness. When original cost to the vendor was available, however, that figure less depreciation had been placed upon the company's books. The sum of the differences between net inventory value and purchase price was included as a separate item in the plant investment account and represented less than 2 per cent of the total figure.

In 1937 approximately 94 per cent of the gross revenue of the company was derived from its principal business—electricity; steam heating accounted for about 4 per cent and gas business in the Port Huron area for about 1 per cent.

The policy of the company with respect to depreciation is reflected in the following excerpts from Detroit Edison annual reports.

Retirement Reserve—Depreciation[1]

Another question which has been asked is what our policy is with respect to depreciation. The Uniform Classification of Accounts provides for our charging a monthly item of Retirement Expense as part of the cost of doing business, which item is transferred into a Retirement Reserve. Against that Retirement Reserve there is written off, at the time of retirement, the book value of each item of plant or property retired from service for any cause whatsoever. There is no mandate by the Commission as to the amount which shall be put into the Reserve monthly. We, of course, observe literally the rule about

[1] Annual report, 1926.

writing off all retired property, and we have exercised our best judgment as to the amounts which should be put into reserve to provide for prospective retirements. But we have refrained from setting up any mathematical rule which would bind us to make monthly charges according to the estimated life of any piece or part of our plant. We have increased or supplemented our monthly appropriations to Retirement Reserve,

(*a*) when we foresaw earlier retirement of any large item or class of property,

(*b*) when and as the total investment in depreciable property was increased, and further,

(*c*) when we had good years we have made further supplemental additions to the Reserve.

Conversely, we have revised our estimates of requirements in the direction of a decrease when apparatus in service proved to be more durable than we had expected, and we have made smaller appropriations when net earnings for the time being were definitely less than we had anticipated.

The condition of affairs at the end of 1926 is that the Retirement Reserve has a balance of $14,078,828.41 which, when compared to the observed condition of our depreciable property, is enough to take care of the retirements expected in the next few years, even though we should be unable to make intended additions to the Reserve in those same years.

We are aware of a theory which would require us to make a calculated addition to a Reserve as a yearly or monthly expense item, whether the net earnings for the period were adequate or otherwise. That theory provides a reserve to meet the Retirement charges as they actually arrive, but it does not allow the Reserve to serve its equally useful purpose of allowing the fat years of business to make provision against the lean years. Instead of a Reserve, that theory sets up an Encumbrance.

Our use of a Reserve does not stop us from recognizing by special accounting the fluctuating value of exceptional items of our plant investment; for instance, automobiles. Our practice is to take automobiles (including trucks) into our investment account at 50% of purchase price. Inasmuch as we have in effective use 425 automobiles of all sorts and of all ages, from one month up, it is a safe method which carried the lot at half price.

This discussion can be summed up by saying that all of our Company's property is in first class condition; that the daily maintenance charged directly to operation is ample; that the provision made for the retirement of property because of cumulative wear and tear or obsolescence is adequate for any retirements reasonably to be expected in the next few years; that our method is to keep well informed as to the actual condition and probable usefulness of all apparatus and to treat calculations of accruing depreciation solely as intelligent estimates, which must be revised by actual experience; and that our policy is to

increase the present margin of Retirement Reserve when and as it is timely to do so.

Discussion of the relation of the Maintenance and Retirement Reserve accounts was included in the annual report for 1929:

There is no present occasion for extra appropriations into Retirement Reserve (Depreciation).

. . . . . .

The charges to maintenance increased more than proportionally—the figure being $3,589,251, while the 1928 figure was $3,017,398. The explanation is that we are rebuilding certain wire lines . . . and that the rebuilding includes work which would have become chargeable to maintenance during subsequent years. In dividing the cost between Retirement Reserve and Maintenance Account, we observed that good accounting required a charge to be made to Maintenance Account according to these forestalled costs. To do otherwise would have made a deceptive reduction in the charged maintenance costs.

Further outlines as to depreciation policy were made in the 1934 report:

We seek to provide for retirement as we foresee it is likely to occur. This year, when actual retirements were unexpectedly large, we made an extraordinary appropriation out of earnings to retirement reserve. In good years we set aside more and in poor years less, realizing that it is the pressure of good business which above all accelerates retirements. We believe our method is sound, and it depends upon judgments based on intimate knowledge of the property. The federal tax officials who can have no such knowledge on which to base judgment, require, for tax purposes, the use of a uniform "rule of thumb" method, and we have conformed to their requirement. This means that our federal income tax returns show as "depreciation" sums which vary considerably from our appropriations to "Retirement Reserve." In some years our appropriations have been larger, but the aggregate of "depreciation" reserves conforming to the Government's theory substantially exceeds our own "Retirement Reserve."

. . . . . .

It should be remembered that Maintenance is designed to keep up original operating efficiency. It is an entirely separate account from the Retirement Reserve, which through its credits and charges provides for the discarding of property from service.

A study conducted by the company showed that in the 11 years preceding 1932 almost two-thirds of all retirements were due to inadequacy and only in small part to the physical wearing out of apparatus or buildings. For example, in 1903 a power house was

built to replace an existing one which had become inadequate; the probable life of the new unit might conservatively have been estimated at 20 to 25 years. This unit was built at four times the capacity of the original unit but in 1910 it was replaced as inadequate because of the requirements of population growth upon serviceable size. An example of entirely unforeseeable obsolescence occurred with a group of oil circuit breakers (automatic switches for cutting out the line). For the protection of the equipment these switches had been immersed in an oil bath in order to quench the arc when the circuit was broken, but they were necessarily taken out and replaced by direct cables to the tanks when the oil in several cases had caused an explosion by becoming ignited.

During the depression the executives stated that the cessation of plant expansion had "lessened the requirements for appropriations into and out of the Retirement Reserve and that Reserve has continued to increase so as to cover careful estimates of the next few years."

In short, the company's policy might be summarized according to one of the executives as being based upon "good sense and judgment and what the earnings will stand—expressed in a round figure." The reserve was looked upon as a purely equalizing reserve and not as a measure of accrued depreciation. No complete life expectancy records were maintained by the company, and a lump-sum reserve was maintained, there being no breakdown by classes of property.

The Control Department prepared for the executive committee each year, on a five-year cumulative basis, a schedule of anticipated retirements. This report, entitled "Estimated Retirement Charges" (Exhibit 1), presented in detail the items which the operating heads believed should be retired within the succeeding five years. These estimates were based upon careful physical examination, as well as evaluation of obsolescence and inadequacy possibilities. For example, as to poles, which were identified by numbers, tests for butt rot, etc., were made. In 1933 an entire Delray Power House, shown on the books at approximately $4,000,000, was to be retired and was included in this report as a single retirement unit. A comparison of the report total for the ensuing five years was then made with the Retirement Reserve balance, and consideration was given to the probable annual

expense charge and reserve credits necessary during that period to insure the continued "adequacy of the reserve balance."

The funds provided by operating charges to retirement expense were not segregated, but were regarded as general funds at the service of the company's properties and business. This depreciation policy was believed to be sanest and most expedient. For Federal income tax purposes a 3.48 per cent depreciation rate was allowed and taken.

The company had never had a rate base formally determined by the Michigan regulatory body; it was generally assumed that the rate base was equal to the sum of working capital and gross plant, less some depreciation. In a hearing during 1936 a 10 per cent depreciation deduction was suggested by an engineer of the commission on the grounds that a plant maintained at 90 per cent represented the satisfactory average situation. A 5½ per cent to 6½ per cent rate of return had been allowed by the commission. A company executive characterized the relations with the commission as based upon "frank statements of fact plus common sense" and a mutual attitude of "comparative informality."

The balance sheet of the Detroit Edison Company at December 31, 1936, is given below. Exhibit 1 shows the estimated retirement charges; Exhibit 2 presents a comparative statement of Profit and Loss for the period 1903–1936, inclusive; and Exhibit 3 is a statement of Operating and Nonoperating Expenses for the same period. Exhibit 4 represents a running analysis of the Retirement Reserve 1922–1936, inclusive.

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1. Comment on the method of keeping the property account employed by the company.

2. Do you consider the Detroit Edison depreciation policies satisfactory from the point of view of the parties at interest?

3. Do you agree with the proposition that because of decreased retirements in depression years lower charges to operations in respect of retirement expense (depreciation) are feasible?

THE DETROIT EDISON COMPANY
(A NEW YORK CORPORATION)
BALANCE SHEET
ASSETS

	As at December 31, 1936
Fixed Capital:*	
Utility properties—	
Tangible	$292,488,284
Intangible	7,476,631
Other properties—	
Tangible	287,858
Total Fixed Capital	$300,252,773
Current and Working Assets:	
Cash on hand and on deposit in banks	$ 4,244,845
Notes and accounts receivable, trade—	
Billed	6,388,760
Unbilled (estimated accrual since latest meter readings)	2,223,100
Other notes and accounts receivable	387,482
Inventories—quantities and condition determined by the management—	
Merchandise for resale, at average cost	332,677
Coal, at average cost	1,838,044
Construction and maintenance materials, at average cost or less	3,722,385
Prepaid insurance	400,463
Total Current and Working Assets	$ 19,537,756
Miscellaneous Assets:	
Investments in and advances to subsidiary companies, consolidated—	
Capital stocks	$ 874,049
Indebtedness—not current	848,906
Loans to employes (less reserve)	132,789
Other investments—	
At cost (quoted market values not readily obtainable)	252,419
Casualty and contingency investment fund—	
Marketable securities, at cost (aggregate quoted market value $1,357,154)	1,292,898
Annuity—cash surrender value	250,000
Cash, and accrued interest purchased	6,736
Long term contracts receivable and other miscellaneous assets	194,492
Deposits in banks and trust companies closed or under restriction	1,744,431
Less—reserve for undetermined losses	*—497,981*
Total Miscellaneous Assets	$ 5,098,739
Suspense Items:	
Debt discount and expense	$ 7,052,738
Miscellaneous undistributed charges	144,831
Total Suspense Items	$ 7,197,569
Reacquired Securities:	
Capital stock reacquired for sale to employes, 1,479 shares, at cost	$ 186,764
Total Assets	$332,273,601

* *Note.*—The amounts at which Fixed Capital is carried represent the historical cost thereof, and do not purport to represent or determine present sale value, replacement cost or reproduction cost.

THE DETROIT EDISON COMPANY
(A NEW YORK CORPORATION)
BALANCE SHEET.—(*Continued*)
LIABILITIES

	As at December 31, 1936
Capital Stock:	
Authorized—1,500,000 shares of a par value of $100 a share	
Outstanding—1,272,260 shares	$127,226,000
Premium on Capital Stock	758,038
Long Term Debt:	
The Detroit Edison Company—	
General and Refunding Mortgage Bonds—	
Series D, 4½%, due February 1, 1961	$ 50,000,000
Series E, 5%, due October 1, 1952	15,000,000
Series F, 4%, due October 1, 1965	49,000,000
Series G, 3½%, due September 1, 1966	20,000,000
Total	$134,000,000
Great Lakes Power Company Mortgage Bonds, 6%, due April 1, 1943	320,000
Total Long Term Debt	$134,320,000
Current Liabilities:	
Accounts payable—	
Trade	$ 1,129,097
Sales and excise taxes	176,163
Pay rolls	448,574
Accrued liabilities—	
Taxes, including provision for Federal income taxes	3,097,208
Interest on funded and unfunded debt	1,935,754
Miscellaneous accruals	75,250
Other current liabilities—	
Dividend payable January 15	2,544,520
Consumers' deposits	689,877
Deposits by employes on account of options to purchase capital stock reacquired by the company	53,840
Miscellaneous items	26,328
Total Current Liabilities	$ 10,176,611
Reserves:	
Retirement reserve	$ 33,513,020
Casualty and contingency reserve	1,549,633
Less—allocated to reserve for undetermined losses in respect of deposits in closed banks	—*497,981*
Miscellaneous reserves	121,854
Total Reserves	$ 34,686,526
Unadjusted Credits:	
Customers' deposits for line extensions	$ 15,667
Appliance rentals and other items	9,977
Total Unadjusted Credits	$ 25,644
Earned Surplus	$ 25,080,782
Total Liabilities, Reserves and Capital	$332,273,601

Source: Company report.

EXHIBIT 1
DETROIT EDISON COMPANY
ESTIMATED RETIREMENT CHARGES
FIVE YEARS, 1937–1941

	1937	1938–1941	Total, 1937–1941
Summary*			
Conners Creek Power Plant (see note 1 under Conners Creek detail)	$ 513,500	$ 2,452,600	$ 2,966,100
Delray Power Plant	440,900	673,000	1,113,900
Trenton Channel Power Plant	30,300	255,000	285,300
Miscellaneous—All Steam and Hydraulic Power Plants	75,000	410,000	485,000
Substations	322,800	1,319,900	1,642,700
Underground Lines	275,000	1,080,000	1,355,000
Overhead Lines (including Meters)	995,000	3,590,000	4,585,000
Heating Plants	18,100	157,500	175,600
Steam Distribution System	91,000	524,000	615,000
Port Huron Gas Division	5,000	76,500	81,500
Warehouses	5,000	20,000	25,000
Equipment (Automobiles, Furniture, etc.)	178,000	712,000	890,000
Miscellaneous	358,800	1,200,000	1,558,800
Grand Total	$3,308,400	$12,470,500	$15,778,900

* Each of the items on this summary statement was supported by statements in greater detail. The one related to the Conners Creek power plant is given on page 421.

EXHIBIT 1.—(*Continued*)
DETROIT EDISON COMPANY
ESTIMATED RETIREMENT CHARGES
FIVE YEARS, 1937–1941

Description of item	Total property value	Estimated salvage value	Estimated cost of removal	Estimated total retirement charge	Estimated retirement charges	
					1937	1938–1941
Detail						
Power Plants						
Conners Creek						
Main Unit No. 4, including piping and electrical equipment (includes reconditioning of salvaged parts and auxiliaries)*...	$ 515,000	$ 15,000	$ 20,000	$ 520,000	$.....	$ 520,000
Main Unit No. 6, including piping and electrical equipment (includes reconditioning of salvaged parts and auxiliaries)*	829,000	15,000	20,000	834,000	.....	834,000
House Alternator No. 4 and control equipment.	34,900	6,500	500	28,900	28,900	.....
House Alternators Nos. 5 and 6* . .	66,500	10,000	1,100	57,600	.....	57,600
Boilers Nos 9 and 10 and piping.	390,000	20,000	22,000	392,000	392,000	.....
Boilers Nos. 5, 6, 7, and 8 and piping.	681,000	40,000	44,000	685,000	.....	685,000
Transformers and bus from units Nos. 4 and 6*..	116,000	5,000	5,000	116,000	.....	116,000
Turbine room structures*	50,000	12,000	25,000	63,000	....	63,000
Boiler room structures	175,000	.....	52,000	227,000	50,000	177,000
Air cooler, old unit No. 8	31,600	. .....	.....	31,600	31,600	. .....
Essex—Replace unit No 8 circuit breaker and cables . .	35,400	24,700	300	11,000	11,000	.....
Total, Conners Creek	$2,924,400	$148,200	$189,900	$2,966,100	$513,500	$2,452,600

* The removal of units 4 and 6 and their auxiliaries during the next five years is only a possibility. It is now planned to furnish steam for these units through desuperheaters from the new high pressure boilers. Replacement of the units with larger ones depends upon economic and load conditions. There is also a possibility that one of these units may be moved to Delray Power House No. 3.

EXHIBIT 2
DETROIT EDISON COMPANY
(INCLUDING CONSOLIDATED SUBSIDIARY UTILITY COMPANIES)
PROFIT AND LOSS, THIRTY-FOUR YEARS ENDING DECEMBER 31, 1936
(000 omitted)

Year	Surplus at first of year	Net income*	Total surplus available	Appropriations from Surplus				Surplus at end of year
				For retirement reserve (depreciation)	Property retirals charged to profit and loss	Other appropriations or write-offs	Dividends declared	
1903	$.....	$ 56	$ 56	$ 52	$...	$.....	$.....	$ 4
1904	4	90	94	.....	....	.....	.....	94
1905	94	58	152	.....	....	.....	.....	152
1906	152	137	289	.....	....	.....	.....	289
1907	289	199	488	413	....	.....	.....	75
1908	75	167	242	18	....	.....	.. ..	224
1909	224	368	592	100	1	.....	100	391
1910	391	625	1,016	250	8	.....	250	507
1911	507	741	1,248	300	....	.....	414	534
1912	534	591	1,125	.....	7	.....	525	592
1913	592	1,027	1,619	.....	14	.....	774	832
1914	832	1,334	2,166	.....	34	.....	942	1,190
1915	1,190	1,732	2,922	.....	90	59	1,215	1,558
1916	1,558	2,432	3,990	222	159	215	1,488	1,906
1917	1,906	2,354	4,260	.....	....	9	1,967	2,284
1918	2,303	2,138	4,441	.....	....	16	2,056	2,368
1919	2,401	2,337	4,738	.....	....	19	2,059	2,660
1920	2,660	1,837	4,497	700	....	59	2,202	1,535
1921	1,654	2,545	4,199	.....	....	1	2,234	1,964
1922	1,966	3,259	5,225	.....	....	9	2,599	2,617
1923	2,617	5,148	7,765	430	....	173	3,062	4,099
1924	4,099	6,102	10,201	423	....	204	3,968	5,606
1925	5,606	8,390	13,996	640	....	341	5,472	7,543
1926	7,543	9,798	17,341	980	....	578	6,354	9,429
1927	9,428	10,152	19,580	545	....	164	6,973	11,898
1928	11,897	12,644	24,541	1,500	....	135	7,198	15,708
1929	15,708	13,146	28,854	.....	....	36	8,331	20,487
1930	20,487	11,117	31,604	.....	....	15	9,897	21,692
1931	21,691	11,429	33,120	1,500	....	1,862	10,151	19,608
1932	19,608	6,632	26,240	.... .	....	749†	8,851	18,138
1933	18,239‡	5,708	23,947	.....	....	.....	5,047	18,900
1934	18,900	6,906	25,806	1,457	....	315	5,066	18,968
1935	19,018	9,863	28,881	.....	....	492	6,345	22,044
1936	22,045	10,691	32,736	.....	....	86	7,623	25,027

* Including minor adjustments to surplus.
† Credit.
‡ After credit adjustment of $101,052.71.

EXHIBIT 3
DETROIT EDISON COMPANY
OPERATING AND NONOPERATING EXPENSES
(INCLUDING CONSOLIDATED SUBSIDIARY UTILITY COMPANIES)
(000 omitted)

Year	Maintenance expense	Per cent of gross revenue	Retirement reserve (depreciation) charged against operations	Per cent of gross revenue	Total expenses
1903	$ 49	9.13	$.....	.....	$ 361
1904	60	8.79	.....	.....	451
1905	64	7.30	.....	.....	591
1906	77	6.27	.....	.....	754
1907	104	6.44	.....	.....	968
1908	118	6.62	.....	.....	1,106
1909	142	6.44	.....	.....	1,275
1910	196	6.46	60	1.98	1,780
1911	265	7.36	60	1.67	2,121
1912	347	7.91	460	10.49	2,987
1913	410	7.40	510	9.19	3,732
1914	429	6.60	520	8.01	4,195
1915	464	5.98	600	7.73	4,811
1916	606	6.02	782	7.77	6,271
1917	709	5.78	782	6.37	8,616
1918	737	5.34	782	5.67	10,054
1919	974	5.90	860	5.21	12,220
1920	1,170	5.32	400	1.82	17,457
1921	1,304	5.58	1,460	6.24	17,099
1922	1,601	6.06	2,415	9.14	19,239
1923	2,155	6.79	3,025	9.54	22,364
1924	2,467	7.22	3,500	10.24	23,898
1925	2,568	6.59	4,515	11.59	26,339
1926	2,971	6.62	5,500	12.26	30,861
1927	2,807	5.93	5,950	12.56	32,156
1928	3,017	5.76	6,550	12.51	34,102
1929	3,589	6.35	7,400	13.08	37,580
1930	3,199	5.96	6,900	12.85	36,566
1931	2,898	5.89	4,000	8.12	31,811
1932	2,457	5.58	5,500	12.48	31,143
1933	2,098	5.06	4,032	9.75	28,657
1934	2,493	5.53	4,625	10.25	31,733
1935	2,558	5.15	5,418	10.92	33,449
1936	3,362	6.10	6,688	12.14	38,280

EXHIBIT 4
DETROIT EDISON COMPANY
RETIREMENT RESERVE (DEPRECIATION), 1922–1936
(000 omitted)

Year	Appropriated to retirement reserve (operating expenses and surplus charges)	Net charges against retirement reserve	Balance remaining in the retirement reserve	Per cent of plant
1922	$2,415	$1,559	$ 3,704	3.88
1923	3,455	1,316	5,843	5.33
1924	3,923	1,717	8,049	5.98
1925	5,155	2,176	11,028	7.21
1926	6,480	3,430	14,078	7 69
1927	6,495	4,035	16,539	8 05
1928	8,050	4,014	20,575	8.96
1929	7,400	4,233	23,742	9.17
1930	6,900	4,886	25,755	9.42
1931	5,500	3,966	27,289	9.78
1932	5,500	3,220	29,569	10.39
1933	4,032	3,182	30,419	10.46
1934	6,082	6,464	30,037	10.37
1935	5,418	4,432	31,022	10.45
1936	6,898	4,119	33,801	11.13

Note.—The funds corresponding to the balance in the Retirement Reserve have been invested in plant.

XV. INTANGIBLES

Winbigler Textile Mills Company

DETERMINATION OF THE VALUE OF A GOING BUSINESS

In the early part of 1922, the stockholders of the Winbigler Textile Mills Company desired to liquidate their investment in that company. The stock had been closely held since the time of organization in 1913, but due to various unrelated reasons, all of the stockholders concluded it was a propitious period for them to dispose of their interests.

An opportunity to accomplish this end was found about two months later, when it was learned that a much larger textile company with mills in both the New England and southern states had decided to expand its activities. The Winbigler Textile Mills, being located in North Carolina and equipped to manufacture specialized fabrics, nearly fulfilled the requirements that were being sought by the executives of the larger company. Consequently the directors of the Winbigler Textile Mills were asked to quote a price at which they would sell all the capital stock. There were 10,342 shares of the common stock, and 6,883 shares of the preferred stock outstanding. Ninety-two per cent of the former and 74 per cent of the latter were owned by the directors, and the remainder was held by people who would unquestionably accept any decision of the directors.

There had never been an open market for the stock, neither on an exchange nor at a public auction. The only sale on record took place on April 16, 1921, when one of the directors sold 40 shares at $625 a share.

To determine the value of the stock, the directors revised the latest balance sheet to make it more accurately reflect actual conditions.

WINBIGLER TEXTILE MILLS COMPANY
BALANCE SHEET, JULY 31, 1921

	Book figures	Adjusted figures
Fixed Assets	$ 225,563	$ 2,500,000
Investments	3,780,981	3,780,981
Accounts Receivable	2,691,265	2,691,265
Inventory	2,088,830	2,088,830
Cash	101,274	101,274
	$8,887,913	$11,162,350
Preferred Stock	$ 688,300	$ 688,300
Common Stock	1,034,200	1,034,200
Surplus	5,730,321	8,620,021
Accounts Payable	29,076	29,076
Accrued Wages	15,317	15,317
Legal and Auditors' Fees	8,497	8,497
Commissions Payable	80,000	. . . .
Wellington Club	2,460	2,460
Dividend Declared	235	235
Accrued Preferred Dividends	309,739	309,739
Reserve for Taxes	615,000	449,737
Reserve for Litigation	4,725	4,725
Reserve for Contingencies	370,000	. . . . .
Accrued Interest	43	43
	$8,887,913	$11,162,350
Net book value of Common Stock per Share	$ 654	$ 933

Since its organization, the company had used excessive depreciation rates, making the book value of the fixed assets much less than the reproduction value less reasonable depreciation. The Reserve for Taxes was deemed to be $165,263 greater than even conservative accounting warranted, and the Reserve for Contingencies account was transferred to the Surplus account because the directors believed it to be purely a proprietorship reserve.

On an earning capacity basis, the value of each share of common stock was estimated to be $1,117. This figure was determined as follows:

Year	Operating earnings, excluding investment income	Income tax	Net
1917	$ 911,153	$170,724	$ 740,429
1918	775,166	171,519	603,647
1919	774,772	159,124	615,648
1920	1,459,532	429,884	1,029,648
1921	1,498,066	396,307	1,101,759
			$4,091,131
Average yearly income			$ 818,226
Less preferred dividend			41,298
			$ 776,928
Capitalized on 10 per cent basis			$7,769,280
Value per share			$ 751
Value of investments per share			366
Total value per share			$ 1,117

Believing that the company unquestionably had a valuable asset in its goodwill, another attempt was made to find the value of the stock by considering that element. This was done by determining the following facts: the average investment required for the operations of the business, exclusive of the investment in securities; the average net earnings during that period; the excess of the net earnings over a reasonable return on the investment; and the value of that excess on the basis of an assumed five-year purchase. The calculation was as follows:

Date	Total surplus	Less investments in securities	Net surplus investment in operations
December 31, 1917	$1,298,019	$ 924,104	$ 373,915
December 31, 1918	2,044,890	1,326,856	718,034
December 31, 1919	2,760,301	1,813,710	946,591
December 31, 1920	2,803,967	2,684,877	119,090
December 31, 1921	4,521,135	2,762,837	1,758,298
			$3,915,928

Average surplus applicable to operations	$ 783,186
Common stock	1,034,200
Total average investment in operations	$1,817,386
Average net income	$ 776,928
Reasonable net income (10 per cent of investment)	181,739
Excess over reasonable return	$ 595,189
Taken on basis of 5-year purchase	5
Value of goodwill	$2,975,945
Value of goodwill per share	$ 287
Adjusted book value per share	933
Total value per share of common stock	$ 1,220

The goodwill was figured on a five-year purchase basis because the directors believed that the company manufactured what was essentially a staple commodity. Even though the company was open to competition, it had been able to maintain the excess return on the invested capital.

A comparison was then made of the various methods of computation.

Book value unadjusted	$ 654
Book value adjusted	933
Capitalizing earnings at 10 per cent	1,117
Goodwill added to adjusted book value	1,220

Of these four, the earning capacity basis was considered the most accurate.

The preferred stock was valued at par, plus the $309,739 or 45 per cent of accrued dividends which had been allowed to accumulate. In setting a price, therefore, the directors used the following values:

6,883 shares of preferred stock at $145	$ 998,035
10,342 shares of common stock at $1,116	11,541,672
Total	$12,539,707

The prospective purchasers, believing this to be excessive, made another analysis to refute it. In due time, they gathered the following information which they believed to be pertinent to the problem.

While the dividends on the preferred stock had not been paid for several years, there was little doubt that the stock comprised a good investment. Not only had the earnings of the company been more than sufficient to justify the payment of the dividends, but the financial position of the company also warranted such action. The company had a large surplus of funds invested in securities, which could have been liquidated at any time to pay all the accumulated dividends, without hampering the regular operations of the mills. However, Mr. Beste, who was treasurer of the larger corporation, argued that the preferred stock should have been valued at only $85 per share because similar preferred stocks of other textile companies were at that time selling in the open market at more than a 7 per cent yield. Furthermore, he did not believe that the accumulated dividends should have been given a 100 per cent valuation. In the event that the accumulated dividends were paid, the holders of the preferred stock would be subject to a large income tax. No definite percentage could be stated for this because it would vary under different conditions, but Mr. Beste maintained that the average open market purchaser would deduct at least 25 per cent of the book value before making a bid. Therefore he recommended that the directors accept the following as being a logical value for the preferred stock of the company:

6,883 shares at	$ 85	$585,055
Accumulated dividends at	34	234,022
	$119	$819,077

In arriving at a proper value for the common stock, a number of factors were considered. In the first place, Mr. Beste believed that 25 per cent of the value of the securities account applicable to the common stock should have been deducted for the same reasons that it had been done for the accumulated dividends on the preferred stock. In a sense, these securities were capital

available for dividends, but the stockholder would not receive their full face value due to the income tax which would have to be paid. For this reason, the securities account was deemed to have the following value, from the common stockholders' viewpoint.

Total market value of securities	$3,780,981
Less reserve for preferred dividends	309,739
Equity of common stock	$3,471,242
Probable tax if distributed (25 per cent)	867,811
Net value to stockholder	$2,603,431
Value per share	$ 252

The basis which should have been used to capitalize the earnings was the point about which the greatest difference of opinion arose. The directors used a 10 per cent basis but Mr. Beste asserted that there was no justification for this valuation. To support this assertion, he quoted market values of the common stocks of textile mills which were engaged in the manufacture of staple products. In general, the earnings of these companies varied between 16 and 22 per cent of the market value. He believed the Winbigler Textile Mills did not make staple goods, but goods which were singularly subject to quick changes of demand. They made highly specialized yarns, which varied in color, design, and type. It was only through the keen foresight of the management that the earnings of the company had been maintained at such favorable levels.

A large portion of the profits of the company had been due to the purchasing policies. Mr. A. D. Winbigler, who had resigned in August, 1921, had always directed the purchasing activities. His home had been in Boston where he had been able to keep in close touch with market conditions. He also had had very valuable contacts with brokers in England who had kept him posted with the latest market news. An analysis of the purchases made during the preceding 10 years revealed that the largest purchases were almost consistently made near the low prices.

After the resignation of Mr. Winbigler, it was seriously doubted whether as experienced a manager could be found to take his place. A Mr. Dixon, who had been in charge of the mill operations and to whose efforts their efficiency was due, had been performing this function since Mr. Winbigler had left, but it was

not expected that he could so efficiently conduct both activities at the same time. In fact, there was some question whether the Winbigler Textile Mills Company would be able indefinitely to retain his services. He was not bound by contract, and there existed the ever-present danger that some other textile company would offer him a bigger salary than the Winbigler Textile Mills could afford to pay.

Mr. Beste pointed out these facts to indicate that the past earnings of the company were due to a very able management and not to goodwill. He maintained that any company which had to change the nature of its product so frequently did not have the opportunity to build up goodwill.

Due to the change in the management, he contended that the past earnings could not be used as a reliable guide for present values. At any rate, he believed that the earnings should not be capitalized at less than 20 per cent. He asserted that the unstable condition in which the company found itself did not warrant a higher valuation. Using this basis, he computed the following value for the common stock.

Average net earnings, 5 years	$ 818,226
Capitalized on 20 per cent basis	$4,091,130
Less preferred stock at 85	585,055
	$3,506,075
Value per share (divide by 10,342)	$ 339
Value of investments per share	252
Total value, including investments	$ 591

As a total value of the securities of the Winbigler Textile Mills Company, Mr. Beste presented these figures:

6,883 shares preferred stock at $119	$ 819,077
10,342 shares common stock at $591	6,112,122
Total value	$6,931,199

Criticize the two methods of determining the value of the stock. If you had been asked, as an independent consultant, to recommend a fair price for the stock and to present a report supporting your figures, what additional facts, if any, would you have considered and what methods would you have used?

XVI. INVESTMENTS

MANGER MANUFACTURING COMPANY

INVESTMENTS IN SECURITIES

A public accounting firm was engaged to audit the books of this company and prepare statements as of December 31, 1933. An examination of the company's security investment accounts disclosed the facts given in the paragraphs below.

On the balance sheet of December 31, 1932, prepared by another accounting firm, the securities had been shown at cost with a footnote giving market value. The statements were to be prepared on a non-consolidated basis.

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1. How should security investments have been shown on the balance sheet of December 31, 1933?

2. Should the basis of valuation of the prior balance sheet have been continued? If not, where should the resulting adjustment have appeared on the income statement or surplus statement?

3. Which of the items were marketable securities? Which were current assets?

a. The company owned 1,000 shares of United States Steel Corporation common stock, for which it had paid $67,500. On December 30, 1933, the market value of this stock was $47,750.

b. The company held also $20,000 par value of Cleveland and Pittsburgh Railroad, General "B" 4½ per cent bonds of 1942, which had cost $18,200. Upon consulting Fitch's Bond Record, the auditors found that these bonds were listed on the New York Stock Exchange and that the last sale had taken place on June 15, 1933, at 98. The principal, interest, and sinking fund of these bonds were guaranteed by the Pennsylvania Railroad.

c. National Dairy Products Corporation had outstanding December 31, 1933, $69,623,500 of an issue of 5¼ per cent Debenture Gold bonds of 1948. The Manger Manufacturing Company owned $100,000 par value of these bonds at a cost of $80,250.

They were listed on the New York Stock Exchange, sale quotations for December 30 being 79.[1]

d. The Llewellyn Manufacturing Company had outstanding an issue of $2,000,000, 5½ per cent First Mortgage bonds, due in 1953. The Manger Manufacturing Company held $750,000 of these bonds at a cost to them of $585,000. Local December 30 market quotations indicated a bid price of 80, with 81½ being asked.

e. For temporary investment, the Manger Manufacturing Company had purchased 250 of its own 4 per cent Gold Debentures, $1,000 denomination, due in 1950, at a cost of $154,375. The company held also 1,525 shares of its common stock, $50 par value, for resale to employees at $25 per share, purchased at a cost of $36,981.25. Market quotations indicated a December 30 value for the bonds of $155,000, and for the stock, $40,412.50.

f. A subsidiary of the Manger Manufacturing Company, the Hartman Castings Company, had outstanding an issue of $1,000,000, 5½ per cent bonds due in 1942. These bonds were listed and the December 30, 1933, sale price was 74½. The Manger company owned $300,000 par value of these bonds, acquired at 92 at the time they were issued.

g. Another subsidiary, the Northwest Tool Works, Inc., had outstanding an issue of $800,000, 4 per cent bonds, all of which were owned by the Manger Manufacturing Company. These bonds had been bought in the open market at a cost of $623,815.

h. Some years previously the Manger company had acquired 60,000 out of a total issue of 110,000 shares of the no par stock of the Hartman Castings Company. The transaction had involved the transfer of an unused plant at an agreed figure of $430,000 and $200,000 in cash. The auditors were unable to determine whether the stated figure for the plant was reasonable, since by reason of its location the Hartman company had been the only logical purchaser. There was no current market for the minority shares.

i. The company owned $100,000 par value of Universal Pipe and Radiator Company Debenture 6 per cent bonds of 1936, which

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[1] If a company with a larger investment in securities had held $20,000,000 of this issue, would it have been as current an asset as the $100,000 held by the Manger company?

had cost $51,500. The market quotation on December 30 was, bid 9⅛, asked 19. The issue was rated by the Standard Statistics Company, Inc., as Uncertain—Conditional rating because of insufficient data (formerly rated Very Weak).

j. One investment of the company, that of the Francisco Sugar Company, 20-year 7½ per cent bonds of 1943, had defaulted on its November 15, 1933, interest payment. The Manger Manufacturing Company held $5,000 par of these bonds, which had cost $3,475. The market sale price on December 30 was 20⅛. Receivers had been appointed November 16, 1933, and the issue was rated as Weak by Standard Statistics.

k. The company owned 1,500 shares of American Woolen Company, $100 par, Cumulative Preferred stock. Cost price was $60,000 and market price on December 30, 1933, was $97,125. At this time there were accumulated dividends on this stock of $49 per share.

General Manufacturing Corporation

THE TREATMENT OF PREMIUM AND DISCOUNT ON BONDS

The company, with total assets of $2,000,000, had built up an investment fund of $60,000 to provide for the replacement of some of its plant when retired and for future expansion if and when expansion seemed wise. It was not known when the funds would be required, but approximately half the investment was held in short-term bonds. It was the intention of the management to hold eventually about $200,000 in the fund.

Two bonds, each of $1,000 denomination, were bought on June 29, 1927. The bonds were delivered to the company's broker on July 1, and accrued interest was computed as of that day by the two brokers. The seller kept the coupon for the interest due July 1, and since the bonds were delivered on the coupon date there was no accrued interest. The company paid its broker on July 1, so the broker did not charge accrued interest, as he might have done, if he had been paid the next day.

A description of each bond is given below:

a. Brooklyn Edison Company, 6 per cent, General Mortgage, Series B bonds; due January 1, 1930; interest payable January and July 1; price paid, 104½.

b. Pressed Steel Car Company, 5 per cent Convertible Gold bonds; due January 1, 1933; interest payable January and July 1; price paid, 94.

On January 1, 1928, when the first interest payment was received, a problem arose as to the treatment of premium and discount. The management wished to establish a general policy in accounting for these items. Four suggestions were made:

a. At the time of purchase Investment in Bonds should be debited for the price paid, accrued interest, if any, being debited to Accrued Interest on Bond Investments. The bonds should be carried at the price paid until they matured or were sold. At that time Investment in Bonds should be credited for the original price, any difference, other than interest, being carried to Loss or Gain on Investments.

b. Premium should be written off to Loss or Gain on Investments at the time of purchase. Discount should be treated as in *a* above.

c. The premium or discount should be written off on a straight-line basis. In the case of the Brooklyn Edison bond the premium of $45 should be written off in equal installments of $9 at the end of each of the five interest periods until maturity.

January 1, 1928	Cash	$30.00	
	Investment in Bonds		$ 9.00
	Interest on Bond Investments		21.00

The discount of $60.00 on the Pressed Steel Car Company bond should be accumulated and added to the asset account in equal installments of $5.45 ($5.46 for five periods) over the 11 interest periods until maturity.

January 1, 1928	Cash	$25.00	
	Investment in Bonds	5.45	
	Interest on Bond Investments		$30.45

In both instances the bonds would be brought to par at maturity. If sold before maturity, the difference between the book value and the price received, after allowance for accrued interest, should be carried to Loss or Gain on Investments.

d. Both bonds should be brought to par at maturity, but by a method more exact mathematically than the straight-line method. The reason a 6 per cent bond sold above par was that in the market appraisal a rate below 6 per cent (in this case 4.088 per cent) was determined as adequate for a bond of that degree of risk.

The amortization should be so arranged that the investor would always receive 4.088 or 2.044 per cent semiannually on the book value. The method is shown in the accompanying table.

BROOKLYN EDISON COMPANY

	Interest at coupon rate	Interest on last book value at market rate	Amortization	Book value
	(3%)	(2.044%)		$1,045.00
January 1, 1928	$30	$21.36	$8.64	1,036.36
July 1, 1928	30	21.18	8 82	1,027.54
January 1, 1929	30	21.00	9 00	1,018.54
July 1, 1929	30	20.82	9 18	1,009.36
January 1, 1930	30	20.63	9.36	1,000.00

The investor should receive in each period the market rate of interest on the last book value, and the difference between this and the interest actually received is the amortization which serves to write the bond down to par at maturity. The entry to record the first interest received should be

January 1, 1928	Cash	$30.00	
	Interest on Bond Investments		$21.36
	Investment in Bonds		8.64

The Pressed Steel Car Company bond was available at a discount because the market had appraised it and established a rate of 6.308 per cent.

PRESSED STEEL CAR COMPANY

	Interest at coupon rate	Interest on last book value at market rate	Accumulation	Book value
	(2½%)	(3.154%)		$ 940.00
January 1, 1928	$25	$29.65	$4.65	944.65
July 1, 1928	25	29 79	4.79	949.44
January 1, 1929	25	29.95	4.95	954.39
July 1, 1929	25	30 10	5.10	959.49
January 1, 1930	25	30.26	5.26	964.75
July 1, 1930	25	30 43	5.43	970.18
January 1, 1931	25	30.60	5.60	975.78
July 1, 1931	25	30.78	5.78	981.56
January 1, 1932	25	30.96	5.96	987.52
July 1, 1932	25	31.15	6.15	993.67
January 1, 1933	25	31.34	6.33	1,000.00

If the market rate of interest remained the same, the bond would become more valuable as it approached maturity. Income therefore arose from two sources, the interest received and the increase in the

value of the bond. In this accumulation table the income in each period is at the market rate on the last book value. The difference between the income so determined and the interest received is the accumulation. The entry to record the first interest received should be

January 1, 1928	Cash	$25.00	
	Investment in Bonds	4.65	
	Interest on Bond Investments		$29.65

If the bonds were sold before maturity, the difference between the price received and book value at the time of sale, other than accrued interest, should be carried to Loss or Gain on Investments.

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1. Prepare journal entries to record the payment of each bond at maturity under each of the methods suggested.

2. Assume that both bonds were sold with delivery July 1, 1929, the company retaining the coupons due on that date, and that prices received were 99⅞ for the Brooklyn Edison Company bond and 90 for the Pressed Steel Car Company bond. Prepare journal entries to record the transaction under each of the methods suggested.

3. The interest and principal on the Pressed Steel Car Company bonds were defaulted at the date of maturity, January 1, 1933. Prepare any journal entries which seem necessary.

4. What policy should the company have adopted in accounting for premium and discount on bonds held as investments?

5. Are there any reasons why one method should be used in accounting for premium and another for discount?

6. Was the quality of the bonds an important factor in the determination of the treatment of discount and premium? If the policy of the company had been to hold first grade bonds or, on the other hand, to hold a distinctly speculative list, should this have affected the choice of a policy or its administration?

7. In what ways, if at all, would the situation have been different if the investor had been an individual, an investment trust, a bank holding the bonds as its own investment, a trust company holding them as trustee for an individual beneficiary, or an insurance company?

XVII. FUNDED DEBT

DETROIT EDISON COMPANY—NO. 3

ACCOUNTS USED IN REPORTING FUNDED DEBT

DETROIT EDISON COMPANY AND SUBSIDIARY UTILITY COMPANIES CONSOLIDATED BALANCE SHEET

ASSETS

	As at Dec. 31, 1931	As at Dec. 31, 1930
Fixed Capital:		
Plant Investment:		
Real Estate, Buildings, Fixtures and Grounds	$ 61,307,323	$ 59,815,428
Power Plant Equipment, Transmission and Distribution System	217,625,866	213,458,026
	$278,933,189	$273,273,454
Current Assets:		
Construction Materials, Coal and Other Supplies on hand and in transit (at cost or less)	$ 5,632,874	$ 6,090,078
Cash	2,736,579	3,634,752
Notes Receivable	79,198	20,693
Accounts Receivable	8,721,801	8,280,895
Prepaid Accounts	1,121,664	693,165
	$ 18,292,116	$ 18,719,583
Miscellaneous Assets:		
Stocks of Subsidiary Companies (Note)	$ 990,049	$ 1,195,049
Advances to Subsidiary Companies (Note)	6,811,911	6,325,639
Bonds and Other Investments	4,452,901	556,020
Casualty and Contingency Investment Fund	1,329,558	1,255,365
Special Deposits	2,600	2,620
	$ 13,587,019	$ 9,334,693
Suspense:		
Debt Discount and Expense (amortized during life of bonds)	$ 4,294,691	$ 3,769,255
Deferred Charges, amounts in suspense and liquidation	54,385	125,148
	$ 4,349,076	$ 3,894,403
Adjustment Accounts:		
Reacquired Securities in excess of subscriptions accepted against the same	$ 47,996	$ 2,884
	$315,209,396	$305,225,017

Note: These companies have no part in our public utility business or earnings, and their accounts are therefore not consolidated with ours in these statements.

DETROIT EDISON COMPANY AND SUBSIDIARY UTILITY COMPANIES CONSOLIDATED BALANCE SHEET.—(*Continued*)

LIABILITIES

	As at Dec. 31, 1931	As at Dec. 31, 1930
Capital Stock (Authorized 1,500,000 shares, $100 par value) Outstanding	$127,226,000	$127,060,100
Premium on Capital Stock	796,189	796,189
Long Term Debt:		
First Mortgage 5s, due January 1, 1933	$ 10,000,000	$ 10,000,000
Eastern Michigan Edison Company First Mortgage 5s, due (and paid) November 1, 1931	.....	4,000,000
First and Refunding Mortgage 5s, Series A, due July 1, 1940 (redeemed March 1, 1931)	.....	16,665,000
First and Refunding Mortgage 6s, Series B, due July 1, 1940 (redeemed March 1, 1931)	.....	18,319,000
General and Refunding Mortgage 5s, Series A, due October 1, 1949	26,000,000	26,016,000
General and Refunding Mortgage 5s, Series B, due June 1, 1955	23,000,000	23,000,000
General and Refunding Mortgage 5s, Series C, due August 1, 1962	20,000,000	20,000,000
General and Refunding Mortgage 4½s, Series D, due February 1, 1061	50,000,000	.....
Convertible Debenture 6s, due December 15, 1932 (redeemed December 15, 1931)	.....	133,900
	$129,000,000	$118,133,900
Current Liabilities:		
Notes Payable	200,000	.....
Accounts Payable	3,710,359	3,918,855
	$ 3,910,359	$ 3,918,855
Accrued Liabilities:		
Taxes Accrued	$ 2,591,720	$ 3,432,100
Interest Accrued	2,069,450	1,805,009
Miscellaneous Accrued Liabilities	95,875	99,999
	$ 4,757,045	$ 5,337,108
Reserves:		
Retirement Reserve (Depreciation)	$ 27,289,574	$ 25,755,328
Casualty and Contingency Reserve	1,336,122	1,255,044
Miscellaneous Reserves	923,323	791,821
	$ 29,549,019	$ 27,802,193
Miscellaneous Unadjusted Credits	$ 363,228	$ 485,224
Profit and Loss (Surplus)	19,607,556	21,691,448
	$315,209,396	$305,225,017

Source: Company report.

BALANCE SHEET—LIABILITIES[1]

Important changes have been made in the Long Term Debt. The entire First and Refunding issue which was due in 1940, amounting to $34,984,000, was called for redemption on March 1st, at a premium of 5%. More than half of this issue ($18,319,000) bore interest at 6%, and the remainder bore 5%. The 6% bonds were sold in the

[1] Annual report, 1931.

DETROIT EDISON COMPANY
CONSOLIDATED INCOME ACCOUNT
For the Year 1931

Gross Earnings from All Operations:		
Electricity	$46,573,482	
Steam	2,150,487	
Gas	464,440	
Miscellaneous	44,092	
		$49,232,50
Expense of All Operations, Including Maintenance	$22,044,278	
Retirement Reserve (Depreciation)	4,000,000	
Federal Income and Other Taxes	5,767,000	
		31,811,278
Balance, Being Net Earnings from All Operations		$17,421,223
Interest on Funded Debt	$ 6,068,717	
Interest on Unfunded Debt	94,564	
	$ 6,163,281	
Less Amount Charged to Property Account for Interest on Money Borrowed for Construction Purposes	394,973	
		5,768,308
Net Income		$11,652,915
Deductions:		
Extinguishment of Discount on Securities	$ 185,129	
Miscellaneous	38,650	
		223,779
Balance, Being Net Income Carried to Profit and Loss		$11,429,136
Profit and Loss (Surplus) at Beginning of Period		21,691,448
		$33,120,584
Appropriations from Profit and Loss:		
Dividends paid and declared	$10,151,200	
Appropriations to Retirement Reserve (Depreciation)—additional to current appropriations from earnings	1,500,000	
Unamortized Debt Discount and Expense on First and Refunding Mortgage Bonds, redeemed March 1, 1931	2,221,573	
Miscellaneous Adjustments of Profit and Loss (Net—to Profit)	359,745	
		13,513,028
Profit and Loss (Surplus) as per Balance Sheet		$19,607,556

Note: Subsidiary companies whose accounts are not consolidated in the above income account have no part in our public utility business. The net income of such subsidiary companies amounted to $10,426 for 1931.

Source: Company report.

troubled years 1920 and 1921, when they brought very low prices notwithstanding their high rate of interest. On February 1, we sold 4½% bonds to the same principal amount as the bonds called—this 4½% series being Series D, General and Refunding Bonds due in 1961, but payable at par if called during five preceding years. This substitution of a 4½% issue makes a decrease by $358,110 of annual interest charge on the same par value. The unamortized remainder of the selling discount and expense of the First and Refunding Bonds was $2,221,573, which has been written off against Surplus.[1] This is its proper disposition and it occasions the reduction of Surplus which is shown. On the issue of the like amount of General and Refunding Bonds, the State fees and recording tax were paid to the amount of $227,396, which amount likewise has been written off out of Surplus, according to our custom. The discount on the sale of this lot of 4½% bonds, and the premium paid on the call, are charged to Debt Discount and Expense, to be amortized in equal monthly charges over the long life of the new bonds.

The second bond transaction of the year was the sale in July of an additional $15,016,000 of the same Series D, 4½%, General and Refunding Bonds. The proceeds thereof were used to retire short-time bank loans and to increase cash balance, and for the payments

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[1] Although the $34,984,000 of bonds sold February 1 were offered at 100 and interest, it is stated that the discount on the sale of this item was charged to Debt Discount and Expense. The discount involved represented the bankers' margin. The corporation received in cash the offering price less the margin.

The price actually received by the corporation is not given, but most of the other entries to Debt Discount and Expense are given so that, by reconstructing this account, it is possible to get some idea of the amount of the discount on the $34,984,000 of bonds sold.

DEBT DISCOUNT AND EXPENSE

a. Dec. 31, 1930 Balance	$3,769,255	*d.* Mar. 1, 1931 Unamortized Debt Discount and Expense	$2,221,573
x. Feb. 1, 1931 General & Refunding Bonds, Series D	1,182,268	*e.* Dec. 31, 1931 Extinguishment of Discount on Securities	185,129
b. Mar. 1, 1931 Premium on Call	1,749,200	*f.* Dec. 31, 1931 Balance	4,294,691
c. Dec. 15, 1931 Premium on Call	670		
	$6,701,393		$6,701,393
Dec. 31, 1931 Balance	$4,294,691		

a. This is the balance of the account on December 31, 1930, given in the balance sheet.
b. As indicated in the text, a premium of 5 per cent was paid on the First and Refunding Bonds, and this premium was charged to Debt Discount and Expense.
c. A premium of ½ per cent was paid on the Convertible Debentures.
d. As indicated in the text, this amount was written off.
e. This amount is given in the income account, and represents the regular writing off of Debt Discount and Expense against operations.
f. The final balance of the account on December 31, 1931, is given in the balance sheet of that date.

If no other entries were made in the account, item *x*, the discount on the General and Refunding Bonds, Series D, sold on February 1 was $1,182,268. This was at the rate of 3.379 per cent. The indicated cash received from this issue was the par less the discount.

recited in the next two paragraphs. The State fees and recording tax on this lot have likewise been written off.

The third transaction was the paying off at maturity (November 1) of $4,000,000 Eastern Michigan Edison 5% bonds, followed by the discharge of the mortgage. These Eastern Michigan bonds were the last outstanding bonds of any subsidiary. All our remaining bonds are Detroit Edison issues—namely, the original First Mortgage Bonds of $10,000,000, due January 1, 1933, and the four Series of General and Refunding Bonds.

In December we bought and cancelled $16,000 of the General and Refunding, 5%, Series A Bonds. This purchase was made to bring Series A to an even figure of $26,000,000. As of December 15, we also called for payment, one year ahead of maturity and at a premium of ½%, the last remainder of 6% Convertible Debentures.

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1. Did the refinancing result in a net saving of $358,110 in the cost of the funds involved?

2. Do you agree with the accounting disposition of the unamortized discount and expense on bonds called, the premium paid on the call, the state fees and recording tax, and the discount and expense on the new issues?

Northern States Power Company

BOND DISCOUNT AND EXPENSE

On November 19, 1934, application was made to the Securities and Exchange Commission by the Northern States Power Company (a Minnesota corporation) for an order making its previously filed registration statement[1] effective as of November 21, 1934. While granting the application, the commission announced that a difference of opinion existed among the commissioners as to the treatment of certain items in the registration statement. In this connection, the commission's public statement[2] read in part as follows:

The circumstances giving rise to difference of opinion among the commissioners were, speaking generally, as follows: In 1924 the Company had on its books more than $8,000,000 of unamortized bond discount and expense. In that year it wrote up its fixed capital and investment accounts approximately $15,876,596 on the basis of an appraisal by an affiliate, crediting about $7,784,949 thereof to a Retirement

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[1] The registration statement referred to was filed in connection with a new $10,000,000 issue of 5 per cent Refunding Mortgage Bonds due in 1964.

[2] Securities and Exchange Commission, Release 254, November 21, 1934.

Reserve and about $8,091,647 to a Capital Surplus account. Thereupon it charged off during 1924 and 1925 $8,070,208 which was substantially all of its then unamortized bond discount and expense to the Capital Surplus account and thereafter to that extent made no annual charges against earnings or earned surplus for amortizing said discount and expense.

Three of the commissioners thought that these circumstances were sufficiently disclosed in the registration statement and prospectus as amended, while two thought that adequate disclosure and treatment required that the balance sheets, the earnings, the earned surplus accounts and statements of dividends paid should be restated and should be accompanied by a statement of the company's past accounting practices.

Included in the auditors' certificate which appeared in the company's registration statement were the following two paragraphs concerning the matter referred to by the commission:

As of December 31, 1924, there were reflected on the books of the Company the cost of reproduction new (including going-concern value and water-power value aggregating $6,768,464) and the accrued depreciation of the properties of the Company, as determined by an appraisal made by Byllesby Engineering and Management Corporation (an affiliated interest). The accounts of the Company have also been adjusted to reflect the value of the investments of the Company in its subsidiary companies (exclusive of values attaching to surplus earned since dates of acquisition of these companies), as determined upon the basis of this appraisal which also included the properties (including intangibles) of its subsidiary companies. Additions to property, plant and equipment and intangibles resulting from certain major acquisitions of properties made in 1926 were recorded at their net cost plus the amount ($2,398,212) of accrued depreciation indicated by an appraisal of these properties as of that date. As a result of recording these appraisals and acquisitions, the balance sheets of the Company as of December 31, 1933, and August 31, 1934, reflect gross increases in property, plant and equipment and intangibles of $5,515,801.15 and in investments of $10,360,794.87 making a total of $15,876,596.02 of which $7,784,949.20 was credited to retirement reserve and the net appreciation of $8,091,647.00 was credited to capital surplus. Prior to August 31, 1934, the amounts of $5,515,801.15 and $7,784,949.02, respectively, were reduced by an amount of approximately $2,123,000 representing the excess of the appraised value of property retired over the original cost thereof.

Substantially all ($8,070,208.16) of the then unamortized debt discount and expense of the Company was charged off during 1924 and 1925 against the capital surplus arising from the appraisal. Premium and duplicate interest on refunded issues were charged to unamortized debt discount and expense on Refunding Mortgage Gold Bonds, 4½%

Series due 1961, and are in process of amortization over the life of the refunding issue. Prior to the making of these charges to capital surplus the Company had followed the policy of making annual charges to income which, in general, were designed to provide for the amortization of debt discount and expense over the lives of the respective issues, but on the basis of carrying forward all unexpired discount, premium and expense applicable to refunded issues to be spread over the life of the refunding issue. Upon this basis, the charges against income for amortization of debt discount and expense would have been increased by approximately $321,000 for the year 1931, $297,000 for the year 1932, $299,000 for the year 1933 and $190,000 for the eight months ended August 31, 1934, the total additional charges against income for the period prior to August 31, 1934, would have aggregated approximately $5,270,000, approximately $2,800,000 of the $8,070,-208.16 would have remained to be amortized over future years and surplus accounts as of August 31, 1934, would have shown a debit balance of approximately $1,104,000 for earned surplus and a credit balance of $8,091,647 for the capital surplus arising from the revaluation of fixed assets and investments.

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1. What is your opinion of the company's treatment of its unamortized debt discount and expense in 1924 and 1925?

2. What difference would it have made in the subsequent statements of the Northern States Power Company if the $8,070,-208 write-off had been made to earned surplus rather than capital surplus? Is it probable that this would have made any difference in the commission's attitude on the case?

XVIII. PROPRIETORSHIP

A. DEVELOPMENT OF A CORPORATION FROM A SINGLE PROPRIETORSHIP

ABERDEEN AND COMPANY

PROPRIETORSHIP ACCOUNTS

A. It is the purpose of this case to illustrate certain changes in the proprietorship status of a business, and the accounting treatment which these changes require. The statements have been simplified in order to bring out the significance of these changes more clearly.

In 1911 James Aberdeen was the sole proprietor of a woodworking establishment manufacturing window frames and sash, doors, staircases, and other mill work for local building contractors. His balance sheet was as follows:

JAMES ABERDEEN
BALANCE SHEET, DECEMBER 31, 1911

Cash	$ 5,000	Mortgage	$30,000
Accounts Receivable	13,000	Capital	53,000
Inventory	15,000		
Plant	50,000		
	$83,000		$83,000

The average net profits for the preceding five years, after allowing the proprietor a salary of $3,600 per year, but before any allowance for loss on bad debts or for depreciation, had been 20 per cent on the amount of his capital. The business had reached the limits of the local market, but he and two other men, one of whom was F. D. Williams, who had been selling building supplies in eastern Massachusetts, saw an opportunity for expansion. They therefore arranged a partnership under the following partnership agreement:

January 2, 1912

James Aberdeen, F. D. Williams, and H. C. Carpenter have this day entered into an agreement of co-partnership for the conduct of a general woodworking and millwork business to be known as Aberdeen, Williams, and Carpenter.

1. James Aberdeen is to contribute his interest in the assets as shown on his balance sheet of December 31, 1911, except that he is to set up an allowance of 10% for bad debts and one of 15% for depreciation on plant. The goodwill of the present business is valued at the difference between his capital after these adjustments and $60,000, his agreed share in the partnership.

2. F. D. Williams is to contribute $30,000 in cash and is to let his profits accumulate until his capital is $60,000.

3. H. C. Carpenter is to contribute the mortgage of $30,000 on Aberdeen's plant, which he holds, and $30,000 in cash.

4. The drawing account of each partner is to be credited with $300 on the first of each month in lieu of salary.

5. All profits and losses are to be equally divided. Before determining profits for purposes of distribution, 20% of the original value of goodwill is to be written off each year until goodwill is entirely eliminated.

6. This agreement will terminate on the death of any partner and may be terminated on December 31 of any year if notice thereof is given by any partner six months in advance. In the event of liquidation each partner is to share in proportion to his capital.

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1. Show the partnership balance sheet as of the date of the agreement.

2. If the operating profits on December 31, 1912, were $15,000, how would they be divided?

3. If there had been an operating loss of $5,000, how would it have been divided?

B. The expansion program of 1912 proved very profitable and further expansion was undertaken in 1919 in an effort to sell woodwork designed by outstanding architects in a national market. The expansion was financed partly from profits but principally from borrowing, much of which was on short time. A new plant begun in 1919 was finished in the fall of 1921 without adequate provision having been made for the financing. At this time, the balance sheet was as shown on page 447.

The general creditors threatened to petition for a receiver unless some arrangement was made to pay off a portion of their claims and to provide for the eventual payment of the balance. H. C. Carpenter had been opposed to the later phases of the policy of expansion and wished to incorporate the business in order that liability in the event of failure would not involve the rest of his estate, since neither Aberdeen nor Williams had sub-

stantial funds outside the business. Carpenter was satisfied as to the prospects of the business, and he and two friends were willing to invest additional money in a corporation if they obtained control on sufficiently favorable terms.

ABERDEEN, WILLIAMS, AND CARPENTER
BALANCE SHEET, DECEMBER 31, 1921

Cash		$ 55,000	First Mortgage Bonds		$ 200,000
Accounts Receivable	$275,000		Notes Payable (Bank)		200,000
Less: Allowance	25,000	250,000	Notes Payable (Builders)		175,000
Notes Receivable, Williams		25,000	Accounts Payable		150,000
Inventory		250,000	Notes Payable (Aberdeen)		25,000
Plant	$600,000		Notes Payable (Carpenter)		50,000
Less: Allowance	50,000	550,000	James Aberdeen, Capital		150,000
Undivided Loss		150,000	F. D. Williams, Capital		150,000
			H. C. Carpenter, Capital		150,000
			James Aberdeen, Drawing Account		10,000
			F. D. Williams, Drawing Account		5,000
			H. C. Carpenter, Drawing Account		15,000
		$1,280,000			$1,280,000

Carpenter suggested that a corporation be organized with 10,000 shares of common stock of $100 par authorized, and that each partner should receive stock for his entire interest in the business, as shown by the balance sheet of December 31, 1921, after sharing the loss. In determining the interest of each partner in the business, the note receivable from Williams, the notes payable to Aberdeen and Carpenter, and the balances in the drawing accounts were to be included. Williams objected, but his note, on which he had borrowed for speculation outside, was past due, and he had nothing except his interest in the business with which to pay it. He finally agreed to the proposal.

Carpenter then suggested to Henry Lewis and A. B. Gould, his friends interested in the business, that each of the three buy $100,000 worth of stock and pay $50 a share for it, one-half in cash down, and one-half three months later. Lewis and Gould objected because the stock would be assessable. They suggested that the three buy the notes payable from the banks and builders and point out to them that, if the incorporation did not go through, the notes could not be paid. Negotiations were opened and it

proved possible to buy the notes for cash at 60 cts. on the dollar. The three bought the notes of $375,000 with their own money and agreed in writing to transfer them to the proposed corporation for $300,000 in stock and $75,000 in notes of the corporation. Since the proposal was going through, the notes were considered good and the stock was to be issued as fully paid.

On January 10, 1922, a corporation under the name of Aberdeen and Company was organized under the laws of Massachusetts.[1]

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1. Show the beginning balance sheet of the corporation.
2. Was the stock fully paid?

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[1] Commonwealth of Massachusetts, General Laws Relating to Corporations. Chapter 156. Business Corporations, Organization—Section 6 through Section 12:

"Section 6. Three or more persons may associate themselves by written agreement of association with the intention of forming a corporation under general laws for any lawful purpose not excluded by section two. The agreement of association shall state:

. . . . . .

"*a.* That the subscribers thereto associate themselves with the intention of forming a corporation.

"*b.* The corporate name assumed.

. . . . . .

"*c.* The location of the principal office of the corporation in the commonwealth, and elsewhere in the case of corporations organized to do business wholly outside the commonwealth.

"*d.* The purposes for which the corporation is formed and the nature of the business to be transacted.

. . . . . .

"*e.* If only shares with par value are to be issued, the total amount of the capital stock of the corporation, which shall not be less than one thousand dollars, to be authorized, and the number of shares into which the capital stock is to be divided, and the par value of the shares, which shall not be less than five dollars, or, in lieu thereof, if any shares without par value are to be issued, the number of shares without par value to be authorized, which shall not be less than ten, and the number of shares having par value to be authorized, if any, and the par value thereof, which shall not be less than five dollars.

"*f.* The restrictions, if any, imposed upon the transfer of shares.

. . . . . .

"*g.* If there are to be two or more classes of stock, a description of the different classes and a statement of the terms on which they are to be created and of the method of voting thereon.

"*h.* Any other lawful provisions for the conduct and regulation of the business of the corporation, for its voluntary dissolution, or for limiting, defining or regulating the powers of the corporation, or of its directors or stockholders, or of any class of stockholders.

"*i.* The subscriber or subscribers by whom the first meeting of the incorporators shall be called.

"*j.* The names and residences of the incorporators and the amount of stock subscribed for by each.

"Section 7. The agreement of association of any corporation formed for the purpose of acquiring, holding, managing, improving, leasing, buying and selling real estate, except a corporation formed for the purpose of owning forest land classified under chapter sixty-one, shall state the term of duration of the corporation, which shall not exceed fifty years.

. . . . . .

"Section 8. The first meeting of the incorporators shall be called by a notice signed by such subscriber to the agreement of association as may be designated therein or by a majority of the subscribers to such agreement; and such notice shall state the time, place and purposes of the meeting, which shall be held within the commonwealth. A copy of such notice shall, seven days at least before the day appointed for the meeting, be given to each incorporator or left at his residence or usual place of business, or deposited in the post office, postage prepaid, and addressed to him at his residence or usual place of business, and another copy thereof, and an affidavit of one of the signers that the notice has been duly served, shall be recorded with the records of the corporation. If all of the incorporators shall in writing, upon the agreement of association, waive such notice and fix the time and place of the meeting no notice shall be required.

. . . . . .

"Section 9. At the first meeting of a corporation organized under general law or created by special act, or at any adjournment thereof, the incorporators shall organize by the choice, by ballot, of a temporary clerk who shall be sworn, by the adoption of by-laws and by the election by ballot of directors, of a treasurer, of a clerk, and of such other officers as the by-laws require to be elected by the stockholders. The temporary clerk shall make and attest a record of the proceedings, until the clerk has been chosen and sworn, including a record of such choice and qualification.

. . . . . .

"Section 10. A majority of the directors elected at such first meeting shall forthwith make, sign and make oath to articles setting forth:

"*a*. A true copy of the agreement of association and the names of the subscribers thereto, or, if the corporation is created by special act, a copy of the act of incorporation.

"*b*. The date of the first meeting and of the successive adjournments thereof, if any.

"*c*. Subject to section fourteen, the amount of capital stock then to be issued, the amount thereof to be paid for in full in cash, the amount thereof to be paid for in cash by instalments and the instalment to be paid before the corporation commences business, and the amount thereof to be paid for in property. If such property consists in any part of real estate, its location, area and the amount of stock to be issued therefor shall be stated; if any part of such property is personal, it shall be described in such detail as the commissioner may require, and the amount of stock to be issued therefor stated. If any part of the capital stock is issued for services or expense, the nature of such services or expenses and the amount of stock which is issued therefor shall be clearly stated.

"*d*. The name, residence and post office address of each of the officers of the corporation.

"The directors who sign such articles and the officers and directors who sign any amendment thereof shall be jointly and severally liable to any stockholder of the corporation for actual damages caused by any statement therein which is false and which they know, or on reasonable examination could have known, to be false.

. . . . . .

"Section 11. The articles of organization, the agreement of association, and the record of the first meeting of the incorporators, including the by-laws, shall be submitted to the commissioner, who shall examine them and who may require such amendment thereof or such additional information as he deems necessary. If he finds that the provisions of law relative to the organization of the corporation

C. At the end of 1924, the company decided to expand further and undertake a campaign of national advertising. Business was active from 1922 to 1924 and the temporary difficulties of 1921 had been overcome. Net profits were $40,000 in 1922, $90,000 in 1923, and $70,000 in 1924. Dividends of 6 per cent were paid in 1923 and 8 per cent in 1924.

The directors decided to issue $200,000 of common stock and opened negotiations with a group of local businessmen who offered to buy it at $110, if payment could be made one-quarter at the time of subscription and one-quarter at the end of three, six, and nine months. It was arranged further that interest would be allowed on all amounts paid in at 6 per cent from the time of

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have been complied with, he shall endorse his approval on the articles. Thereupon, the articles shall, upon payment of the fee provided by section fifty-three, be filed in the office of the state secretary.

. . . . . .

"Section 12. Upon the approval and filing as above provided of the articles of organization of a corporation organized under general laws, the state secretary shall issue a certificate of incorporation in the following form:

COMMONWEALTH OF MASSACHUSETTS

"Be it known that whereas (the names of the subscribers to the agreement of association) have associated themselves with the intention of forming a corporation under the name of (the name of the corporation), for the purpose (the purpose declared in the agreement of association), with a capital stock of (the amount fixed in the agreement of association, with a statement of the several classes into which the stock is divided and their respective amounts, and of the method of paying for such stock, whether by cash in full, cash in instalments, property, services or expenses, or partly by one method and partly by another or others), and have complied with the provisions of the statutes of this commonwealth in such case made and provided, as appears from the articles of organization of said corporation, duly approved by the commissioner of corporations and taxation and recorded in this office: now, therefore, I (the name of the secretary), secretary of the commonwealth of Massachusetts, do hereby certify that said (the names of the subscribers to the agreement of association), their associates and successors, are legally organized and established as, and are hereby made, an existing corporation under the name of (name of the corporation), with the powers, rights and privileges, and subject to the limitations, duties and restrictions, which by law appertain thereto.

"Witness my official signature hereunto subscribed, and the great seal of the commonwealth of Massachusetts hereunto affixed, this day of in the year (the date of filing of the articles of organization).

"If such corporation is organized with capital stock without par value, the form of said certificate may be modified to conform thereto.

"The state secretary shall sign the certificate of incorporation and cause the great seal of the commonwealth to be thereto affixed, and such certificate shall have the force and effect of a special charter. The existence of every corporation organized under general laws shall begin upon the filing of the articles of organization in the office of the state secretary. The state secretary shall also cause a record of the certificate of incorporation to be made, and such certificate, or such record, or a certified copy thereof, shall be conclusive evidence of the existence of such corporation."

. . . . . .

payment till the stock was issued and that the stock subscribed for by a particular investor would be issued whenever his subscription was paid in full.

Williams was the only stockholder who wished to subscribe for the new issue. In many states, he would have had a right, known as the preemptive right, to subscribe for that percentage of the new issue which his holdings constituted of the old stock already issued, but this was not true in Massachusetts. The prospective investors, however, agreed to permit Williams to take the stock, for which he could have subscribed under the preemptive right. On December 31, 1924, Williams paid for his stock in full at 110 and the stock was issued on that date. He took only the number of whole shares to which he had a right under the agreement.

On December 31, 1924, George O. Carter and eight other men, who constituted the group which had negotiated for the purchase of the new stock, subscribed for $200,000 par value, less the amount which Williams had taken, under the terms of the agreement.

A controlling account called Stock Subscriptions was opened in the general ledger and was debited with the total amount of the subscriptions at $110 a share. An account was opened for each subscriber in a subsidiary ledger. Stock Subscribed and Premium on Stock Subscribed, in the general ledger, were credited for the amount of the stock subscribed, at par, and the premium, respectively.

The subscription agreement signed by Carter is given below:

SUBSCRIPTION FORM

The undersigned in consideration of the subscriptions of the other subscribers hereby subscribes for one hundred shares of common stock of Aberdeen and Company and hereby agrees to pay the par value thereof (one hundred dollars per share), and ten dollars additional on each share as a premium, both in cash, to the treasurer of the corporation as follows: twenty-five per cent on the signing of this subscription, and twenty-five per cent on April 1, July 1, and October 1, 1925. The stock will be issued when fully paid for, and will participate in dividends on and after the date of issue. Interest at the rate of six per cent, computed on the 360-day basis, on all sums already paid in may be deducted from the last instalment due.

December 31, 1924 GEORGE O. CARTER.

All the subscribers paid the installments according to the terms of the agreement and the stock was issued on October 1, 1925.

The company already had a stock ledger, controlled by the Capital Stock account in the general ledger. When Carter's

stock was issued on payment of the last portion of his subscription, an account was opened in his name in this stock ledger. It was credited with the par value of the shares issued to him. If, subsequently, Carter sold any shares or surrendered them to the company, the account would be debited with the par value.

The company's stock certificate book was similar to a check book. A certificate was detached and sent to Carter and the stub filled out to show the following information: the number of the certificate, the number of shares represented by it, and Carter's name. If the stock should be sold later, the returned certificate would be attached to its stub and a new certificate issued. Therefore the open stubs in this book showed the amount of stock outstanding and the names of the persons who held it.

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1. Show journal entries for all transactions involved in issuing the new stock.

2. What accounting disposition should subsequently be made of the premium on this stock? If available legally for dividends, would you advise its being used for that purpose?

3. Were the interests of the creditors and stockholders affected by the sale of this stock? If so, in what way?

D. In 1925 a local firm of investment bankers became interested in the company and suggested that a stock dividend would make it easier to sell stock later. A commercial banker also suggested that his bank would consider the credit of the company sounder if a stock dividend were paid.

On the date of the last subscription payment the previous year, enough additional stock had been sold for cash to bring the total issued up to $900,000. The condensed balance sheet of the company was as follows:

ABERDEEN AND COMPANY
BALANCE SHEET, DECEMBER 31, 1925

Cash	$ 150,000	Outside Liabilities	$ 250,000
Other Assets	1,216,400	Capital Stock	900,000
		Premium on Stock	23,000
		Surplus	193,400
	$1,366,400		$1,366,400

On January 2, 1926, the directors declared a stock dividend of 10 per cent, payable February 1, to stock of record January 20.

It was suggested that this be paid in part from premium on stock and the legal counsel of the company indicated that this was legal in Massachusetts, but not in some other states. It was decided to use the entire premium for this purpose.

The company had appointed the General Trust Company to serve as transfer agent, so the latter prepared a transcript of the stock ledger, showing the number of shares held by each stockholder as of the close of business on January 20, 1926. The treasurer of the company determined the amount of the dividend for each stockholder and made out a stock certificate and a warrant for each, the stock certificate being for the number of whole shares to which the stockholder was entitled under the dividend and the warrant entitling him to a fractional share. The warrants were transferable and carried a statement that stock certificates would be issued against warrants for the total amount of whole shares in warrants surrendered. The certificates and warrants were countersigned by the American Trust Company which served as registrar and were sent to the stockholders.

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1. Show the journal entries involved in the stock dividend.
2. In what ways were the interests of creditors or stockholders affected by the stock dividend?

E. During 1926 the net earnings before dividends were $190,000 and dividends were paid quarterly at the rate of 10 per cent per annum. The stock issued as a stock dividend on February 1, 1926, received full dividends, since the first quarterly dividend was paid March 1, 1926, to stock of record February 15, 1926.

In 1927 net earnings before dividends were $200,000 and dividends were paid quarterly at the rate of 10 per cent per annum.

On January 10, 1928, the directors decided to split the stock three for one and issue three shares of no par stock for each share of par stock previously outstanding. The stated value of each new share was fixed at $40. The charter was amended to provide for the additional shares.

A letter was sent to each stockholder asking him to surrender his share certificate properly endorsed on or before February 1 so that new certificates could be issued. When the old certificates were received, new certificates were made out by the treasurer and certified by the registrar. All the old certificates were surrendered.

As of February 1, the company issued 1,000 additional shares of the new no par stock to a group of investment bankers for $40 per share. This stock was sold by the bankers to the public at $50.

A quarterly dividend of $1 per share was declared February 3 payable March 1, 1928, to stock of record February 15.

---

1. Show journal entries to record the change to no par stock, the issuance of additional stock, and the declaration and payment of the dividend of $1 per share.

2. To what extent were the interests of the creditors and stockholders affected by these transactions?

B. TYPES OF DIVIDENDS

Eastman Kodak Company

REGULAR AND EXTRA DIVIDENDS IN CASH. WAGE DIVIDENDS

The balance sheets at December 28, 1935, and December 26, 1936, and the income and surplus statement for the intervening period are given below, as included in the annual report. Those portions of the balance sheets not directly concerned with dividends are condensed. The report also included a schedule showing earnings and dividends since 1902, and reference in the text to the wage dividend. Data concerning the dividends of the company are shown in Exhibit 1.

EASTMAN KODAK COMPANY AND ALL WHOLLY OWNED SUBSIDIARY COMPANIES
CONDENSED CONSOLIDATED BALANCE SHEETS

	December 26, 1936	December 28, 1935
ASSETS		
Current Assets	$ 92,134,552	$ 95,177,148
Investments and Advances (at cost, less reserve)	5,643,600	6,344,306
Land, Buildings, Plant and Machinery, at Cost (Net)	71,980,712	65,831,009
Deferred Charges to Future Operations	984,859	994,564
	$170,743,723	$168,347,027
LIABILITIES		
Current Liabilities:		
Accounts Payable, Accrued Payrolls, Wage Dividend, etc.	$ 7,671,960	$ 6,268,885
Reserve for Taxes	7,544,878	5,195,951
Bills Discounted	.....	2,378,473
Dividends Payable:		
Preferred	92,485	92,486
Common	3,376,382	3,376,382
	$ 18,685,705	$ 17,312,177
General and Contingent Reserves	$ 9,849,246	$ 9,978,733
Capital Stock and Paid-in Surplus:		
6% Cumulative Preferred Stock—$100 par value:		
Authorized—100,000 shares Issued— 61,657 shares	$ 6,165,700	$ 6,165,700
Common Stock—No par value:		
Authorized— 2,500,000 shares		
Issued— 2,263,150 shares		
Less: In Treasury— 12,229 shares		
2,250,921 shares at stated value of $10.00 per share	22,509,210	22,509,210
Paid-in Surplus*	28,617,862	28,617,862
	$ 57,292,772	$ 57,292,772
Earned Surplus, as per annexed statement	$ 84,916,000	$ 83,763,345
	$170,743,723	$168,347,027

* The source of the paid-in surplus was described as follows in the report for 1929:
Paid-in Surplus representing difference between amount received during year for 205,590 shares of Common Stock at $150 per share and the stated value thereof at $10 per share $28,782,600

EASTMAN KODAK COMPANY AND ALL WHOLLY OWNED SUBSIDIARY COMPANIES

CONSOLIDATED STATEMENT OF PROFIT AND LOSS AND EARNED SURPLUS FOR THE YEAR ENDED DECEMBER 26, 1936

Net sales	$119,800,210
Less:	
Cost of sales and expenses (including depreciation of $6,252,894 in 1936)	97,144,223
Income from operations	$ 22,655,987
Interest and dividends	979,373
Net profit on sales of securities	128,808
Other income	162,481
Total income	$ 23,926,649
Deduct:	
Provision for United States and foreign income taxes	$ 4,532,929
Provision for United States surtax on undistributed profits	210,928
Other charges	276,421
	$ 5,020,278
Net profit for the year	$ 18,906,371

EARNED SURPLUS

Earned surplus, beginning of year	$ 83,763,345
Net profit for the year	18,906,371
	$102,669,716
Deduct:	
Amount transferred to General and Contingent Reserves	$ 2,000,000
Excess of cost of shares over book value of net tangible assets of Kodak (East Africa) Limited (minority interest acquired during the year)	190,057
Dividends:	
Preferred—6%	369,942
Common—$6.75 per share	15,193,717
	$ 17,753,716
Earned surplus, end of year	$ 84,916,000

Source: Company report.

RECORD OF ANNUAL EARNINGS AND THEIR DISTRIBUTION

	Net Profits	Preferred Dividends	Common Dividends	Reserve Fund	Surplus
1902, 6 months	$ 1,488,295	$ 162,366	$ 856,930	$ . . .	$ 468,999
1903	2,864,719	368,059	1,867,205	... .	629,455
1904	3,339,148	360,347	1,921,019	....	1,057,782
1905	4,013,913	365,217	2,348,197	.... . .	1,300,499
1906	5,415,700	369,942	3,418,260	500,000	1,127,498
1907	7,015,423	369,942	4,891,550	750,000	1,003,931
1908	7,472,519	369,942	3,904,140	1,000,000	2,198,437
1909	7,852,575	369,942	5,856,210	1,000,000	626,423
1910	8,975,177	369,942	7,806,390	... .	798,845
1911	11,649,264	369,942	7,804,905	500,000	2,974,417
1912	13,999,047	369,942	7,807,957	500,000	5,321,148
1913	14,162,436	369,942	7,810,620	1,000,000	4,981,874
1914	11,313,012	369,942	5,859,840	.....	5,083,230
1915	15,741,454	369,942	11,719,680	....	3,651,832
1916	17,289,206	369,942	13,674,635	....	3,244,629
1917	14,542,567	369,942	5,861,520	.....	8,311,105
1918	14,051,969	369,942	8,792,280	.....	4,889,747
1919	18,326,188	369,942	7,819,110	.....	10,137,136
1920	18,566,211	369,942	7,865,840	.. ..	10,330,429
1921	14,105,861	369,942	7,953,215	.....	5,782,704
1922	17,952,555	369,942	12,574,962	.....	5,007,650
1923	18,877,230	369,942	15,678,337	....	2,828,950
1924	17,201,815	369,942	16,267,400	.....	564,473
1925	18,467,114	369,942	16,231,640	113,800	1,751,732
1926	19,860,635	369,942	16,167,880	227,600	3,095,213
1927	20,142,161	369,942	16,209,200	227,600	3,335,419
1928	20,110,440	369,942	16,224,700	227,600	3,288,198
1929	22,014,916	369,942	16,630,512	227,600	4,786,862
1930	20,353,789	369,942	17,861,380	227,600	1,894,867
1931	13,408,786	369,942	18,077,900	.....	5,039,056*
1932	6,058,749	369,942	9,008,478	.....	3,319,671*
1933	11,119,044	369,942	6,752,763	.....	3,996,339
1934	14,503,247	369,942	10,129,145	. ...	4,004,160
1935	15,913,251	369,942	12,380,066	. ...	3,163,243
1936	18,906,371	369,942	15,193,717	2,000,000	1,342,712
Totals .	$467,074,787	$12,724,191	$341,227,583	$ 8,501,800	$104,621,213
Deduct: Reserve required in addition to previous reserves and appropriations to offset entire book value of Goodwill and Patents as at December 28, 1935 . . .				$19,515,155	
Additional reserve for the year ending December 26, 1936.				190,058	
					$ 19,705,213
Balance of earned surplus—December 26, 1936					$ 84,916,000

* Deficit.
Source: Company report.

WAGE DIVIDEND: The payment of a wage dividend on March 1, 1937, was approved by the Board of Directors. This will make the twenty-fifth wage dividend payment, one having been made each year beginning in 1912, with the exception of 1934. The wage dividend is contingent on specific action each year by the Board of Directors, and upon declaration of dividends on the common stock of the Company in excess of $3.50 per share for the preceding calendar year. Its purpose is to enable employees to share in the financial success of the Company, to recognize the value of trained steady workers, and to reward continuous service. The wage dividend is not taken into account in establishing wage or salary rates. Employees are urged to

regard it, as its name implies, not as extra wages but as dividends upon their earnings. The estimated amount payable March 1, 1937, was $2,220,000.

. . . . . .

To minimize the effects of recent tax legislation, Eastman Kodak Company (a New York corporation, the principal operating subsidiary of your company) was dissolved on September 5, 1936. Its operations are now conducted by the parent company, Eastman Kodak Company, a New Jersey corporation. For the same reason, eight smaller subsidiary units were dissolved during the year, and their assets and liabilities were transferred to the parent company.[1]

EXHIBIT 1
EASTMAN KODAK COMPANY
DIVIDEND DATA

	Preferred	Common regular	Common extra*
1936	$6.00	$5.00	$1.75

Approximate Dividend Dates

Dividend meeting preferred & common	Ex-dividend preferred & common	Dividends payable preferred & common
November†	December 5	January 1
February†	March 5	April 1
May†	June 5	July 1
August†	September 5	October 1

* $0.25 each quarter and $0.75 on December 10.
† Dividends are declared at the Board meeting held on the first Wednesday after the first Thursday of these months.
Source: *Standard Corporation Records*, September 20, 1937.

1. What were the significant differences, if any between the regular and extra dividends?

2. Was the wage dividend an expense or a distribution of profit?

3. Were the dividends on the stock of this corporation in 1936 a distribution of profit?

4. As far as may be determined from the facts given, what were the limits upon dividends which could be declared and paid?

[1] Annual report, 1936.

A. M. Byers Company

DIVIDENDS FROM PAID-IN SURPLUS. INTEREST ON ACCUMULATED DIVIDENDS

A description of dividends paid in 1937, the balance sheet for that year with the items other than those concerning capital very much condensed, and the deficit statement were taken from the report of the company for 1937:

Dividends Paid

The undistributed profits tax levied by the Federal Government, if no profits are distributed during the taxable year, averages 20½%. Therefore a dividend on the preferred stock was paid on September 20, 1937 as follows:

$1.25 per share balance accrued for quarter ended April 30, 1933...	$ 70,930
$1.25 per share balance accrued for quarter ended July 31, 1933....	70,930
Total Dividend.....	$141,860
Interest at 5% accrued on these dividends in accordance with the Preferred Stock Provisions.....	30,360
Total paid to Preferred Stockholders	$172,220

By advice of counsel, and by authority of the Board of Directors, this entire amount was charged to Paid-in Surplus because there was no available balance in the Earned Surplus account. The Pennsylvania laws, under which the company is incorporated, permit the charging of dividends on preferred stock to Paid-in Surplus under these conditions.

The corporation has been advised by counsel that, for income tax purposes, the entire amount of the distribution is returnable as a dividend by the stockholders receiving the dividend.

Dividends in Arrears

The total amount in arrears on the Preferred Stock, accrued to September 30, 1937, is $1,626,661.33, or $28.67 per share.

Accrued interest (at 5%) on these deferred dividends, to September 30, 1937, is $156,637.09, or $2.76 per share.

A. M. Byers Company

Condensed Balance Sheet, September 30, 1937

Assets

Current Assets			$ 2,834,113
Capital Assets (net)			13,782,653
Patents (net)			204,545
Goodwill			1
Deferred Charges			31,907
			$16,853,219

Liabilities

Current Liabilities			$ 217,338
Reserves			129,949
Capital (Note A):			
Capital Stock:			
Authorized:			
63,794 Shares 7% Cumulative Participating Preferred Stock of $100 par value		$ 6,379,400	
325,000 Shares Common Stock of no par value		$	
Issued:			
63,073 Shares Preferred		$ 6,307,300	
266,635 Shares Common		2,666,350	
Stated value of capital stock		$ 8,973,650	
Paid-in surplus (Note B)		9,070,730	
		$18,044,380	
Deficit from operations (Note B)		1,688,404	
		$16,355,976	
Deduct:			
Treasury Stock:			
6,329 Shares Preferred (Par value)	$632,900		
2,000 Shares Common (cost)	143,292		
	$776,192		
Dividends (Note B):			
Payment on account of cumulative dividends in arrears on preferred stock representing dividends originally due May 1, 1933, and August 1, 1933, amounting in each case to $1.25 per share, and interest at 5% per annum from date dividends were payable to date of payment, September 20, 1937	$172,220	948,412	
		$15,407,564	
Capital surplus arising from revaluation of capital assets		1,098,368	16,505,932
			$16,853,219

Note A.—At September 30, 1937, there were unpaid cumulative dividends on the preferred stock amounting to $1,626,661 and interest contingently payable thereon of $156,637.

Note B.—In accordance with resolutions of the Board of Directors, the dividends on the preferred stock, together with interest thereon, amounting to $172,220, have been charged to paid-in surplus.

A. M. BYERS COMPANY
STATEMENT OF DEFICIT
SEPTEMBER 30, 1937

Deficit, A. M. Byers Company, at September 30, 1936		$ 105,505
Provision to reduce investment in and advances to Orient Coal and Coke Company to book value thereof at September 30, 1936		1,002,902
Deficit at September 30, 1936		$1,108,407
Provision to reduce investment in and advances to Orient Coal and Coke Company to the nominal amount of $1.00 as at October 1, 1936		818,293
		$1,926,700
Add—Amortization applicable to prior years of costs of tentative projects		15,240
		$1,941,940
Deduct:		
Transfers from reserve for contingencies	$123,630	
Net profit for year ending September 30, 1937	93,223	
Proportion of capital surplus (arising from revaluation of properties) realized during year	36,683	253,536
Deficit at September 30, 1937		$1,688,404*

* Before charges in respect of preferred dividends and interest in arrears totaling $172,220, charged to paid-in surplus in accordance with resolutions of the Board of Directors.

Most of the paid-in surplus arose from the issue of common stock in 1929 as described in the following excerpt from the report for that year. It is impossible to trace the figures exactly but apparently there was also a transfer from amounts previously carried in the stated value of common stock.

COMMON STOCK

The number of shares authorized has been increased from 200,000 shares to 325,000 shares. On January 10, 1929, 660 shares authorized were sold for cash in accordance with authority previously given. On January 8, 1929, the preferred and common stockholders were given the right to subscribe to 66,635 shares of the common stock of the company at $100 per share. All of this stock was subscribed for and was issued during the year. The number of common shares issued at September 30, 1929 total 266,635 and the number of shares authorized but not issued total 58,365.

In 1930 paid-in surplus was brought to the figure at which it appeared in 1936 by a transfer described in the balance sheet for that year:

Paid-in Surplus—October 1, 1929	$8,131,000	
Add—Net Paid-in Surplus at February, 1925, transferred from Capital Surplus arising from revaluation of Capital Assets	939,730	$9,070,730

1. Were these dividends a distribution of the profit of the enterprise?

2. Even if these dividends were income for purposes of the Federal income tax, were they income in fact?

The Westinghouse Air Brake Company

Reduction of Capital and Return of Capital to Stockholders

Wilmerding, Pa., November 20, 1935

To the Stockholders of
The Westinghouse Air Brake Company:

A meeting of the stockholders of the company has been called to convene on Friday, December 20, 1935, in accordance with formal notice thereof enclosed herewith.

Your Board of Directors recommends that at this meeting action be taken to reduce the stated capital of the company from $47,581,660.80 to $34,893,217.92 without however changing the number of issued shares. If this reduction in the stated capital be authorized by the stockholders, the surplus of the company will be increased by the amount of $12,688,442.88, which amount will represent paid-in or capital surplus. The amount of the reduction and of the paid-in or capital surplus thereby created would be equivalent to $4.00 per share on the 3,172,110.72 issued shares of no par value stock.

Your Board further recommends, in connection with such reduction, that an amount equivalent to $2.00 per share of such paid-in or capital surplus be distributed as a return of capital to the stockholders in the manner hereinafter suggested.

The reasons prompting the aforesaid recommendations are as follows:

Among the consolidated current assets of the company are approximately $16,000,000 of marketable securities, carried at cost, which is substantially the market value thereof. After a study of the amount of working capital that might be required upon the restoration of normal business conditions, it is the considered judgment of your Board that a reserve fund in marketable securities of $10,000,000 will adequately finance your business, and that the proceeds from sale of the remainder of these securities can, without effect on the company's ability to carry on its operations, be distributed to stockholders in connection with the return of capital. Your Board recommends that such distribution

be made in installments over a two-year period in order to assure more advantageous liquidation of the large amount of securities involved, such installments to be at the rate of 25 cents per share per quarter, commencing April 30, 1936, and to be payable to stockholders of record thirty (30) days prior to the respective dates of payment.

During the years 1931, 1932, 1933, 1934, and the nine months of the present fiscal year, your company has disbursed to stockholders in ordinary dividends $15,628,465.08 in cash, which amount is $11,000,000 in excess of the net earnings of the company within the period stated. As a result of such disbursements the earned surplus of the company has been so reduced in amount that in the judgment of your Board it is advantageous to establish a paid-in surplus equivalent to $4.00 per share, one-half of which will be retained as paid-in surplus, and the remaining half distributed to stockholders as suggested.

After giving effect to the proposed reduction in stated capital and distribution of $2.00 per share, the stated capital of the company will be reduced to $34,893,217.92 and the surplus will be increased by $6,344,221.44 of paid-in or capital surplus, which, however, will not be available for ordinary dividends.

While the expectation of a definite improvement in the business situation seems warranted, your Board feels that the continuance of ordinary dividend payments after January 31, 1936, must await the realization of future earnings, but if these proposals are favorably acted upon, the stockholders may expect a payment of at least 25 cents per share per quarter for the two years commencing April 30, 1936. This is twice the rate of ordinary dividends which have been currently paid.

The suggested reduction in the stated capital of the company equivalent to $4.00 per share would in nowise affect the equity of any stockholder, but would merely create a paid-in or capital surplus in a corresponding amount. However, the suggested distribution to stockholders to the extent of $2.00 per share would, of course, reduce their equity in an equivalent amount, just as would ordinary dividends.

Your Board strongly recommends that you vote in favor of the proposed action, and inasmuch as the affirmative vote of the holders of a majority of the outstanding shares of the capital stock will be required, you are respectfully urged to make sure of being represented at the meeting. In the event of your inability to be present in person and of your being in favor of the Board's recommendations, it is important that the enclosed proxy, which will be voted in favor of the proposed action and which is solicited on behalf of your Board, be dated, signed and mailed in the enclosed envelope by you to the Secretary as soon as possible after receipt of this letter.

By Order of the Board,

A. L. HUMPHREY,
Chairman.

CHAS. A. ROWAN,
President.

THE WESTINGHOUSE AIR BRAKE COMPANY
Wilmerding, Pa.

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

To the Stockholders of
The Westinghouse Air Brake Company:

Notice is hereby given that a special meeting of the stockholders of The Westinghouse Air Brake Company will be held at the principal office of the Company in the Borough of Wilmerding, Allegheny County, Pennsylvania, on Friday, the 20th day of December, 1935, at 1:00 o'clock p.m., for the following purposes:

1. For the purpose of considering and acting upon the following resolution heretofore adopted by the Board of Directors of said company:

"The Board of Directors of The Westinghouse Air Brake Company, a Pennsylvania corporation, duly convened in a meeting at the office of the Company, Westinghouse Building, City of Pittsburgh, State of Pennsylvania, on the 12th day of November, 1935, at 3:00 o'clock p.m., do, upon motion duly made and seconded and unanimously carried, RESOLVE AND DECLARE that it is advisable and in the best interests of the company:

"That the present stated capital of the company applicable to its 3,172,110.72 issued no par value shares be reduced from $47,581,660.80 to $34,893,217.92 without changing the number of said shares;

"That upon such reduction in stated capital there be transferred on the books of the company from stated capital to the account of paid-in surplus an amount equivalent to such reduction, *viz.*: $12,688,442.88;

"That upon such reduction in stated capital there be distributed to the stockholders as a return of capital the sum of $6,344,221.44 out of paid-in surplus to be created through the proposed reduction in stated capital, being equivalent to $2.00 per share thereof, and that in order to assure more advantageous liquidation of the large amount of securities involved, such distribution be in installments over a two-year period at the rate of 25 cents per share per quarter, commencing April 30, 1936, the respective installments to be payable to stockholders of record thirty days prior to the date of payment.

"The Board of Directors of The Westinghouse Air Brake Company do further RESOLVE AND DECLARE that the foregoing matters shall be submitted to a vote at a special meeting of the stockholders entitled to vote thereon, to be held at the principal office of the Company in the Borough of Wilmerding, Pennsylvania, on the 20th day of December, 1935, at 1:00 o'clock p.m., and that the secretary of the company be and he is hereby directed to cause written notice to be given to each stockholder of record entitled to vote thereon of the time, place and purposes of said meeting as indicated in the preceding resolution,

such notice to be in conformity with the by-laws of the company and the laws of the State of Pennsylvania."

2. To transact such other business as may properly come before the said meeting in connection with any of the foregoing matters.

The stockholders of record on the books of the company at the close of business on November 30, 1935, will be entitled to vote at the meeting.

By Order of the Board,
R. O. YEARICK,
Secretary.

November 20, 1935.

THE WESTINGHOUSE AIR BRAKE COMPANY
CONDENSED CONSOLIDATED BALANCE SHEET
DECEMBER 31, 1935

ASSETS

Current Assets		$29,334,118
Other Notes and Accounts Receivable		1,967,874
Miscellaneous Investments		7,984,460
Capital Stock of Westinghouse Air Brake Company held for corporate purposes in the Treasuries of the companies (65,293 668/1000 shares at cost)		1,588,846
Property (net)		10,914,035
Other Assets and Deferred Charges		792,757
		$52,582,090

LIABILITIES

Current Liabilities		
Dividends Payable January 31, 1936	$ 388,321	
Amount to be Distributed from Paid-in Surplus in 1936	2,379,083	
Other Current Liabilities	1,052,297	$ 3,819,701
Amounts to be Distributed from Paid-in Surplus Subsequent to 1936		3,965,138
Other Liabilities		1,463,134
Capital Stock and Surplus:		
Capital Stock—Authorized 4,000,000 Shares of no par value; issued 3,172,111 Shares—Stated Capital	$34,893,218	
Surplus:		
Earned Surplus (restricted in the amount of $251,361, which represents the cost of 6,845 668/1000 shares of the parent company's capital stock reacquired and held in its treasury)	2,096,677	
Paid-in Surplus	6,344,222	43,334,117
		$52,582,090

THE WESTINGHOUSE AIR BRAKE COMPANY

CONDENSED STATEMENT OF CONSOLIDATED INCOME AND EARNED SURPLUS FOR THE YEAR ENDED DECEMBER 31, 1935

Gross Sales—Less discounts, returns, and allowances	$11,739,328
Cost of Sales (including distribution, administration, and general expenses, but before income taxes)	12,293,260
Net Loss from Operations	$ 553,932
Other Income—Net	1,649,147
Net Profit	$ 1,095,215
Provision for Federal and State Income Taxes	173,139
Net Profit for the Year	$ 922,076
Extraordinary Charges—Net	619,603
Net Increase in Earned Surplus before Dividends	$ 302,473
Earned Surplus, January 1, 1935	3,348,036
Earned Surplus before Dividends	$ 3,650,509
Cash Dividends Declared	1,553,832
Earned Surplus, December 31, 1935	$ 2,096,677

STATEMENT OF PAID-IN SURPLUS FOR THE YEAR ENDED DECEMBER 31, 1935

Paid-in Surplus Created by Reduction of Stated Value of Capital Stock	$12,688,443
Less Amount Authorized to be Distributed to Stockholders (included in Liabilities in the Consolidated Balance Sheet at December 31, 1935)	6,344,221
Paid-in Surplus, December 31, 1935	$ 6,344,222

Source: Company report.

1. Were the dividends of $2 per share a distribution of profit or a return of capital? In what respects did they differ from the dividends described in the case of the A. M. Byers Company?

2. Were the dividends of The Westinghouse Air Brake Company income to the recipients?

3. In view of the facts stated was the action of the company in reducing its capital and paying dividends from the surplus so created wise?

HAMILTON WOOLEN COMPANY

ACQUISITION OF TREASURY STOCK

In April, 1932, the Hamilton Woolen Company, Inc. notified its stockholders that it had on hand cash in excess of its estimated requirements for working capital under then existing conditions and that it was unable under those conditions to use this cash advantageously. The Board of Directors at that time, after carefully considering the problem of investing this excess cash in securities, decided that it would be advisable to use it for the purchase of stock of the corporation. This plan having been approved by the stockholders, the Board of Directors invited offers of stock by the stockholders, and expended $422,500 in the purchase of a total of 6500 shares of stock, which are now held in the treasury.

The Directors believe it advisable to again purchase stock of the corporation. They are of the opinion that the corporation should not go into the open market to buy its own stock without first offering to all stockholders an equal opportunity to offer for purchase by the corporation all or part of their holdings, should they desire to do so.

Subject to action by the stockholders, the Board of Directors has therefore authorized an invitation to stockholders to offer all or any part of their stock for purchase by the corporation at not exceeding $50 per share. The terms of such invitation, determined pursuant to that authorization, are set forth in subparagraphs *A* to *F*, inclusive, of article 4 of the Notice of the Annual Meeting of Stockholders to be held February 1, 1933, enclosed herewith. If these terms are approved by the stockholders at the meeting, the Board of Directors proposes that the corporation invite offers from the stockholders of record upon the terms stated, and has authorized an aggregate present expenditure for the purchase of stock from stockholders, on the proposed terms or in the open market, not in excess of $62,000.[1]

. . . . . .

A. The corporation proposes to apply not exceeding $62,000 of surplus to the purchase of its common stock at not exceeding $50 per share.

B. Stockholders of record may offer to the corporation all or any part of their stock for purchase at $50 per share or at any less price. Stockholders may offer different blocks of their stock at different prices, but no stockholder shall offer more stock than the amount standing in his name, and no alternative, conditional or contingent offers will be accepted. Offers at the lowest prices will be accepted first and, in case not all the stock offered at the same price is accepted for purchase, the number of shares purchased at such price will be prorated as nearly as possible (avoiding fractions of a share) among all

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[1] Company report, November 30, 1932.

offers at such price. The corporation reserves the right to reject any and all offers.

C. Offers for purchase hereunder by the corporation shall be submitted on forms to be furnished by the corporation, signed by the stockholder of record and enclosed in a sealed envelope; and must be received by Messrs. Price, Waterhouse & Company, Auditors, 75 Federal Street, Boston, Massachusetts, on or before twelve o'clock noon, February 25, 1933.

D. All offers received will remain sealed until the expiration of the period for submitting offers, and at or after that hour will be opened and checked by representatives of the corporation's auditors, Messrs. Price, Waterhouse & Company, who will report thereon to the Board of Directors. The Board will act upon such report as soon as possible, but not later than March 4, 1933.

E. Stockholders will receive prompt notification of the number of shares which the corporation has elected to purchase on their respective offers and will be requested to deposit with the Transfer Agent stock certificates (in form for transfer) for the shares purchased not later than ten (10) days after the date of such notice.

F. This invitation to offer stock hereunder is open to all stockholders including the Directors of the corporation, who may offer thereunder stock of the corporation held by them individually or as trustees or in other fiduciary capacities.[1]

HAMILTON WOOLEN COMPANY, INC.
BALANCE SHEET—NOVEMBER 30, 1932
ASSETS

Current Assets:		
Cash on hand and in banks		$ 338,355
United States Certificates of Indebtedness maturing within one year and accrued interest		836,244
Accounts receivable—less reserves		517,689
Inventories at cost or market, whichever lower	$ 492,164	
Less—Reserve	75,000	417,164
		$2,109,452
Deferred Charges		37,843
Fixed Assets:		
Land, buildings, machinery and equipment at adjusted book value	$ 993,495	
Less—Reserve for depreciation	473,408	520,087
		$2,667,382

[1] Company Notice of Annual Meeting of Stockholders, January 16, 1933.

HAMILTON WOOLEN COMPANY, INC.
BALANCE SHEET—NOVEMBER 30, 1932.—(*Continued*)
LIABILITIES

Current Liabilities:			
Accounts payable		$ 20,344	
Accrued pay roll and commissions		17,961	
Provision for state and federal taxes		22,119	
Provision for loss in finishing unshipped sales		7,627	
Provision for dividend payable January 16, 1933		38,730	$ 106,781
Capital Stock:			
Authorized—45,000 shares of no par value			
Issued— 38,775 shares		$1,938,750	
Less—In treasury 6,500 shares		325,000	
Outstanding— 32,275 shares			1,613,750
Surplus:			
Balance—December 1, 1931		$1,043,374	
Less—Cost of treasury stock in excess of $50 per share		97,500	
		$ 945,874	
Add—Net profit for the year ending November 30, 1932, as per statement annexed	$39,617		
Less—Dividend payable January 16, 1933	38,640	977	946,851
			$2,667,382

HAMILTON WOOLEN COMPANY, INC.
CONDENSED STATEMENT OF PROFIT AND LOSS
FOR THE YEAR ENDING NOVEMBER 30, 1932

Net sales (less discounts and allowances)		$3,710,871
Cost of sales, expenses, and all other charges, except taxes deducted below		3,686,492
		$ 24,379
Add: Interest received and miscellaneous income		20,238
		$ 44,617
Deduct: Provision for state and federal taxes		5,000
Net profit for the year		$ 39,617

Source: Company report.

In what respects did the acquisition of treasury stock in 1933 differ from the dividends described in the A. M. Byers Company and The Westinghouse Air Brake Company cases?

Deere & Company

STOCK DIVIDEND PAID ON COMMON IN COMMON. THE EFFECT OF TAXATION ON DIVIDENDS

By amendments to the Articles of Incorporation of the Company adopted by its shareholders on September 15, 1937, and filed in the office of the Secretary of State of the State of Illinois on September 20, 1937, it is provided that the unissued shares of Common Stock of the Company may be issued at such time or times, in such manner, amounts and proportions and for such considerations, as shall be fixed from time to time by the Board of Directors and permitted by law. At a meeting of the Board of Directors immediately following the above mentioned meeting of the shareholders, the Board adopted a resolution declaring a Common Stock dividend payable on October 30, 1937, to the Common Shareholders of record at the close of business on October 2, 1937, at the rate of two shares of Common Stock for each one share of Common Stock outstanding (not including shares held in the treasury of the Company). The number of outstanding common shares (exclusive of 3,546 shares in the treasury of the Company) is 1,001,454; the number of shares required for the payment of said Common Stock dividend is, therefore, 2,002,908.

Concurrently with the declaration of said Common Stock dividend, and for the purpose of providing the capital required therefor, there was transferred from the earned surplus account of the Company to capital account the sum of $9,979,080.

The purpose of the declaration of the payment of this Common Stock dividend is to effect a wider distribution of Common Stock among its Common Shareholders, and to provide additional permanent capital to meet the expanding business of the Company. The amount so transferred from surplus to capital account will constitute a part of the working capital of the Company and the same has not yet been allocated to any specific uses.[1]

Excerpts from the balance sheets of October 31, 1936 and 1937, and the income and surplus statement for the intervening period are included.

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[1] New York Stock Exchange Listing Application, A-11,005, September 22, 1937.

1. The company paid three types of dividends during 1937. What were the significant differences among them in terms of the effects on the corporation?

2. How much income did a stockholder receive who held 100 shares of preferred throughout the fiscal year ending October 31, 1937, and 100 shares of common until October 30 at which time he received additional shares?

DEERE & COMPANY
CONDENSED CONSOLIDATED BALANCE SHEET AS OF OCTOBER 31

	1936	1937
Current Assets	$66,119,310	$ 83,958,522
Notes and Accounts of Officers and Employes	93,845	86,825
Claims against Closed Banks	100,214	90,101
Cash Deposited with Escrow Agents	20,000	20,000
Pension Fund Investments	943,358	713,096
Company's Capital Stocks Owned—at Cost		
Preferred (7,000 shares)	83,881	83,881
Common (3,546 shares)	63,548	63,548
Property and Equipment, net of Depreciation	17,883,349	19,723,046
Investments	2,493,744	2,750,380
Deferred Charges	614,698	615,670
	$88,415,947	$108,105,069
Current Liabilities		
Dividends Payable	$ 2,092,500	$ 540,050
Other Current Liabilities	6,896,591	20,464,542
Reserves	6,644,222	7,170,525
Stated Capital and Earned Surplus		
Preferred Stock*—authorized—2,000,000 shares of $20 par—issued, 1,550,000	31,000,000	31,000,000
Common Stock—authorized—5,000,000 shares without par—issued		
1,005,000 shares	20,100,000	.....
3,007,908 shares	.....	30,079,080
Earned surplus (including $147,428 applicable to the Company's preferred and common capital stocks reacquired)	21,682,634	18,850,872
	$88,415,947	$108,105,069

* Dividend rate, 7% per annum.

Note.—Dividends on preferred stock were in arrears at October 31, 1936, in the amount of $3,642,500, or $2.35 a share.

DEERE & COMPANY AND SUBSIDIARY COMPANIES
SUMMARY OF CONSOLIDATED INCOME AND EARNED SURPLUS
FOR THE YEAR ENDED OCTOBER 31, 1937

Net Sales		$100,399,710
Deduct:		
Cost of manufacture, distribution, collection, and administrative and general expenses, including provisions for possible losses in collection of receivables, for decline in market values of inventories, and for contingencies, etc.	$78,540,732	
Depreciation	1,621,323	
Provision for Federal income and excess profits taxes (including $1,980,000 for surtaxes on undistributed profits)	6,794,351	
Provision for other taxes	1,988,322	88,944,728
Net Operating Income		$ 11,454,982
Other Income—Net:		
Interest and finance charges on receivables, etc.	$ 2,287,158	
Cash discounts on purchases	587,669	
Retail store profits—Net, and miscellaneous income, less miscellaneous income charges	833,108	
Total	$ 3,707,935	
Less—Interest on notes payable and sundry obligations	226,441	3,481,494
Net Income for the Year		$ 14,936,476
Earned Surplus, October 31, 1936 (including $147,428 applicable to the Company's preferred and common capital stocks reacquired)		21,682,634
Earned Surplus, October 31, 1937, before dividends		$ 36,619,110
Dividends Paid:		
In Cash:		
Preferred stock, $3.75 a share	$ 5,786,250	
Common stock, $2.00 a share	2,002,908	
In common stock at the rate of two shares for each share of common stock outstanding	9,979,080	17,768,238
Earned Surplus, October 31, 1937 (including $147,428 applicable to the Company's preferred and common capital stocks reacquired)		$ 18,850,872

Source: Company report.

The price range of the common stock during 1937 and preceding years is shown in Exhibit 1. Dates of dividend payments are included in Exhibit 2.

EXHIBIT 1
DEERE & COMPANY
PRICE RANGE—COMMON STOCK

	High	Low
1934	34 1/8	10 1/8
1935	58 3/4	22 3/4
1936	108 3/4	107
1937	143 1/2	68 1/4
	27*	19 1/2*

* After 200% stock dividend.
Source: *Standard Corporation Records*, Individual Reports Section.

EXHIBIT 2
DEERE & COMPANY
DIVIDEND DATES AND PAYMENTS, 1936–1937

1936

Preferred			Common
Amount	Record	Payable	Nil
$0.35	2/15	3/2	
0.35	5/15	6/1	
0.35	8/15	9/1	
1.35	11/14	12/1	
$2.40			

1937

Preferred			Common		
Amount	Record	Payable	Amount	Record	Payable
$0.70	2/15	3/1	$1.00	8/14	9/1
1.35	5/15	6/1	1.00	10/2	10/20
1.35	8/14	9/1	200% Stk.	10/2	10/30
0.35	11/15	12/1			
$3.75					

Source: *Standard Corporation Records*, Main Dividend Sections; monthly, 1936, annual, 1937.

California Packing Corporation

STOCK DIVIDENDS PAID IN PREFERRED ON COMMON. THE EFFECT OF TAXATION ON DIVIDENDS

Consent to the following amendment of the Certificate of Incorporation of the California Packing Corporation was given by the stockholders on December 29, 1936, pursuant to a resolution adopted by the directors on November 30.[1]

1. To increase the present authorized shares of stock of the Corporation from 1,500,000 shares without par value to 1,700,000 shares, of which 1,500,000 shares being the present authorized shares, shall be without par value, and 200,000 new shares shall have a par value of $50 each;

2. To classify said 1,700,000 shares as follows: 1,500,000 shares without par value as Common Stock, and 200,000 new shares with a par value of $50 per share as Preferred Stock;

3. To provide that such Preferred Stock shall, among other things, be cumulative, with dividends at the rate of five per cent (5%) per annum, redeemable at par, plus accrued unpaid dividends, at thirty (30) days' notice; be preferred as to earnings and assets, and receive par plus accrued dividends, in the event of liquidation, dissolution, or winding up of the Corporation; have no voting power until in arrears in the payment of four (4) quarterly dividends; and have no pre-emptive right;

4. To change the additional statement with respect to the minimum amount of capital of the Corporation so as to provide that the same shall not at any time be less than the sum of the aggregate par value of all issued shares having par value, plus thirty million dollars ($30,000,000).

The following paragraph appeared in the annual report for the year ended February 28, 1937:

The Federal Tax Law of 1936 imposes a graduated tax ranging from 7% to 27% on the undistributed earnings of corporations. The Corporation was advised by its Counsel that if preferred shares were created and thereafter a dividend was paid to its common stockholders payable in the alternative at the option of each stockholder, either in cash or preferred shares, and if thereafter a further dividend was paid to the common stockholders in such preferred shares, both of these dividends would comply with the prerequisites of the Federal

[1] New York Stock Exchange Listing Application, A-10807, January 29, 1937.

Tax Law of 1936 as to distribution of earnings, and the Corporation would receive credit therefor in the same manner as though cash had been distributed. A Special Meeting of the Stockholders was held on December 29, 1936, at which meeting 200,000 shares of preferred stock of the Corporation, at $50.00 par value per share, was authorized, of which 51,644.65 shares having a par value of $2,582,232.50 were issued during the year in the form of two dividends. Dividend No. 70A under which the stockholders were offered at their option a cash dividend of 50¢ a share or its equivalent in preferred stock, resulting in the issuance of 3,391 shares of preferred stock of par value $169,550.00 and cash payments amounting to $312,986.50. Dividend No. 71A under which the stockholders received preferred stock at par at the rate of $2.50 per share of common stock. The number of shares of preferred stock issued in payment of this dividend was 48,253.65 having a par value of $2,412,682.50. The fractional share was acquired at par for cash and retired. In addition to the aforementioned, five (5) cash dividends of 37½¢ each per share were paid, amounting to $1,809,511.88. Common stockholders, therefore, received during the fiscal year, in the form either of cash or preferred stock, the equivalent of $4.87½ per share. A dividend of 15¢ per share was paid on 3,391 shares of preferred stock outstanding on January 25, 1937, amounting to $508.65. . . .

Dividend No. 70A was declared December 30, 1936, payable January 25, 1937, to stock of record January 9, 1937. Dividend No. 71A was declared January 26, 1937, payable February 20, 1937, to stock of record February 5, 1937.

The balance sheets as of February 29, 1936, and February 28, 1937, are given in condensed comparative form, together with the income and surplus statement for the intervening period.

What were the differences in the effects of the stock dividends on the corporations concerned and on the interests of stockholders in this case and in that described in the Deere & Company case?

California Packing Corporation
Condensed Consolidated Balance Sheets

	February 29, 1936	February 28, 1937
Current Assets	$27,246,872	$35,301,619
Growing Crops and Advances to Producers	1,922,335	1,647,648
Employees' Stock Subscriptions, balance	164,689	33,907
Investments	9,467,265	9,490,897
Capital Assets, net of depreciation	17,142,852	17,251,299
Deferred Charges	389,936	492,390
	$56,333,949	$64,217,760
Current Liabilities		
Dividends Payable, March 16, 1936	$ 361,902	$.....
Other Current Liabilities	6,841,148	11,952,667
Funded Indebtedness	7,500,000	7,500,000
Capital and Surplus		
Preferred Stock 5%—$50 par*	.....	2,582,200
Stated capital†	30,000,000	30,000,000
Earned surplus	11,630,899	12,182,893
Contingent Liability—		
1936 $96,462		
1937 $51,323		
	$56,333,949	$64,217,760

* Authorized—200,000 shares; issued—51,644 shares.

† Represented by 965,073 shares of no par value stock (authorized 1,500,000 shares of which there are 93,750 shares available for conversion of debentures).

Notes:

A. It is the practice of the Corporation to take up in its books annually, its proportionate share of profits (or losses) of the Alaska Packers Association (based upon that company's fiscal year ended December 31) by charge (or credit) to investment in this company, and credit (or charge) to profit and loss; dividends received are credited directly to the investment account to reflect the resulting reduction in net asset value of such company. Dividends received in the year ended February 28, 1937, amounted to $388,610 as compared with proportionate share of profits included above of $441,637. Consolidated surplus includes $151,654 credit resulting from adjustment of investment in Alaska Packers Association to the proportionate share of book value of underlying net assets of that company, not actually received in dividends as at February 28, 1937.

B. No provision has been made for surtax on undistributed profits since dividends paid are in excess of the taxable net income used as a basis for estimating the provision for Federal income tax.

C. Depreciation provided on plant and property charged to profit and loss during the year amounted to $1,033,278.

CALIFORNIA PACKING CORPORATION
AND WHOLLY OWNED SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENT OF PROFIT AND LOSS AND EARNED SURPLUS
YEAR ENDED FEBRUARY 28, 1937

Sales		$61,750,118
Cost of goods sold		48,244,818
Gross profit		$13,505,300
Selling, administrative and general expenses	$8,108,082	
Interest on debentures	375,000	8,483,082
		$ 5,022,218
Other Income:		
Dividends received from companies less than 50% owned	$ 38,096	
Miscellaneous	26,509	64,605
		$ 5,086,823
Proportionate share (84.5%) of profits and credits to surplus of Alaska Packers Association for year ended December 31, 1936 (Note A)		441,637
		$ 5,528,460
Provision for Federal income tax (exclusive of $26,129 shown below) (Note B)		781,191
Net profit from operations and share of profits of Alaska Packers Association		$ 4,747,269
Adjustment credits considered to relate mainly to prior years, less payment of $1,995,410 to insurance company in connection with Annuity Plan for employees of the Companies, less Federal income tax thereon of $26,129		148,062
Balance added to surplus		$ 4,895,331
Earned surplus, February 29, 1936		11,630,900
		$16,526,231
Dividends Paid:		
Nos. 67–71A on common stock—$4.87½ per share ($2,122,498 in cash and $2,582,233 in preferred stock)	$4,704,731	
No. 1 on preferred stock—$0.15 per share (in cash)	509	
	$4,705,240	
Less—No. 67 on common stock—liability for which was set up in previous fiscal year, $0.37½ per share (in cash)	361,902	4,343,338
Earned surplus, February 28, 1937, per balance sheet (Note A)		$12,182,893

Source: Company report.

A schedule on earnings and dividends which was a part of each report is given as it appeared in the report for 1937.

California Packing Corporation and Subsidiary Companies
Comparative Statement of Earnings and Dividends Paid

Year Ended February 28	Net Earnings after All Charges	Dividends Paid	Added to Surplus
1917	$ 1,086,522	$ 111,089*	$ 975,433
1918	6,147,940	1,418,228*	4,729,712
1919	3,689,279	1,926,566*	1,762,713
1920	7,242,402	2,071,271*	5,171,131
1921	4,253,015	2,830,248	1,422,767
1922	2,240,591	2,830,248	589,657‡
1923	6,168,383	2,830,248	3,338,135
1924	5,319,351	2,830,248	2,489,103
1925	6,150,479	2,920,248	3,230,231
1926	6,014,851	3,163,602	2,851,249
1927	5,057,353	3,909,664	1,147,689
1928	3,439,685	3,909,664	469,979‡
1929	6,233,021	3,909,664	2,323,357
1930	6,024,349	3,909,664	2,114,685
1931	91,180	3,909,664	3,818,484‡
1932	4,877,595†	977,416	5,855,011‡
1933	4,521,001†	.....	4,521,001‡
1934	4,131,863	241,268	3,890,595
1935	3,240,704	1,447,609	1,793,095
1936	2,542,248	1,447,610	1,094,638
1937	4,895,330	4,343,337*	551,993
	$74,569,950	$50,937,556	$23,632,394

May 18, 1926, Transferred to Capital Account for Stock Dividend	$ 8,045,515	
Years Ended February 28, 1932 and 1933, Capital Stock retired—12,343 shares	487,827	
February 29, 1932, Provision for obsolescence of Capital Assets, etc.	4,000,000	
February 28, 1933, Debenture discount and expense—unamortized balance written off	347,482	
	$12,880,824	
February 28, 1935—Depreciation adjustment to February 28, 1934	1,431,323	$11,449,501
Surplus per Balance Sheet, February 28, 1937		$12,182,893

* Includes Dividends on Preferred Stock then outstanding. Dividends paid in year ended February 28, 1937, include $2,582,233 paid in preferred stock.
† Loss.
‡ Deducted from surplus.

PLYMOUTH OIL COMPANY

DIVIDENDS FROM TREASURY STOCK

In the last quarter of 1934, [November 21, 1934], the Board of Directors authorized the distribution of 40,384 shares of common stock of the Plymouth Oil Company [costing $913,980] in the form of a 4% stock dividend [payable December 22 to stock of record December 3]. This was treasury stock which had been accumulated in the open market over a period of years. By reason of restrictions imposed by the Federal Securities Act in the disposition of treasury stock, the Board of Directors deemed it expedient to make distribution of this stock for the benefit of all the stockholders. No other treasury stock is held by the Company. Cash dividends in the amount of seventy-five cents per share were paid during the year. The added value of the stock dividend, on the basis of the selling price on the date of dividend declaration, of $8.50 per share, gave to stockholders dividend income for the year of approximately $1.10 per share.[1]

In the consolidated balance sheet as of January 1, 1934, 35,918 shares of treasury stock of the Plymouth Oil Company were shown under Investments as a noncurrent asset at $871,524. As of that date, capital stock authorized and outstanding consisted of 1,050,000 shares of $5 par at $5,250,000. Total consolidated earned surplus was $4,937,715.

The dividends during 1934 were recorded in the consolidated surplus statement for that year.

PLYMOUTH OIL COMPANY
RECONCILIATION OF SURPLUS

Surplus, Consolidated Balance Sheet, January 1, 1934		$4,937,715
Add: Net Earnings, January 1 to December 31, 1934		1,006,326
Dividends from Plymouth Oil Company Treasury Stock		26,939
		$5,970,980
Less: Cash Dividends		
Paid to Minority Interests by Big Lake Oil Co.	$475,000	
Paid by Plymouth Oil Company	787,500	
Stock Dividend		
Cost of 40,384 Shares of Re-acquired Treasury Stock Distributed by Plymouth Oil Company	913,980	2,176,480
Surplus, January 1, 1935		$3,794,500

The price range of the stock during 1933 and 1934 is shown in Exhibit 1.

[1] Company report, 1934.

EXHIBIT 1
PLYMOUTH OIL COMPANY
PRICE RANGE OF STOCK

	High	Low
Year 1933	17 5/8	6 3/4
Jan.–Oct. 1934	16 3/4	8
October	9	8 1/8
November	9 7/8	8 1/4
November 30	8 1/2*	...
December	8 3/4	7 1/4

* Ex-dividend.
Source: *Bank and Quotation Record.*

1. In what respects did this dividend in stock differ from the more usual type of stock dividend involving the issue of new stock?

2. Was the amount of income received by stockholders equal to the charge to surplus by the corporation?

GENERAL ELECTRIC COMPANY

DIVIDENDS IN THE STOCK OF ANOTHER CORPORATION

In 1932 the General Electric and Westinghouse companies held large blocks of common stock of the Radio Corporation of America. The terms of a consent decree entered in the United States District Court for the District of Delaware on November 21, 1932, provided among other things that these companies should "divest themselves of their stock of Radio Corporation by distribution to their stockholders and otherwise."

Regarding this provision, it was stated in the annual report of the General Electric Company for 1932 that:

> . . . pursuant to the decree, your Directors voted [probably December 2, 1932] to distribute on February 20, 1933, 4,807,320 5/6 shares of the 5,188,755 shares of Radio Corporation common stock owned by your Company as a dividend to its common stockholders of record on December 16, 1932, on the basis of 1/6 of one share of Radio Corporation common stock for each share of common stock of General Electric Company. The balance of your Company's holdings was left to be disposed of by your Directors within three years from the date of the decree.

The 4,807,320 5/6 shares of Radio stock were shown as an asset in the balance sheet of the General Electric Company for Decem-

ber 31, 1932, at $26,440,264.58. The rest of the Radio stock was evidently included under "Associated companies and miscellaneous securities." The following item was included after current liabilities in the balance sheet:

Dividend payable in common stock of Radio Corporation of America (per contra)..... $26,440,264.58

The surplus statement of that year included a deduction for the dividend, in the amount of $26,440,264.58.

Radio Corporation common stock was quoted on the New York Stock Exchange at 5⅝–5¾ on December 2, 1932, at 5⅛–5¼ on December 16, 1932, and at 3⅞–4 on February 20, 1933.

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1. Was this a stock dividend?

2. Was it income to the recipients in the amount charged to surplus by the corporation?

General Motors Corporation

DIVIDEND POLICY

In mailing dividend checks in September, 1935, the following letter was sent to stockholders of General Motors Corporation:

General Motors Corporation
Broadway at 57th Street
New York, N. Y.

September 11, 1935

To our stockholders:

Enclosed please find check covering the dividend payable on the common shares of the General Motors Corporation standing in your name under date of August 15, representing a regular quarterly dividend of $.50 per share and an extra dividend of $.25 per share. At the time of the declaration of this dividend, a statement was made with respect to same which is repeated below for your information.

"As to the increase in regular dividend rate from $.25 to $.50 per quarter, I might state that it has been a long standing policy of the Board to establish a normal or regular rate of dividend as generous as possible, and one that can be reasonably counted upon by the stockholders, while at the same time reflecting the financial position of the Corporation, the current rate of earnings, and the future trend, so far as that can ever be discerned. The increased rate ordered at this time reflects the judgment of the Board with respect to all these factors.

"It must be recognized, however, that with things as they are, there may be injected into the situation, at any moment, unusual circumstances that can not be foreseen, such as may entirely alter the

case. In such an event, the Directors will not hesitate to re-appraise their position, and act accordingly.

"The regular dividend declared today represents a rate of disbursement two-thirds of that of the pre-depression period."

Perhaps this might be an appropriate opportunity to elaborate somewhat on certain phases of the dividend question.

The Directors of General Motors Corporation have consistently taken the position that there should be only two considerations in determining dividend action—first, earnings which alone make dividends possible, present as well as future; second, the future needs of the business. Generally speaking, any business, if it performs a useful service to the community, and is properly administered, must continually develop. This does not mean that it must necessarily grow in size, but it must at least keep pace with the evolution of things if it is to continue to exist. This principle applies importantly to a highly technical business, such as that of General Motors. Machinery and plant quickly become inefficient and must be replaced with the new and better or the efficiency of the business is impaired. New models involving large expenditures are yearly required to maintain the competitive position of the products manufactured. All this is necessitated by a continually advancing technology—a highly essential process.

No business is safe, and as a matter of fact, no business should be safe if it stands still, because progress is essential in all things. To go ahead usually involves some capital outlay. There is available for this the amount set aside yearly for depreciation and obsolescence, but frequently that is not sufficient, especially when applied to any one year, or in the event of any unusual circumstances. Still again, even if the business is not expanding, changed circumstances may require additional working capital to carry on its day to day operations. The necessity for providing for capital needs out of earnings is today a most important consideration on account of the obstacles and hazards that exist with respect to the flow of additional capital into industry.

I make this explanation to reach the point that it is not always desirable, in fact, it is usually not either desirable or even possible over the years to pass out all the earnings of a business; some should be set aside for the purposes above mentioned. On the other hand, conditions do arise where it is entirely justifiable and to the interest of the stockholders to pay out in any one year more than that year's earnings. General Motors, during the depression from which we are just emerging, did that very thing—as a result, it was able to maintain payments to the stockholders during the entire depression. A reduced volume of business releases working capital which can be made available to the stockholders for their use. Again, the necessity for capital expenditures such as plant and machinery is minimized. When the amounts we are dealing with are large, as in the case of General Motors, an appreciable contribution is made in maintaining the purchasing power of the community. This is a highly desirable consideration as the public is importantly served.

Applying the above thinking to the case of General Motors, it may be interesting to point out that if we consider the ten year period, beginning in 1925 and ending in 1934, five years fairly representing a period of unusual prosperity and five years representing a period of unusual depression, there was disbursed to the stockholders 77% of the earnings, leaving 23% for the purposes of the business itself. If we take the first five years, the proportion disbursed as dividends was 63%; for the second five years, 113%.

The recent announcement made by General Motors, that the management felt conditions had sufficiently adjusted themselves to warrant the belief that there was an opportunity for profitable investment, and that an expenditure of $50,000,000 would be made to improve and expand the Corporation's productive facilities, both at home and overseas, is another illustration of the point. This highly essential development became possible because of the accumulation of earnings.

Therefore the problem of dividend policy is not always a simple one. A rate of dividend when once declared carries with it the desirability of continuity. The declaration must reflect not only the current condition of the business but there must be considered the future trend, especially with respect to prospective earnings and possible capital needs. Under conditions existing today such an appraisal is difficult. There is involved unusual uncertainty. This must be appreciated by the stockholders.

The most important point I want to make is that General Motors stockholders can rely upon the Directors to pass on the largest possible share of the earnings consistent with the needs of the business. Other considerations, such as essential progress of the business, the maintenance of an efficient and effective plant, an aggressive organization, and adequate protection against such hazards as the political tendency of today to penalize business bigness through discriminatory taxes and otherwise, are in times like these very real and must be given proper consideration as applied to any business.

The answer to the problem of dividend distribution depends upon the determination of an equitable balance. The judgment of the Directors of General Motors Corporation on this point is expressed in the action referred to at the beginning of this message.

ALFRED P. SLOAN, JR.,
President.

This is a statement of dividend policy. There was at the time of this statement a limit on dividends which could legally be paid. What were the differences between the determination of the problem of policy and the determination of amounts legally available for dividends in terms of the facts on which decisions would be based, the methods used in coordinating and interpreting those facts, and the persons or groups by whom decisions would be made?

American Telephone and Telegraph Company—No. 3

DIVIDEND AND RELATED POLICIES

Despite the failure of the company, by a substantial margin, to earn the full dividend requirements on its capital stock in 1932, 1933, and 1934, the directors of the American Telephone and Telegraph Company continued dividend payments in those years at the annual rate of $9 per share established in 1922. With respect to this dividend policy, the following statement was made in the company's annual report for the year 1933:

. . . while due to the reduced volume of business the System's earnings of 3.7 per cent on the cost of plant and other assets were inadequate, the past financial policy made it possible to continue the dividend to stockholders at the usual rate.

Prior to 1932, the Company had never in any year paid out all of its earnings in dividends. Thus, in its nearly fifty years of existence, it accumulated a surplus, which together with its proportion of the surplus of its Associated Companies and the Western Electric Company amounted to $31 per share of its stock outstanding. In the past two years $6.66 per share of this surplus, $3.04 in 1932 and $3.62 in 1933, has been used in order to maintain the dividend on the stock. The Company has no "watered stock" but, on the contrary, has received an average of $114 a share for the 18,662,275 shares of stock outstanding. The dividend of $9.00 a share was therefore at the rate of 6.4 per cent and the 1933 net income of $5.38 per share was 3.8 per cent on the stockholders' investment, including the surplus.

As stated in the 1932 Annual Report, "during the boom period, culminating in 1929, in spite of considerable pressure growing out of the speculative fever, the Company paid no extra or stock dividends and did not split up its stock." This was in accord with the policy followed for many years and formally stated in 1927—"there is not only no incentive but it would be contrary to sound policy for the management to earn speculative or large profits for distribution as 'melons' or extra dividends. On the other hand, payments to stockholders limited to reasonable regular dividends with their right, as the business requires new money from time to time, to make further investments on favorable terms, are to the interest both of the telephone users and of the stockholders."

This policy has enabled a stability of return to stockholders during the depression that has in thousands of cases helped to provide the bare necessities of life for those who have invested their savings in the business. Of the 681,000 stockholders, 381,000 are women and about 115,000 are Bell System employees. No stockholder owns as much as one per cent of the stock outstanding, the average holding per stockholder being 27 shares.

Despite charges against surplus of approximately $55,800,000, $67,600,000, $56,800,000, and $35,000,000 in 1932, 1933, 1934, and 1935 respectively, as a result of dividend payments in excess of earnings, consolidated net working capital of the company showed increases in the last two years. On December 31, 1935, cash and temporary cash investments alone totaled more than $267,000,000 as compared with $219,000,000 at the end of 1933 and $204,000,000 at the end of 1932. That maintenance of the regular dividend rate did not bring about any depletion of the company's working capital was a result of the fact that the annual provisions for depreciation were in excess of the amounts by which the company failed to earn its full dividend requirements.

In accordance with the requirements of the Interstate Commerce Commission,[1] the company makes monthly charges against its earnings in an amount sufficient to provide for current depreciation accruing in its investments in depreciable fixed assets from losses due to wear and tear (not covered by current maintenance); from losses due to obsolescence or inadequacy resulting from age, physical change, supersession by reason of new inventions and discoveries, changes in popular demand or public requirements; and from losses suffered through destruction of property by extraordinary casualties. These monthly charges against earnings are in such amount as will distribute and include in the expense accounts, as nearly as may be, evenly throughout its service life, the cost of property used up in rendering service, and provide a reserve account in the balance sheet for meeting the full loss of investment in depreciable fixed capital upon its ultimate retirement. In the nine years 1929–1937, inclusive, the company's annual consolidated provisions for depreciation were as follows:

1929	$164,376,990
1930	182,400,230
1931	192,307,175
1932	181,312,237
1933	171,846,193
1934	153,474,643
1935	171,681,516
1936	160,963,777
1937	161,601,522

[1] As of January 1, 1936, these requirements were superseded by those of the Federal Communications Commission. Under Section 604(*a*) of the Federal Communications Act, which established the new communications commission, all rules of the Interstate Commerce Commission were continued in effect until modified, terminated, superseded, or repealed by the Federal Communications Commission.

In the year 1934, the depreciation expense was reduced by $15,948,059 as a result of adjustments made in the accounts of two subsidiary companies arising in connection with court decisions rendered during the year. Had these adjustments not been made, the 1934 depreciation expense would have been $169,422,702, or 4.3 per cent of the cost of the average depreciable plant in service. Comparable percentages from 1929 to 1937 were:

	Per Cent
1929	5.0
1930	5.0
1931	4.9
1932	4.5
1933	4.4
1934	3.9
1935	4.3
1936	4.1
1937	4.0

In Exhibit 1 the total assets, reserve for depreciation, funded debt, capital stock, surplus, net income, and dividends of the company on a consolidated basis are given for 1912–1937. During this time there were no changes in the par or stated value of the stock, there were no stock dividends or splits, and there were no reductions in capital with resultant increases in surplus. No stock was sold at a discount. All changes recorded in the capital stock account were the result of credits arising from the issuance of shares of $100 par. Apparently all of this stock was issued for cash. Any premiums received were carried to premium on capital stock and were not mingled with surplus.

---

1. Did the relative simplicity in the administration of capital stock and surplus in the period prior to 1930 make easier the task of the management in meeting the difficulties of the depression years following 1930?

2. Do you agree with the company's dividend policy from the point of view of public service or public relations in time of depression?

3. What other policies of the company facilitated the continuance of dividends?

EXHIBIT 1
AMERICAN TELEPHONE AND TELEGRAPH COMPANY
(000 omitted)

Year ended Dec. 31	Total assets	Reserve for depreciation	Funded debt	Capital stock	Surplus	Net income	Dividends
1912	$ 924,261	*	$ 294,380	$ 393,210	$164,237‡	$ 42,681	$ 29,460
1913	980,004	*	341,147	395,225	174,498‡	42,037	30,302
1914	1,019,774	*	385,352	393,732	189,955‡	40,307	30,304
1915	1,057,908	*	353,236	440,711	223,402‡	48,086	32,897
1916	1,198,863	*	422,587	463,102	262,005‡	57,239	35,160
1917	1,276,503	*	407,434	505,404	303,526‡	50,714	36,863
1918	1,380,506	*	430,992	513,017	341,992‡	51,948	39,735
1919	1,530,075	*	546,203	512,122	388,574‡	51,958	39,840
1920	1,634,250	*	585,794	511,493†	444,039‡	47,785	40,000
1921	1,902,511	*	666,741	632,216†	506,123‡	67,425	47,848
1922	2,162,523	*	646,033	837,007†	563,583‡	86,623	60,305
1923	2,400,048	*	752,661	891,535†	621,853‡	99,624	72,429
1924	2,664,195	*	752,733	1,093,573†	678,838‡	107,246	82,603
1925	2,938,004	*	890,337	1,144,619†	748,250‡	136,503	93,243
1926	3,256,636	*	921,523	1,312,881†	839,982‡	155,061	100,614
1927	3,457,467	$ 600,664	919,790	1,351,940†	296,953	166,059	112,401
1928	3,826,684	650,621	964,784	1,564,644†	373,798	191,088	119,349
1929	4,228,430	699,035	1,148,540	1,611,862†	475,865	217,105	132,224
1930	5,000,196	740,006	1,115,592	2,155,053†	442,442	201,646	156,625
1931	5,024,336	788,586	1,054,825	2,172,897†	448,372	193,379	180,904
1932	4,901,576	820,195	1,043,908	2,097,348	401,739	139,336	185,032
1933	4,907,677	891,438	1,037,625	2,097,313	345,908	128,585	183,240
1934	4,977,055	967,713	1,038,825	1,964,165	321,056	125,352	174,385
1935	5,059,352	1,061,102	1,078,377	2,096,144	268,943	147,539	174,385
1936	5,149,309	1,124,809	862,040	2,052,340	246,088	197,838	181,174
1937	5,057,809	1,198,516	871,509	2,019,619	249,247	193,390	180,228

* Not reported.
† Includes installments on stock not yet issued.
‡ Including reserves for depreciation and contingencies.
Source: Consolidated statements from company reports.

C. REDUCTION OF CAPITAL, CAPITAL SURPLUS, EARNED SURPLUS

RADIO CORPORATION OF AMERICA—No. 1

REDUCTION IN THE STATED VALUE OF NO PAR STOCK

The following letter to stockholders accompanied the annual report for 1931. Balance sheets for 1930 and 1931 are given below in comparative form, with that for 1931 reflecting the changes indicated in the letter. The income and surplus statements for 1931 are also given.

RADIO CORPORATION OF AMERICA
RCA Building
570 Lexington Avenue
New York

March 14, 1932

To the Stockholders:

On November 9, 1931, the Board of Directors of the Company appointed a Committee to consider with the executive officers of the Company what action should be taken, in the light of present conditions, to reduce book values of certain assets of the Company and its subsidiaries and to establish appropriate reserves.

The Committee has recommended:

1. That the 36,100 shares of Class "B" Preferred stock and the 30,060 shares of Common stock of the Corporation in its treasury be retired.

2. That the capital represented by the Common stock of the Corporation be reduced from approximately $4.22 a share to $2.00 a share.

3. That against the Capital Surplus so created and amounting to approximately $30,057,400 there be charged a total amount of approximately $21,733,500 for reduction of book values of certain plants and equipment of subsidiaries and other fixed assets, and reserves for certain investments and contingencies of the Company and its subsidiaries; and that the balance of approximately $8,323,900 of such Capital Surplus remaining after the foregoing adjustments be not available for dividends but be added to the General Reserve making such General Reserve approximately $9,823,900.

4. That against the Earned Surplus amounting to approximately $26,528,600 there be charged a total amount of approximately $15,200,800 representing cost of treasury stock retired, write-downs of inventories, and reserves for certain investments and contingencies of the Company and its subsidiaries after which adjustments the Earned Surplus account will amount to approximately $11,327,800.

The consolidated balance sheet in the annual report herewith gives effect to the foregoing recommendations.

The reduction of capital as proposed requires the consent of the holders of a majority of the total number of outstanding shares of stock of the Corporation having voting power. The Board of Directors and management believe that the proposed action is desirable and in the interest of stockholders.

A form of consent to the reduction of capital is enclosed. If you are a holder of "A" Preferred or Common Stock please indicate your approval of the proposed reduction by signing said form of consent and returning it to the Company in the enclosed envelope as promptly as possible.

By order of the Board of Directors,
DAVID SARNOFF,
President.

RADIO CORPORATION OF AMERICA AND SUBSIDIARY COMPANIES
CONSOLIDATED BALANCE SHEETS AT DECEMBER 31

	1930	1931
ASSETS		
Current Assets:		
Cash in Banks and on Hand	$ 20,379,115	$ 23,916,408
Marketable Securities*	903,425	613,458
Notes and Accounts Receivable (less Reserves)	20,898,425	12,591,566
Inventories (at the lower of Cost or Market)	28,253,713	8,294,269
Total Current Assets	$ 70,434,678	$ 45,415,701
Investments:		
Securities and Notes of and Advances to Associated and Other Companies (at Cost, less Reserves)	$ 32,279,526	$ 26,760,892
Fixed Assets:		
Factories, Radio Communication and Broadcasting Stations, Warehouses, Service Shops, Offices, etc.—Land, Buildings and Equipment in Operation and Construction (at Cost)	$ 97,368,618	$ 96,919,345
Less: Reserves	36,992,847	57,540,088
	$ 60,375,771	$ 39,379,257
Patents, Contracts, etc., at Cost, less Reserves	3,462,463	4,863,363
Total Fixed Assets	$ 63,838,234	$ 44,242,620
Deferred Charges:		
Taxes, Insurance, etc., paid in advance	$ 1,995,630	$ 641,943
Total Assets	$168,548,068	$117,061,156
LIABILITIES AND CAPITAL		
Current Liabilities:		
Notes Payable	$ 5,000,000	$.....
Accounts Payable	7,561,431	6,585,902
Miscellaneous Accruals and Payables	2,031,093	
Due to General Electric and Westinghouse Companies	18,182,592†	17,729,719†
Dividends Payable	1,304,957	346,005
Total Current Liabilities	$ 34,080,073	$ 24,661,626
Funded Debt and Other Liabilities:		
Mortgages Payable	$ 5,115,869	$ 3,925,000
Notes Payable (Serial Notes)	857,010	677,650
Total Funded Debt and Other Liabilities	$ 5,972,879	$ 4,602,650
Reserves for Special Contingencies	$.....	$ 4,173,277
General Reserves	4,650,000	9,823,854
Deferred Income (applicable to future operations)	1,305,265	.....
Capital Stock:		
"A" Preferred 7 % Cumulative, Par Value $50	$ 19,779,870	$ 19,779,870
"B" Preferred Cumulative $5 Dividend, No Par Value, Redemption Value $100 per share	72,749,443†	16,430,709
Common, No Par Value		26,261,381
Total Capital Stock	$ 92,529,313	$ 62,471,960
Earned Surplus	$ 30,010,538	$ 11,327,789
Total Liabilities and Capital	$168,548,068	$117,061,156

* 1930 at Cost, 1931 at Market Value.
† See footnote on page 490.

Radio Corporation of America and Subsidiary Companies
Consolidated Statement of Income for the Year Ended December 31, 1931

Gross Income:		
From Operations	$100,124,847	
Other Income	2,520,573	
Total Gross Income from all sources		$102,645,420
Less: Cost of Sales, General Operating, Development, Selling and Administrative Expenses		91,099,218
Net Income for the Year (before Interest, Loss on Foreign Exchange, Depreciation, Amortization of Patents, and Federal Income Taxes)		$ 11,546,202
Deduct:		
Interest	$ 1,469,181	
Provision for Loss on Foreign Exchange	965,206	
Depreciation	7,842,912	
Amortization of Patents	400,000	
Provision for Federal Income Taxes	100,000	
Total deductions		10,777,299
Net Income for the Year, Transferred to Surplus		$ 768,903

† The 803,375.1 shares of "B" Preferred stock listed jointly with the 13,160,750.2 shares of no par common stock in 1930 were issued in connection with the acquisition of the outstanding common stock of the Victor Talking Machine Company as described on page 3 of the Radio Corporation's annual report to stockholders for 1929. In the annual report for 1929, page 4, it is also stated that General Electric and Westinghouse advanced $32,000,000 to the Victor Talking Machine Company. The arrangements, described on pages 6 and 7 of the 1930 annual report, concerning the transfer of manufacturing facilities from General Electric and Westinghouse to the Radio Corporation of America provided for the elimination of this debt. The balance, $18,182,592.04, not eliminated by the end of 1930, was listed among the current liabilities for that year.

RADIO CORPORATION OF AMERICA AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENT OF SURPLUS AT DECEMBER 31, 1931

	Total Surplus	Earned Surplus	Capital Surplus
Surplus at January 1, 1931	$30,010,538	$30,010,538	$
Add:			
Net Income for the year	768,903	768,903	
Capital Surplus created by retiring stated value of Treasury Stock, and by reduction of stated value of Common Stock to $2.00 per share	30,057,354		30,057,354
	$60,836,795	$30,779,441	$30,057,354
Deduct:			
Cost of Treasury Stock to be retired and cancelled	$ 2,838,472	$ 2,838,472	$
Write-down of Inventories	10,359,000	10,359,000	
Write-down of Fixed Assets (Buildings and Equipment)	16,222,000		16,222,000
Write-down of Investments	4,891,300	1,391,300	3,500,000
Reserves for Special Contingencies	2,623,500	612,000	2,011,500
Additions to General Reserve	8,323,855		8,323,854
	$45,258,127	$15,200,772	$30,057,354
Dividends on "A" Preferred Stock	1,373,907	1,373,907	
Dividends on "B" Preferred Stock	2,876,972	2,876,973	
	$49,509,006	$19,451,652	$30,057,354
Surplus at December 31, 1931	$11,327,789	$11,327,789	$

Source: Company report.

1. From the facts given, does it appear that the treasury stock was acquired before or after December 31, 1930? Prepare summary journal entries to record the acquisition of treasury stock, its retirement, and the creation of capital surplus through the restatement of common stock.

2. Did the treasury stock transactions result in a reduction in the capital of the company? If so, did the reduction occur at the time of acquisition or of retirement?

3. Did the capital reduction of 1931 imply that income in prior years had been overstated? Do you agree with the classification of surplus at December 31, 1931, as earned?

4. What was the effect of the capital and surplus adjustments of 1931 on the interests of creditors and stockholders?

American Smelting and Refining Company

Reduction in the Stated Value of Capital Stock

Statement of President
in Regard to
Plan to be Submitted May 21, 1935 to the Stockholders
of
American Smelting and Refining Company

New York City, April 3, 1935.

To All Stockholders:

A special stockholders' meeting has been called for May 21, 1935, for the purposes stated in the enclosed notice. The principal object of the meeting is to take action on a proposal to reduce the stated value of the outstanding common capital stock of the Company, thereby effecting a corresponding reduction in the book value of the property account.

This plan has been recommended unanimously by your Board of Directors after mature consideration. The annual stockholders' meeting held on April 2, 1935, endorsed it, with a recommendation that this special stockholders' meeting be called to take final action. . . .

This action in no way affects stockholders' rights. It does not diminish the number of shares owned by each stockholder, which will remain as heretofore. It does not alter the no-par status of the present stock. The change of figures alters in no degree whatever the actual intrinsic net worth of the Company or the intrinsic value of its capital assets of any class, and does not diminish to the slightest extent the Company's earning power.

The reasons influencing your Board of Directors and the annual stockholders' meeting in recommending this action are:

(*a*) It will facilitate the permanent registration of the securities of your Company on the New York Stock Exchange in accordance with the provisions of the Securities Exchange Act of 1934;

(*b*) It will improve the possibility of paying dividends in the future on all classes of stock.

Registration under the Securities Exchange Act

In order to continue the listing of the stocks and bonds of your Company upon the New York Stock Exchange under the Securities Exchange Act of 1934, it is necessary that the officers and directors of your Company file various statements, particularly the balance sheet and current earnings statement.

Section 18 of the Act provides that any person who shall make or cause to be made any statement in any application, report or document, filed pursuant to the Securities Exchange Act—

> "or any rule or regulation thereunder, which statement was at the time and in the light of the circumstances under which it was made false or misleading with respect to any material fact, shall be liable to any person (not knowing that such statement, was

false or misleading) who, in reliance upon such statement, shall have purchased or sold a security at a price which was affected by such statement, for damages caused by such reliance, unless the person sued shall prove that he acted in good faith and had no knowledge that such statement was false or misleading."

This may be interpreted to mean that your officers and directors assume possible liability for the accuracy of statements in the balance sheet. As to these, there is no difficulty, with the exception of the property account and the stated value of the common stock. As to the property account, your Directors are faced with the problem of the respective amounts to assign to tangibles and to intangibles. These must be segregated under the rules of the Commission, where it is practicable to do so.

Your Company's position as to tangibles and intangibles requires the following explanation:

The Company, at the time of its organization over thirty-five years ago in 1899, and on successive occasions in the next ten years, acquired the property and business of about twenty separate enterprises in various parts of the United States and Mexico, all of which were going, prosperous, established concerns. The business and assets so acquired necessarily included the element of going concern value, existing contracts and earning capacity. The acquisitions could not have been made unless the Company was prepared to pay, in securities or money, or both, a value in excess of that of the tangible properties and assets conveyed. It necessarily also had to pay for the intangibles.

The total amount entered on the books of the Company for property, both tangible and intangible, acquired for stock, after elimination of intercompany transactions, was	$105,820,657
Since organization and up to December 31, 1934, your Company has written off, for depreciation, ore depletion, amortization, and property retirements	164,941,153
Thus, the write-off exceeds the original valuation of both tangible and intangible property acquired for stock by the sum of	$ 59,120,496
Since organization, your Company has also spent in cash, for new construction and additional properties (including $7,346,622.50 spent in cash to complete acquisition of common capital stock of American Smelters Securities Company), less amortized value of properties sold, sales of salvage, etc	159,349,426
Therefore, the property account stood on December 31, 1934, at	$100,228,930

Note.—In the early years of your Company's life, many expenditures, in accordance with practice then considered wise and conservative, were charged off as repairs, which, under the strict accounting principles now followed, should have been charged to capital account. Also, the proceeds of properties disposed of were credited against current expenditures for property additions and betterments. Therefore, in the tabulation given above, it has not been possible to include all such items of additions, write-offs and sales. To that extent, the figures with respect to the total amounts written off and the total amount expended are partly estimated, but it is believed that whatever variation from actual there is in these figures is relatively insignificant.

Notwithstanding that the book value of property acquired for stock has been more than written off, a curious situation has arisen

because of our tax laws. Depletion and depreciation, in the tax returns, do not apply to intangibles at all, and amortization applies in the main to tangibles and does not reduce appreciably the book value of the intangible property. For the first eighteen years of your Company's existence, it followed the accounting customary during that time, making no distinction in its property account between tangibles and intangibles. But with the advent of Revenue laws during the war, beginning with the Excess Profits Tax, it became important to make such a distinction. As a higher value placed upon intangibles results in a higher tax, Government representatives naturally strove to increase the valuation placed upon the intangibles and reduce that of the tangibles. While your Company struggled as best it could, it was forced to compromise on what it believed to be an excessive valuation of the intangibles and an undervaluation of tangibles.

As hereinbefore stated, the property account on the balance sheet as of December 31, 1934, including both tangibles and intangibles, has a total value of $100,228,929.97. If we are forced to divide this amount between tangibles and intangibles on the basis of our Government tax accounting, it will result in valuing the tangibles (plants, mines and other physical property) at $52,087,099.26, and the intangibles (patents, good will, going concern value, etc.) at $48,141,830.71. It is this latter amount which the present plan proposes to reduce to $4,478,390.71, by reducing the stated value of the common stock from $60,998,000.00 to $18,299,400.00 and eliminating the surplus of $964,840.00 arising from the acquisition of 16,000 shares of the 6% preferred stock held for retirement. This results in a conservative valuation of intangibles, since it includes valuable patents and patent rights owned by the Company, as well as good will or going concern values acquired for cash.

. . . . . .

Dividends

Your Company is organized under the laws of the State of New Jersey, which provide that dividends may be declared only out of surplus, or the net profits of the business; *i.e.*, current and accumulated net earnings in excess of capital paid in. Your Company had at the end of 1931, in cash and United States Government bonds, nearly $21,000,000, and was amply fortified, so far as cash was concerned, to continue at least the preferred dividends. But current earnings fell below dividend requirements, and an unprecedented fall in metal prices and in shipments to its smelting and refining plants raised the question of whether further dividends could be paid without impairment of capital, in view of the stated value on the balance sheet of the property account and of the common stock. Your Directors had no alternative but to take the conservative view and accordingly declared no dividends on the common stock after February 1, 1932; and, after June 1, 1932, none on the preferred stocks. This was the first failure to pay

preferred dividends in the then thirty-three years' life of your Company. Payment was not again resumed until December 1, 1933, with the payment of the equivalent of the current dividend on the 7% preferred (all arrearages on which have since been fully paid); and until March 1, 1935, on the 6% second preferred, with the payment of $3.00 per share, and the declaration on April 3, 1935, of $4.50 per share, payable June 1, 1935.

But during all the time since 1931, your Company never had less than $17,000,000 of cash and United States Governments, as shown by its annual and semiannual reports, and owed no floating debts, other than current obligations not due and fully provided for. Since December 31, 1932, it never had less than $20,000,000, and had no borrowings from banks. The maximum arrearage on both classes of preferred stock was $6,031,000 on December 1, 1933. From a cash standpoint, the dividends on both classes of preferred stock, at least, could easily have been paid currently, had your Board of Directors felt safe in doing so; that is to say, if they had felt certain that a claim might not be made that such dividends, if paid, actually were paid out of capital and not out of a true surplus or out of accumulated earnings. Admittedly, dividends could not have been paid out of current earnings, since these were not sufficient for the purpose.

The plan now submitted to the stockholders, if approved, will remove such a doubt. Future earnings of the Company, after depreciation, depletion and amortization allowed under the tax laws, can be transferred directly to surplus, thus becoming available for dividends. This will establish the surplus on a definitely sound basis and will enable the Directors, whenever warranted by the cash position and current or accumulated earnings, to declare dividends without fear as to impairment of capital.

. . . . . .

RESOLUTIONS ADOPTED AT ANNUAL MEETING OF STOCKHOLDERS, APRIL 2, 1935

RESOLVED, that it is the sense of this meeting that that part of the stated capital of the Company which is represented by its outstanding shares of no-par common stock be reduced from $33⅓ per share to a stated value of $10 per share, thereby effecting a reduction in the outstanding capital stock liability of the Company of $42,698,600 and a corresponding reduction in the book value of its property account; and

WHEREAS, the General Corporation Act of New Jersey, as heretofore revised, supplemented and amended, provides that such a reduction may be made if the Board of Directors shall pass a resolution declaring that such a change is advisable and calling a meeting of the stockholders to take action thereon, and if at such meeting two-thirds in interest of each class of the stockholders having voting power shall vote in favor of the change, be it

AMERICAN SMELTING AND REFINING COMPANY AND SUBSIDIARIES
CONDENSED COMPARATIVE CONSOLIDATED BALANCE SHEET, DECEMBER 31, 1934
As Stated in the Annual Report and as Recommended in Plan to be Submitted to Stockholders at Special Meeting of May 21, 1935

ASSETS

	As Stated		As Recommended	
CAPITAL ASSETS:				
Property—Cost of plants, properties of subsidiary companies and additions and improvements, including patents, licenses, good-will and other intangible assets not segregated, less depreciation, ore depletion, amortization and property written off to profit & loss and to obsolescence reserve		$100,228,930		
Property—Segregated and re-stated in accordance with plan set forth in accompanying letter of April 3, 1935, to stockholders:				
(a) Plants, mines, and other tangible properties, less depreciation, depletion and amortization				$ 52,087,099
(b) Unamortized cash cost to parent company of capital stocks of subsidiary companies in excess of latter's book value of tangible property at date of acquisition, and cash cost of patents, licenses and other intangibles, less amortization				4,478,391
Investments—Securities of and advances to affiliated companies at cost or less:				
Companies controlled	$ 457,992		$ 457,992	
Companies not controlled	21,249,642		21,249,642	
Total	$21,707,634		$21,707,634	
Less reserve	4,757,604	16,950,030	4,757,604	16,950,030
Total capital assets		$117,178,960		$ 73,515,520
Total current assets		90,909,827		90,909,827
Total miscellaneous assets		2,792,530		2,792,530
Total assets		$210,881,317		$167,217,877

AMERICAN SMELTING AND REFINING COMPANY AND SUBSIDIARIES
CONDENSED COMPARATIVE CONSOLIDATED BALANCE SHEET, DECEMBER 31, 1934.—(*Continued*)
LIABILITIES

	As Stated		As Recommended	
FUNDED DEBT AND CAPITAL STOCK:				
Bonds Outstanding:				
American Smelting and Refining Company Series "A" 5% First Mortgage Bonds, maturing April 1, 1947	$49,290,900		$49,290,900	
Less:				
Retired through operation of sinking fund	$12,026,800		$12,026,800	
Held in treasury	880,800		880,800	
Total	$12,907,600	$ 36,383,300	$12,907,600	$ 36,383,300
Preferred Capital Stock:				
7% Cumulative—Authorized and outstanding, 500,000 shares of $100 par value		50,000,000		50,000,000
6% Cumulative Second—Authorized and issued, 200,000 shares of $100 par value	20,000,000		20,000,000	
Less: 16,000 shares held for retirement	1,600,000	18,400,000	1,600,000	18,400,000
Common Capital Stock:				
Authorized, 4,000,000 shares without par value Issued and outstanding, 1,829,835 shares	$60,994,500			
Outstanding, 35 shares of $100 par value not surrendered in exchange for no-par value shares	3,500	60,998,000		18,299,400
Total Funded Debt and Capital Stock		$165,781,300		$123,082,700
Total current liabilities		14,451,584		14,451,584
Total miscellaneous liabilities		1,289,482		1,289,482
RESERVES:				
Metal stock	14,069,426		14,069,426	
Extraordinary obsolescence, contingencies, etc	1,584,506		1,584,506	
Mine and new business investigations	437,706		437,706	
Other	683,909		683,909	
Total Reserves		16,775,547		16,775,547
SURPLUS arising through acquisition of 16,000 shares of 6% cumulative second preferred stock held for retirement		964,840		0
PROFIT AND LOSS SURPLUS		11,618,564		11,618,564
Total Liabilities		$210,881,317		$167,217,877

Source: Letter to stockholders, April 3, 1935.

FURTHER RESOLVED, that the Board of Directors of the Company elected at this meeting be and they hereby are requested (subject to the exercise of their lawful discretion in the premises) to pass a resolution to the foregoing effect, as contemplated by the said General Corporation Act, and calling a special meeting of the stockholders to take action thereon; and be it

FURTHER RESOLVED, that the said proposal to reduce the stated value of the no-par common stock of the Company as aforesaid be and the same is hereby recommended to the favorable consideration of all the stockholders of the Company, to the end that at such special meeting two-thirds in interest of each class of such stockholders having voting power shall vote in favor of the change.

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1. Are there significant differences between this and the preceding case in the reasons which apparently impelled the management to seek a reduction in capital?

2. As far as may be discovered from the facts given, was the reduction in this case wise from the point of view of the long-term interests of stockholders?

PACKARD MOTOR CAR COMPANY

STOCK SPLIT-UP AND CHANGE FROM PAR TO NO PAR. TRANSFERS FROM SURPLUS TO CAPITAL AND FROM CAPITAL TO SURPLUS

A. Change in Capital Structure.

As you have been advised, the capital structure of the Company has been changed. As of September 3, 1929, our stockholders received five shares of no par value common stock for each old share of $10 par value stock held by them. To make this possible, 15,000,000 shares of no par value common stock were issued to replace the 3,000,000 shares of $10 par value stock previously outstanding. $20,000,000 was transferred out of surplus into Capital Account, bringing the capital of the Company to $50,000,000 with a surplus of $19,106,349.45.

The Balance Sheet as submitted by our auditors gives effect as at the close of the fiscal year to these changes in capital structure.[1]

PACKARD MOTOR CAR COMPANY AND SUBSIDIARY COMPANIES

Consolidated Balance Sheet for fiscal years ended August 31, 1928 and 1929, giving effect at the end of the current fiscal year to the authorized issuance to the stockholders of record on September 3, 1929 of 15,000,000 shares of no par value in exchange of 3,000,000 shares of $10 each par value and to the transfer, in this connection from surplus to capital stock of an amount of $20,000,000.

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[1] Annual report, 1929.

	August 31, 1929	August 31, 1928
ASSETS		
Property Account (Net)	$36,390,415	$30,813,670
Rights, Privileges, Franchises and Inventions	1	1
Total Property Investment	$36,390,416	$30,813,671
Mortgages and Land Contracts Receivable, etc.	2,578,190	2,409,711
Total Current Assets	41,702,982	41,680,330
Deferred Charges to Future Operations	355,404	273,613
Total Assets	$81,026,992	$75,177,325
LIABILITIES		
Capital Stock:		
Outstanding—		
Common (Authorized 25,000,000 shares) no par value—15,000,000 shares	$50,000,000	$.....
Outstanding—		
Common (Authorized 5,000,000 shares) par $10 —3,004,264 shares	.....	30,042,640
Total Current Liabilities	11,920,642	14,705,742
Surplus:		
Balance at beginning of year	$30,428,943	$20,986,439
Add—Transfer to Property Account in connection with adjustment of Income Tax, of items charged to operations in prior years	728,394	.....
Net Profit for the year	25,183,257	21,885,416
Together	$56,340,594	$42,871,855
Deduct—Transfer to Capital Stock in accordance with Resolution of Board of Directors	20,000,000	.....
Cash Dividends	17,234,244	12,442,912
Total Deductions	$37,234,244	$12,442,912
Balance at end of year	$19,106,350	$30,428,943
Total Liabilities	$81,026,992	$75,177,325

Source: Company report, 1929. Sections other than capital and surplus condensed.

B. The following statement appeared in the annual report of the Packard Motor Car Company for December 31, 1932:

At a meeting of stockholders of the Company, held June 19, 1929, the transfer of $20,000,000 from our Surplus, as it was then, to our Capital Account, was approved. At their Annual Meeting April 18, 1932, the Stockholders approved a reduction in the Capital Account of the Company in the amount of $10,000,000 and the increase of the Surplus in like amount. The effect of this was to return $10,000,000 to Surplus from which it was transferred in 1929. These changes in capital structure did not affect the total value of the Company's assets or the book value per share.

The remaining $10,000,000 was returned to surplus in 1935 as recorded in the following paragraphs from the reports for 1934 and 1935, respectively.

The Surplus which at the beginning of the year stood at $8,904,685 has been reduced by the losses recorded and chiefly on account of the Company's expansion program, to $1,614,136. But it is the expectation as forecast in notices calling this meeting that the stockholders will return to Surplus the remaining $10,000,000 that was transferred some years ago out of Surplus to Capital. With this accomplished the Surplus at December 31, 1934 would be $11,614,136 and the Capital Stock $30,000,000.

. . . . . .

Capital stock was reduced from $40,000,000.00 to $30,000,000.00, $10,000,000.00 being returned to surplus in accordance with the resolution of stockholders, April 15, 1935, this being the remainder of the amount transferred from surplus to capital in 1929.

With the exception of the addition of $728,394 to surplus in 1929, which represented a transfer to the Property Account in connection with an Income Tax adjustment of items charged to operations in prior years, there were no entries in surplus during the entire period 1929 to 1935, except for profit or loss of the several years, dividends, and the transfers to and from capital described above.

The capital stock and surplus sections of the balance sheet for 1935 were as follows:

Capital Stock:		
Common (Authorized 25,000,000 Shares) No Par Value—Issued 15,000,000 Shares (Includes 8,660 shares issued to Trustee for account of company, and not carried as an asset)		$30,000,000
Surplus:		
Balance at December 31, 1934	$ 1,614,136	
Add—Amount returned to surplus in accordance with resolution of stockholders April 15, 1935, from amount transferred from surplus to capital stock in year 1929	10,000,000	
Net Profit for the Year Ended December 31, 1935	3,315,622	$14,929,758

1. In what ways did this stock split-up differ from a stock dividend?

2. If the surplus capitalized in 1929 was earned surplus, did the amounts returned to surplus in 1932 and 1935 constitute earned surplus?

3. As far as the facts of this case are concerned, what is the fundamental distinction between capital and surplus? What is the fundamental distinction between capital surplus and earned surplus?

American Locomotive Company

TRANSFER FROM CAPITAL SURPLUS TO EARNED SURPLUS

The surplus of the company as recorded in the report for 1930 was $19,759,953 with no differentiation as between earned or capital surplus. After certain surplus adjustments described in the report for 1931 the balance remaining was shown in separate amounts for earned and capital surplus.

It will be noted that there has been made a surplus adjustment whereby the depreciated value ($21,868,203) of existing additions to permanent plant property—in prior years charged to reserves created out of current earnings—has been added to the Cost of Property and Earned Surplus accounts. Also capital surplus amounting to $14,426,998 has been applied as a reduction of the Cost of Property account.

CONSOLIDATED SURPLUS ACCOUNT

Surplus, December 31, 1930		$19,759,953
Surplus adjustment restoring to cost of property and to earned surplus the depreciated value of existing additions to permanent plant property charged to reserves created out of earned surplus in prior years		21,868,203
Excess of par and stated value over cost of Preferred and Common stock in Treasury—Net		776,708
		$42,404,864
Loss for year ended December 31, 1931	$ 3,929,384	
Dividends—Preferred stock $2,619,386		
Common stock 767,900		
	3,387,286	
		7,316,670
		$35,088,194
Capital surplus applied as a reduction of the Property Account		14,426,998
Surplus, December 31, 1931		$20,661,196
Earned Surplus	$19,884,488	
Capital Surplus	776,708	

In 1933 surplus was increased by a reduction in the stated value of the no par common stock from $50 to $5 per share, and was

applied in the reduction of the plant and investment accounts, as described in the report for that year. Although beginning surplus was shown as a single amount in the statement for 1933, the same total was recorded at the end of the surplus statement for the prior year as follows:

Earned Surplus	$13,425,147
Capital Surplus	1,018,596

During the period under review a change was made in the stated capital of the Company. By the necessary statutory action of the Stockholders at their annual meeting in New York on April 18, 1933, the stated value of the no par Common capital stock of the Company was reduced from $50 per share to $5 per share, and an amended certificate of incorporation, making such change effective, was filed with the Secretary of State of New York on June 29, 1933. This reduction in the stated value of the Common stock resulted in creating Capital Surplus amounting to $34,555,500, of which $32,023,024 has been applied, under power granted by the Stockholders, to make such reductions in the values of the Corporation's properties and other investments, as of January 1, 1933, as in the judgment of the Board of Directors of the Corporation will approximate their present sound values, as follows:

	Book Value January 1, 1933 before Adjustments	Revised Valuations as of January 1, 1933	Reduction in Valuation January 1, 1933
Cost of Property	$83,832,171	$47,645,884	$36,186,287
Depreciation Reserve	22,164,410	11,824,368	10,340,042
Net Cost of Property	$61,667,761	$35,821,516	$25,846,245
Investments—			
160,500 shares—No par Common Stock of General Steel Castings Corporation	$ 8,001,375	$ 2,500,000	$ 5,501,375
Other Investments	2,447,878	1,772,474	675,404
Total Investments	$10,449,253	$ 4,272,474	$ 6,176,779
			$32,023,024

As a result of the foregoing revaluations, operating income has been relieved of a substantial yearly charge for depreciation on plants and equipment.

CONSOLIDATED SURPLUS ACCOUNT

Surplus, December 31, 1932		$14,443,743
Excess of par value over cost of Preferred stock of the Company acquired since December 31, 1932		271,150
Capital surplus resulting from reducing the stated value of 770,000 shares of the no par Common stock from $50 to $5 per share	$34,650,000	
Less reduction in stated value of 2,100 shares of stock held in the treasury	94,500	
		34,555,500
		$49,270,393
Less Capital surplus applied in reduction of the Property and Investment accounts		32,023,024
		$17,247,369
Less additional reserve for contingencies created from earned surplus		425,000
		$16,822,369
Loss for year ended December 31, 1933		1,465,504
Surplus, December 31, 1933		$15,356,865
Earned Surplus	$11,178,615	
Capital Surplus	4,178,250	

Source: Company report.

1. Determine as closely as the available facts permit the amount of capital surplus at December 31, 1930.

2. Did the transactions of 1931 change the nature of surplus from capital to earned? Do you agree with the classification as between earned and capital surplus at December 31, 1933?

3. If by virtue of reduced depreciation charges after 1933 net profits were larger than they otherwise would have been, would these additional amounts constitute valid earned surplus?

Allis-Chalmers Manufacturing Company

TREASURY STOCK

The comparative balance sheet included in the annual report for 1929, from which the following excerpt is taken, did not contain any reference to treasury securities. The certificate of the public accounting firm which accompanied the financial statements referred to treasury securities as indicated below. The corresponding certificate, by the same firm, in the report for 1928 did not mention such securities. Current liabilities in 1928 were $5,632,585 and in 1929, $8,986,982.

	1929	1928
Current and Working Assets		
Cash	$ 1,615,409	$ 2,541,597
Marketable securities	3,584,929	3,080,009
Notes receivable	3,039,775	1,916,216
Accounts receivable	9,392,372	6,343,999
Inventories	16,141,634	13,598,794
	$33,774,119	$27,480,615

. . . . . .

We have examined the books and accounts of the Allis-Chalmers Manufacturing Company for the year ended December 31, 1929. The marketable securities include investments in bonds and stock of the Company costing $2,163,042, which is less than the market value at December 31, 1929, and we certify that the foregoing Balance Sheet and relative Profit & Loss and Surplus Accounts have been correctly prepared from the books, and, in our opinion, fairly set forth the financial position of the Company as at December 31, 1929, and the results of the operations for the year ended on that date.

Price, Waterhouse & Co.

Milwaukee, March 5, 1930.

In 1930 investments in bonds and stock of the company were shown separately under Current and Working Assets. There was no reference to the matter in the audit certificate.

Current and Working Assets		1930
Cash and call loans		$ 3,035,360
Investments at cost (quoted value approx. $2,890,000):		
Debentures of the Company (par $1,114,000)	$1,106,961	
1612 shares of the Company	46,742	
Sundry securities	1,929,391	3,083,094
Notes receivable		7,152,846
Accounts receivable		7,243,013
Inventories		14,820,081
		$35,334,394

In the comparative balance sheet included in the report for 1931, treasury securities were deducted on the liability side, and the change was applied to the figures for 1930. The reduction of $729,584 in sundry marketable securities did not appear in the surplus statement for 1931. The reserve of $1,188,202 in 1930 was called, in the statement for that year, a reserve for receivables and contingencies.

	1931	1930
Current and Working Assets		
Cash	$ 4,027,596	$ 3,035,360
Sundry Marketable Securities (Reduced to market value December 31, 1931, by charge against Surplus Reserves of $729,584)	1,939,332	1,929,391
Notes Receivable	6,358,048	7,152,846
Accounts Receivable	6,179,021	7,243,013
Inventories of Work in Process, Manufactured Stock, Materials, Supplies and Consigned Stocks at cost or market, whichever is lower	13,834,216	14,820,081
	$32,338,213	$34,180,691
. . . . .	.	
Reserves		
For Receivables	$ 598,664	$ 1,188,202
For Employer's Liability Insurance	162,283	539,398
	$ 760,947	$ 1,727,600
Funded Debt		
Ten-year 5% Gold Debentures due May 1, 1937	$15,000,000	$15,000,000
Deduct—In Treasury	1,004,000	1,106,961
	$13,996,000	$13,893,039
Capital Stock (Common)		
Authorized—2,000,000 Shares No Par Value		
Issued 1,360,000 Shares	$40,171,768	$36,083,768
Deduct—In Treasury at cost 48,348	708,661	46,742
1,312,252*	$39,463,107	$36,037,026
Earned Surplus	$16,840,314	$17,399,111

*As at December 31, 1931; 1612 shares in treasury in 1930.

1. Were the several changes in the treatment of treasury securities wise?

2. Did the acquisition of treasury stock constitute a reduction in the capital of the enterprise? If so, was the amount of the reduction measured by the cost of the treasury stock or by the number of shares in the treasury times the stated value per share? Was the treatment in 1931 consistent with your opinion as to the amount of capital?

COCA-COLA COMPANY

TREASURY STOCK

The capital stock of the company at December 31, 1927, consisted entirely of common stock—1,000,000 shares without par value—stated at $25,000,000. In the report for 1928, capital stock was stated on the same basis, but a footnote to the balance sheet and a paragraph from the text of the report described a stock dividend declared in Class "A" stock.

Note.—On December 8, 1928, a Stock dividend of 1,000,000 shares of Class "A" stock was declared payable to stockholders of record as at January 15, 1929.

. . . . . .

The action of the stockholders in declaring a stock dividend, in the form of Class "A" stock (callable at $52.50 per share and carrying a preferential cumulative dividend of $3.00 per share per annum) furnishes an opportunity for the small investor which cannot help but improve the stability and investment characteristics of our security structure.

The surplus statement for the year ended December 31, 1929, is given in full:

Profit and Loss—Surplus Account				
Balance—December 31, 1928.				$14,395,197
Net Profits from Operations for year ended December 31, 1929.....				12,758,276
				$27,153,473
Deductions for Dividends:				
Nominal Amount transferred from Surplus and assigned to Class "A" Stock distributed as a Dividend on Common Stock			$5,000,000	
Dividends Paid in Cash:				
Class "A":				
June 28, 1929.....	$1,500,000			
Less: Dividend on Stock owned by Company.....	211,966	$1,288,034		
December 28, 1929..	$1,500,000			
Less: Dividend on Stock owned by Company.....	280,770	1,219,230	2,507,264	
Common:				
March.....		$1,000,000		
June 28, 1929.....		1,000,000		
September 28, 1929.....		1,000,000		
December 28, 1929.....		1,000,000	4,000,000	11,507,264
Balance December 31, 1929.....				$15,646,209

In the balance sheet for 1929 the Class "A" stock was shown on the liability side at a stated value of $5,000,000, and an investment in that stock was shown on the asset side as a separate classification immediately below current assets. The company evidently purchased a large block of the Class "A" stock soon after it was issued and continued to acquire additional shares.

Asset side:		
Investment in Company's Own Class "A" Stock—at Cost....		$ 9,433,733
Liability side:		
Capital Stock:		
Class "A"—1,000,000 Shares—No Par Value.	$ 5,000,000	
Common—1,000,000 Shares—No Par Value...	25,000,000	
	$30,000,000	
Profit and Loss—Surplus.....	15,646,209	$45,646,209

The common and Class "A" stock were stated on the liability side as above through 1933. The investment in the company's own Class "A" stock was shown as an asset in the following amounts. Common stock was first included in 1933. The number of shares in 1929 and 1930 was computed from dividend data.

	Shares	Cost
1929.....	187,180	$ 9,433,733
1930	219,746	11,141,305
1931.....	308,620	15,391,006
1932	323,520	16,056,658
1933.....	327,820	16,255,343
1933 Common.....	4,100	374,712

A change in treasury stock in 1934 was described in the text of the report for that year and was reflected in the proprietorship section of the balance sheet and in a deduction included in the surplus statement.

The attached consolidated balance sheet and statement of operations, is drawn to conform to suggestions of the Securities & Exchange Commission and the New York Stock Exchange. Of the Company's investment in its own stock, 200,000 Class "A" Shares have been retired and cancelled, and remaining holdings of Class "A" and Common Shares are shown as a deduction from capital and surplus at cost.

. . . . . .

Capital Stock			
Class "A"—$3.00 preference cumulative—Retirable at $52.50:			
800,000 shares—No par value		$ 4,000,000	
Common—1,000,000 shares—No par value		25,000,000	
		$29,000,000	
Profit and Loss—Surplus		24,762,053	
		$53,762,053	
Less: Stock owned by Company—At cost:			
127,820 shares of Class "A"	$6,486,883		
14,100 shares of Common	1,319,712	7,806,595	$45,955,458

DEDUCTION ON SURPLUS STATEMENT

Cost of 200,000 shares Class "A" stock retired	$9,767,110	
Less: Nominal value—$5.00 per share	1,000,000	$ 8,767,110

Somewhat similar transactions occurred in 1935, which served to eliminate all Class "A" stock owned by the company. In addition, the common stock was split four for one. There was a deduction on the surplus statement for Class "A" stock retired, but there was no entry there for the stock split since the amount of capital was not changed.

The Company's one million shares of common stock have been divided into four million shares. Additional Class "A" stock acquired during the year brought treasury holdings to 200,000 shares, which were retired and cancelled, leaving 600,000 Class "A" shares outstanding in the hands of the public.

. . . . . .

Capital Stock			
Class "A"—No par value: $3.00 preference dividend cumulative			
Callable at $52.50 per share			
Authorized and originally issued 1,000,000 shares			
Outstanding December 31, 1934	800,000 shares		
Less: Retired in 1935	200,000 shares		
Issued and outstanding	600,000 shares	$ 3,000,000	
Common—No par value:			
Authorized and issued	4,000,000 shares	25,000,000	
		$28,000,000	
Surplus—Earned		20,379,100	
		$48,379,100	
Less: Common stock owned by Company—At cost—8,100 shares		189,533	$48,189,567

DEDUCTION ON SURPLUS STATEMENT

Cost of 200,000 shares Class "A" stock retired ...	$10,369,615	
Less: $5.00 per share charged against capital stock liability	1,000,000	$ 9,369,615

1. Did the issuance of the stock dividend in 1929 and the subsequent expenditure of $9,433,733 in the acquisition of a portion of that stock result in a net increase or decrease in the capital of the company?

2. As far as the facts given permit, indicate the amount of income received by stockholders in connection with Class "A" stock and the years in which the income was received.

3. What apparently were the objectives of the management in issuing and reacquiring the Class "A" stock? Was the policy followed well advised?

EXHIBIT 1
COCA-COLA COMPANY
STOCK QUOTATIONS

	Class "A"		Common	
	High	Low	High	Low
1928	....	..	180½	127
1929	50⅝	44¾	154½	101
1930	53	48½	191⅜	133¼
1931	53½	45⅜	170	97½
1932	50	41⅝	120	68½
1933	51	44	105	73½
1934	57	50⅛	161½	95¼
1935	58⅜	53⅜	298½	161⅞
			93*	72½*

* After issuance of three additional shares for each share held.
Source: *Bank and Quotation Record.*

Allied Chemical & Dye Corporation

DISCLOSURE IN RELATION TO TREASURY STOCK, CONTINGENCY RESERVE, AND SURPLUS

The Allied Chemical & Dye Corporation was organized in the latter part of 1920 as a merger of five firmly entrenched non-competing chemical companies. Prior to that date, the United States had been almost entirely dependent upon Germany, dominant in the chemical industry, for its supply of many important chemicals and almost all of its dyestuffs. When the war cut off importations from Germany, the textile industry, as well as other industries in the United States, suffered from an inability to obtain the various chemicals required. It was with a view of combating the postwar competition from foreign companies, such as the I. G. Farbenindustrie in Germany, that the consolidation resulting in the formation of the Allied Chemical & Dye Corporation was effected. At the same time, it was believed that this consolidation would enable the United States to become independent of foreign countries for various chemical supplies. Under these circumstances, the management of the Allied Chemical & Dye Corporation believed that it was unwise to make known to the public, and thus to European competitors, the company's potentialities as reflected in plant capacity and the nature of the equipment and processes used.

It was said that the five companies which consolidated were not competitors in any way but were engaged in specific branches of the chemical industry. The following information relative to the activities of each of these five companies was given in the Allied Chemical & Dye Corporation's statements of application to the Committee on Stock List of the New York Stock Exchange:

General Chemical Company—The largest producer in the United States of heavy acids and other chemicals.

Solvay Process Company—The largest manufacturer of alkalis and soda products in the United States.

Semet-Solvay Company—A manufacturer of coke and its by-products and by-product coke ovens. Among its products are salicylic acid, caustic potash, benzaldehyde, protective paints for iron and steel.

Barrett Company—Manufacturer of roofing materials, "Tarvia" for roads and pavements, insulating compounds, coal tar pitch, creosote products, flotation and lampblack oils, chemicals for dyestuff manufacturers, paint and rubber specialty manufacturers and manufacturing chemists.

National Aniline and Chemical Company, Inc.—The largest distributor of coal tar derivatives and dyestuffs in the United States.[1]

The management of the Allied Chemical & Dye Corporation was unusually secretive in all matters pertaining to the company's activities and operations. Beyond announcements relating to the declaration of dividends, the company did not issue any official statements or in any other manner divulge information to stockholders other than that published in its very brief annual reports. It was said that among the factors contributing to the company's adoption of such a secretive policy were the domestic and international competitive conditions prevailing in the chemical industry at the time the company was formed.[2]

As may be seen from an examination of balance sheets for 1932 and 1933 below, reserves were large and substantial amounts of funds were held in marketable securities.

The common stock of the Allied Chemical & Dye Corporation was known as a "mystery" stock. The mystery lay not only in the secretive policies of the company in so far as the publicity of its activities and operations was concerned, but also in the alleged understatement of the company's earnings, and in the attitude of the board of directors toward the matter of dividends. From the time of the company's organization, the dividend action of the management was the subject of discussion and rumors in financial circles and, until announced, was always a matter of great conjecture. This situation, in conjunction with the company's policy of aloofness toward the usual channels for the dissemination of information, was largely responsible for the circulation of numerous unofficial reports concerning such matters as dividends and the redemption of the preferred stock. The nature of some of these speculative reports is illustrated by the following statement given in an analysis (April, 1931) of the Allied Chemical & Dye Corporation by Spencer Trask and Company:

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[1] A-5178, March 25, 1920; and A-5345, December 21, 1920.

[2] Harvard Business School, Business Policy case, BP-II, 286.

. . . Futile speculation as to Allied's manufacturing costs of fertilizer; fears as to its ability to compete with Chile or with other synthetic producers; and preposterous estimates as to the size of its present plant investment at Hopewell, Va., have all served to exaggerate this phase of Allied's business. No additional capital liabilities have been assumed for its construction and the $125,000,000 which is reported to have been spent at Hopewell could more accurately be written down to about $40,000,000. Furthermore, it is hardly logical to assume that, after a year of actual operations Allied would continue its expansion at Hopewell unless the results had demonstrated conclusively the Corporation's ability to meet any competition that may arise. . . .

. . . It is our opinion that Allied Chemical & Dye, strengthened by the economies which always come with business depressions, will emerge from the present period of unsettlement to continue the progress that has long distinguished its past record.

Since the reserves built up by the management appeared to the stockholders as more than adequate to provide for contingencies, it was hoped that the management would (1) discontinue the setting aside of further large reserves; (2) show the company's true earnings; and (3) increase the dividend on the common stock. The management, however, continued to strengthen the company's financial position by the accumulation of still larger working capital and reserves in order to compete effectively with the European chemical companies in all branches of the trade.[1] Dividends on the preferred stock were $7 per share from 1926 through 1935. On February 14, 1936, the preferred stock was retired at $120 per share (345,540 shares outstanding) plus accrued dividends of $0.85½. Regular dividends on the common stock were $6 per share from 1926 through 1937, with an additional payment of $1.50 in 1937.

One of the reasons for the retention of large reserves was the policy of the company in providing for expansion from its own resources. The nature of the chemical industry with the constant development of new processes made it essential that the management be in a position to retire old properties and replace them with new plants when the need arose.

In 1932 there was an extensive correspondence between the officials of the New York Stock Exchange and the management of the company concerning the extent of the disclosure in the annual

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[1] Harvard Business School, Business Policy case, BP-II, 286.

report. The following letter of June 23, 1932 stated the opinion of the exchange authorities:[1]

Mr. Orlando F. Weber, President
Allied Chemical & Dye Corporation
New York City
Dear Sir:

Since writing you on March 22, 1932, in reference to complaint from a stockholder regarding the lack of adequate information in your annual reports, this Committee has received complaints from other stockholders believed to hold substantial amounts of your stock.

These complaints appear to us to be well grounded. When a corporation voluntarily applies for the listing of its securities, it incurs an obligation to provide present and prospective investors with sufficient information upon which to base their actions. The reports of Allied Chemical & Dye Corporation do not appear to us to meet this obligation in the following particulars:

The Balance Sheet should show, in addition to the present information:

(*a*) The basis of valuation of the Property Account, United States Government and Other Marketable Securities, and Inventories. Preferably, United States Government Securities should be separated from Other Securities.

It is recognized that the basis of valuation of two of these items was stated in the text of your report. It would be simpler and more informative to include the information in the Balance Sheet.

(*b*) There should be a footnote to the Balance Sheet stating the current market value of the item United States Government and Other Marketable Securities.

(*c*) In view of the large total of the Reserve for General Contingencies some information should be given as to any large amounts included for specific purposes. It is now open to question as to whether this is in the main, an appropriation against the ordinary contingencies of operations, or a reserve against depreciation in security values. No opinion can be formed as to whether the reserve is either excessive or inadequate.

(*d*) If "Further Surplus" is entirely Earned Surplus, that fact should be indicated by including that word in the title as, "Further (earned) Surplus." If the item is not entirely Earned Surplus, it should be so separated as to show the Earned Surplus separately. The term "Further Surplus" is unusual in financial reports and conveys no definite meaning.

The consolidated income account is deficient, in that it conveys no information upon which any opinion as to the efficiency of the management can be based. It does not serve one of the essential dual purposes of an income account, in that it is useless as one of the factors

[1] *Wall Street Journal*, April 27, 1933, p. 1.

to be considered in estimating future earnings. This is because it does not separate operating earnings from non-operating earnings, does not indicate non-recurring items of income or expense, and lacks all specific detailed information.

This committee feels that no income statement is really complete and fully serviceable without the inclusion of the items of "Sales" and "Cost of Sales." We recognize, however, that the inclusion of these items may work a business hardship upon certain corporations and believe that Allied Chemical & Dye Corporation may be among corporations of this type. We feel, however, that the form of income account shown on the attached sheet, so far as the items are applicable to your transactions, contains the minimum amount of information which should be given. Details and rearrangements of the form of this statement are, of course, fully open to discussion.

We therefore request your assurance that you will give to any inquiring stockholder the information above outlined and that your future reports will be published as above indicated, subject, of course, to such changes, if any, as may be agreed upon, should you desire a conference on the matter.

As a suggestion, rather than request, we ask you to consider again the matter of the publication of either quarterly income statements or the quarterly publication of an income statement for the preceding twelve months. We have reviewed the reply of the secretary of your company to Mr. Whitney's letter of October 8, 1931, requesting the publication of such statements; but it is not clear to us how twelve months' statements published quarterly can possibly be misleading.

We have purposely reduced both the request and the suggestion above to what we believe to be the extreme of moderation. We earnestly seek your cordial cooperation in the interests of your own stockholders and of the public.

Yours very truly,

COMMITTEE ON STOCK LIST.
J. M. B. Hoxsey,
Executive Assistant.

The following paragraphs are from the text of the report for 1932. The balance sheet, income statement, and surplus statement for 1932 are given in full.

The balance sheet and the income account of the Company for 1932 are in the same form in which they have been previously stated. The reports thus afford a continuity of record of the Company's operations since incorporation.

The policy of valuing inventories at the end of the year on a basis of cost or market, whichever was lower, has been continued.

U. S. Government and other marketable securities are stated at cost. The difference between cost and market value is amply provided for in the general contingency reserves created for the protection of the Company's assets and operations.

ALLIED CHEMICAL & DYE CORPORATION
CONSOLIDATED GENERAL BALANCE SHEET, DECEMBER 31, 1932

ASSETS

Property Account		
Real Estate, Plants, Equipment, Mines, etc...		$222,990,044
Investments		
Bonds and Stocks of Other Companies.....	$ 12,535,810	
Sundry.....	156,700	12,692,510
Current Assets		
Cash	$ 25,883,393	
United States Government and Other Marketable Securities....	92,404,341	
Accounts and Notes Receivable.....	9,721,720	
Inventories.....	22,645,245	150,654,699
Deferred Charges		
Prepaid Taxes, Insurance, etc.....		892,885
Other Assets		
Patents, Processes, Trade Marks, Goodwill, etc		21,305,943
Total..		$408,536,081

LIABILITIES

Current Liabilities		
Accounts Payable	$ 1,827,847	
Wages Accrued	180,907	
Dividends Payable	4,289,418	$ 6,298,172
Reserves		
Depreciation, Obsolescence, etc	$129,257,567	
General Contingencies	55,887,867	
Taxes	1,731,372	
Insurance	2,269,316	
Sundry	2,347,676	191,493,798
Capital Stock		
Preferred Stock, Par $100 per Share Issued 392,849 Shares	$ 39,284,900	
Common Stock, without par value, basis $5 per Share Issued 2,401,288 Shares.....	12,006,440	51,291,340
Surplus—December 31, 1932		
Capital Surplus.....	$ 61,752,335	
Further Surplus.....	97,700,436	159,452,771
Total.....		$408,536,081

ALLIED CHEMICAL & DYE CORPORATION
CONSOLIDATED INCOME ACCOUNT
YEAR ENDED DECEMBER 31, 1932

Gross Income after provision for depreciation, obsolescence, all state and local taxes, repairs and renewals	$ 12,730,109
Federal Taxes	1,288,919
Net Income	$ 11,441,190

SURPLUS ACCOUNT

Surplus at December 31, 1931	$165,169,252	
Net Income year 1932	11,441,190	$176,610,442
Dividends:		
Cash—Preferred	$ 2,749,943	
Common	14,407,728	17,157,671
Surplus at December 31, 1932		$159,452,771

Source: Company report.

The paragraphs below are from the text of the report for 1933. The accounting statements for that year are given in full.

Gross retirements from property account during the year amounted to $2,765,009 of which $1,439,026 was charged to contingency reserves provided in prior years.

Marketable securities carried at cost of $70,642,880 were transferred from current assets to investments. The market value of these securities on March 8, 1934, was approximately $1,000,000 less than cost.

ALLIED CHEMICAL & DYE CORPORATION
CONSOLIDATED GENERAL BALANCE SHEET, DECEMBER 31, 1933

ASSETS

Property Account		
Real Estate, Plants, Equipment, Mines, etc., at cost		$221,836,019
Investments		
Sundry Investments	$ 12,827,704	
Marketable Securities at cost	70,642,881	83,470,585
Current Assets		
Cash	$ 27,271,548	
U. S. Government Securities at cost	21,263,318	
Accounts and Notes Receivable	13,743,568	
Inventories at cost or market, whichever is lower	22,878,590	85,157,024
Deferred Charges		
Prepaid Taxes, Insurance, etc		648,424
Other Assets		
Patents, Processes, Trade Marks, Goodwill, etc.		21,305,943
Total		$412,417,995

LIABILITIES

Current Liabilities		
Accounts Payable	$ 2,718,493	
Wages Accrued	242,528	
Dividends Payable	4,289,418	$ 7,250,439
Reserves		
Depreciation, Obsolescence, etc	$135,369,746	
Investments	40,000,000	
General Contingencies	13,260,733	
Taxes	2,556,973	
Insurance	2,296,960	
Sundry	2,046,886	195,531,298
Capital Stock		
Preferred Stock, Par $100 per Share Issued 392,849 Shares	$ 39,284,900	
Common Stock, without par value, basis $5 per Share Issued 2,401,288 Shares	12,006,440	51,291,340
Surplus—December 31, 1933		
Capital Surplus	$ 61,752,335	
Further Surplus	96,592,583	158,344,918
Total		$412,417,995

Note.—Marketable Securities, all listed on New York Stock Exchange or New York Curb Exchange, include 187,189 shares of Company's common stock at cost of $25,837,300. and 47,309 shares of Company's preferred stock at cost of $5,640,485. Total market value of Marketable Securities at December 31, 1933 was $66,171,532. Market value of U. S. Goverment Securities at December 31, 1933 was $20,394,288.

Further Surplus consists of $35,685,838 earned surplus accrued to the Company since its organization and $60,906,745 accrued to its Subsidiary Companies prior to the Company's organization.

ALLIED CHEMICAL & DYE CORPORATION
CONSOLIDATED INCOME ACCOUNT
YEAR ENDED DECEMBER 31, 1933

Gross Income after provision for depreciation, obsolescence, repairs and renewals, all state, local and capital stock taxes		$ 16,620,763
Federal Income Taxes		2,025,242
Net Income		$ 14,595,521

SURPLUS ACCOUNT

Surplus at December 31, 1932	$159,452,771	
Net Income year 1933	14,595,521	$174,048,292
Dividends declared:		
Preferred	$ 2,749,943	
Common	14,407,728	
Total dividends declared	$ 17,157,671	
Less Dividends on Treasury stock, not included in Income	1,454,297	15,703,374
Surplus at December 31, 1933		$158,344,918

Note.—Gross Income reported in above Income Account includes interest and dividends amounting to $1,985,288.
Source: Company report.

1. Did the company receive dividends on treasury stock in 1932? Was the method of reporting treasury stock in 1933 sound?

2. In view of the position of this company, were the requests for more complete disclosure by the New York Stock Exchange reasonable?

D. ISSUANCE OF STOCK

UNITED STATES STEEL CORPORATION—NO. 2

THE RIGHT OF STOCKHOLDERS TO SUBSCRIBE TO ADDITIONAL STOCK

In the early part of 1929 after extended study and consideration, the Directors decided to retire or provide for the retirement of the entire issues of the United States Steel Corporation Fifty-Year 5% Gold Bonds of 1951, and its Ten-Sixty-Year 5% Bonds of 1963. Of these issues there were outstanding at January 1, 1929, exclusive of bonds theretofore purchased and then in the treasury, $134,830,000 and $136,632,000, respectively. The plan decided upon together with a presentation of the advantages which would accrue therefrom to the corporation and stockholders, was fully outlined in circular addressed to stockholders dated March 5, 1929.

The plan contemplated supplying the cash funds required for the foregoing in part from cash resources in hand representing surplus and other reserves, and in part from proceeds of sale of additional shares of Common stock to be offered Common stockholders. . . .

The plan as above outlined was carried out in its entirety, the stockholders of the Corporation at the annual meeting on April 15, 1929, taking the necessary action permitting the issuance and sale of the required number of shares of additional Common stock needed for the purpose

. . . . . .

Of the 1,016,605 shares offered in 1929 to stockholders for cash subscription at $140 per share, subscriptions were received for 1,009,867 shares (99.3%); the balance, 6,738 shares, not taken under the subscription rights, were sold by the Corporation in the market as authorized by the Directors in the subscription offer. The total cash realized from the 1,016,605 shares was $142,697,624.50.[1]

The circular sent to stockholders on April 16, 1929, is reproduced in full.

UNITED STATES STEEL CORPORATION
71 Broadway
New York, April 16, 1929.

Offer of Shares of Common Stock
To Common Stockholders for Subscription

To the Common Stockholders:

The holders of Common Stock of the Corporation as of record at close of business May 1, 1929, are offered the privilege of subscribing for additional shares of Common Stock at the price of $140 per share. The purpose of the issue, amounting to approximately $101,660,500

[1] Annual report, 1929.

par value of stock, is to provide funds for use in purchasing for cancellation, and to redeem upon call for retirement, the outstanding Bonds of the Corporation.

Common Stockholders will be entitled to subscribe for additional shares as above in the proportion of one share for each Seven shares of Common Stock then held as shown by the books of the Corporation. Warrants entitling Common Stockholders to subscribe, and which will be required in such connection, will be mailed stockholders on May 13, 1929.

Subscriptions must be made and received by the Corporation before the close of business, 3 o'clock P.M. on June 21, 1929. Payments may, if desired, be made in two installments on respectively June 21, 1929, and October 1, 1929.

Further and full details of the offer will be found on the pages following.

MYRON C. TAYLOR,
Chairman Finance Committee.

OFFER OF SHARES OF COMMON STOCK OF UNITED STATES STEEL CORPORATION TO COMMON STOCKHOLDERS FOR SUBSCRIPTION

Record date for Rights	Mailing date for Warrants	Closing date for Subscriptions
May 1, 1929	May 13, 1929	June 21, 1929

Stockholders Entitled to Subscribe: Common stockholders of record at the close of business on Wednesday, May 1, 1929, will be entitled to subscribe for additional Common Stock in proportion of one share of stock for each Seven shares of Common stock then held by them as shown by the books of the Corporation.

Expiration of Offer: The subscription privilege will expire at the close of business on Friday, June 21, 1929.

The manner in which the subscription privilege is to be exercised is described below.

Subscription Rights: One "right" attaches to each share of stock outstanding at the close of business on May 1, 1929. Stockholders of that date are entitled to subscription rights on the basis of shares then registered in their names. Seven rights are required to subscribe for each share of additional Common stock. Prices quoted for rights sold in the market are for the right to subscribe for one-seventh of a share. Subscriptions will be accepted by the Corporation for full shares only.

Issue of Warrants: On May 13th Warrants will be mailed to the Common stockholders evidencing their subscription rights and specifying the number of shares of Common stock for which each is entitled to subscribe under this offer.

Warrants will be of two kinds: (1) Full share Warrants, entitling the holder to subscribe for one or more full shares of Common stock

and representing Seven rights or multiples thereof; and (2) Fractional Warrants, for less than a full share, entitling the holder to subscribe for one or more sevenths of a share.

Rights evidenced by warrants may be transferred to others until and including June 19, 1929, by assignments duly executed in the form printed on the reverse of the warrants. Combinations of warrants for fractional shares to permit subscriptions for full shares may be made through their purchase and sale. The *Corporation will, however, neither purchase nor sell Fractional Warrants.*

Holders desiring to divide warrants may return them to the Transfer Department of the United States Steel Corporation, Room 708, 71 Broadway, New York, N. Y., and new warrants will be issued in exchange for them aggregating the same number of rights divided as the holder may have indicated.

Subscriptions: Subscriptions must be made by executing the subscription agreements on the reverse of the warrants and delivering them with payments then due to G. L. Edwards, Treasurer, at his office, Room 1612, 71 Broadway, New York, N. Y., before the close of business on June 21, 1929. Subscriptions will be accepted for full shares only.

Payments: Payments for shares subscribed for must be made to the Treasurer at his office above named either by payment in full on June 21, 1929, or in two installments on respectively June 21, 1929, and October 1, 1929, of amounts specified below under either "Option 1" or "Option 2."

Warrants for the required number of rights, duly signed for subscription in the space provided on their reverse, must accompany the first payment. Checks, drafts and money orders should be drawn to the order of United States Steel Corporation and must be payable in New York funds.

Payments on subscriptions made prior to their due dates will not be credited with any interest allowance for such prepayments.

Optional Payments

Option 1. Full Payment of Subscription Price on June 21, 1929

Subscribers who desire may pay the subscription price in full on June 21, 1929, upon making payment on that date of $139.80 per share.

Note:—This amount is computed as follows:

Subscription price of stock	$140.00
Less, Interest from June 21 to July 1, 1929 at rate approximately equal to the percentage which present dividend rate of 7% on Common Stock is to the subscription price for the stock	.20
Balance as above	$139.80

Stock paid for in full as above will participate in dividends payable *after* July 1, 1929. Stock will be issued and certificates delivered as

soon after the date of payment as practicable, but not prior to June 1, 1929.

Option 2. Payment of Subscription Price in Two Installments on June 21, 1929, and October 1, 1929

Subscribers may at their option pay the subscription price for the stock in two installments on the following dates in the respective amounts per share, viz.:

On June 21, 1929	$70.00
On October 1, 1929	69.05

Note.—Above amount af $69.05 is computed as follows:

Balance of subscription price due October 1, 1929	$70.00
Less, interest from June 21 to October 1, 1929, on installment of $70.00 paid on June 21st at rate approximately equal to the percentage which present dividend rate of 7% on Common Stock is to the subscription price for the stock	.95
Balance due October 1, 1929	$69.05

Stock paid for in two installments will participate in dividends payable *after* October 1, 1929. Stock will be issued and certificates delivered as soon after the date of payment in full as practicable, but not prior to September 3, 1929.

Receipts: The Treasurer will acknowledge the receipt by him of subscriptions and payments in manner as follows:

For Subscriptions Paid in Full on June 21st: Acknowledgment of receipt of same will be evidenced by counter receipts or by receipts mailed subscribers. The certificates for the shares of Common stock thus fully paid for will be delivered on counter receipts or mailed, as stockholders may elect, as soon after the date of payment as practicable.

For Subscriptions on which the First Installment only is paid on June 21st: Acknowledgment of receipt of same will be evidenced by counter receipts or by receipts mailed subscribers. Negotiable receipts will later be issued and delivered in exchange for counter receipts or mailed to subscribers for *all* subscriptions on which the first installment *only* is paid on June 21st. These negotiable receipts will entitle the person named therein or his assignee to the shares of new Common stock specified therein upon full compliance with the subscription terms. Such receipts must be delivered to the Treasurer with the payment of the second installment on October 1, 1929. Acknowledgment of receipt of final payment will be issued subscribers, and the certificates for the shares of Common stock when so fully paid for will be delivered on counter receipts or mailed, as stockholders may elect, as soon after the date of payment of final installment as practicable.

Delivery of Stock Certificates: Certificates for the fully paid shares of Common stock will, unless otherwise ordered, be delivered by registered mail to the address stated in the subscription agreements, or

in assigned negotiable receipts surrendered. No stock will be issued upon subscriptions not fully paid.

Stockholders in the United States: Stockholders in the United States desiring further information and assistance in connection with the making and payment of subscriptions should not hesitate to consult a bank or a responsible broker, or they may communicate with the undersigned.

Stockholders in Europe: Stockholders in Europe desiring information or assistance in connection with the making and payment of subscriptions may communicate with Messrs. Morgan, Grenfell & Co., 23 Great Winchester Street, London, England; or Messrs. Morgan & Cie., 14 Place Vendome, Paris, France.

Correspondence: Correspondence with this Company relating to the foregoing should be addressed to G. L. Edwards, Treasurer, 71 Broadway, New York, N. Y.

By Order of the Board of Directors,
G. L. EDWARDS,
Treasurer.

The high and low prices of United States Steel Common for the 5 years prior to the issue of the new stock were:

HIGH AND LOW PRICES OF COMMON STOCK
NEW YORK STOCK EXCHANGE

	High	Low
1924	121	94¼
1925	139¼	112⅜
1926	160½	113⅞*
1927	176	111⅜
1928	172½	132⅜

* This represents the low in 1926 of new common on a when issued basis after 40 per cent stock dividend.
Source: *Standard Corporation Records*, Individual Reports Section.

1. Show summary journal entries to record the subscription and issue of the new stock, ignoring the adjustments for interest and dividends and assuming that the difference between $140 per share and the total sum realized was accounted for by the price at which the 6,738 shares were sold.

2. This stock was issued in accordance with the principle known as the preemptive right, according to which existing stockholders have a right to subscribe ratably to any new stock issued by the corporation. If this principle were not followed, would it be possible for directors to issue stock under conditions prejudicial to the interests of the stockholders?

Hershey Chocolate Corporation

THE RELATION BETWEEN THE STATED VALUE OF NO PAR STOCK AND THE VALUATION OF ASSETS

The following letter appeared in a prospectus issued in 1927 by the National City Company. The 6 per cent Prior Preferred was sold to the public at $99 per share and the Convertible Preference and part of the Common in units consisting of 10 shares of Convertible Preference and three shares of Common at $740 per unit flat.[1]

HERSHEY CHOCOLATE CORPORATION
(of Delaware)

October 24, 1927.

The National City Company,
National City Bank Building,
New York, N. Y.
Dear Sirs:

Referring to your purchase of Convertible Preference Stock and Common Stock of the Hershey Chocolate Corporation, which it is proposed to issue, I take pleasure in giving you the following information:

Business and Properties

Hershey Chocolate Corporation has been incorporated under the laws of the State of Delaware to acquire from the Hershey Chocolate Company (of Pennsylvania) the long-established business and extensive manufacturing and distributing properties and organization utilized by that Company in the manufacture and sale of chocolate and cocoa products, including the goodwill of the business as a going concern. The Company originated the chocolate almond bar and, in addition to this popular article, also makes and markets under the well known Hershey name, a variety of other products including milk chocolate bars, breakfast cocoa, coating chocolate, and chocolate syrup. The business was originally established in 1893 and has experienced a remarkable growth and prosperity, notwithstanding the fact that the Company has never publicly advertised its products. The sales of chocolate, cocoa and related products amounted to over $32,900,000 in 1926.

The property to be acquired by the Hershey Chocolate Corporation includes the chocolate and cocoa plant, the milk collecting stations and creameries, and certain other assets directly related to the chocolate and cocoa business. These properties constitute the largest entity in the world engaged in this business. The chocolate and cocoa plant

[1] Moody's *Industrials*, 1929.

is located at Hershey, Pennsylvania, twelve miles east of Harrisburg, and is surrounded by a rich dairy country which assures an economical supply of milk. The plant comprises over thirty connected buildings of stone and reinforced concrete, fireproof construction, with a total floor area of over 50 acres, completely equipped for the manufacture of the various products and including also a machine shop, printing shop, ice plant, and power station. The equipment is well designed and modern in all respects; in fact, a large part of the producing machinery and equipment was designed and installed by the Company's own engineers and embodies a scale of capacity and productivity exceeding that usually employed in the industry.

The Corporation will also control all of the issued capital stock of the Chocolate Sales Corporation which is the selling agent for the products of the Hershey Chocolate Company and which effects national distribution of these products through confectionery jobbers and wholesale grocers, and, as well, some direct sales to large users such as chain retail store companies, etc.

Purpose of Issue

The Corporation proposes to issue $15,000,000 of 6% Cumulative Prior Preferred Stock, 350,000 shares of Convertible Preference Stock, and 650,000 shares of Common Stock, for the purpose of acquiring the business and properties of the Hershey Chocolate Company (of Pennsylvania), as previously described, retiring certain indebtedness of that Company, and providing additional working capital. The Company proposes to call for redemption, as of January 1, 1928, all of its Preferred Stock and First Mortgage and Collateral Trust Bonds outstanding and to deposit sufficient cash for the retirement, at maturity, of all of its Serial Notes outstanding. Upon completion of this financing, the capitalization of the Hershey Chocolate Corporation will be as follows:

	Authorized	Outstanding
6% Cumulative Prior Preferred Stock ($100 par value)	$20,000,000	$15,000,000
Convertible Preference Stock (no par value)	350,000 shs.	350,000 shs.
Common Stock (no par value)	1,000,000 shs.[1]	650,000 shs.

[1] 350,000 shares reserved to provide for conversion of the Convertible Preference Stock.

The Corporation will have no funded indebtedness.

Convertible Preference Stock Provisions

Subject to the prior rights of the 6% Cumulative Prior Preferred Stock, the Convertible Preference Stock is entitled to receive, from the surplus or the net profits, cumulative regular quarterly dividends at the rate of $4 a share per annum, payable on the fifteenth day of each of

the months of February, May, August and November in each year to stockholders of record on the 25th day of the month next preceding the date of payment. Prior to the first declaration of a dividend on the Common Stock in any year, an extra dividend of $1 a share must be declared and set aside for payment on the Convertible Preference Stock.

In the case of any distribution of capital assets, whether voluntary or involuntary, the Convertible Preference Stock is entitled to receive, subject to the prior rights of the Prior Preferred Stock, a sum equivalent to $50 per share plus all unpaid regular dividends (if any) accumulated thereon and any extra dividends declared but unpaid, before any distribution is made to the holders of the Common Stock. The Convertible Preference Stock is then entitled to share equally, per share, with the Common Stock in any further distribution of capital assets until a total of $100 per share and all accumulated unpaid dividends (if any) is received by the holders of the Convertible Preference Stock.

If regular quarterly dividends on the Convertible Preference Stock shall be in arrears in an amount equal to or exceeding $4 a share, then the Convertible Preference Stock will, for any and all purposes, have full voting rights, share for share, with the Common Stock, until all accumulated dividends are paid or declared and set aside for payment. The Corporation may not sell its assets as an entirety except upon the consent of a majority of the outstanding Convertible Preference Stock. Except as indicated in the foregoing, or as by law expressly provided, the Convertible Preference Stock is to have no voting power.

Conversion Privilege

The Convertible Preference Stock will be convertible at any time, at the option of the holders, into Common Stock at the rate of one share of Convertible Preference Stock for one share of Common Stock. If, at any time, the Corporation shall issue any Common Stock, either as a stock dividend or in subdivision of any previously outstanding shares, or for labor or services, the conversion privilege will be protected by a proportionate adjustment in the number of shares of Common Stock into which the Convertible Preference Stock may be converted.

The holders of the Convertible Preference Stock will have the right to subscribe ratably with the holders of the Common Stock, to any additional shares of Common Stock which may at any time be issued for cash, and to any stocks, bonds, debentures or other securities convertible into shares of Common Stock.

Earnings

The following table shows the gross revenue, amount of depreciation charged, and the consolidated net income of the properties and business which will be acquired by the Hershey Chocolate Corporation. The net income has been calculated by deducting Federal income taxes at the present rate of 13½% per annum in lieu of Federal income, capital

stock, and excise taxes actually paid. There is also shown a calculation of the income available for dividends on the Convertible Preference Stock after deducting dividends on the Prior Preferred Stock to be outstanding.

Year Ended	Gross Revenue	Depreciation Charged	Net Income (calculated as above)	Income Available for Dividends on Convertible Preference Stock
Dec. 31, 1922	$22,724,440	$629,607	$5,089,782	$4,189,782
Dec. 31, 1923	27,125,558	660,412	5,809,261	4,909,261
Dec. 31, 1924	31,000,081	671,758	6,674,591	5,774,591
Dec. 31, 1925	30,208,994	683,494	4,462,638	3,562,638
Dec. 31, 1926	32,913,614	699,291	5,034,119	4,134,119
6 months ended June 30, 1927	17,957,340	382,809	2,726,790	2,276,790

For the 5 years and 6 months ended June 30, 1927, the income available for dividends on the Convertible Preference Stock, as shown above, has averaged $4,517,669 per annum, equivalent to $12.90 per share of Convertible Preference Stock to be outstanding or to more than 3 times the regular annual dividend of $4 per share. For the 6 months ended June 30, 1927, such income amounted to $2,276,790, equivalent to 3¼ times the regular dividend of $2 per share on the Convertible Preference Stock for the period.

The combined annual dividend requirement of 6% on the Prior Preferred Stock and $4 per share on the Convertible Preference Stock aggregates $2,300,000 or less than 43% of the average annual net income available for dividends for the five years and six months ended June 30, 1927, and even with an annual dividend of $5 per share on the Convertible Preference Stock, this combined requirement aggregates less than 50% of such average annual net income.

Based on the foregoing, and deducting the annual dividend requirement of 6% on the Prior Preferred Stock and an amount equivalent to $5 per share on the Convertible Preference Stock, the net income available for dividends on the Common Stock is shown in the following tabulation:

Year Ended	Income Available for Dividends on Common Stock (calculated as above)	Per Share
Dec. 31, 1922	$2,439,782	$3.75
Dec. 31, 1923	3,159,261	4.86
Dec. 31, 1924	4,024,591	6.19
Dec. 31, 1925	1,812,638	2.79
Dec. 31, 1926	2,384,119	3.67
6 Months ended June 30, 1927	1,401,790	2.16

Calculated as above, the income available for dividends on the Common Stock for the 5 years and 6 months ended June 30, 1927, has averaged $4.26 a share per annum. For the 6 months ended June 30, 1927, the calculated income available for the Common Stock is equivalent to an annual rate of $4.31 per share of Common Stock to be outstanding.

Balance Sheet

The following is a pro forma consolidated balance sheet of the Hershey Chocolate Corporation, based on a balance sheet as of June 30, 1927, of the Hershey Chocolate Company segregated by Messrs. Arthur Andersen & Company, public accountants, to show the assets, as of that date, related to the chocolate and cocoa business, and adjusted to give effect to the present financing and the transactions incidental thereto:

ASSETS

Current Assets:			
Cash in Banks and on Hand		$ 455,840	
Accounts Receivable—Net of Reserve		1,929,918	
Deposits on Cocoa Futures		143,200	
Inventories—book quantities (verified by physical inventories September 30, 1927) at cost which was lower than market		10,158,511	
Total Current Assets			$12,687,469
Working Assets:			
Supplies, Repair Parts, etc		$ 328,490	
Prepaid Insurance, Taxes, Rents, etc		117,198	
Total Working Assets			445,688
Plant and Property, etc.:			
Real Estate	$ 106,687		
Buildings and Improvements	5,326,582		
Machinery, Equipment and Fixtures	7,696,308		
Total	$13,129,577		
Less: Reserve for Depreciation	5,799,358	$ 7,330,219	
New York Properties—Net		1,272,336	
Uncompleted Construction		83,730	
Total Plant, Property, etc.—Net			8,686,285
Total Assets			$21,819,442

LIABILITIES

Current Liabilities:			
Notes Payable		$ 500,000	
Accounts Payable		1,277,973	
Reserve for Federal Income Taxes		594,983	
Accrued Interest, Taxes, Rents, etc		906,576	
Total Current Liabilities			$ 3,279,532
Prior Preferred Stock—6% Cumulative			15,000,000
Convertible Preference Stock (350,000 shares of no par value)			350,000*
Common Stock (650,000 shares of no par value)			650,000
Surplus at Organization			2,539,910
Total Liabilities			$21,819,442

* Upon any distribution of capital assets the Convertible Preference Stock is entitled to receive $50 per share and accumulated unpaid dividends (if any) before any distribution to the Common Stock, and shares equally per share with the Common Stock in any further distribution of capital assets until the Convertible Preference Stock receives a total of $100 per share and accumulated unpaid dividends (if any).

The plants and properties of the Hershey Chocolate Company always have been carried on the books at cost with liberal accrual for depreciation and it is proposed to continue this policy with respect to the books of the Hershey Chocolate Corporation. However, Messrs. Day & Zimmermann, Inc., are completing an appraisal of the land, buildings, machinery and equipment to be taken over by the Hershey Chocolate Corporation and relating thereto I quote a letter received from them, as follows:

DAY & ZIMMERMANN, INC.
Engineers

October 19, 1927

Hershey Chocolate Company,
Hershey, Pa.
Dear Sirs:

With reference to the appraisal in which we are engaged, of the land, buildings, machinery and equipment of your Company and affiliated companies, principally employed in the business of manufacturing and selling chocolate and cocoa products, which assets (or the stocks of affiliated companies owning the same) we understand you contemplate transferring to a new corporation to be formed under the name of Hershey Chocolate Corporation, and in response to your request, we write to advise that, while our appraisal of these properties is not yet completed, we are sufficiently far advanced in the work of appraisal to state that, in our opinion, final figures will show the reproduction cost thereof, new, less accrued depreciation, based on present day prices of materials and labor, and including present values of land, to be in excess of $18,000,000.

We consider the foregoing figure to be a conservative estimate; and it is our belief, at the present time, that the final results will be somewhat in excess of the foregoing amount.

Yours very truly,
DAY & ZIMMERMANN, INC.
W. Findlay Downs,
Vice President.

MANAGEMENT

The executive management and operating organization, which have been responsible for the past success of the chocolate and cocoa business of the Hershey Chocolate Company, will continue in the control and operation of the Hershey Chocolate Corporation.

Very truly yours,
M. S. HERSHEY,
President.

The information contained in this circular is based upon official statements and statistics on which we have relied. We do not guarantee but believe it to be correct.

. . . . . .

STOCK PRICES
NEW YORK STOCK EXCHANGE

Price Range	Convertible Preference		Common	
	Low	High	Low	High
1927	66¼	75½	26⅛	50⅝
1928	70¼	89	30¾	72½
1929	60⅝	143¼	45	143⅞
1930	83½	108¾	70	109
1931	70½	104	68	103¾
1932	57	83	43½	83

Source: *Standard Corporation Records*, Individual Reports Section.

1. Prepare a pro forma balance sheet as it would appear after the sale of the Prior Preferred, the Convertible Preference, and as much of the Common as necessary to make up the units, but before the purchase of the assets. Assume that these securities were all sold at the prices indicated, and that the corporation received 93 net on one and 94 per cent of the unit price for the others. Assume that the corporation received $1 per share for the additional shares of common.

2. Prepare journal entries to record the transactions involved in the transition from the pro forma balance sheet above to that given on page 531.

3. Did the information included above constitute adequate disclosure of material facts to investors and prospective investors in these securities? If not, what additional facts should have been included?

4. What was the amount of capital stock of this corporation? Is this amount consistent with the statement frequently made that the capital of a corporation represents the investment of the stockholders therein?

Air Reduction Company, Incorporated

STOCK ISSUED IN THE ACQUISITION OF PROPERTY

During 1937 the Air Reduction Company, Incorporated, acquired the assets and business of two small companies operating in the same field,[1] as recorded in a listing application filed with the New York Stock Exchange.[2] For the purposes of this case, only the purchase of Crystal Carbonic Laboratory, Inc., will be considered.

The Board of Directors of the Company at a meeting held July 28, 1937, authorized the acquisition by the Company from Crystal Carbonic Laboratory, Inc., a Delaware corporation . . . of all of the assets and business as [a] going concern of . . . [the] corporation in exchange for the issuance to the said Crystal Carbonic Laboratory, Inc., of 34,561 shares of common stock of the Company . . . and, pursuant to said action of the Board of Directors, agreements containing plans of reorganization were entered into by the Company with the said Crystal Carbonic Laboratory, Inc., . . . providing for the acquisition by the Company of all of the said assets and business as [a] going concern of the said corporation in exchange for the issuance to the said Crystal Carbonic Laboratory, Inc., of the said 34,561 shares of the authorized but unissued common stock of the Company. . . .

The said corporation whose assets and business as [a] going concern is to be acquired by the Company is in the business of manufacturing and selling liquid carbon dioxide in the States of North Carolina, Georgia, Virginia, Arkansas, Louisiana, Florida, Alabama, Mississippi, Tennessee and Texas. Crystal Carbonic Laboratory, Inc., owns and operates plants for the manufacture of liquid carbon dioxide, equipped with the necessary gas cylinders, trucks, etc., for the distribution thereof in the cities of Charlotte, North Carolina; Jacksonville, Florida; Birmingham, Alabama; Memphis, Tennessee and Dallas, Texas. . . .

Substantially all properties to be acquired in this acquisition with the exception of the gas cylinders will be owned and operated by a one hundred per cent. owned subsidiary or subsidiaries of Air Reduction Company, Incorporated.

For financial statements of Crystal Carbonic Laboratory, Inc., . . . see Exhibit A.

This Exhibit constitutes an essential part of the application. The information contained therein is not furnished on the authority of the

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[1] These companies were acquired from the Coca-Cola Company as reported in *Standard Corporation Records*, Individual Reports Section, C30, revised March 21, 1938.

[2] New York Stock Exchange Listing Application A-10984, August 25, 1937.

applicant corporation, which makes no representation with respect to the accuracy or completeness thereof.

EXHIBIT A

. . . . . .

CRYSTAL CARBONIC LABORATORY, INC.

(a) BALANCE SHEETS AS AT DECEMBER 31, 1935 AND DECEMBER 31, 1936

	December 31, 1935		December 31, 1936	
ASSETS				
Current:				
Cash		$ 68,271		$ 86,650
Accounts receivable—				
Trade	$ 30,636		$ 35,688	
Less: Allowance for losses	10,300		10,369	
Net balance		20,336		25,319
Inventory (priced at lower of cost or market):				
Raw materials and finished products		8,645		6,936
Total current assets		$ 97,252		$118,905
Other assets:				
Securities owned (at cost)	$ 250		$.....	
Miscellaneous receivables	2,944		3,243	
Total other assets		3,194		3,243
Permanent assets (at cost):				
Land, buildings, machinery and equipment	$872,220		$886,079	
Less: Allowance for depreciation	535,300		561,117	
Permanent assets—Net		336,920		324,962
Deferred charges		2,230		2,367
Goodwill		84,101		84,100
		$523,697		$533,577
LIABILITIES				
Current:				
Accounts payable		$ 4,742		$ 3,011
Accrued accounts		1,161		2,976
Taxes on income (estimated)		18,985		28,302
Total current liabilities		$ 24,888		$ 34,289
Capital Stock:				
Common—No par value—				
1,000 shares authorized and issued —Stated value		10,000		10,000
Capital surplus		488,000		488,000
Earned surplus		809		1,288
		$523,697		$533,577

EXHIBIT A.—(*Continued*)

(b) PROFIT AND LOSS STATEMENT FOR THE YEARS ENDED DECEMBER 31, 1935 AND DECEMBER 31, 1936

	Year ended December 31, 1935		Year ended December 31, 1936	
Gross profit		$202,618		$271,242
Expenses—Selling, production overhead, and administrative and general		92,998		104,436
Operating profit		$109,620		$166,806
Other income	$ 12,065		$ 10,549	
Less: Other deductions	8,371		9,653	
Other income—Net		3,694		896
Profit before taxes on income		$113,314		$167,702
Federal and State normal income taxes	$ 18,300		$ 26,950	
Federal surtax			150	
Total taxes on income (estimated)		18,300		27,100
Net profit		$ 95,014		$140,602

Note.—In the determination of gross profits and expenses, as above shown, provision for depreciation has been included as follows:

	Year ended December 31, 1935	Year ended December 31, 1936
Included in—		
Manufacturing costs deducted in the determination of gross profits	$39,000	$39,966
Expenses	2,523	2,566
Total provision for depreciation	$41,523	$42,532

(c) CAPITAL SURPLUS ACCOUNT FOR THE YEARS ENDED DECEMBER 31, 1935 AND DECEMBER 31, 1936

Balance—December 31, 1934	$554,658
Less: Dividends paid in cash during 1935 in excess of available earned surplus	66,658
Balance—December 31, 1935	$488,000
No change during 1936	.....
Balance—December 31, 1936	$488,000

EXHIBIT A.—(*Continued*)

(d) EARNED SURPLUS ACCOUNT FOR THE YEARS ENDED DECEMBER 31, 1935 AND DECEMBER 31, 1936

Balance—December 31, 1934	$ 14,495
Net profit from operations for the year ended December 31, 1935	95,014
	$109,509
Less: Dividends paid in cash	108,700
Balance—December 31, 1935	$ 809
Net profit from operations for the year ended December 31, 1936	140,602
	$141,411
Less: Dividends paid in cash	140,122
Balance—December 31, 1936	$ 1,289

. . . . . .

CRYSTAL CARBONIC LABORATORY, INC.

(i) BALANCE SHEET, AS OF JULY 31, 1937

ASSETS

Current assets:				
Bank balances			$ 86,974	
Accounts receivable—Trade		$ 38,194		
Less reserve for bad debts		10,369	27,825	
Inventories			8,188	$122,987
Other assets:				
Working funds			$ 12,500	
Collateral deposits			90	
Accounts receivable—The Coca-Cola Co., Wilmington			9,027	
Accounts receivable—Crystal			2,575	
Bank account in liquidation			164	
Traveling advances			1,256	
Contingent funds			535	
Employees' insurance premiums			134	$ 26,281
Permanent assets:	(Assets)	(Reserve)		
Land	$	$	$ 53,750	
Land improvements	8,039	4,283		
Buildings	159,282	90,190		
Machinery and equipment	266,390	225,668		
Furniture and fixtures	9,610	8,275		
Autos and trucks	18,019	11,777		
Drums and valves	389,236	240,406		
	$850,576	$580,599	$269,977	323,727
Deferred charges: Unexpired insurance				1,399
Intangible assets: Goodwill				84,100
Total assets				$558,494

EXHIBIT A.—(*Continued*)

LIABILITIES

Current liabilities:		
Accounts payable—Trade	$ 7,557	
F.O.A.B. collections from employees	77	
S.U.I.T. collections from employees	16	
States gas taxes	3,105	$ 10,755
Accrued liabilities:		
Accrued taxes—Ad valorem, etc	$ 4,727	
Accrued Federal U.I. tax	224	
Accrued F.O.A.B. tax	77	
Accrued states U.I. tax	430	
Accrued expenses	63	5,521
Reserves:		
State income tax reserve	$ 2,344	
Federal income tax reserve	26,126	28,470
Capital:		
Common stock	$ 10,000	
Capital surplus	488,000	
Earned surplus	15,748	513,748
Total liabilities		$558,494

(j) PROFIT AND LOSS STATEMENT FOR THE SEVEN MONTHS ENDED JULY 31, 1937

Operating profit		$ 98,016
Additions to income	$ 5,787	
Deductions from income	4,456	1,331
Net profit before Federal taxes		$ 99,347
Federal taxes		13,965
Net profit earned on outstanding stock		$ 85,382

(k) EARNED SURPLUS ANALYSIS FOR THE SEVEN MONTHS ENDED JULY 31, 1937

Earned surplus analysis:		
Balance at January 1, 1937	$ 1,289	
Profit or loss current year to June 30, 1937	85,023	
Profit or loss current month ended	14,547	$100,859
Less:		
Dividends	$ 70,923	
State income tax reserve	223	
Federal income tax reserve	13,965	85,111
Balance at July 31, 1937		$ 15,748

I hereby certify that the financial statements included in Exhibit A covering the seven months ended July 31, 1937, have been correctly prepared from the books of account of Crystal Carbonic Laboratory, Inc. . . .

J. C. WEEKLEY,
Assistant Treasurer.

August 20, 1937

The consolidated balance sheet of the Air Reduction Company as of June 30, 1937, and an income statement for the six months ending June 30, 1937, were also included in the listing application.

AIR REDUCTION COMPANY, INCORPORATED
AND WHOLLY-OWNED SUBSIDIARY COMPANIES
CONSOLIDATED BALANCE SHEET AS OF JUNE 30, 1937

ASSETS

Current Assets:		
Cash		$ 8,653,228
Notes and accounts receivable:		
Customers	$ 3,486,120	
Miscellaneous	382,306	
Total	$ 3,868,426	
Less reserves	247,365	
Remainder		3,621,061
Inventories (at lower of cost or market)		3,101,248
United States Government Bonds and Notes, at face value		2,955,000
Federal Land and Intermediate Credit Bank Bonds, at face value		451,000
Other bonds and notes, and preferred stocks called for redemption		4,518,264
Total current assets		$23,299,801
Fixed Assets—Land, buildings and equipment, including gas cylinders (less reserves, $19,964,462)		14,286,606
Investments		4,606,926
Treasury Stock (463 69/75 new shares)		7,564
Pension and insurance funds		759,253
Patents and licenses		1
Deferred assets		539,214
Total		$43,499,365

LIABILITIES

Current Liabilities:		
Accounts Payable	$ 1,288,621	
Dividends payable (paid July 15, 1937)	2,542,602	
Accruals	491,736	
Estimated Federal taxes	1,423,898	
Total current liabilities		$ 5,746,857
Reserves:		
For Contingencies:		
Deposits and certificates in closed banks	$ 253,914	
General	812,458	
Total	$ 1,066,372	
Pension and insurance funds	759,253	
Deposits to insure cylinder returns, etc.	122,047	
Total reserves		1,947,672

AIR REDUCTION COMPANY, INCORPORATED
AND WHOLLY-OWNED SUBSIDIARY COMPANIES
CONSOLIDATED BALANCE SHEET AS OF JUNE 30, 1937.—*(Continued)*

	(Shares)		
Capital and Surplus:			
Common Stock without par value:			
Authorized	3,000,000		
Unissued	456,934 1/5		
Issued	2,543,065 4/5	$24,389,397	
Earned surplus		11,415,439	
Total capital and surplus			35,804,836
Total			$43,499,365

Note.—No accrual has been made for excess profits taxes or for surtax on undistributed profits inasmuch as the amounts of such taxes, if any, are not determinable until December 31, 1937.

SUMMARY OF CONSOLIDATED NET INCOME FOR THE SIX MONTHS ENDED JUNE 30, 1937

Gross sales, less discounts, returns and allowances		$15,779,756
Operating expenses (including depreciation ($746,817)		10,868,039
Net Operating income		$ 4,911,717
Other income	$ 150,865	
Less—Income charges	50,487	100,378
Net income before estimated Federal taxes		$ 5,012,095
Estimated Federal taxes		771,658
Net Income Earned on Outstanding Stock		$ 4,240,437
Shares of Stock outstanding	2,542,601 66/75	(new shares)
Earnings per share		$1.67

Note.—No accrual has been made for excess profits taxes or for surtax on undistributed profits inasmuch as the amounts of such taxes, if any, are not determinable until December 31, 1937.

I hereby certify that the financial statements covering the six months ended June 30, 1937, have been correctly prepared from the books of account of Air Reduction Company, Incorporated.

R. B. DAVIDSON
Secretary.

August 20, 1937.

The following exhibit, which was not a part of the listing application, shows the price range of Air Reduction common stock on the New York Stock Exchange.

EXHIBIT 1
AIR REDUCTION COMPANY, INCORPORATED
PRICE RANGE OF COMMON STOCK
NEW YORK STOCK EXCHANGE

Yearly High and Low

1930	156⅜	87½
1931	109⅜	47⅝
1932	63½	30⅞
1933	112	47½
1934	113	91¾
1935	173	104⅜
1936	86½*	58*

Monthly High and Low in 1937

January	80¼	75
February	79	73¼
March	78¼	71½
April	77¼	68½
May	76	67¼
June	73	64½
July	75¾	69⅛

Quotations in July, 1937

	High	Low	Last
July 27	74¼	73½	73¾
July 28	74½	73	73

* After 3 for 1 split, April 8, 1936.
Sources: *Bank and Quotation Record*, January issues, 1931–1937; monthly issues, 1937; *The New York Times*, July 28, 29, 1937.

For the purpose of this case, ignore the fact that the property was to be held by a wholly owned subsidiary and assume that the assets and liabilities were to be taken up on the books of the Air Reduction Company itself.

If, as assistant controller, you were asked to make recommendations as to the treatment of this acquisition on the books of account of the Air Reduction Company, what would you recommend?

XIX. CONSOLIDATED STATEMENTS

YORKTOWN MANUFACTURING COMPANY

CONSOLIDATED STATEMENTS

A. Prior to 1925 the Yorktown Manufacturing Company, manufacturers of cotton sheetings, sold its product to jobbers for distribution. In 1925 the directors voted to organize a separate company to market the product directly under a trade name. The Newcastle Company was incorporated with 2,600 shares of $100 par stock, all of which was purchased by the Yorktown company at par. The product to be marketed was billed to the merchandising company at cost. All profits of the Newcastle Company were declared as dividends each quarter and paid to the parent company.

On December 31, 1925, the balance sheets of the two companies were as follows:

YORKTOWN MANUFACTURING COMPANY AND NEWCASTLE COMPANY
BALANCE SHEETS AS OF DECEMBER 31, 1925

	Yorktown	Newcastle
Cash	$ 174,650	$ 8,614
Raw Materials	371,886	
Goods in Process	349,342	
Finished Goods		181,308
Accounts Receivable		116,530
Dividends Receivable	2,558	
Advances to Newcastle	51,468	
Investment in Newcastle	260,000	
Land, Buildings and Equipment, Net of Depreciation	1,437,202	
Furniture and Fixtures, Net of Depreciation		24,596
Deferred Charges	19,246	
	$2,666,352	$331,048
Accounts Payable	$ 215,946	$ 17,022
Accrued Expenses	57,738	
Notes Payable—Yorktown		51,468
Dividends Payable		2,558
Capital Stock	1,500,000	260,000
Surplus	892,668	
	$2,666,352	$331,048

Prepare a consolidated balance sheet of the two companies at December 31, 1925. Use the consolidation work sheet in the Working Forms.

B. In 1926 the Yorktown Manufacturing Company decided to liquidate the Newcastle Company because it had not been successful in establishing a satisfactory market for Yorktown sheets. Still anxious to control its marketing outlets, however, the Yorktown company purchased a 100 per cent interest in the Severn Manufacturing Company on July 1, 1926. The Severn company manufactured sheetings also and owned 80 per cent of the stock of the Mobile Company which had developed a well-established market for Severn sheets. The Mobile Company had been organized in 1922 and 20 per cent of the stock had been sold to outsiders. Surplus at July 1, 1926, had been earned since organization. Goods of the Severn company were billed to Mobile at cost, and after the purchase of Severn by Yorktown, goods of Yorktown were to be billed to Mobile on the same basis.

The balance sheets of the three companies on July 1, 1926 were:

YORKTOWN MANUFACTURING COMPANY, SEVERN MANUFACTURING COMPANY, AND MOBILE COMPANY
BALANCE SHEETS AS OF JULY 1, 1926

	Yorktown	Severn	Mobile
Cash	$ 196,930	$ 203,914	$ 96,978
Accounts Receivable	134,752		118,312
Raw Materials	349,664	184,136	
Goods in Process	239,886	303,586	
Finished Goods	186,108	4,978	185,608
Due from Mobile		67,180	
Investment in Severn	1,451,120		
Investment in Mobile		200,000	
Land, Buildings and Equipment, Net of Depreciation	1,570,974	1,720,534	
Furniture and Fixtures, Net			21,202
Deferred Charges	21,196	14,756	3,424
	$4,150,630	$2,699,084	$425,524
Notes Payable	$ 284,912	$ 195,296	$ 81,000
Accounts Payable	627,134	373,074	12,622
Due to Severn			67,180
Funded Debt		877,800	
Capital Stock	2,700,000	1,040,500	250,000
Surplus	538,584	212,414	14,722
	$4,150,630	$2,699,084	$425,524

Prepare a consolidated balance sheet of the three companies as of July 1, 1926.

C. In order to control its supplies of raw material, the Yorktown Manufacturing Company on January 1, 1928, bought a 75 per cent interest in the Beaumont Company, a cotton buying organization, for $353,180.

Balance sheets of the four companies, and an analysis of the surplus accounts for the year 1928 are given below:

YORKTOWN MANUFACTURING COMPANY, SEVERN MANUFACTURING COMPANY, MOBILE COMPANY, AND BEAUMONT COMPANY
BALANCE SHEETS AS OF DECEMBER 31, 1928

	Yorktown	Severn	Mobile	Beaumont
Cash	$ 200,178	$ 217,692	$ 78,256	$ 22,186
Accounts Receivable			319,686	
Raw Materials				568,776
Goods in Process	354,864	325,608		
Finished Goods		6,882	475,500	
Due from Mobile		72,478		
Due from Beaumont	22,956			
Investment in Severn	1,451,120			
Investment in Mobile		200,000		
Investment in Beaumont	353,180			
Land, Buildings and Equipment, Net	1,633,386	1,711,930		
Furniture and Fixtures, Net			19,164	452,942
Deferred Charges	18,974	16,978	4,386	6,730
	$4,034,658	$2,551,568	$896,992	$1,050,634
Accounts Payable	$ 517,904	$ 310,160	$101,381	$ 283,806
Notes Payable		89,140	450,189	261,784
Due Yorktown				22,956
Due Severn			72,478	
Dividends Payable			3,126	
Funded Debt		871,400		
Capital Stock	3,000,000	1,040,500	250,000	446,000
Surplus	516,754	240,368	19,818	36,088
	$4,034,658	$2,551,568	$896,992	$1,050,634

SURPLUS ACCOUNTS, 1928

	Yorktown	Severn	Mobile	Beaumont
Surplus January 1, 1928	$520,606	$234,636	$16,944	$57,106
Net Profit	146,148	57,758	15,374	.....
Total	$666,754	$292,394	$32,318	$57,106
Deficit	.....	.....	.....	21,018
Dividends	150,000	52,026	12,500	.....
Surplus December 31, 1928	$516,754	$240,368	$19,818	$36,088

The dividends payable on Mobile's books were declared December 15, payable January 10, 1929. The Severn company had not yet entered the dividends on its books.

The goods in process inventories of Yorktown and Severn contained raw materials in the amounts of $283,891 and $260,486 which had been sold them by the Beaumont Company at cost plus 3 per cent.

Prepare a consolidated balance sheet of the four companies at December 31, 1928.

D. In 1936 the Yorktown Manufacturing Company voted to liquidate the Severn, Mobile, and Beaumont companies as separate corporations, and to merge the four companies into the Yorktown Manufacturing Company. The minority interests in Mobile and Beaumont were purchased at book value as of April 1, 1936. The merger was to take place as of December 31, 1936.

The balance sheets of the four companies on December 31, 1936, were as shown on page 546.

YORKTOWN MANUFACTURING COMPANY, SEVERN MANUFACTURING COMPANY, MOBILE COMPANY, AND BEAUMONT COMPANY
BALANCE SHEETS AS OF DECEMBER 31, 1936

	Yorktown	Severn	Mobile	Beaumont
Cash	$ 185,396	$ 115,470	$ 58,478	$ 25,208
Raw Materials				559,442
Goods in Process	361,308	317,830		
Finished Goods		11,104	479,304	
Accounts Receivable			313,908	
Due from Mobile		64,256		
Due from Beaumont	31,648			
Investment in Severn	1,451,120			
Investment in Mobile		254,676		
Investment in Beaumont	471,750			
Land, Buildings and Equipment, Net of Depreciation	1,625,164	1,652,152		
Furniture and Fixtures, Net			21,926	439,164
Deferred Charges	23,152	14,756	6,408	8,752
	$4,149,538	$2,430,244	$880,024	$1,032,566
Accounts Payable	$ 546,566	$ 97,154	$241,941	$ 146,157
Notes Payable			284,163	368,375
Due Yorktown				31,648
Due Severn			64,256	
Funded Debt		970,000		
Capital Stock	3,000,000	1,040,500	250,000	446,000
Surplus	602,972	322,590	39,664	40,386
	$4,149,538	$2,430,244	$880,024	$1,032,566

The goods in process inventories of Yorktown and Severn contained raw materials of $289,046 and $254,264 which had been sold them by Beaumont at cost plus 3 per cent.

Prepare the merger balance sheet as of December 31, 1936.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—No. 4

CONSOLIDATED STATEMENTS

The American Telephone and Telegraph Company has provided for many years unusually complete information on the basis of consolidation. Both consolidated and nonconsolidated statements have been included in the annual reports since 1907. The list of affiliates consolidated and those not consolidated has been given since 1925 and the par and cost of the stock investment therein since 1934.

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1. What are the significant differences between the balance sheet of the American Telephone and Telegraph Company and the consolidated balance sheet of the Bell System? What are the significant differences between the nonconsolidated and consolidated income statements? Financial statements describe the condition and operation of a business entity. What is the business entity described by each of these sets of statements?

2. Do you agree with the policy of the corporation in including the Cincinnati and Suburban Bell Telephone Company and the Southern New England Telephone Company in the consolidation even though it does not own a majority of their voting stock? Do you agree with the policy of the corporation in excluding the Western Electric Company?

3. As far as the figures given permit, indicate which items on the statements of the New England Telephone and Telegraph Company should be eliminated in the consolidation. The stock of this subsidiary stands on the books of the parent corporation at a cost greater than its par. To what extent does this fact affect the value at which the assets should appear in the consolidation and the amount of surplus? What was the amount of the minority interest?

4. What is the relation between the claims on assets and earnings of the New England Telephone and Telegraph Company represented by holders of its own First Mortgage Thirty-Year 5 per cent Bonds, Series A, 1952 and by holders of American Telephone and Telegraph Company Twenty-five year, 3¼% Debentures of 1961?

The following excerpts are taken from the annual report of the American Telephone and Telegraph Company for 1935.

Bell System Financial Statements

The Bell System Financial Statements which follow consolidate the accounts of the American Telephone and Telegraph Company and those of its 23 associated telephone companies listed below:

Bell Tel. Co. of Nevada
The Bell Tel. Co. of Pennsylvania
The Chesapeake & Potomac Tel. Co.
The Chesapeake & Potomac Tel. Co. of Baltimore City
The Chesapeake & Potomac Tel. Co. of Virginia
The Chesapeake & Potomac Tel. Co. of West Virginia
The Cincinnati & Suburban Bell Tel. Co.
The Diamond State Tel. Co.
Illinois Bell Tel. Co.
Indiana Bell Tel. Co.
Michigan Bell Tel. Co.
The Mountain States Tel. & Tel. Co.
New England Tel. & Tel. Co.
New Jersey Bell Tel. Co.
New York Tel. Co.
Northwestern Bell Tel. Co.
The Ohio Bell Tel. Co.
The Pacific Tel. & Tel. Co.
Southern Bell Tel. & Tel. Co.
Southern California Tel. Co.
The Southern New England Tel. Co.
Southwestern Bell Tel. Co.
Wisconsin Tel. Co.

All but four of these companies are controlled directly by the American Telephone and Telegraph Company through ownership of a majority of their voting stock. The Bell Telephone Company of Nevada and Southern California Telephone Company are controlled indirectly, all of their stock being held by The Pacific Telephone and Telegraph Company. The Home Telephone and Telegraph Company of Spokane, one of the group formerly consolidated, was merged with The Pacific Telephone and Telegraph Company as of December 1, 1935. In view of their close relationship to other Bell System Companies, The Cincinnati and Suburban Bell Telephone Company and The Southern New England Telephone Company, in which the American Telephone and Telegraph Company owns less than a majority of voting stock, have for many years been treated as parts of the Bell System and their accounts included in the Bell System figures.

Since January 1, 1913, all Bell System telephone companies have maintained their accounts in accordance with the Uniform System of Accounts prescribed for telephone companies by the Interstate Commerce Commission and continued in effect during 1935 by the Federal Communications Commission. In accordance with the rules prescribed in the System of Accounts, telephone plant is carried in the accounts, with certain exceptions specified in the rules, at cost to the accounting company.

The consolidated Income Statement excludes (with minor exceptions) all inter-company items such as interest, dividends, and license

contract payments, which constitute income receipts to one company in the consolidated group and income disbursements to another company in that group. The consolidated Balance Sheet excludes, for the 24 companies in the consolidated group, inter-company receivables and payables and inter-company security holdings. The latter comprise mainly investments of the American Telephone and Telegraph Company in the securities of the associated telephone companies. The American Company carries these securities at their cost to it, which is about $57,000,000 in excess of their par value, and this excess has been extinguished from the consolidated Balance Sheet with a corresponding reduction in Unappropriated Surplus. Telephone Plant is included in the consolidated Balance Sheet in the aggregate amount at which it appears on the respective books of the 24 companies consolidated.

Investments in stocks of companies (not consolidated) controlled directly or indirectly by Bell System companies, such as the Western Electric Company, Inc., The Tri-State Telephone and Telegraph Company, Bell Telephone Laboratories, Inc., and 195 Broadway Corporation, are shown on the consolidated Balance Sheet under "Investment in Controlled Companies" at the amount of the Bell System's equity in their capital stock and surplus. Dividends and interest received from such companies, and the Bell System's proportionate interest in their earnings or deficits for the year (after dividends) are included in the consolidated Income Statement under "Other Earnings—Net."

BELL SYSTEM FINANCIAL STATEMENTS

(Consolidating the accounts of the American Telephone and Telegraph Company and its 23 Associated Telephone Companies)

CONSOLIDATED BALANCE SHEET

ASSETS

	December 31, 1935
Telephone Plant	$4,266,584,160
Plant and equipment for furnishing service; comprising land and buildings, rights of way, poles, wire, cable, underground conduit, switchboards, telephones, office furniture, vehicles, tools, construction work in progress, etc. Includes also on December 31, 1935 Organization and Franchise costs—$1,915,833, and Undistributed Cost of Property—$8,321,103.	
Investments in Controlled Companies (not consolidated):	
Stocks	208,713,100
Comprises equity of Bell System in capital stock and surplus of these companies.	
Bonds, Notes and Advances	23,162,028
Other Investments:	
Stocks	37,254,973
Includes investment in The Bell Telephone Company of Canada of $18,854,783.	
Bonds, Notes and Advances	14,469,372
Miscellaneous Investments	27,332,221
Principally real estate including about $16,000,000 of land and buildings retired from telephone plant and held for sale.	
Sinking and Other Reserved Funds:	
Sinking Funds—Cash and Securities	3,999,117
Deposit for Redemption of Bonds	44,000,000
Cash deposited with Trustee for Series "A" Bonds of Southwestern Bell Telephone Company, called for redemption on February 1, 1936.	
Current Assets:	
Cash and Deposits	55,659,774
Temporary Cash Investments	212,180,528*
Includes on December 31, 1935 United States Government obligations $209,975,095, and Tax Anticipation Warrants $1,904,184.	
Current Receivables	91,640,280
Interest and dividends receivable, working advances, amounts due for service, etc., less reserves for uncollectible accounts.	
Material and Supplies	48,869,839
Deferred Debits:	
Discount on Funded Debt	10,837,293
Prepayments of rents, taxes, directory expenses, etc.	9,384,838
Other Deferred Debits	5,264,843
Debit items, the final disposition of which had not been determined at close of year.	
Total Assets	$5,059,352,366

* Market value, December 31, 1935, $212,962,000.

BELL SYSTEM FINANCIAL STATEMENTS

(Consolidating the accounts of the American Telephone and Telegraph Company and its 23 Associated Telephone Companies)

CONSOLIDATED BALANCE SHEET.—(*Continued*)

LIABILITIES*

	December 31, 1935
Capital Stock (par value outstanding held directly by public):	
Common Stock—American Tel. and Tel. Co.	$1,866,227,500
Associated Telephone Companies	131,979,143
Preferred Stock—Associated Telephone Companies	97,937,600
Premiums on Stock—American Tel. and Tel. Co. Amount received in excess of par value.	268,749,078
Stock Installments—American Tel. and Tel. Co. Amount received under Employees' Stock Plan on stock subscriptions not yet completed or cancelled. (This Plan was discontinued as to new subscriptions in 1933.)	4,330,337
Long-term Debt	
American Tel. and Tel. Co.	453,902,713
Associated Telephone Companies	624,474,750†
Current and Accrued Liabilities:	
Current Liabilities. Bills for supplies, services, etc.; liability in respect of customers' deposits, prepayments and advance billing for service; provision for refunds due subscribers under rate orders; and (for 1935) provision for premium payable on Series "A" Bonds of Southwestern Bell Telephone Company called for redemption on February 1, 1936.	64,801,429
Accrued Liabilities Not Due. Taxes, interest, dividends and rents payable after the close of the year.	116,835,624
Deferred Credits. Credit items, the final disposition of which had not been determined at close of year.	3,491,424
Reserves for Depreciation of Plant and Equipment. Provision to meet loss of investment in depreciable plant upon its ultimate retirement from service.	1,061,102,083
Other Reserves. Provision for pending accident cases and for the ultimate retirement of leaseholds, franchises, etc.	1,619,919
Equity in Consolidated Surplus—Reserved and Unappropriated—attaching to Common Stock of Associated Telephone Companies held directly by public	8,914,411
Equity of American Tel. and Tel. Co. in Consolidated Surplus:	
Surplus Reserved. Comprised at December 31, 1935, provision of $66,295,949 against general contingencies, etc., (including $64,664,444 reserved by American Tel. & Tel. Co.); $16,731,008 against the contingency of refunds by Bell System companies of exchange and toll revenues collected; and $3,016,092 to extinguish as of February 1, 1936 the unamortized discount on Series "A" bonds of Southwestern Bell Telephone Company called for redemption.	86,043,049
Unappropriated Surplus	268,943,306
Total Liabilities	$5,059,352,366

* Statement as to certain contingent liabilities appears in note (a).

† Includes $48,836,600 Southwestern Bell Tel. Co. Series "A" bonds called for redemption on February 1, 1936. See also note (b).

C. A. HEISS, Comptroller.

BELL SYSTEM FINANCIAL STATEMENTS

(Consolidating the accounts of the American Telephone and Telegraph Company and its 23 Associated Telephone Companies)

CONSOLIDATED INCOME STATEMENT

	Year 1935 (c)
Operating Revenues	
Local Service Revenues (c) Revenues from local exchange service.	$640,993,436
Toll Service Revenues Revenues from long distance and local toll service.	273,483,256
Miscellaneous Revenues Revenues derived from directory advertising, rents and miscellaneous sources.	23,724,799
Less: Uncollectible Operating Revenues (c) Provision made during year for revenues which may be uncollectible.	3,830,619
Total Operating Revenues (d)	$934,370,872
Operating Expenses	
Current Maintenance (e) Cost of inspection, repairs and rearrangements required to keep the plant and equipment in good operating condition, representing 4.2 per cent. of the cost of the average plant in service during 1935.	$175,469,287
Depreciation Expense (c) Provision to meet loss of investment when depreciable property is retired from service, based on rates of depreciation designed to spread this loss of investment uniformly over the service life of the property. Depreciation expense during 1935 represented 4.3 per cent. of the cost of the average depreciable plant in service.	171,681,516
Traffic Expenses Costs incurred in the handling of messages, principally operators' wages.	131,839,788
Commercial Expenses Costs incurred in business relations with customers; pay station commissions; also the cost of directories, sales activities, advertising, etc.	74,541,595
General and Miscellaneous Expenses:	
General Administration, including cost of Development and Research	21,879,163
Accounting and Treasury Departments	33,868,909
Provision for Employees' Service Pensions	11,320,412
Employees' Sickness, Accident, Death and Other Benefits	6,880,785
Other General Expenses	12,932,795(e)
Less: Expenses Charged Construction	2,171,444
Operating Rents Rents paid for the use of buildings, poles, conduits and other facilities.	13,186,203
Total Operating Expenses	$651,429,009
Net Operating Revenues (carried forward)	$282,941,863

Note.—See explanatory notes (c), (d) and (e) on pp. 555–556.

BELL SYSTEM FINANCIAL STATEMENTS

(Consolidating the accounts of the American Telephone and Telegraph Company and its 23 Associated Telephone Companies)

CONSOLIDATED INCOME STATEMENT.—(*Continued*)

Net Operating Revenues (brought forward)	$282,941,863
Taxes (c)	95,923,952
Provision for federal, state and local taxes.	
Operating Earnings	$187,017,911
Other Earnings—Net:	
Dividends from controlled companies	$ 2,600,609
Proportionate interest in earnings or deficits (after dividends) of controlled companies*	2,450,954
Dividends from non-controlled companies	2,098,325
Interest Revenues, and Miscellaneous Earnings—Net	5,743,782
Total Net Earnings	$199,911,581
Interest Deductions (c)	52,372,527
Interest charges, including amortization of discount on funded debt and taxes payable under bond indentures.	
Net Income	$147,539,054
Dividends on Preferred Stock of Associated Telephone Companies held directly by public	$ 6,425,085
Net Income applicable to Common Stock of Associated Telephone Companies held directly by public	8,319,187
Net Income applicable to American Tel. and Tel. Co. stock	132,794,782
Number of Shares of American Tel. and Tel. Co. Stock Outstanding during the Year	18,662,275
Earnings Per Share on American Tel. and Tel. Co. Stock	$7.11

* Includes . . . $2,605,081, proportionate interest in earnings . . . of Western Electric Company. This company paid no dividends during the year.

BELL SYSTEM FINANCIAL STATEMENTS

(Consolidating the accounts of the American Telephone and Telegraph Company and its 23 Associated Telephone Companies)

CHANGES DURING 1935 IN AMERICAN TELEPHONE AND TELEGRAPH COMPANY'S EQUITY IN CONSOLIDATED UNAPPROPRIATED SURPLUS

Balance—December 31, 1934	$321,056,224
Additions:	
Net Income applicable to American Tel. and Tel. Co. Stock	$132,794,782
Transfer from Surplus Reserved upon settlements of rate litigation	3,693,124
Miscellaneous additions	602,492
Total	$137,090,398
Deductions:	
Dividends on American Tel. and Tel. Co. Stock	$167,960,475
Transfers to Surplus Reserved—	
Provision against contingency of refunds in pending rate cases, and other miscellaneous contingencies	6,534,797
Provision against extinguishment of unamortized discount on bonds called for redemption on February 1, 1936	3,016,092
Premiums payable on bonds called for redemption on February 1, 1936	2,441,830
Premiums paid on bonds redeemed	2,655,400
Unamortized discount extinguished upon redemption of bonds	2,542,886
Miscellaneous deductions	4,051,863
Total	$189,203,316
Balance—December 31, 1935	$268,943,306

C. A. HEISS, Comptroller.

BELL SYSTEM FINANCIAL STATEMENTS

EXPLANATORY NOTES RELATING TO CONSOLIDATED BALANCE SHEET AND INCOME STATEMENT

(a) As of December 31, 1935, certain of the associated telephone companies had contingent liabilities to make refunds, including interest thereon, in the event of adverse decisions in court cases involving charges for telephone service of some $20,000,000, which had been collected within the period 1924 to 1935, inclusive, and taken up in the accounts pending final adjudication. Against these contingencies, there has been set aside by these companies in Surplus Reserved, the amount of $16,799,628. The American Telephone and Telegraph Company is surety on bonds executed by The Ohio Bell Telephone Company in the amount of $17,112,669 to guarantee such rate refunds, if any, as may finally be required of that company. The American Telephone and Telegraph Company was released on January 1, 1936, from its suretyship on a bond of $3,000,000 executed by the Southwestern Bell Telephone Company to guarantee such rate refunds as might be required in connection with the San Antonio, Texas, rate case, the case having been closed.

BELL SYSTEM FINANCIAL STATEMENTS

EXPLANATORY NOTES RELATING TO CONSOLIDATED BALANCE SHEET AND INCOME STATEMENT.—(*Continued*)

The consolidated financial statements contain no specific provision in respect of the following contingencies.

1. A guarantee covering payment of notes in the amount of $3,055,194, secured by collateral, undertaken by the New Jersey Bell Telephone Company.

2. A tax claim made by the City of New York upon the American Telephone and Telegraph Company, as to which tax the Company denies liability.

(b) Two important items of refinancing occurred during the year 1935:

1. The Illinois Bell Telephone Company sold in October $45,000,000 First and Refunding Mortgage 3½% Bonds, Series B, at 100½%, applying the proceeds with other company funds to the retirement at 105% of its $48,726,200 Series A 5% Bonds which were called for redemption on December 1.

2. The Southwestern Bell Telephone Company sold in December $44,000,000 First and Refunding Mortgage 3½% Bonds, Series B, at 100½% (and has since the end of the year sold an additional $1,000,000 of these bonds at the same price). The net proceeds of these sales will be applied with other company funds to the retirement on February 1, 1936 of $48,836,600 Series A Bonds at 105%. Since these transactions had not been completed at the close of 1935 their effect is not fully reflected in the consolidated balance sheet.

This refinancing reduces Bell System funded debt by about $7,500,000 and annual interest charges by $1,728,140. Taking into account income taxes and amortization of the premium on the bonds retired, the annual saving will amount to approximately $1,100,000 of which $215,000 will represent a saving through the use of treasury funds.

(c) The Consolidated Income Statement for 1935 reflects adjustments in the accounts made in connection with settlements during the year of pending rate litigation. The settlements were those of the Illinois Bell Telephone Company in the Chicago rate case and The Chesapeake and Potomac Telephone Company in the Washington, D. C., rate case (both of which were referred to in the 1934 Annual Report); and that of the Southwestern Bell Telephone Company in the San Antonio, Texas, rate case, which settlement involved a refund of approximately $729,000. The combined effect of these adjustments was to increase certain accounts, and decrease others, as follows:

	Year 1935
Local Service Revenues	$ 615,178*
Uncollectible Operating Revenues	99,000*
Depreciation Expense	1,225,178*
Taxes	103,000†
Interest Deductions	491,635†

* Indicates increase.
† Indicates decrease.

BELL SYSTEM FINANCIAL STATEMENTS
EXPLANATORY NOTES RELATING TO
CONSOLIDATED BALANCE SHEET AND INCOME STATEMENT.—(*Continued*)

(The net effect of these adjustments was to decrease Net Income by $114,365 in 1935.)

(d) Operating Revenues for 1935 include for certain of the companies consolidated a total amount not exceeding $4,000,000 subject to possible refund in the event of adverse decisions in pending rate cases. (See Note (a) on preceding page.)

(e) Due to the adoption of a revised method of distributing engineering costs, the 1935 figure for Other General expenses includes such costs in the amount of approximately $5,372,000; in 1934 similar costs were distributed principally to maintenance and construction accounts.

BELL SYSTEM CAPITAL OBLIGATIONS
STOCKS, BONDS AND NOTES OUTSTANDING DECEMBER 31, 1935
(INTER-COMPANY HOLDINGS EXCLUDED)

	Par Value	Increase during Year
Common Stock (American Tel. and Tel. Co.)	$1,866,227,500	
Common Stock (Associated Telephone Cos.)		
New England Tel. and Tel. Co	$ 46,251,600	
Southern New England Tel. Co	26,662,600	
Cincinnati and Suburban Bell Tel. Co	19,319,250	
Illinois Bell Tel. Co	1,040,400	$ 11,400*
Mountain States Tel. and Tel. Co	13,062,200	
Pacific Tel. and Tel. Co	25,629,100	951,000*
Other Associated Cos	13,993	1,200*
Total Common Stock, Associated Telephone Cos	$ 131,979,143	$ 963,600*
Preferred Stock (Associated Telephone Cos.)		
New York Tel. Co. 6½%	$ 25,000,000	
Bell Tel. Co. of Pennsylvania 6½%	20,000,000	
Diamond State Tel. Co. 6½%	500,000	
Chesapeake and Potomac Tel. Co. of Baltimore City 7% (a)	3,000,000	
Wisconsin Tel. Co. 7%	4,947,000	
Northwestern Bell Tel. Co. 6½%	4,800,800	
Southwestern Bell Tel. Co. 7%	21,785,500	
Pacific Tel. and Tel. Co. 6%	17,904,300	
Total Preferred Stock, Associated Telephone Cos	$ 97,937,600	
Bonds and Notes (American Tel. and Tel. Co.)	Face Value	
Thirty Year Collateral Trust 5s, 1946	$ 64,865,200	$ 761,900*
Thirty-Five Year Sinking Fund Debentures 5s, 1960	117,819,700	
Thirty Five Year Debenture 5s, 1965	149,899,000	
Twenty Year Sinking Fund Debenture 5½s, 1943	94,784,700	180,000
Thirty Year 4s, 1936	2,589,000	
Ten Year Convertible 4½s, 1939	12,923,000	
4% Demand Notes sold to Trustee of Pension Fund	11,022,113	
Total Bonds and Notes, American Tel. and Tel. Co. (b)	$ 453,902,713	$ 581,900*

* Decrease.
(a) Called for redemption April 15, 1936.
(b) Excludes $652,000 bonds held in sinking funds of Associated Telephone Companies.
(c) Includes issues assumed or guaranteed.
(d) Series A Bonds of Southwestern Bell Tel. Co. have been redeemed and $1,000,000 additional Series B Bonds have been issued since December 31, 1935. Giving effect to these transactions Total Bonds and Notes (Asso. Tel. Cos.) would show a decrease of $7,701,922.

BELL SYSTEM CAPITAL OBLIGATIONS
STOCKS, BONDS AND NOTES OUTSTANDING DECEMBER 31, 1935 (INTER-COMPANY HOLDINGS EXCLUDED).—(*Continued*)

	Face Value	Increase during Year
Bonds and Notes (Associated Tel. Cos.) (c)		
New England Tel. and Tel. Co.:		
First Mortgage Series A 5s, 1952	$ 35,000,000	.....
First Mortgage Series B 4½s, 1961	40,000,000	.....
Southern New England Tel. Co.:		
Debenture 5s, 1970	10,000,000	.....
New York Tel. Co.:		
First and General Mortgage 4½s, 1939	60,857,325	$ 1,230
Bell Tel. Co. of Pennsylvania:		
First Mortgage 5s, 1943 (Central District Tel. Co.)	8,555,500	.....
First and Refunding Mortgage 5s, 1948	35,000,000	.....
First and Refunding Mortgage 5s, 1960	50,000,000	.....
Chesapeake and Potomac Tel. Co. of Virginia:		
First Mortgage 5s, 1943	4,085,700	175,400*
Southern Bell Tel. and Tel. Co.:		
First and Gen. Mortgage 5s, 1937 (Cumberland Tel. & Tel. Co.)	14,250,000	719,000*
First Mortgage 5s, 1941	47,070,500	.....
Ohio Bell Tel. Co.:		
Consolidated 5s, 1944 (Ohio State Tel. Co.)	.....	4,749,000*
Illinois Bell Tel. Co.:		
First and Refunding Mortgage 5s, 1956, Series A	....	48,726,200*
First and Refunding Mortgage 3½s, 1970, Series B	45,000,000	45,000,000
Southwestern Bell Tel. Co.:		
First and Refunding Mortgage 5s, 1954, Series A	48,836,600(d)	.....
First and Refunding Mortgage 3½s, 1964, Series B	44,000,000	44,000,000
Pacific Tel. and Tel. Co.:		
First Mortgage and Collateral Trust 5s, 1937	24,948,000	654,000*
First and Refunding Mortgage 5s, 1947 (Southern California Tel. Co.)	6,011,000	162,000*
Refunding Mortgage 5s, 1952	23,890,000	.....
First Mortgage 5s, 1936 (Home Tel. & Tel. Co. of Spokane)	2,999,900	.....
Miscellaneous Bonds, Mortgages and Notes	9,554,300	1,556,700*
4% Notes sold to Trustee of Pension Funds (principally demand)	114,415,925	7,875,748
Total Bonds and Notes (Asso. Tel. Cos.)	$ 624,474,750(d)	$40,134,678(d)

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
BALANCE SHEET
ASSETS

		December 31, 1935
Investments:		
Stocks of Associated Cos. (a)		$2,015,145,129
Investment, at cost, in stocks of associated telephone companies.		
Controlled companies	$1,992,763,348	
Non-controlled companies	22,381,781	
Stocks of Other Cos. (a)		170,216,162
Investment, at cost, in stocks of other than associated telephone companies.		
Controlled companies	$150,857,338	
Non-controlled companies	19,358,824	
Notes of, and Advances to, Associated Cos. (a)		116,343,923
Controlled companies	$110,293,923	
Non-controlled companies	6,050,000	
Other Notes and Advances (a)		20,850,841
Controlled companies	$20,847,000	
Sundry items	3,841	
Sinking Funds		1,202,573
Amounts on deposit with trustees under bond indentures.		
Plant and Equipment:		
Long Lines Plant		435,270,512
Plant and equipment mainly for providing interconnection between and through territories of associated telephone companies. Includes $12,500 real estate held pending sale.		
General Equipment		1,073,730
Office furniture and equipment other than that included in Long Lines Plant.		
Current Assets:		
Cash and Deposits		18,236,185
Temporary Cash Investments		194,339,659
United States Government obligations. (Market value December 31, 1935, $194,892,000.)		
Current Receivables		13,010,977
Interest and dividends receivable, working advances, amounts due for service, etc., less reserve for uncollectible accounts.		
Material and Supplies		8,381,309
Deferred Debits		1,680,878
Prepayments of rents, taxes and insurance; deposits with workmen's compensation commissions; and deferred debit items the final disposition of which had not been determined at close of year.		
Total Assets		$2,995,751,878

(a) See detailed list of investments.

Note.—At December 31, 1935 there were pledged with the Old Colony Trust Company, Trustee, stocks of Associated Companies having a par value of $111,650,100 (book value of $112,469,276), under Trust Indenture securing this Company's Thirty-Year Collateral Trust 5s, dated December 1, 1916 of which $64,865,200 face value were outstanding.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
BALANCE SHEET.—(*Continued*)
LIABILITIES

	December 31, 1935
Capital Stock:	
Stock Issued and Outstanding (Authorized $2,500,000,000)	$1,866,227,500
Par value of 18,662,275 shares of common stock outstanding.	
Premiums	268,749,078
Amount received in excess of par value of stock.	
Capital Stock Installments	4,330,337
Amount received under Employees' Stock Plan on stock subscriptions not yet completed or cancelled. (This Plan was discontinued as to new subscriptions in 1933.)	
Long-term Debt:	
Bonds and Debentures	443,532,600
Notes sold to Trustee of Pension Fund*	11,022,113
Current and Accrued Liabilities:	
Dividend Payable	41,990,119
Dividend declared, payable after close of year.	
Accounts Payable	3,416,838
Current bills for supplies, services, etc., and other obligations subject to current settlement.	
Interest and Taxes Accrued, Not Due	11,263,579
Interest and taxes payable after close of year.	
Deferred Credits	1,775,452
Items, the final disposition of which had not been determined at close of year. Includes also reserves for pending accident cases, etc.	
Reserves for Depreciation of Plant and Equipment	95,040,546
Provision to meet loss of investment in depreciable plant upon its ultimate retirement from service.	
Surplus:	
Surplus Reserved	64,664,444
Amount reserved for general contingencies.	
Unappropriated Surplus	183,739,272
Decrease for 1935 comprises:	
Divs. chgd. against Surplus $42,153,970	
Mis. deduc. (net) 44,530	
Total Liabilities	$2,995,751,878

* Demand notes held by Trustee as an investment of pension funds not presently required to meet pension payments.

Note.—No specific provision has been made in the accounts in respect of a contingent liability to the City of New York for taxes imposed under Local Law No. 19 of 1933, and subsequent similar laws, since the Company denies liability for such taxes.

On December 31, 1935, the Company was surety on bonds for $17,112,668.94, executed by The Ohio Bell Telephone Company as principal, providing for the refund by that Company to telephone users of sums, if any, which may be found to have been collected under rates in excess of those ultimately held legal. The Company was also surety at that date on a similar bond of the Southwestern Bell Telephone Company in the amount of $3,000,000, but was released therefrom on January 1, 1936.

C. A. HEISS, Comptroller.

American Telephone and Telegraph Company
Income Statement

	Year 1935
Operating Revenues	
Toll Service Revenues	$ 78,092,813
Message tolls and private line service revenues.	
License Contract Revenues	12,635,358
Payments received for services furnished telephone companies under license contracts.	
Miscellaneous Revenues	4,044,862
Less: Uncollectible Operating Revenues	523,590
Total Operating Revenues	$ 94,249,443
Operating Expenses (a)	
Current Maintenance (b)	$ 15,284,240
Depreciation Expense	17,492,018
Traffic and Commercial Expenses	7,691,463
Provision for Employees' Service Pensions	905,348
Employees' Sickness, Accident, Death and other Benefits	456,733
Operating Rents	11,826,107
General and Miscellaneous Expenses	18,932,890(b)
Less: Expenses Charged Construction	81,514
Total Operating Expenses	$ 72,507,285
Net Operating Revenues	$ 21,742,158
Taxes	5,879,722
Operating Earnings	$ 15,862,436
Dividend Revenues	121,244,200
Interest Revenues	11,289,498
Miscellaneous Non-operating Revenues—Net	840,392
Total Net Earnings	$149,236,526
Interest Deductions	23,430,021
Net Income (c)	$125,806,505
Dividends Declared	$167,960,475
Dividends at the rate of $9.00 per share per annum on capital stock:	
Charged against Net Income	$125,806,505
Charged against Surplus	42,153,970

(a) The expenses shown under this caption include the cost of maintaining and operating the Company's long distance communication service and costs incurred by the Company in the performance of general staff services, *i.e.*, development and research, patent, general advisory and other services, furnished telephone companies under license contracts.

(b) Due to the adoption of a revised method of distributing engineering costs, 1935 figures for General and Miscellaneous Expenses include such costs in the amount of $495,420; in 1934 similar costs were distributed principally to the maintenance and construction accounts.

(c) Net Income of the Company $125,806,505 for 1935 is less by $6,988,277 . . . than the Company's proportion of the consolidated Bell System Net Income for these years. The Net Income figures of the Company, by itself, include dividend revenues paid in part by some companies from previously accumulated surplus earnings and do not take into account the Company's proportion of the undivided profits or deficits for the year (after dividends, if any) of associated and affiliated companies. No dividends were received from the Western Electric Company, Inc., . . . that company, including its subsidiaries, having a net profit for 1935 of $2,620,279. . . .

C. A. Heiss Comptroller.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
INVESTMENTS IN ASSOCIATED AND OTHER COMPANIES AT DECEMBER 31, 1935

	Capital Stocks (a)			Notes and Advances
	Par Value of Holdings	Per Cent of Total Outstanding	Book Value (Cost)	Face Value
Asso. Tel. Cos.				
N. E. Tel. & Tel. Co	$ 87,094,200	65 31	$ 92,045,721	$ 19,750,000
Southern N. E. Tel. Co	13,337,400	33 34	13,649,213	6,050,000
N. Y. Tel. Co	421,300,000	100 00	444,280,335	10,500,000
N. J. Bell Tel. Co	120,395,200	100 00	134,062,384	29,154,800
Bell Tel. Co. of Pa	110,000,000	100 00	116,316,050	825,000
Diamond State Tel. Co	5,000,000	100 00	5,700,000	435,000
Chesapeake & Potomac Tel. Co.	20,000,000	100 00	21,000,000	1,770,000
Chesapeake & Potomac Tel. Co. of Balt. City	30,000,000	100 00	31,467,862	575,000
Chesapeake & Potomac Tel. Co. of Va	18,000,000	100 00	18,000,000	3,900,000
Chesapeake & Potomac Tel. Co. of W. Va	16,200,000	100 00	16,200,000	2,025,000
Southern Bell Tel. & Tel. Co	124,998,700	99 99	126,815,773	
Ohio Bell Tel. Co	129,999,600	99 99	130,041,898	
Cincinnati & Suburban Bell Tel. Co	8,169,150	29 72	8,732,568	
Michigan Bell Tel. Co	109,988,607	99 99	110,401,210	20,774,730
Indiana Bell Tel. Co	32,999,200	99 99	33,585,686	5,734,393
Wisconsin Tel. Co	40,000,000	100 00	43,223,835	
Illinois Bell Tel. Co	148,959,600	99 31	154,440,399	
Northwestern Bell Tel. Co	95,000,000	100 00	96,039,490	950,000
Southwestern Bell Tel. Co	172,998,900	99 99	176,251,978	
Mountain States Tel. & Tel. Co.	34,987,500	72 82	36,362,463	13,900,000
Pacific Tel. & Tel. Co.—Common	154,870,900	85 80	150,529,084	
Pacific Tel. & Tel. Co.—Preferred	64,095,700	78.17	55,999,180	
Total Book Value (Cost)			$2,015,145,129	$116,343,923
Other Companies				
Bell Tel. Labs., Inc	$ 50,000	(b)50 00	$ 50,000	$ 2,750,000
Bell Tel. Secs. Co	1,000,000	100 00	1,000,000	
Bell Tel. Co. of Canada	18,749,800	24 06	18,854,783	
Cuban American Tel. & Tel. Co.—Common	432,500	50 00	162,500	
Cuban American Tel. & Tel. Co.—Preferred	340,000	50.00	340,000	
Western Electric Co., Inc. (no par value)	(c)5,965,183	99 42	144,192,338	
195 Broadway Corp	5,500,000	100 00	5,515,000	(d)15,775,000
Eastern Tel. & Tel. Co. (Canada)	75,000	100 00	75,000	1,480,000
Transpacific Communication Co., Ltd	25,000	100.00	25,000	842,000
Sundry	1,230		1,541	3,841
Total Book Value (Cost)			$ 170,216,162	$ 20,850,841

(a) Common stocks except as otherwise indicated.
(b) Remaining 50% owned by Western Electric Company, Inc.
(c) Number of shares.
(d) Includes real estate mortgages of $13,100,000.

The following excerpts are from the annual report of the New England Telephone and Telegraph Company for 1935.

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY

FINANCIAL REPORTS

The balance sheet and income statement which follow are summaries of the accounts of the New England Telephone and Telegraph Company. This Company has maintained its accounts in accordance with the Uniform System of Accounts for Telephone Companies prescribed by the Interstate Commerce Commission effective January 1, 1913, amended from time to time, revised January 1, 1933, and continued in effect for 1935 by the Federal Communications Commission. The Uniform System of Accounts established specific rules in respect of the items to be included in the various accounts which have been prescribed and contain the requirement that plant and other fixed assets, with certain specified exceptions, shall be entered in the accounts at actual cost to the Company. . . .

FREDERIC E. MOORE,
General Auditor.

New England Telephone and Telegraph Company
Balance Sheet, December 31, 1935
Assets

Investments:		
Telephone Plant		$306,439,884
Plant and equipment for furnishing service: comprised of land and buildings, rights of way, poles, wire, cable, underground conduit, switchboards, telephones, office furniture, vehicles, tools, construction work in progress, etc.		
Miscellaneous Physical Property		5,047,761
Real estate not now held for telephone purposes.		
Investment in Controlled Companies		1,306,895
Capital Stocks	$812,253	
Advances	494,641	
Other Investments		1,443
Miscellaneous stocks, bonds, etc.		
Total Investments		$312,795,983
Current Assets:		
Cash		$ 1,562,339
Available for current needs.		
Working Funds		444,204
Cash held by cashiers and other employees as working funds.		
Notes Receivable		950
Notes due on demand.		
Accounts Receivable		8,134,240
Current accounts due the company for service (less reserve for uncollectible accounts), toll settlements, interest, rents, and sundry miscellaneous items.		
Material and Supplies		1,861,875
Carried principally for construction and maintenance purposes.		
Total Current Assets		$ 12,003,608
Deferred Debits:		
Prepayments		$ 528,486
Rents, insurance, cost of directories, and other expenses prepaid and applicable to period after close of year.		
Discount on Funded Debt		3,616,607
Balance of unamortized discount and expense on bonds outstanding.		
Other Deferred Debits		260,471
Miscellaneous items, the final disposition of which had not been determined at the end of year.		
Total Deferred Debits		$ 4,405,564
Total Assets		$329,205,155

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY
BALANCE SHEET, DECEMBER 31, 1935.—(*Continued*)

LIABILITIES

Capital Stock		$133,345,800
Par value of common stock outstanding. (Authorized 2,000,000 shares, outstanding 1,333,458 shares.)		
Long-term Debt:		
Bonds Authorized and Outstanding:		
New England Telephone and Telegraph Company First Mortgage 5% Bonds, Series A, due June 1, 1952*		$ 35,000,000
New England Telephone and Telegraph Company First Mortgage 4½% Bonds, Series B, due May 1, 1961*		40,000,000
Total Bonds		$ 75,000,000
Real Estate Mortgage due March 29, 1939		2,000,000
Advances from American Telephone and Telegraph Company		19,750,000
Notes Sold to Trustee of Pension Fund†		9,127,415
Total Long-term Debt		$105,877,415
Current and Accrued Liabilities:		
Customers' Deposits and Advance Billing and Payments		$ 581,134
Deposits as security for payment of bills and advance billing and payments for service.		
Accounts Payable and Other Current Liabilities		2,910,410
Amounts owing for payrolls, supplies, toll settlements, and sundry miscellaneous items which are in process of payment.		
Accrued Liabilities Not Due		1,999,385
Taxes	$1,492,812	
Interest	506,573	
Total Current and Accrued Liabilities		$ 5,490,929
Deferred Credits		$ 5,484
Miscellaneous items, the final disposition of which had not been determined at end of year.		
Depreciation Reserve		75,913,939
Provision to meet loss of investment in depreciable plant upon its ultimate retirement from service.		
Surplus:		
Unappropriated Surplus		8,571,588
Analysis of increase during 1935:		
Net Income for Year (after Dividends)	$88,304	
Miscellaneous Additions	6,982	
Total Additions	$95,286	
Miscellaneous Deductions	35,913	
Net Increase	$59,373	
Total Liabilities		$329,205,155

FREDERIC E. MOORE, General Auditor.

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* Security: First mortgage, except as to lien stated below, on all property, except securities, of Company in Maine, New Hampshire, Massachusetts and Rhode Island. Prior Liens: As to specific parcels of real estate acquired subsequent to June 1, 1922, mortgage of $2,000,000. Junior Liens: None.

† Demand notes held by Trustee as an investment of Pension Trust Fund not presently required to meet pension payments.

New England Telephone and Telegraph Company
Income Statement
Year Ended December 31, 1935

Local Service Revenues	$50,079,146
Revenues from local exchange service.	
Toll Service Revenues	15,671,597
Revenues from long distance and local toll service.	
Miscellaneous Revenues	2,280,854
Revenues from directory advertising, rents, and miscellaneous sources.	
Total	$68,031,597
Less—Uncollectible Operating Revenues	244,248
Provision made during year for revenues which may be uncollectible.	
Total Operating Revenues	$67,787,349
Current Maintenance	$13,796,759
Cost of inspection, repairs, and rearrangements required to keep the plant and equipment in good operating condition.	
Depreciation Expense	11,749,235
Provision to meet loss of investment when depreciable plant is retired from service, based on rates of depreciation for the different classes of property which spread this loss of investment uniformly over its service life. Depreciation expense represented 4.231% of average investment in depreciable plant in service during 1935.	
Traffic Expenses	12,045,781
Costs incurred in the handling of messages, principally operators' wages.	
Commercial Expenses	5,359,941
Costs incurred in business relations with customers; pay station commissions; also cost of directory, sales activities, advertising, etc.	
Operating Rents	661,197
Rents paid for the use of buildings, poles, conduits, and other facilities.	

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY
INCOME STATEMENT
YEAR ENDED DECEMBER 31, 1935.—(*Continued*)

General and Miscellaneous Expenses:	
Executive and Legal Departments	$ 434,328
Accounting and Treasury Departments	2,096,342
Provision for employees' service pensions	815,021
Employees' sickness, accident, death, and other benefits	614,150
Services received under license contract	973,463
Other general expenses*	687,004
Expenses Charged Construction—Cr.	137,996
Total General and Miscellaneous Expenses	$ 5,482,312
Total Operating Expenses	$49,095,225
Net Operating Revenues	$18,692,124
Taxes. Provision for federal, state, and local taxes.	5,419,346
Net Operating Income	$13,272,778
Net Non-operating Income. Dividends and Interest, and other miscellaneous income (net).	141,958
Income Available for Fixed Charges	$13,414,736
Bond Interest. Interest charges on outstanding bonds.	$ 3,550,000
Other Interest. Interest charges on other debt obligations.	1,609,370
Amortization of Discount on Funded Debt. Proportion of debt discount and expense applicable to the year.	166,314
Total Fixed Charges	$ 5,325,684
Balance Available for Dividends	$ 8,089,052
Dividends on common stock at the rate of 6% per annum	8,000,748
Income Balance Transferred to Surplus	$ 88,304

* Due to the adoption of a revised method of distributing engineering costs, the 1935 figure includes such costs in the amount of $438,717.

FREDERIC E. MOORE, General Auditor.

UNITED STATES STEEL CORPORATION—NO. 3

CHANGES IN METHODS OF CONSOLIDATION

Several episodes in the history of the United States Steel Corporation are described in an earlier case at pages 356 to 377. The facts were considered there from the point of view of plant accounting, but they also involved issues in methods of consolidation.

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1. In the consolidated balance sheet of November 30, 1901, surplus of subsidiary companies at the date of acquisition was included in consolidated surplus, and an equivalent amount was included in the cost of property. In the consolidated balance sheet of December 31, 1902, this surplus at acquisition in the amount of $116,356,111 was eliminated both from consolidated surplus and from property (page 360). The remaining $25,000,000 of initial surplus arose in the course of the financing of the parent company. Was the change of 1902 wise?

2. What entries were presumably made on the books of the parent and/or the subsidiaries when $508,302,500 was written off for intangible values?

3. What entries were presumably made in connection with the setting up of $270,000,000 of appropriated surplus, and its subsequent elimination in 1935?

4. What entries were involved in the segregation of $260,368,522 of remaining intangibles, and the elimination of this amount in 1938 in accordance with the changes proposed in the report for 1937?

5. After the changes of 1938, was the basis of consolidation used by the United States Steel Corporation similar to that of the American Telephone and Telegraph Company in so far as it affected the book values of assets on the consolidated balance sheets and the amounts of surplus thereon?

XX. STATEMENT OF SOURCE AND APPLICATION OF FUNDS

General Refractories Company

THE SOURCE AND APPLICATION OF FUNDS STATEMENT

The balance sheets of the company for December 31, 1929 and 1930, and the income and surplus statements for the intervening period are given below. During the year significant changes took place in the working capital position and in related aspects of the business. In order to analyze these changes more fully, the source and application of funds work sheet on page 572 was prepared, and a statement of source and application of funds was drawn up.

In the Working Forms the balance sheets for December 31, 1930 and 1931, are set up on a source and application of funds work sheet. The income and surplus statements for 1931 are given below.

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1. Complete the work sheet and prepare the statement of source and application of funds for the period 1930–1931.

2. What were the significant changes which took place in this business in each of the periods and how were they related?

General Refractories Company and Subsidiary Companies
Condensed Consolidated Statement of Operations
For the Calendar Year 1930

Earnings from operations, before taxes, interest, etc.	$ 2,629,174
Miscellaneous income	258,054
Earnings before taxes, interest, depreciation and depletion	$ 2,887,228
Corporate, municipal and income taxes	334,660
	$ 2,552,568
Interest on floating debt	101,684
	$ 2,450,884
Depreciation and depletion reserved from earnings	314,296
Net profits	$ 2,136,588

General Refractories Company
Condensed Balance Sheet, December 31, 1929

Assets

Current:		
Cash in Banks and on Hand		$ 973,522
Bills Receivable		405,630
Accounts Receivable, net of allowances		1,385,271
Inventories, at cost or market, whichever was lower		2,754,121
Accrued Interest Receivable		46,160
Investments, Marketable, at Cost		170,213
		$ 5,734,917
Employees' Mortgages		2,716
Miscellaneous Investments		808,522
Deferred Accounts		433,529
Patents, at cost		28,852
Real Estate, Buildings, Machinery, Equipment, Mineral Lands, Leases, etc., net of all allowances for Depreciation and Depletion		15,296,254
		$22,304,790

Liabilities

Current:		
Accounts Payable		$ 140,763
Accrued Accounts		186,949
Allowance for Federal Income Tax		200,000
		$ 527,712
Contingent Liability as Accommodation Endorser	$ 80,000	
Capital Stock and Surplus, as annexed:		
Capital Stock without Par Value Authorized and Issued, 300,000 shares		21,777,078
		$22,304,790

Capital Stock and Surplus Account

Capital Stock:	
Authorized and Outstanding, 300,000 shares	$12,951,696
Surplus, Paid in	5,175,510
Surplus, Earned	3,649,872
Total Capital Stock and Surplus, December 31, 1929	$21,777,078

GENERAL REFRACTORIES COMPANY AND SUBSIDIARY COMPANIES
CONDENSED CONSOLIDATED BALANCE SHEET, DECEMBER 31, 1930

ASSETS

Current:		
Cash in Banks and on Hand		$ 605,700
Bills Receivable, customers and individuals		74,364
Accounts Receivable, net of allowances		1,099,764
Inventories, at cost or market, whichever is lower		3,212,831
Accrued Interest Receivable		85,898
Investments, Marketable, at Cost (market value, $156,000)		183,595
		$ 5,262,152
Employees' Mortgages		1,970
Miscellaneous Investments, at Cost		824,698
Notes Receivable, officers and employees, partly secured by General Refractories Co. stock		1,048,931
Deferred Accounts		472,440
Patents, at Cost		37,251
Real Estate, Buildings, Machinery, Equipment, Mineral Lands, Leases, etc., net of allowances for Depreciation and Depletion		18,677,941
		$26,325,383

LIABILITIES

Current:		
Bills Payable, Banks		$ 3,105,000
Accounts Payable		440,976
Accrued Accounts		171,694
Allowance for Federal Income Tax		242,500
		$ 3,960,170
Contingent Liability as Accommodation Endorser	$124,250	
Capital Stock and Surplus, as annexed:		
Capital Stock, without Par Value Authorized, 600,000 shares; outstanding, 300,000 shares		22,365,213
		$26,325,383

CONSOLIDATED CAPITAL STOCK AND SURPLUS ACCOUNT
DECEMBER 31, 1930

Capital Stock:		
Authorized 600,000 shares / Outstanding 300,000 shares		$12,951,695
Surplus, paid in		5,052,058
Surplus, earned:		
Balance, January 1, 1930	$3,649,872	
Net profit for the calendar year 1930	2,136,588	
	$5,786,460	
Dividends declared during the year	1,425,000	4,361,460
Total capital stock and surplus, December 31, 1930.		$22,365,213

Source: Company report.

General Refractories Company
Work Sheet for Source and Application of Funds Statement, 1929–1930

	1929	1930	Where Gone	Where Got	Adjustments		Working Capital		Funds	
							Increase	Decrease	Applied	Provided
Cash in banks and on hand	$ 973,522	$ 605,700	$	$ 367,822	$	$	$	$ 367,822	$	$
Bills receivable	405,630	74,364		331,266				331,266		
Accounts receivable, net of allowances	1,385,271	1,099,764		285,507				285,507		
Inventories, at cost or market, whichever lower	2,754,121	3,212,831	458,710				458,710			
Accrued interest receivable	46,160	85,808	39,738				39,738			
Investments, marketable, at cost	170,213	183,595	13,382				13,382			
Total current assets	$ 5,734,917	$ 5,262,152								
Employees' mortgages	$ 2,716	$ 1,970		746						746
Miscellaneous investments	808,522	824,698	16,176							16,176
Notes receivable, officers and employees partially secured		1,048,931	1,048,931						1,048,931	
Deferred accounts	433,528	472,440	38,912						38,912	
Patents, at cost	28,852	37,251	8,399						8,399	
Real estate, buildings, machinery, equipment, leases, etc., net of allowance for depletion and depreciation	15,296,254	18,677,941	3,381,687		314,296 123,452*				3,819,435	
	$22,304,789	$26,325,383								
Bills payable, banks	$	$ 3,105,000		3,105,000				3,105,000		
Accounts payable	140,763	440,976		300,213				300,213		
Accrued accounts	186,949	171,694	15,255				15,255			
Allowance for Federal income tax	200,000	242,500		42,500				42,500		
Total current liabilities	$ 527,712	$ 3,960,170								
Capital stock	$12,951,695	$12,951,695								
Paid-in surplus	5,175,510	5,052,058	123,452			123,452				
Earned surplus	3,649,872	4,361,460		711,588	2,136,588	1,425,000				
	$22,304,789	$26,325,383	$5,144,642	$5,144,642						
Funds provided by										
Profits						2,136,588				2,136,588
Depreciation and depletion						314,296				314,296
Decrease in working capital							3,905,223			3,905,223
Funds applied to										
Dividends paid					1,425,000				1,425,000	
					$3,999,336	$3,999,336	$4,432,308	$4,432,308	$6,356,853	$6,356,853

* Assumed to have been a write-down of plant, because similar amount was deducted from paid-in surplus in 1931.

General Refractories Company
Statement of Source and Application of Funds
December 31, 1929–1930

Funds Provided

By Profits:		
Net Profits	$2,136,588	
Depreciation and Depletion	314,296	$2,450,884
By Decrease in Employees' Mortgages		746
Decrease in Working Capital		3,905,223
		$6,356,853

Funds Applied

To Increase in Notes and Accounts Receivable, officers and employees	$1,048,931
Increase in Miscellaneous Investments	16,176
Increase in Deferred Accounts	38,912
Increase in Patents	8,399
Increase in Real Estate, Machinery, Buildings, Equipment, Mining Lands, Leases, etc	3,819,435
Payment of Dividends	1,425,000
	$6,356,853

Changes in Working Capital

Increase		
Increase in Current Assets:		
Inventories	$ 458,711	
Accrued Interest Receivable	39,737	
Marketable Investments	13,382	
Decrease in Current Liabilities:		
Accrued Accounts	15,255	$ 527,085
Decrease		
Decrease in Current Assets:		
Cash in Banks and on Hand	$ 367,822	
Notes Receivable	331,266	
Accounts Receivable	285,507	
Increase in Current Liabilities:		
Accounts Payable	300,213	
Bills Payable, Banks	3,105,000	
Allowance Federal Income Tax	42,500	4,432,308
Net Decrease in Working Capital		$3,905,223

General Refractories Company
Condensed Statement of Operations
For the Calendar Year 1931

Earnings from operations, before taxes, interest, etc.	$749,539
Miscellaneous income	166,130
Earnings before taxes, interest, depreciation and depletion	$915,669
Corporate, municipal and income taxes	82,298
	$833,371
Interest on funded and floating debt	294,570
	$538,801
Depreciation and depletion reserved from earnings	301,981
Net profit	$236,820

* Not subject to Federal Income Tax.

General Refractories Company
Capital Stock and Surplus Account,
December 31, 1931

Capital Stock:		
Authorized, 600,000 shares Issued, 300,000 shares		$12,951,696
Surplus, capital:		
Balance, January 1, 1931	$5,052,058	
Depreciation and depletion for the year ended December 31, 1931, of property values represented by capital surplus	103,902	4,948,156
Surplus, earned:		
Balance, January 1, 1931	$4,361,460	
Net profit for the calendar year 1931	236,820	
	$4,598,280	
Dividends declared and paid during the calendar year 1931	900,000	3,698,280
Total capital stock and surplus, December 31, 1931.		$21,598,132

Source: Company report.

RADIO CORPORATION OF AMERICA—NO. 2

SOURCE AND APPLICATION OF FUNDS

The balance sheets of the company for December 31, 1930 and 1932, are set up on a source and application of funds work sheet in the Working Forms. The income and surplus statements for the years 1931 and 1932 are given below.

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1. Complete the work sheet for 1930–1932, and prepare a statement of source and application of funds for that period.

2. What were the significant facts concerning the financial history of this company for the period 1930–1932?

RADIO CORPORATION OF AMERICA AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENT OF INCOME
FOR THE YEAR ENDED DECEMBER 31, 1931

Gross Income:		
From Operations		$100,124,847
Other Income		2,520,573
Total Gross Income from all sources		$102,645,420
Less: Cost of Sales, General Operating, Development, Selling and Administrative Expenses		91,099,218
Net Income for the Year		$ 11,546,202
Deduct: Interest	$1,469,181	
Provision Loss on Foreign Exchange	965,206	
Depreciation	7,842,912	
Amortization of Patents	400,000	
Provision Federal Income Taxes	100,000	10,777,299
Net Income for the Year, Transferred to Surplus		$ 768,903

CONSOLIDATED STATEMENT OF SURPLUS AT DECEMBER 31, 1931

	Total Surplus	Earned Surplus	Capital Surplus
Surplus at January 1, 1931	$30,010,538	$30,010,538	$
Add: Net Income for the Year	768,903	768,903	
Capital Surplus created by retiring stated value of Treasury Stock, and by reduction of stated value of Common Stock to $2 per share	30,057,354		30,057,354
	$60,836,795	$30,779,441	$30,057,354
Deduct: Cost of Treasury Stock to be retired and cancelled	$ 2,838,472	$ 2,838,472	$
Write-down of Inventories	10,359,000	10,359,000	
Write-down of Fixed Assets (Book Value of Buildings and Equipment)	16,222,000		16,222,000
Write-down of Investments	4,891,300	1,391,300	3,500,000
Reserves for Special Contingencies	2,623,500	612,000	2,011,500
Additions to General Reserves	8,323,854		8,323,854
	$45,258,126	$15,200,772	$30,057,354
Dividends on "A" Preferred	1,373,907	1,373,907	
Dividends on "B" Preferred	2,876,973	2,876,973	
	$49,509,006	$19,451,652	$30,057,354
Surplus at December 31, 1931	$11,327,789	$11,327,789	$

RADIO CORPORATION OF AMERICA AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENT OF INCOME AND SURPLUS
FOR THE YEAR ENDED DECEMBER 31, 1932

Gross Income:		
From Operations		$66,168,756
Other Income		1,192,386
Total Gross Income from all sources		$67,361,142
Less: Cost of Sales, General Operating, Development, Selling and Administrative Expenses		62,285,241
Net Income for the Year		$ 5,075,901
Deduct: Interest	$1,206,664	
Depreciation	4,402,823	
Amortization of Patents	600,000	6,209,487
Net Loss for the Year, Transferred to Surplus		$ 1,133,586
Dividend on "A" Preferred Stock		343,019
Deficit for the Year		$ 1,476,605
Surplus at December 31, 1931		11,327,789
Surplus at December 31, 1932		$ 9,851,184

Source: Company reports.

PART V
ACCOUNTING FOR INCOME AND EXPENSE

XXI. THE MEASUREMENT OF INCOME

One of the major functions of accounting is the measurement of income. It is intended in the questions which follow to raise certain issues concerning the nature of income and methods of its determination, with particular reference to cases already considered. Certain references to specific cases are given, but the issues raised are also implicit in many other cases.

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1. To what extent is the amount of income an expression of judgment, and to what extent the result of objective facts, established methods, and accepted principles?

2. Within what areas are the decisions made which affect the measurement of income?

3. Who are the parties at interest in problems involved in the measurement of income? Are the interests of the several groups concerned in a particular corporation uniform? Are the interests of a single group uniform as between successive periods?

4. By what persons or groups are the decisions made which affect the measurement of income? For published statements certified by public accountants, what is the relation between the responsibilities of the management and the public accountants?

5. Are the decisions involved in the measurement of income made solely in the light of objective facts, or are they presumably affected in some measure by pressures arising from the effects of the decisions on the interests concerned?

6. When accountants speak of the measurement of income, what is the thing measured? Is it the same thing as income in the economic sense—that is, income of the community as a whole? In terms of the categories with which accounting deals, does it include both operating and non-operating elements, capital gains, increases in the market value of assets still carried at a lower cost figure, direct credits to surplus, and changes in surplus reserves? Is income in the accounting sense the equivalent of increases in proprietorship other than through investment by proprietors?

7. What are the characteristics of a policy in the measurement of income which may be described as sound?

It is suggested that these questions be considered in connection with the following cases which have already been discussed from other points of view.

Herendeen and Haply Woolen Mills—No. 1, pages 31–38.
The American Tobacco Company, pages 157–161.
National Lead Company, pages 229–237.
Swift & Company, pages 238–242.
International Harvester Company—No. 1, pages 243–246.
Boren Steamship Company—No. 2, pages 329–330.
Henley Radio Company, pages 351–355.
United States Steel Corporation—No. 1, pages 356–377.
Pullman, Inc., pages 379–395.
Long Point Gas Company, pages 404–411.
The Westinghouse Air Brake Company, pages 462–466.
American Telephone and Telegraph Company—No. 3, pages 484–487.

XXII. DETERMINATION OF GROSS INCOME

Richards Realty Company

THE EFFECT OF EXCHANGE WITHOUT SALE ON THE REALIZATION OF INCOME

The Richards Realty Company, an organization dealing in both city and country properties, was offered a farm in exchange for six pieces of city real estate. The farm was located near the city and possessed a value, in the judgment of the management, of $45,000. The management had been considering for a year or more the desirability of acquiring the property with a view to subdividing it and had learned that it could be mortgaged for $35,000. The city property which the farmer wanted in exchange for his farm had been purchased by the company for $30,000. The company agreed to make the desired exchange, and the deal was closed.

In accounting for the transaction the management of the company made the following entry on its books:

Farm Real Estate	$45,000	
City Properties		$30,000
Profit on Real Estate Exchanged		15,000

When the books of the concern were audited, the auditor objected to the addition of $15,000 to profit of the period "in the absence of cash or its equivalent to evidence its having been earned." He held that the transaction had made no substantial change in the risks of unturned property as they had existed prior to its having been consummated, and that therefore the income act was as yet incomplete. He said that although this was true, the management now had some reason for feeling that the company had probably made a good profit on the transaction and could make plans for the future accordingly.

To this the management replied that if the company were dissolved, the transaction would undoubtedly show a profit of $15,000 or better, and that therefore the profit actually existed as of the date of the above entry. Particularly was this true, the

management contended, because the company already had been offered the sum of $10,000 for the least desirable quarter of the farm.

Bancroft Company

THE EFFECT OF INSTALLMENT SALES ON THE REALIZATION OF INCOME

On January 22, 1928, negotiations were undertaken for the sale of the Bancroft Company, a dealer in household furniture, to a competitive organization. At a resulting conference with the competitor, the agents of the company presented a comparative balance sheet and income statement for the years 1925–1927, which they proposed to use in determining the value of the business. These accounting statements, however, were not accepted by the prospective buyer as a basis for computing a purchase price. In preparing the income statements, the company's accountants had followed the practice of treating gross profit on all sales as having been earned during the year in which the sales were made. This practice was entirely consistent with the company's accounting methods, but was open to question because the company made a portion of its sales on deferred payment plans. In fact, its merchandise was sold on the following four bases:

1. Cash.
2. Regular charge. Customers were billed 30 days net.
3. Deferred payments. A down payment, cash or note, of 30 per cent of sales price plus the handling charge was required. The balance due was payable in monthly installments of 10 per cent of sales price. Goods were delivered upon the execution of a conditional sales agreement or chattel mortgage.
4. Special deferred payments. No down payment was required. Payments were made in monthly installments of 5 per cent of sales price plus the prorated handling charge. Conditional sales agreements or chattel mortgages were executed for goods sold on this plan.

The income statements presented at the sale conference with the prospective buyer of the Bancroft Company were, in condensed form, as follows:

BANCROFT COMPANY
COMPARATIVE INCOME STATEMENT
YEARS ENDING DECEMBER 31

	1925	1926	1927	Total
Net Sales (all classes)	$501,454	$640,929	$751,256	$1,893,639
Cost of Goods Sold	225,156	330,628	360,051	915,835
Gross Profit	$276,298	$310,301	$391,205	$ 977,804
Operating Expenses*	255,811	299,457	344,196	899,464
Net Operating Profit	$ 20,487	$ 10,844	$ 47,009	$ 78,340

* Includes Loss on Bad Debts as follows·

	1925	1926	1927	Total
Regular Charge Sales	$ 325	$ 730	$ 803	$ 1,858
Deferred Payment Sales	656	1,533	1,647	3,836
Special Deferred Payment Sales	10,121	11,629	13,885	35,635
Total	$11,102	$13,892	$16,335	$41,329

At a later conference between the agents of the Bancroft Company and its competitor, the parties were again unable to consent to a final sale price for the business. They did, however, agree that the sale price was to be a capitalization of the average net earnings for the past three years at 10 per cent, and the buyer arranged to have his own accountants audit the books of the Bancroft Company and prepare statements of financial condition. In their interpretation of the income of the company, these accountants considered the gross profit on cash, regular charge, and ordinary deferred payment sales as earned during the year of sale; in the case of special deferred payment sales, however, they considered the gross profit as earned only during the year in which cash collections on account were made, in direct proportion to the amount of those collections. The three-year income analysis, with its supporting schedules, prepared by the accountants in accordance with this method, follows:

BANCROFT COMPANY
COMPARATIVE INCOME STATEMENT
YEARS ENDING DECEMBER 31

	1925	1926	1927	Total
Net Sales:				
Cash—regular charge, deferred payment, special deferred payment.	$501,454	$640,929	$751,256	$1,893,639
Cost of Goods Sold	225,156	330,628	360,051	915,835
Gross Profit on all Sales	$276,298	$310,301	$391,205	$ 977,804
Gross Profit on Net Special Deferred Payment Sales:				
Gross Special Deferred Payment Sales	$450,620	$510,212	$605,281	$1,566,113
Returns	37,850	65,846	51,081	154,777
Net Special Deferred Payment Sales	$412,770	$444,366	$554,200	$1,411,336
Cost of Net Special Deferred Payment Sales*	163,002	205,963	242,687	611,652
Gross Profit on Net Special Deferred Payment Sales	$249,768	$238,403	$311,513	$ 799,684
Gross Profit on all Sales other than Special Deferred Payment Sales	$ 26,530	$ 71,898	$ 79,692	$ 178,120
Gross Profit realized on Special Deferred Payment Sales	223,293	246,275	277,382	746,950
Gross Profit Realized	$249,823	$318,173	$357,074	$ 925,070
Operating Expenses† (includes Loss on Bad Debts)	251,645	293,743	340,392	885,780
Net Operating Profit	$ 1,822*d*	$ 24,430	$ 16,682	$ 39,290

* $\frac{\text{Net sales}}{\text{Percentage sales price is of Cost}} \times 100$.

† In computing operating expenses, the amount of Realized Loss on Special Deferred Payment accounts from page 587 was substituted for the amount of loss on Special Deferred Payment Sales on page 583. Hence, it is evident that the parties agreed on all operating expenses except for this one item.

d = deficit

BANCROFT COMPANY
GROSS PROFIT PERCENTAGE ON SPECIAL DEFERRED PAYMENT SALES

Year ending December 31	Gross special deferred payment sales	Cost of special deferred payment sales	Gross profit on special deferred payment sales	Gross profit percentage on selling price	Gross profit percentage on cost	Percentage sales price is of cost
1923	$375,807	$162,236	$213,571	56.83	131.64	231.64
1924	410,386	175,481	234,905	57.24	133.86	233.86
1925	450,620	177,950	272,670	60.51	153.23	253.23
1926	510,212	236,483	273,729	53 65	115.75	215.75
1927	605,281	265,053	340,228	56.21	128.36	228.36

GROSS PROFIT REALIZED ON SPECIAL DEFERRED PAYMENT SALES
YEARS ENDING DECEMBER 31

	Collections for the year ending December 31			
	1923	1924	1925	Total
Gross profit realized:				
For the year ending December 31, 1925:				
Cash	$ 73,289	$196,804	$105,736	$375,829
Sale of repossessed goods	1,368	4,008	3,205	8,581
Total	$ 74,657	$200,812	$108,941	$384,410
Gross profit percentage*	56 83%	57.24%	60 51%	
Gross profit realized	$ 42,428	$114,945	$ 65,920	$223,293

	Collections for the year ending December 31			
	1924	1925	1926	Total
For the year ending December 31, 1926:				
Cash	$ 82,409	$199,390	$135,343	$417,142
Sale of repossessed goods	1,580	6,434	3,250	11,264
Total	$ 83,989	$205,824	$138,593	$428,406
Gross profit percentage*	57 24%	60 51%	53 65%	
Gross profit realized	$ 47,075	$124,544	$ 74,355	$246,974

	Collections for the year ending December 31			
	1925	1926	1927	Total
For the Year Ending December 31, 1927:				
Cash	$ 75,321	$200,851	$205,212	$481,384
Sale of repossessed goods	1,481	10,501	3,860	15,842
Total	$ 76,802	$211,352	$209,072	$497,226
Gross profit percentage*	60 51%	53.65%	56 21%	
Gross profit realized	$ 46,473	$113,390	$117,519	$277,382
Gross profit realized on deferred payment sales for three years ending December 31, 1927	$747,649			

* See gross profit percentage on special deferred payment sales for derivation.

Loss on Bad Debts

	On sales made during the year ending December 31			
	1925	1926	1927	Total
Loss on bad debts				
Regular charge accounts	$ 325	$ 730	$ 803	$ 1,858
Deferred payment accounts	656	1,533	1,647	3,836
Reserve for bad debts	$ 981	$ 2,263	$2,450	$ 5,694

	On sales made during the year ending December 31			
	1923	1924	1925	Total
Realized Loss on Special Deferred Payment Accounts:				
For the year ending December 31, 1925:				
Foreclosures	$ 2,328	$ 5,784	$1,384	$ 9,496
Other	1,628	4,785	2,786	9,199
	$ 3,956	$10,569	$ 4,170	$18,695
Less recoveries subsequent to write-off	876	2,678	1,002	4,556
Realized loss at sales price	$ 3,080	$ 7,891	$3,168	$14,139
Less gross profit*	1,750	4,517	1,917	8,184
Realized loss at cost	$ 1,330	$ 3,374	$1,251	$ 5,955

	On sales made during the year ending December 31			
	1924	1925	1926	Total
For the year ending December 31, 1926:				
Foreclosures	$ 1,765	$ 6,141	$3,065	$10,971
Other	2,235	5,685	2,215	10,135
	$ 4,000	$11,826	$5,280	$21,106
Less recoveries subsequent to write-off	2,106	3,851	1,060	7,017
Realized loss at sales price	$ 1,894	$ 7,975	$4,220	$14,089
Less gross profit*	1,084	4,826	2,264	8,174
Realized loss at cost	$ 810	$ 3,149	$1,956	$ 5,915

	On sales made during the year ending December 31			
	1925	1926	1927	Total
For the year ending December 31, 1927:				
Foreclosures	$ 2,807	$ 9,001	$3,380	$15,188
Other	2,400	9,801	2,900	15,101
	$ 5,207	$18,802	$6,280	$30,289
Less recoveries subsequent to write-off	720	5,381	1,511	7,612
Realized loss at sales price	$ 4,487	$13,421	$ 4,769	$22,677
Less gross profit*	2,715	7,200	2,681	12,596
Realized loss at cost	$ 1,772	$ 6,221	$2,088	$10,081
Realized loss on special deferred payment accounts (bad debts)	$21,951			

From the above data it may be seen that a sale price computed on the basis of the net profit figures arrived at by the accounts of the prospective buyer was barely more than one-half that indicated by the statement prepared by the company. In the former case it was $130,971; in the latter, $261,134. Thus the parties were able to agree upon the rate of capitalization to be applied to the average net profits for the three-year period, but not upon the amount of net profits allocable to the capitalization period. Nor did a final attempt at negotiations result in a settlement, except that both parties consented to submit the issues involved to the judgment of a certified public accountant, who was a partner in a firm which had not previously been concerned with the case. The parties did not agree to accept a figure based on the accountant's opinion as final, but it was probable that they would come to an agreement if the actual earnings of the company during the three-year period in question could be established.

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1. What would your opinion be?
2. Criticize the data offered by the accountants of the prospective buyer.

Wellman Construction Company

LONG-TERM CONTRACTS

The construction business, being contractual in nature and highly competitive, offered profitable opportunities only to those companies which were able and willing to make occasional price concessions, maintain friendly contractual relationships with their clients, and so plan their work that estimates submitted closely approximated the final actual cost. Among the younger of such organizations operating in 1928, was the Wellman Construction Company. During the first year or two this company was in business, it accepted several jobs at cost plus a very small fee; for instance, one bid for a proposed structure was at a cost of $4,000,000 and the company contracted to erect the building for the nominal fee of $50,000. This charge was unusually low, amounting to only 1¼ per cent of the cost, but the company had purposely stated it low in order to assure itself of getting the contract. This particular contract had been made with a large university which was contemplating an extensive building program in which the company wished to participate. Desiring to specialize in the construction of college buildings, the company believed that association on such a large scale with so prominent an institution would have great advertising value.

In carrying out its contractual relationships with its clients, the practice of the Wellman Construction Company differed from many of the other companies in the construction business in that it did not act as an agent for its client. All materials, supplies, wages, and other expenses were paid for by the company, after which it billed the client for such costs. A typical contract stipulated that the client was to pay all the costs incurred each month, plus 6 per cent of such costs as part payment of the total fee. Another stipulation, a carry-over from its earlier contracts, was to the effect that if an estimate of cost turned out to be too low, with the result that the building actually cost considerably more than originally projected, the fee was to be correspondingly reduced.

In its accounting policy, the company had adopted a middle course as far as profits were concerned. Each month 6 per cent of the cost of the work done was billed to the customer as part of

the fee and taken into income. This procedure was followed because it evened out reported earnings and caused the statements more nearly to represent the true status of the company's business from the standpoint of work done. Several companies, whose contracts were practically identical with those of the Wellman Construction Company, took their profits at the outset of a job. This method of accounting for contract operations, however, was considered too optimistic, not to mention its disadvantage of accounting for earnings in irregular annual amounts. Still other companies followed the practice of reporting no part of the profit on a job until it was completed, and the fee estimated at the outset was realized. This method, although conservative, was also open to the criticism that earnings were presented in an irregular manner, and that the statements did not at a given moment of time reflect the contributions of periods really responsible.

To supplement its policy of accruing earnings on the basis of cost-completion, however, the Wellman Construction Company had established the practice of distributing only a small portion of its accumulated earnings as dividends. This practice left what had appeared to be an ample reserve for absorbing unexpected losses, and was regarded as acceptable accounting until 1928. In the early part of that year the company was in process of completing a large contract taken late in 1926. The discrepancy between the estimated and the actual cost of this contract gave rise to questions whether a change should be made in the basis of reporting earned income.

The contract in question had been made with Carson University. The administrative heads of this institution had decided to have a new laboratory building erected for its medical school, the project to be financed by a fund amounting to approximately $1,500,000, which had been accumulated from various gifts. Architects had been retained to draw the plans for the proposed structure, and construction companies had been invited to submit bids for its erection. The Wellman Construction Company had submitted the most favorable bid by approximating the cost at $1,250,000, with a fee of $75,000. It was estimated that 18 months would be required to complete the work. The company had begun work on the new building in March, 1927, and the progress of the construction operations for 1927 were as indicated by the following table of costs and earnings:

MEDICAL LABORATORY JOB
COST AND EARNINGS FOR YEAR 1927

Month	Costs	Fees
March	$ 8,750	$ 525
April	21,235	1,275
May	22,740	1,390
June	59,210	3,100
July	88,780	5,525
August	127,000	7,710
September	101,000	6,230
October	76,765	4,735
November	61,250	3,690
December	54,000	3,328
	$620,730	$37,508

Following its usual practice, the company had included the earnings of $37,508 from the medical laboratory job with its other earnings made during the year, and upon the total it had computed its income tax, a report of which was filed on February 1, 1928.

About January 1, 1928, the bursar of Carson University discovered that the actual costs were exceeding the estimate, and refused to pay further fees to the company. Although the building would not be completed until August or later, it was obvious in May that the building would cost at least $200,000 more than was originally estimated. Because of this large discrepancy between the original estimate and the actual cost, and because the company did not wish to jeopardize its friendly relations with Carson University, it agreed to accept $25,000 as a total fee instead of $75,000 as originally stipulated. This meant that the company had to refund $12,508 to the University. The schedule of costs and earnings for 1928 indicates the trend of construction operations for that year.

MEDICAL LABORATORY JOB
COSTS AND EARNINGS FOR YEAR 1928

Month	Costs	Fees
		$. .
January	$105,620	.. .
February	75,280	.....
March	92,650	.....
April	39,745	.....
May	63,475	12,508*

* Returned to University.

The medical laboratory contract was the first in the company's history which had resulted in a need for adjusting the fee stated in one of its contracts. This contract, however, placed a new problem before the company relating to its policy of reporting earnings and of accumulating surplus. Fortunately, as already noted, the company had followed the practice of paying very small dividends in order that the greater portion of its earnings could be accumulated in surplus. In other words, the accounting policy had been one of comparative liberality in reporting earnings of a particular period, but of comparative conservatism in disposing of those earnings as distributable profits. But the question was now raised whether the better plan would not be one of conservatism primarily with respect to the reporting of periodic earnings, with the dividend policy a matter of secondary consideration.

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1. Should the company change its accounting policy with respect to reporting its earnings? If so, what change would you suggest?

2. Assuming the utmost conservatism in reporting periodic earnings, would not the necessity still exist for conservatism regarding dividends?

Selfarm Building Supply Company, Vincent Company, Gillette Safety Razor Company

CONSIGNMENTS AND SALES TO SUBSIDIARIES

An item, Investments in and Advances to Affiliates, amounting to approximately $850,000, appeared on the balance sheet dated December 31, 1933, of the Selfarm Building Supply Company. A new director, who was the trustee of a large estate which had purchased a substantial amount of the preferred stock of the Selfarm company, questioned the executives as to the nature of the investments and advances.

The executives explained that this account represented, almost entirely, sales to unconsolidated subsidiaries, these sales being made at the same price as sales to other customers of the building supply company; substantial reserves were set up by the parent company against the possibility of operating losses by the subsidiaries.

The new director felt that there was a possibility of abuse resulting from this practice, and did not agree with the executives that the expense involved in a change in practice was so great as to be unwarranted. In spite of the liberal reserves provided by the parent company, the director believed the company should prepare either a fully consolidated statement or separate statements for the owned or controlled companies.

The executives refused to accept the arguments of the new director, however, and felt that they were justified in their position because of the liberal reserve policy.

Another concern, the Vincent Company, shipped its products to sales representatives who sold the merchandise for the account of the Vincent Company. For many years these consignments were reported as completed sales, but in 1934, the company yielded to the demands of the auditors and announced a change in policy: Beginning in 1935, consigned goods were to be reflected in the sales figure only when the actual sales were reported by the consignees.

In this same connection, there was the much-publicized case of the Gillette Safety Razor Company. At the hearings in the stockholders' suit brought against directors of the company in 1930, it was brought out that razors and blades were billed to foreign selling subsidiaries at prices substantially the same as to outside customers. This resulted in the reflection in accounts

receivable of unrealized profits of several millions of dollars. The following excerpts were taken from newspaper accounts of the testimony:

. . . sales began to slip in 1927, and . . . in 1928 "we added $5,000,000 to our accounts receivable by shipments of inventories to foreign branches, on which perhaps $4,000,000 of anticipated profits were taken."

. . . the auditor's report, on the first page, pointed out that sales included sales to subsidiaries at prices substantially the same as to outside customers; and that the earnings of the company consequently included unrealized profits on razors, blades, etc., in the hands of subsidiary companies at the close of the year, the value of such merchandise, as of December 31, 1926, based on current rates of exchange, being approximately $7,900,000. This figure, the report showed, included unrealized gross profits estimated at approximately $5,000,000; whereas on January 1, 1926, the value of such merchandise was about $4,300,000, including unrealized gross profits of approximately $3,000,000. . . . [1]

One of the directors testified that:

The system itself was not dangerous but there was danger in abuse of the system, if more goods were shipped than could be consumed. It must be kept on an even keel to be successful. . . . [2]

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[1] *Boston News Bureau*, October 28, November 10, 1931.
[2] *Boston News Bureau*, October 21, 1931.

Greenleaf Textile Mills

PAYMENT BEFORE DELIVERY

Following current practice in the textile industry, the Greenleaf Textile Mills sold its fabrics through selling agents. Goods were shipped in accordance with instructions from the agents, and the billing was forwarded from their office. The selling agents also made collections, sending remittances to the manufacturers at various times during the month. An account current was rendered monthly, showing total sales, returns and allowances, discounts deducted, and the commission allowed for making the sales.

The present case grew out of an order for 75,000 yards of a certain fabric from a mail order house. The price agreed upon per yard was very low, and the understanding was that the total selling value was to be remitted immediately upon receipt of memorandum billing before the manufacturers would begin the dyeing and finishing operations on the fabric specified. The billing was made in accordance with this understanding of the parties, and a check was received by the selling agents for the amount of the sale. The check was for $50,000 in round numbers.

These arrangements had been consummated in March, 1928. The date for inventorying and closing the books of the manufacturers was May 31, 1928. By the end of May all of the cloth had been woven and was ready for finishing; most of it had been dyed, packed, and stored in the fireproof warehouse of the manufacturers. The packages had been marked with the name of the vendees, and all that remained to be done was to notify the vendees by means of the specific billing which accompanies shipment. The purchase had been made, however, with the understanding that shipping instructions would come at various times during the next few months following the order, and that these instructions would require shipment in fairly small lots to many different customers of the mail order house. By May 31 none of these instructions had been received from the purchaser.

The selling agents considered this a sale in March when the memorandum billing was made, whereas the mill did not enter it as a sale since no shipments had been made.

In discussing the question at issue, it was held by one official of the Greenleaf Textile Mills that the $50,000 order should be

included in the inventory at cost; that title to the goods had as yet not passed, and would not pass until specific billing was made in accordance with definite instructions from the mail order house. He held, further, that it would be good policy for the company never to book sales until title had clearly passed to the property of the sale contract. Another official contended, however, that the matter was not so much one of title passing—although he was not so sure title had not passed in the case of the goods in question—but was rather a question of when the sale was made in a sound financial sense; that even though title might pass in the case of any given sale, the problem whether the sale should properly be booked as revenue existed regardless of that fact. "This transaction," he said, "is as much revenue for our income statement as any of our ordinary sales on account for which we do not expect payment for sometimes 90 days."

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1. Assuming in one case that title to the goods in question had passed, and in the other that it had not, state your opinion as to the accounting for the transaction with the mail order house.

2. Can you frame any general statement as to the event which should determine when revenue should be booked?

Arnett Textile Mills

SPECIAL ORDERS STILL IN PROCESS

The Arnett Textile Mills made most of its sales through Blake and Jones, a firm of textile selling agents. This firm did the billing on all sales which it negotiated, kept the detailed record of accounts receivable, and made collections thereon. Periodic reports were rendered to the Arnett Textile Mills, and served as a basis for the entries on that company's books, in which the amount of the billings was recorded as sales income.

Frequently Blake and Jones took orders for future delivery. In such cases a memorandum billing was made at the time of the order, though payment was not expected until after delivery of the goods, on the usual terms. These orders for future delivery were reported to the Arnett Textile Mills, and recorded immediately by the latter as sales, although goods had not been shipped nor had title passed, and in many cases even the identical goods, which would later be shipped, were still in process in the mill. When goods covered by orders for future delivery were in stock at the end of an accounting period, they were deducted from the closing inventory and thus included in the cost of goods sold. Hence, for goods which were in process, or in some stage of production beyond weaving, and which were recorded in sales through orders for future delivery, only uncompleted process costs were charged in the cost of goods sold, with no allowance for further labor and manufacturing expenses.

In 1927 the attention of the management of the company was called to the apparent looseness of this practice of accounting for orders for future delivery and their cost. On analyzing the situation at the end of the year, it was found that approximately 150,000 yards of fabric reported as sold were orders for future delivery, and still in process. The cost to finish these goods was estimated to be about $20,000.

In a legal case involving a somewhat similar issue, the court said:

> It was in evidence that malt always was oversold; that contracts for future deliveries, running over many months, were entered into, and the claim is that such contracts were required to be taken into consideration when it came to be determined whether any particular

dividend was warranted or not. Such claim, in my opinion, is unfounded. The law is that "no corporation shall make dividends except from the surplus or net profits." These contracts were to deliver at a future time a product not yet made from raw material not yet purchased, with the aid of labor not yet expended. The price agreed to be paid at that future time had to cover all the possible contingencies of the market in the meanwhile, and might show a profit, and ran the chance of showing a loss. When the sales actually took place they were entered in the books. But to calculate months in advance on the result of future transactions, and on such calculations to declare dividends, was to base such dividends on paper profits—hoped-for profits, future profits—and not upon the surplus or net profits required by law. It does not seem to me that you can "divide" —that is, make a dividend of—a hope based on an expectation of a future delivery at a favorable price of what is not yet in existence.[1]

Coleworthy Print Mills

POST-DATED SALES

The Coleworthy Print Mills, manufacturers of printed cotton fabrics in a variety of styles and patterns, sold approximately half its output on "season's datings" terms, which were a common practice in the trade. The year was divided into two periods of six months each. In the spring, salesmen took orders from retailers with the understanding that regardless of the time of shipment the goods would not be billed until October 1. Similarly, in the fall, orders were taken for billing April 1. Such a policy was advantageous to the retailers in providing extension of credit for a considerable length of time. It was useful to the manufacturer in that it enabled him to spread his production program more evenly over the year, and to reduce to a minimum the output of lines which did not appeal to the trade.

According to the contract under which "season's datings" sales were made, title to the goods passed when they left the possession of the vendor. Customers might call for deliveries in whole or in part at any time, but the vendor did not render statements until the specified billing date. When shipments were made before that time, either in whole or in part, memorandum invoices were sent stating the quantity shipped and the price, although payment was not expected before the billing date. However, the regular terms of 2 per cent, 10 days, net 60 days applied on "season's

[1] *Hutchinson v. Curtiss*, 92 N.Y.S. 70, 45 Misc. Rep. 484 (1904).

datings" as well as on other sales, and began on October 1 and April 1, respectively. The fiscal year of the company ended on December 31.

In your opinion, when should "season's datings" sales be recorded as income?

Fells Manufacturing Company

GOODS IN TRANSIT

The Fells Manufacturing Company, a producer of worsted yarns and men's and women's suit and dress goods, was reorganized in 1924 and placed under the supervision of an entirely new management personnel. Like many of the woolen companies, it had been suffering from the radical changes in the fabric markets which were brought on by the World War, and a reorganization was effected to give the business a fresh start in the face of quite novel marketing conditions. The new management, from the treasurer to plant manager, was, of course, anxious to make as good a showing as possible to the directorate which had placed it in charge, and nothing was overlooked which would improve the operating effectiveness of the concern or which would lead to a favorable picture of financial condition as given by the company's balance sheet. The treasurer was unwilling, however, to support any form of accounting which could not be justified in the light of good practice.

The company formally closed its books under the new executives on June 30, 1925. At this time the concern was heavily obligated in the way of promissory notes for current funds, and, until the fall business was well under way, would probably be unable appreciably to reduce its current borrowings. On the contrary, these borrowings would probably grow even larger in amount, since the management was undertaking a new sales policy which called for practically continuous and complete use of its plant facilities. And this, in turn, meant a constantly growing commitment for raw materials and yarns. The working capital position of the company was accordingly of great importance, and, as has been said, the management made every possible effort to cause it to appear not unfavorable in the published balance sheet.

One of the ways in which it was sought to keep at a minimum the company's investment in inventories with their corresponding liabilities was to confine their content to goods actually on hand as of the date of inventory. The last three days of June were set aside for the taking of the inventory, and the plant manager went so far as to hold up delivery from the railroad company to the company's warehouses of certain large purchases arriving during the period of inventory. His defense for this was that the goods might easily have arrived on July 1, that the company had goods coming in all the time, and that two or three days off schedule for deliveries was not unusual.

To this kind of practice the company's auditors objected. They held that not only should the goods delivered to the local freight depot be included in the inventory—with their corresponding payables—but that similar accounting should be given to goods in transit and goods ordered, irrespective of the matter of the passing of title. The auditors explained that financial considerations demanded this manner of treatment of the inventory aspect of working capital position. Knowledge of orders made for goods, not to mention goods already in transit, entered significantly into any conclusions in regard to the company's financial condition; the facts—the balance sheet facts—were simply incomplete without a statement as to purchase orders and materials in transit. It was argued in opposition to this stand that such assets and liabilities belonged to the future period which would get the benefit of the resulting purchases.

The company had committed itself for future deliveries of yarn and top in an amount close to $300,000. Its commitments for immediate delivery were about twice as much.

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1. What policy should the company follow in recording purchases? Should purchase contracts for future delivery be recorded?

2. What effects will the policy suggested have on the balance sheet and income statement?

West Virginia Investment Corporation

PROBLEMS INVOLVED IN THE ACCRUAL OF INCOME FROM SECURITIES

It was the custom of the corporation to prepare its statements on an accrual basis, but the policies involved in determining accruals had never been subjected to critical analysis. The public accountants engaged to audit the books and prepare the statements as of December 31, 1931, were asked to suggest policies to be followed and to determine the accruals on the basis of the policies suggested.

The following items appeared in the portfolio of investments on December 31, 1931. All of these investments had been held throughout 1931.

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1. What policy should be followed with respect to the accrual of income on each item?

2. Determine the accrual, if any, in each case, in accordance with the policy suggested.

BONDS

Principal Amount	Description
$ 90,000	Alleghany Corporation Collateral Trust Convertible 5s 1944. Interest payable February 1 and August 1.
75,000	General Industrial Alcohol Corporation Convertible sinking fund debenture gold 6½s of 1944. Interest payable May and November 1. November 1, 1931, interest payment defaulted.
150,000	New York, New Haven and Hartford Railroad First and Refunding 4½s 1967. Interest payable June 1 and December 1.

NOTES AND ACCEPTANCES

Principal Amount	Description
$ 75,000	Edison Electric Illuminating Company of Boston. Notes 4 per cent, due November 1, 1932. Interest payable May 1 and November 1.
100,000	On November 1, 1931, three months bankers' acceptances, due February 1, 1932, were purchased. These securities bore no interest but were sold at a discount, the price paid being dependent on the current rate of discount, in this case 1¼ per cent per annum. The price paid for the acceptances was $99,687.50.

PREFERRED STOCKS

Number of Shares	Description
2,500	Electric Bond and Share $5 (Cumulative). Dividends payable quarterly February 1, etc. Dividend declared third Wednesday in November to stock of record January 4, 1932, payable February 1, 1932.
1,500	Radio Corporation of America $5 "B" Preferred (No Par) (Cumulative). Dividends payable quarterly January 1, April 1, July 1, October 1. In November, regular Class "B" Preferred dividend due January 1, 1932, passed.

COMMON STOCKS

Number of Shares	Description
2,000	American Telephone and Telegraph Company. $9 per annum, payable quarterly January 15, etc. Dividend declared third Wednesday in November to stock of record December 19, payable January 15.
3,000	American Tobacco Company "B." $5 per annum payable quarterly March 1, etc. Dividend customarily declared last Wednesday in January, to stock of record February 10, payable March 1. Preceding dividend paid December 1 to stock of record November 10.

XXIII. THE DISTINCTION BETWEEN OPERATING AND NON-OPERATING INCOME AND EXPENSE. DIRECT CHARGES TO SURPLUS

Tri-Continental Corporation

Effect of Realized and Unrealized Losses on Securities on the Income of an Investment Trust

October 9, 1931

To the holders of Preferred and Common
Stock of Tri-Continental Corporation:[1]

Enclosed you will find a notice of a meeting of the Preferred and Common Stockholders of your Corporation, to be held on October 29, 1931, together with a form of proxy for use in connection with such meeting.

The first purpose of this meeting is to consider and act upon proposals designed to safeguard the continuance of regular dividends on the Preferred Stock. As of September 30, 1931, the net assets of the Corporation, taken at market values, were equal to $119.42 per share of Preferred Stock outstanding. Your Corporation's current income from interest, cash dividends and service fees is substantially more than sufficient to pay the dividends on its outstanding Preferred Stock and to cover its expenses and taxes. Notwithstanding these facts, if further declines in security prices should occur, the surplus of the Corporation may be reduced to such a point that the Corporation might not, as a matter of law, be able to declare and pay dividends on its Preferred Stock even out of such current income.

In order to increase surplus so as to permit continuance of regular Preferred dividends, it is proposed to change the 6% Cumulative Preferred Stock *with a par value of $100* into $6 Cumulative Preferred Stock *without par value*, and to reduce the stated capital of the Corporation represented by its Preferred Stock to $25 per share and by its Common Stock from $2.50 per share to $1 per share. . . .

. . . . . .

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[1] Letter to Stockholders, October 9, 1931.

TRI-CONTINENTAL CORPORATION
BALANCE SHEET, SEPTEMBER 30, 1931

ASSETS

Cash in Banks, on Hand and at Call		$ 6,368,267
U. S. Government Securities—at cost[1]		1,560,703
Short Term Advances		157,296
Investments—at cost[1]		50,013,030
Interest and Dividends Receivable, etc		556,969
Special Deposits for Dividends (Contra)		592,491
		$59,248,756

LIABILITIES

Reserve for Expenses, Taxes, etc		$ 56,082
Dividends Payable		592,491
Due for Securities Loaned against Cash		1,345,500
Due for Securities Purchased		2,107
Contingent Liabilities	$ 654,100	
Capital Stock:		
6% Cumulative Preferred Stock—$100 par value:		
Authorized 1,000,000 shares		
Issued 295,854 shares	$29,585,400	
Common Stock, no par value:		
Authorized 14,000,000 shares		
Issued 2,020,158 shares	5,050,395	34,635,795
There are reserved unissued 1,008,642 shares for the exercise of warrants to subscribe at any time to Common Stock at $22.50 per share		
General Reserve		1,662,866
Surplus as per statement		20,953,915
		$59,248,756

[1] The market value of Investments and U. S. Government Securities on September 30, 1931 was $21,921,199 less than cost, the value of Investments not readily marketable having been determined by appraisal by the Board of Directors.

TRI-CONTINENTAL CORPORATION
STATEMENT OF INCOME
FOR THE PERIOD
JANUARY 1 TO SEPTEMBER 30, 1931

Income:		
Interest	$ 477,665	
Dividends (excluding dividends on Corporation's own Preferred Stock held)	1,406,925	
Management and Service Fees	99,220	
Profit on Syndicate Participations	29,737	
Miscellaneous	85,098	
		$2,098,645

TRI-CONTINENTAL CORPORATION
STATEMENT OF INCOME
FOR THE PERIOD
JANUARY 1 TO SEPTEMBER 30, 1931.—(*Continued*)

Deductions:		
Expenses	$ 369,874	
Taxes	49,274	
		419,148
Net Income		$1,679,497

TRI-CONTINENTAL CORPORATION
STATEMENT OF SURPLUS
SEPTEMBER 30, 1931

Surplus December 31, 1930*		$19,989,151
Surplus arising from retirement of Preferred Stock		756,336
Net Income		1,679,497
Profit on Sale of Securities:		
Based on average cost	$ 122,522	
Based on cost of individual purchases	121,819	
	$ 244,341	
Loss on Sale of Securities:		
Based on average cost	$8,048,287	
Based on cost of individual purchases	533,188	
	$8,581,475	
Net Loss on Sale of Securities	$8,337,134	
Less: Amount transferred from General Reserve	8,337,134	
		$22,424,984
Preferred Dividends declared	$1,785,000	
Less: Dividends on Corporation's own Preferred Stock held	313,931	
		1,471,069
Surplus September 30, 1931		$20,953,915

The unrealized depreciation on Investments and U. S. Government Securities on December 31, 1930 was $14,753,118 and on September 30, 1931 was $21,921,199.

* Paid-in Surplus on January 1, 1930 was $26,353,693. Transactions during 1930 including the transfer of $10,000,000 from Surplus to General Reserve resulted in a Surplus of $19,989,151 on December 31, 1930.
Source: Company report.

Was the net income of the corporation from December 31, 1930, to September 30, 1931, sufficient to cover the preferred dividends declared during that period?

Curwood Manufacturing Company

ALLOCATION OF RENTAL PAYMENTS

The Curwood Manufacturing Company in 1926 entered into a lease agreement with the owner of a machine shop, whereby the company was to occupy the shop for a period of 10 years at an annual rental of $25,000. In 1931 when its volume of sales was affected seriously by general conditions, the company sought and obtained a downward adjustment of its annual rental. Under the new agreement, the lessor agreed, upon the payment of $50,000, to cancel the old lease and to execute a new lease for a 10-year period at an annual rental of $10,000.

When the new lease had been drawn up and signed, and the $50,000 paid, the executives of the Curwood Manufacturing Company disagreed as to the true nature of the transaction and the entries to be made on the books of the company. The following bases for recording the transaction were considered in the discussion:

1. The $50,000 should be charged directly to the earned surplus account as a nonrecurring item.
2. The $50,000 was paid in settlement of the canceled lease and should be allocated over the remaining five years of the old lease.
3. The $50,000 constituted part of the cost of the new lease and should be spread over its 10-year term.
4. The total amount paid and to be paid for the use of the building was in the nature of rent; therefore, the entire amount of $275,000 should be reallocated in equal amounts of $18,000 over the entire 15-year period covering both the old and new leases.

Rogers Copper Company

DEPLETION

Early in 1925, the Rogers Copper Company purchased for $10,000,000 mining properties which, according to engineers' estimates, contained approximately 250,000,000 lb. of copper. The company divided the $10,000,000 by the pounds of copper and used the figure thus obtained, namely, 4 cts., as its depletion rate for the years 1925 to 1929, inclusive.

Upon the discovery, late in 1929, of an additional deposit of high-grade ore, the engineers revalued the entire property and estimated a copper content as of that date of approximately 430,000,000 lb. This amount, together with the 70,000,000 lb. of copper produced during the period 1925–1929, meant that the original copper content of the ore was 500,000,000 lb. Since the revised figures would have given a depletion rate of 2 cts. per pound instead of the 4 cts. rate used by the Rogers company, a new calculation was made, as follows:

Pounds on Hand	430,000,000
Cost of Property	$10,000,000
Less Depletion Charged to Date	2,800,000
Net Book Value	$ 7,200,000
Depletion Rate per Pound	1.67 cts.

The charges resulting from these depletion rates for the years 1925–1934 are shown in Exhibit 1.

EXHIBIT 1
ROGERS COPPER COMPANY

Year	Pounds	Depletion charged	Depletion should have been	Net income understated
1925	10,000,000	$ 400,000	$ 200,000	$ 200,000
1926	9,000,000	360,000	180,000	180,000
1927	14,000,000	560,000	280,000	280,000
1928	16,000,000	640,000	320,000	320,000
1929	21,000,000	840,000	420,000	420,000
	70,000,000	$2,800,000	$1,400,000	$1,400,000
1930	12,000,000	$ 200,400	$ 240,000	$ 39,600
1931	10,000,000	167,000	200,000	33,000
1932	6,000,000	100,200	120,000	19,800
1933	8,000,000	133,600	160,000	26,400
1934	10,000,000	167,000	200,000	33,000
	46,000,000	$ 768,200	$ 920,000	$ 151,800

In discussing the results shown by Exhibit 1 with the executives of the Rogers Copper Company, the auditors stated that this was not an extreme case, and that many mining companies understated their income for a number of years, which would mean that the depletion rate for the remaining life of the mine might be extremely low.

The auditors further stated that in some cases the depletion figure meant little or nothing because of the impossibility of determining income correctly if the depletion was deducted before arriving at the income for the year. On the other hand, some companies could approximate a true figure. The auditors believed that mining companies frequently discovered additional ore after operating for a period of years, even 20 or 30 years or more, with the result that the later estimates showed more unmined ore than when mining operations were first begun. For this reason, many mining companies have refused to recognize depletion in their published accounts.

The question was raised as to whether the Rogers company was justified in overstating its income from 1930 to 1934 because of the understatement during the earlier period. The company executives agreed that there might be some justification for crediting the $1,400,000 to surplus in 1929 and then using the depletion

rate of 2 cts. per pound based on the revised estimates. Since such a procedure might mean frequent depletion adjustments in later years which might tend to confuse stockholders, however, the executives decided that their treatment of the item was the more practical method.

Austin Mining Company

DEPLETION

The Austin Mining Company, formed in 1904, acquired a group of mining claims for $10,000,000 in cash. Development of the properties as of that date was not sufficient to permit an adequate allocation of the purchase price to the various properties. In March, 1913, when the properties were valued for income tax purposes, the government engineer segregated them into three groups, as follows:

Group A	$ 8,000,000
Group B	4,000,000
Group C	6,000,000
	$18,000,000

As a result of this valuation, the Austin company increased the value of its mines from $9,000,000 to $18,000,000 crediting an account called Surplus from Revaluation. The $9,000,000 was the amount shown on the books after depletion charges of $20 per ton (on 50,000 tons of ore), amounting to $1,000,000, for the period 1904–1913.

Mining operations were carried on at both the Group A and C properties from 1913 to 1935, but no ore was taken from Group B. Based on the government valuation, depletion charges on Group A amounted to $4,000,000, while those on Group C were $2,000,000. It was assumed that, since the total government valuation was twice the total book value, one-half of the depletion for the period from 1913 to 1935 should be charged against capital surplus and one-half against earned surplus.

The properties and the surplus from revaluation appeared on the books as of December 31, 1935, as follows:

	Properties			Total
	A	B	C	
Cost				$10,000,000
Less Depletion to 1913				1,000,000
Net Book Value March 1, 1913				$ 9,000,000
Increased to Government Value				9,000,000
	$8,000,000	$4,000,000	$6,000,000	$18,000,000
Deduct Depletion March 1, 1913, to December 31, 1935, at Government Rates.	4,000,000		2,000,000	6,000,000
Net Book Value December 31, 1935	$4,000,000	$4,000,000	$4,000,000	$12,000,000

SURPLUS FROM REVALUATION

Surplus arising from revaluation of mines	$9,000,000
Less depletion charged thereagainst (one-half of total depletion from March 1, 1913, to December 31, 1935)	3,000,000
Balance, December, 31, 1935	$6,000,000

On January 1, 1936, the Group B mining claims were sold for $500,000 cash, and the following entry was made:

Cash	$ 500,000	
Surplus	3,500,000	
To Mining Property		$4,000,000

Considerable discussion took place as to whether the $3,500,000 should be charged against earned surplus, capital surplus, or whether an allocation should be made between these two accounts. Two suggestions for handling the item were made:

1. If the mines had been carried at their original value, the $500,000 cash would have been credited against the total cost, $10,000,000, since there was no basis for allocation to the various claims. This reasoning led to the suggestion that the entire $3,500,000 should be charged to capital surplus.

2. If the original cost of the properties was prorated on the same basis as the government valuation, then $2,000,000 of the net value on a cost basis as of March 1, 1913, would be allocable to the Group B claims. Under this procedure, $2,000,000 would

be charged to surplus from revaluation and $1,500,000 to earned surplus.

Not only was it out of the question to determine exactly how much, if any, of the $3,500,000 was properly chargeable to the earned surplus account, but the executives of the Austin company were cognizant of the fact that it was actually impossible to make a theoretically correct allocation of the depletion between the two surplus accounts. Assumptions would have to be made either on the basis used by the company or on the basis of some original allocation of the cost of the properties to the various mining claims. Further, it would be impossible to prove whether or not any basis used was correct.

The executives of the Austin Mining Company believed that this inability to make such an allocation with any degree of accuracy led many mining companies to carry only one surplus account on their books, thereby obviating the necessity for allocating the depletion charges. It was felt that the most conservative course for a company which maintained capital and earned surplus accounts was to show the total depletion charged to a separate surplus account without any attempt at allocation.

Further discussion by the executives of the Austin company related to the question: What part of dividends is paid out of earnings and what part represents a return of capital? Here again, it was the general opinion that it was impossible to determine accurately as to whether each dividend paid was taken from earnings or whether it represented a return of capital. Even though an allocation of dividends was required for Federal income tax purposes, the officials of the Austin company did not think such an allocation was at best more than an arbitrary treatment. They thought that accumulated dividends might be shown in a separate account, with the records shown in subdivisions as illustrated below:

Earnings before Depletion and Dividends	$_____
Surplus Arising from Revaluation of Mines	_____
Capital Surplus Created on Acquisition of Mining Properties Having a Value in Excess of the Par Value of Capital Stock Issued Therefor	_____
	$_____
Less Depletion to Date	_____
	$_____
Less Dividends Paid to Date	_____
Total Surplus	$_____

Brolind Mining Company

Additional depreciation charged to capital surplus

The Brolind Mining Company in 1932 purchased the plant and properties of the Jenfer Copper Company for 150,000 shares of stock having a par value of $15,000,000. Since the acquired plant and properties were valued by engineers at $25,000,000, the transaction created a capital surplus of $10,000,000.

The newly purchased properties were contiguous to the mining lands of the Brolind company and duplicated many of the plant facilities, but the Jenfer Copper Company was able to operate at a much lower cost. The Brolind company, therefore, decided to close its own plants until the ore had been completely extracted from the Jenfer mines. It was estimated that, if this plan should be carried out, the original properties of the Brolind Mining Company would not be operated for a period of at least 20 or 25 years, and that by that time the plant and equipment, because of deterioration and obsolescence, would have to be entirely replaced. Equipment valued at $1,000,000, however, was transferred from the closed plants to the Jenfer properties.

In order to record its plants and equipment conservatively, the Brolind company wrote off the balance of the depreciated value of the original properties, amounting to $5,000,000. The directors realized that it would be exceedingly difficult to determine just how much of the $5,000,000 represented insufficient depreciation and how much resulted from the acquisition of the Jenfer properties. If it represented an adjustment of prior years' depreciation, the charge should be made against earned surplus, but if the write-off was the result of the acquisition, the amount should be charged to capital surplus. The original plant was in good condition and the directors believed that the depreciation charges had been adequate for the estimated life of the mine. Therefore it was decided that the loss in value was due entirely to the acquisition of the new properties and that the charge should be made against capital surplus.

Union Carbide And Carbon Corporation

THE EFFECT OF DIRECT ENTRIES TO SURPLUS ON THE MEASUREMENT OF INCOME

The book values of fixed assets were restated in 1931, as described in the annual report for that year. In addition, there were several other extensive charges to surplus.

The net income of the Corporation for the year 1931, after provision for all taxes, depreciation, interest, dividends on senior securities of subsidiary companies, depletion and other charges, was $18,029,522, equivalent to $2.00 per share on 9,000,743 shares of the capital stock, being the number of shares outstanding at the end of the year. . . .

. . . . . .

The market value of the marketable securities, other than shares of this Corporation, as at December 31, 1931, was approximately $3,507,200 lower than at the close of the previous year. This amount has been written off and charged to Surplus.

All cash and other net current assets of foreign companies affected by the decline in foreign exchange have been converted to United States Dollars, at the rate of exchange as at the end of their respective fiscal years. Likewise Canadian and European inventories (of American subsidiary companies) carried in United States Dollars, have been revalued as at December 31, 1931, at the respective rates of exchange of the countries in which such inventories were located. This decrease amounting to $3,455,838 has been charged to Surplus.

. . . . . .

On December 31, 1930, the value of Land, Buildings, Machinery and Equipment, as it appeared on the Books, was $234,590,105. There was expended in construction, acquisition of new properties, and other capital additions in 1931, $17,059,346. . . .

. . . . . .

During the past year a detailed survey of all plants, items of equipment and other Fixed Assets has been made to determine the changes which have taken place in their productiveness and replacement value. Since the formation of the Corporation in 1917, there have been improvements in manufacturing methods and changes in location of plants to areas permitting more favorable manufacturing and distribution operations. Because of the decrease of approximately 21% in general construction costs during the past two years, the present book value of many items of property acquired, constructed or appraised during periods of high labor and material costs exceeds the present replacement value.

The constantly changing costs of labor and material make it impossible to maintain property records sufficiently flexible to show at all times the true replacement value of the Fixed Assets of the Corporation.

However, when the change in values is as great as that which has occurred in the last few years, a restatement is desirable. To permit the records to continue to show the values of earlier years might easily become misleading; especially to those who lay great emphasis upon the "book value" in evaluating the Corporation's securities.

Accordingly, in the balance sheet submitted herewith the value of Buildings, Machinery and Equipment has been written down to the extent of $39,794,031. A portion of this was charged directly to Surplus and a portion to the Reserve for Depreciation. The amount charged to Reserve has in turn been restored by a transfer from Surplus as a provision for unidentified obsolescence, thus leaving the Reserves for Depreciation, etc., intact. It is true that many items of property, such as real estate, mining lands and water powers, have enhanced in value much beyond their cost and that this is nowhere reflected in the records. The enhancement of such items not being structures can not be measured by the cost of labor and materials.

Aside from the consideration of a nearer approach to accuracy, the readjustment of the account will relieve the Consolidated Income from the burden of annual Depreciation and Amortization charges on property or values which do not contribute to the earnings.

Fixed assets were shown as follows in the balance sheets for December 31, 1930 and 1931, the reserve being shown on the liability side.

	1930	1931
Fixed Assets		
Land, Buildings, Machinery and Equipment	$238,668,605	$214,910,669
Less—Mortgages not assumed	4,078,500	3,965,400
	$234,590,105	$210,945,269
Reserves for Depreciation, etc.	$ 53,732,457	$ 59,187,870

The income and surplus statements for 1931 are given in full.

UNION CARBIDE AND CARBON CORPORATION
CONSOLIDATED INCOME AND SURPLUS STATEMENTS
YEAR ENDED DECEMBER 31, 1931

INCOME		
Earnings, after Provision for Income Tax		$26,076,680
Deduct—		
Depreciation and Depletion	$ 6,049,658	
Other Charges	737,050	
Interest on Mortgages and Funded Debt of Subsidiary Companies	723,772	
Dividends on Preferred Stock of Subsidiary Companies	536,678	8,047,158
Net Income		$18,029,522
SURPLUS		
Surplus at January 1, 1931		$98,579,703
Deduct—		
Adjustment of Fixed Asset Values	$39,794,031	
Adjustment of Power Contracts	1,602,621	
Adjustment of Marketable Securities to Market December 31, 1931	3,507,200	
Adjustment of Net Current Assets of Foreign Companies and Revaluation of Inventories carried in United States Dollars, but located in Canada and other Foreign Countries, on account of decline in exchange	3,455,838	
Miscellaneous Items not affecting 1931 Operations	1,188,329	49,548,019
		$49,031,684
Add—		
Net Income for Year (as above)		18,029,522
Total		$67,061,206
Deduct—Dividends declared on Stock of Union Carbide and Carbon Corporation:		
No. 54—65¢ per share, paid April 1, 1931	$ 5,850,483	
No. 55—65¢ per share, paid July 1, 1931	5,850,483	
No. 56—65¢ per share, paid October 1, 1931	5,850,483	
No. 57—65¢ per share, payable January 1, 1932	5,850,483	23,401,932
Surplus at December 31, 1931		$43,659,274

Note.—Includes twelve months earnings to September 30, 1931 of certain subsidiaries other than United States and Canadian.

Source: Company report.

The effect of direct entries on net income may be considered through an examination of individual items, but the quantitative effect of such entries over a term of years is also of importance. In order to test this quantitative relationship, the following schedule was prepared from data given in the annual reports for the corporation.[1] In the preparation of schedules of this nature only charges and credits to surplus which might conceivably have been carried through income were included in the surplus section. For instance, any premiums on stock issued were excluded. For purposes of comparison, similar schedules for other corporations are included.[1]

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1. What is the effect on reported income over a term of years of extensive direct charges to surplus?

2. On what basis should the distinction be drawn between items to be carried through income and those to be carried directly to surplus? As far as may be determined from the facts given, was the policy of the Union Carbide and Carbon Corporation in this area sound?

---

[1] HOSMER, W. A., "The Effect of Direct Charges to Surplus on the Measurement of Income," *Business and Modern Society* (edited by Malcolm P. McNair and Howard T. Lewis, Harvard University Press, Cambridge, Mass., 1938), pp. 113–151. See also *Accounting Review*, March, 1938, pp. 31–55.

UNION CARBIDE AND CARBON CORPORATION
INCOME AND SURPLUS ADJUSTMENTS, 1926–1935

Income Reported			
1926		$ 24,142,607	
1927		25,340,661	
1928		30,577,383	
1929		35,427,025	
1930		28,041,426	
1931		18,029,522	
1932		8,635,270*	
1933		14,172,927	
1934		20,277,443	
1935		27,254,249	
Total		$231,898,513 Credit	
Average			$23,189,851
Undivided Earned Surplus†	Charges	Credits	
1926	.....	$ 5,162‡	
1927	.....	140,164‡	
1928	$ 294,057‡	.....	
1929	4,515,122	.....	
1930	2,847,269‡	.....	
1931	49,548,019	.....	
1932	3,457,936	.....	
1933	2,933,126	2,892,317	
1934	1,255,270	403,752	
1935	3,442,755	570,985	
Totals	$68,293,554	$4,012,380	
Difference	$64,281,174		
Average Surplus Debit			$ 6,428,117
Average Net Income Reported, 1926–1935			$23,189,851
Average Net Debit to Surplus, 1926–1935			6,428,117
Difference, being the average net increase in proprietorship, before dividends, arising from the business conducted			$16,761,734

* Does not include dividends on treasury stock.
† Earned and capital surplus through 1930; earned surplus thereafter.
‡ Net.
Source: Annual Reports of the Union Carbide and Carbon Corporation, 1926–1935.

General Electric Company
Income and Surplus Adjustments, 1926–1935

Income Reported			
1926		$ 46,672,499	
1927		48,799,489	
1928		54,153,806	
1929		67,289,880	
1930		57,490,915	
1932		40,956,996	
1932		14,404,110	
1933		13,429,739	
1934		19,726,044	
1935		27,843,772	
Total		$390,767,250 Credit	
Average			$39,076,725
Undivided Earned Surplus	**Charges**	**Credits**	
1926	$.....	$.....	
1927	.....	.....	
1928	.....	9,264,541	
1929	.....	13,471,402	
1930	.....	.....	
1931	.....	.....	
1932	19,498,310*	.....	
1933	3,920,210	.....	
1934	5,488,757	.....	
1935	1,631,606	2,755,560	
Totals	$30,538,883	$25,491,503	
Difference	$ 5,047,380		
Average Surplus Debit			$ 504,738
Average Net Income Reported, 1926–1935			$39,076,725
Average Net Debit to Surplus, 1926–1935			504,738
Difference, being the average net increase in proprietorship, before dividends, arising from the business conducted			$38,571,987

* Net.

Source: Annual Reports of the General Electric Company, 1926–1935.

American Telephone and Telegraph Company
Income and Surplus Adjustments, 1926–1935

Income Reported			
1926		$ 112,990,401*	
1927		128,614,910	
1928		143,170,491	
1929		166,189,758	
1930		165,544,707	
1931		166,666,534	
1932		145,906,909	
1933		137,456,776	
1934		121,748,729	
1935		125,806,505	
Total		$1,414,095,720 Credit	
Average			$141,409,572
Undivided Earned Surplus	Charges	Credits	
1926	$.....	$ 2,037,631†	
1927	26,477†	47,938,865	
1928	229,553†	.....	
1929	.....	3,166,134†	
1930	4,984,278	.....	
1931	.....	46,397†	
1932	95,488†	.....	
1933	169,611†	.....	
1934	527,916†	.....	
1935	44,530†	.....	
Totals	$6,077,853	$53,189,027	
Difference		$47,111,174	
Average Surplus Credit			$ 4,711,117
Average Net Income Reported, 1926–1935			$141,409,572
Average Net Credit to Surplus, 1926–1935			4,711,117
Total, being the average net increase in proprietorship, before dividends, arising from the business conducted			$146,120,689

* After appropriation for Reserve for Contingencies.
† Net.
Source: Annual Reports of the American Telephone and Telegraph Company, 1926–1935 (parent company only).

United States Steel Corporation
Income and Surplus Adjustments, 1926–1935

Income Reported			
1926		$116,667,405	
1927		87,896,836	
1928		114,173,775	
1929		197,592,060	
1930		104,421,571	
1931		13,038,141	
1932		71,175,705*d*	
1933		36,501,123*d*	
1934		21,667,780*d*	
1935		1,146,708	
Total		$505,591,888 Credit	
Average			$50,559,189
Undivided Earned Surplus	**Charges**	**Credits**	
1926	$	$ 17,442,160	
1927	.....	.....	
1928	36,705,076	36,705,076	
1929	128,922,574	69,833,000	
1930	86,850	18,322,394	
1931	780,082	.....	
1932	845,076	....	
1933	23,042,784	24,979,788	
1934	... .	118,523	
1935	.. . .	....	
Totals	$190,382,442	$167,400,941	
Difference	$ 22,981,501		
Appropriated Surplus Invested in Capital Expenditures, 1935	$270,000,000		
Capital Surplus, 1929	25,000,000		
Total	$317,981,501		
Average Surplus Debit			$31,798,150
Average Net Income Reported, 1926–1935			$50,559,189
Average Net Debit to Surplus, 1926–1935			31,798,150
Difference, being the average net increase in proprietorship, before dividends, arising from the business conducted			$18,761,039

d = deficit.

Source: Annual Reports of the United States Steel Corporation, 1926–1935.

American Commercial Alcohol Corporation

RESTATEMENT OF CAPITAL AND SURPLUS

For the two years ended December 31, 1931 and 1932, the American Commercial Alcohol Corporation reported a net loss of $597,651 and a net profit of $586,438, respectively. During the same period depreciation charges aggregated $430,915, but despite the apparent net contribution to working capital of $419,702, the net current assets of the company declined more than $1,100,000.

In the company's annual report for 1934 the following statement was made by the president:

> It was believed by your management to be necessary and desirable to revise the accounting system of your companies thoroughly, and for that purpose S. D. Leidesdorf & Co. were engaged in November, 1934 to install an accounting system . . . and to make recommendations with respect to accounting practices which would be not only in strict accordance with the rules and regulations prescribed by the Securities and Exchange Commission and the New York Stock Exchange, but would also be in line with thoroughly conservative accounting principles.

Reproduced below are the consolidated balance sheets of the American Commercial Alcohol Corporation as of December 31, 1930, 1931, and 1932, the consolidated statements of income and profit and loss for the years ending December 31, 1931 and 1932, and the consolidated statements of capital surplus as of December 31, 1931 and 1932.

AMERICAN COMMERCIAL ALCOHOL CORPORATION AND ITS SUBSIDIARIES CONDENSED CONSOLIDATED BALANCE SHEETS AS OF DECEMBER 31, 1930–1932

	1930	1931	1932
ASSETS			
Current Assets	$2,657,273	$2,328,858	$2,587,936
Fixed assets (1927 appraised value plus additions at cost less depreciation)	6,300,453	5,946,731	5,851,521
Cash in escrow—on account of contingent liability under property purchase agreement		94,669	
Prepaid expenses	66,741	84,788	368,694
Unamortized organization expense	72,670		
Goodwill, trade-marks, formulae, etc.	1	1	1
Total assets	$9,097,138	$8,455,047	$8,808,152
LIABILITIES			
Current Liabilities	$ 293,578	$1,224,874	$1,327,148
Sundry reserves:			
Provision for containers in customers' hands	253,311	18,368	11,721
Income tax prior years	1,414	112,392	
Provision for stock warrants	1,653	8,653	1,653
Provision for raw material commitments		267,493	
Provision for contingencies		8,615	400,000
Capital stock—common*			
Issued†	$8,769,697	$3,894,950	$3,894,950
Less in treasury†	268,999	130,971	
Outstanding†	$8,500,698	$3,763,979	$3,894,950
Capital surplus	46,484‡	3,050,673	2,586,242
Earned surplus from December 31, 1931			586,438
Total liabilities	$9,097,138	$8,455,047	$8,808,152

* No par shares in 1930, $10 par shares in 1931, and $20 par shares in 1932. In connection with the change in par value in 1932, new shares were exchanged for old on the basis of one for two.

† Represented by following number of shares:

	Issued	Held in treasury	Outstanding
1930	389,494 12	11,950 20	377,543 92
1931	389,495 00	13,097 08	376,397 92
1932	194,747 50		194,747 50

Price range, common stock (New York Stock Exchange)

	High	Low
1931	14½	5
1932	11	6½
1932*	27	11

* New stock after one for two split.

‡ Designated "Surplus."

Note.—Contingent liability as at December 31, 1931, under property purchase agreement—$189,331.

AMERICAN COMMERCIAL ALCOHOL CORPORATION AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME AND PROFIT AND LOSS
FOR THE YEARS ENDING DECEMBER 31, 1931–1932

	1931	1932
Profit on sales before depreciation	$367,048	$1,449,830
Interest received	10,056	4,001
Other income	20,724	8,459
Total income	$397,828	$1,462,290
Deductions:		
Selling expenses	365,781	330,578
Administrative expenses	298,113	227,969
Bad debts	55,817	30,356
Interest paid	17,117	56,238
Discount on sales	31,778	26,670
Depreciation	226,873	204,041
Total deductions	$995,479	$ 875,852
Profit for the period	$597,651*	$ 586,438
Surplus beginning of period	46,484	.....
Miscellaneous surplus adjustments	25,145*	.....
Charged against capital surplus	$576,312	
Balance earned surplus from December 31, 1931		$ 586,438

* Loss.

AMERICAN COMMERCIAL ALCOHOL CORPORATION AND ITS SUBSIDIARIES
CONSOLIDATED CONDENSED STATEMENT OF CAPITAL SURPLUS
AS AT DECEMBER 31, 1931

Amount of Capital Surplus determined and authorized by the stockholders at their meeting of November 24, 1931, arising out of an apportionment of the amount shown on the Company's books at that date, of $8,769,697, representing outstanding Common Stock to the number of 389,495 shares of no par value. This sum was apportioned in such manner as to show $3,894,950 as representing the 389,495 shares of Common Stock at a par value of $10 each; and the remainder as Capital Surplus, *i.e.*			$4,874,747
At the same meeting the stockholders authorized the directors to charge the deficit in Surplus Account against the Capital Surplus so created, and further authorized the Directors in their discretion, to set up reserves out of the Capital Surplus so created. In accordance with this authority, the directors have authorized and directed that the following several sums be entered on the books of account, as of December 31, 1931.			
Appropriation of Capital Surplus:			
Reduction of book value of treasury stock from $280,531 to a par value basis of $130,971		$149,560	
Reserve provided for excess cost of raw materials		267,493	
Reserve provided for future contingencies		8,615	
Extraordinary losses and adjustments:			
Reduction of inventory valuations, necessitated by the purchase of molasses under contracts made in prior years	$144,916		
Losses due to trading in corn options	87,591		
Reduction in valuations of fixed assets, based upon appraisals and estimates made by the officials of the Company	156,636		
Losses due to revaluations of containers	212,819		
Organization expenses—Unamortized balance	72,670		
Provision for income tax assessments, applicable to prior years	110,978		
Miscellaneous items	36,484		
Total extraordinary losses and adjustments		822,094	
Net deficit—December 31, 1931—Charged to Capital Surplus		576,312	
Total deductions from Capital Surplus			1,824,074
Balance—Capital Surplus			$3,050,673

AMERICAN COMMERCIAL ALCOHOL CORPORATION AND ITS SUBSIDIARIES
CONSOLIDATED CONDENSED STATEMENT OF CAPITAL SURPLUS
AS AT DECEMBER 31, 1932

Capital surplus—Balance December 31, 1931		$3,050,673
Add—Balance of reserves, December 31, 1931 which were created out of Capital Surplus in 1931:		
Income taxes prior years	$112,392	
Provision for Stock Warrants	8,653	
Provision for raw material commitments	267,493	
Provision for contingencies	8,615	
		397,153
Total		$3,447,826
Deduct—Charges to Capital Surplus and Reserves:		
Income taxes for prior years and expenses in connection therewith	$ 54,412	
Settlement of claim for liability in connection with Stock Warrants	7,000	
Cost of molasses and grain consumed in manufacture	$1,161,239	
Less—Charged to operations on basis of market price determined as at December 31, 1931	905,839	
Balance charged to reserve for raw material commitments provided for at December 31, 1931	255,400	
Salary due at December 31, 1931 under a contract made at time of organization of the Company with an executive who discontinued functioning as an officer of the Company—as at January 1, 1932	39,799	
Loss incurred through sale of Treasury Stock and extinguishment of employees stock purchase agreements	46,479	
Legal, printing and other expenses incident to change of Capital Stock from No Par Value to a Par Value of $10 per share, and from a Par Value of $10 per share, to a Par Value of $20 per share	10,636	
Portion of cost of moving Chemical Plant from Orange, N. J., to Philadelphia, Pa	3,676	
Bonus to discharged employees and salary contract adjustment paid in recognition of long term services	5,853	
Expenses and adjustments applicable to prior years:		
Allowances to customers and adjustment of claims	$16,064	
Excess of allowances for and expenses incident to reconditioning drums—in hands of customers December 31, 1931—over actual inventory value	10,593	
Experimental expenses	3,566	
Legal and auditing expenses	6,139	
Sundry other expenses	6,423	
Total	$42,785	

AMERICAN COMMERCIAL ALCOHOL CORPORATION AND ITS SUBSIDIARIES
CONSOLIDATED CONDENSED STATEMENT OF CAPITAL SURPLUS
AS AT DECEMBER 31, 1932.—(*Continued*)

Total brought forward	$42,785		
Less—Collection of freight claims and other credit adjustments	6,109		
Balance of expenses and adjustment applicable to prior years		$ 36,676	
Total of charges to Capital Surplus and Reserves			$ 459,931
Balance			$2,987,895
Reserve for Stock Warrants—Balance remaining December 31, 1932		1,653	
Reserve for contingencies—Authorized by Board of Directors at their meeting March 2, 1933		400,000	
			401,653
Capital Surplus—Balance December 31, 1932			$2,586,242

Sources: Statements from New York Stock Exchange Listing Applications, A-9904, April 21, 1932; A-10117, July 19, 1933; stock quotations from *Bank and Quotation Record.*

1. In your opinion, did the company's 1931 and 1932 statements of income and profit and loss, in the words of the company's auditors, "correctly reflect . . . the results of its operation for the year"?

2. In view of the reported profits how do you account for the substantial decrease in working capital?

XXIV. RESERVES

UVALDE COMPANY[1]

RESERVE FOR LIABILITY UNDER A CONTRACT

During 1921, the Uvalde Company, a Texas construction organization, constructed certain street pavements under contracts with the city of San Antonio. The pavements were completed in 1921, and all of the sums agreed upon were paid by the city, netting some $120,000. The company had agreed with the city, however, to maintain the pavements for a period of substantially 5 years and accordingly created a reserve out of revenue in the amount of $68,759.82, which it called a reserve for maintenance. This reserve was based on careful estimates by the company's engineers as to the cost of the maintenance specified in the contract. The company followed the accrual method of accounting, or one of booking earnings and costs on the basis of their incidence in fact rather than of their realization or incurrence in the form of cash.

The tax report of the Uvalde Company, prepared in accordance with the above accounting, was rejected by the government as explained in the following opinion:

LITTLETON (in part): "Any taxpayer suspending business at the end of any taxable year and having at that time future collateral undertakings might possibly find it necessary to expend a portion of the income received in a prior year in fulfilling obligations in connection with transactions which produced said income if occasion therefor should arise, but this does not entitle a taxpayer to withhold from taxable income, in addition to all expenses paid or incurred within the taxable year, a liberal portion of the income because he may possibly be called upon to expend sums to make good guaranties entered into respecting work completed and for which he received full compensation within the taxable year. This taxpayer is not seeking to report strictly on a long-term contract basis for the reason that it did not have long-term contracts. It had ninety-day contracts containing a provision that it would construct the work in such manner that it would remain

[1] Adapted from 1 BTA 932.

in good condition for a period of from three to ten years, depending upon the nature of construction, and collaterally, it agreed that in the event of any defects appearing it would repair the same at its own cost. If no defects occurred no expenditure would be necessary. It would be impossible, upon any basis definitely to determine what amount would be necessary to keep the streets in good condition. Even taxpayer itself does not contend that it had actually incurred any determined liability in the taxable year to pay any definite amount, all expenses paid or incurred being deducted. For such possible future expense, taxpayer withheld from taxable income the sum of $68,759.82, charging that amount on its books as a reserve for maintenance. If it should not in the future be required to make repairs equal to such sum the amount would not be expended, and we cannot find in the revenue law any authority for deducting from income in any taxable year sums, as expenses, neither paid nor incurred within the year. The law specifically provides to the contrary. Section 234 (*a*).

. . . The fact that taxpayer kept its books and rendered its return on the accrual basis does not change the situation."

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1. Aside from technical or statutory tax considerations, would you consider it sound business to provide such a reserve for maintenance as that set up by the Uvalde Company?

2. What entries should be made in the books to reflect the company's accounting for the reserve for maintenance? What would happen to that account at the close of the specified 5-year period?

3. To what extent would the existence of such a reserve protect the Uvalde Company against its liability under the contract?

Market Basket Corporation

SELF-INSURANCE AGAINST FIRE LOSS

The Market Basket Corporation operated a chain of retail grocery stores in central and western New York and northern Pennsylvania, the main warehouse being in Geneva, New York. From 1922 to 1930 the chain grew rapidly by opening new stores and acquiring other chains. On December 31, 1931, it operated 306 stores and maintained meat markets in 36.

Previous to 1922 the company had carried insurance on its stores, but in that year it allowed its insurance on the stores to lapse as the policies expired and undertook to carry the risk of fire loss itself. Until December 31, 1928, Fire Insurance Reserve was credited and Insurance Expense was debited quarterly for the amount which it would have been necessary to pay in premiums if the insurance had been carried in outside companies.

During 1929 and 1930 each store was charged $3 per month for insurance except that, if a meat market was operated, the charge for the whole store was $6 per month. In 1931 the charge was reduced to $2 and $4, respectively, since the former amount seemed to be building up the reserve too rapidly. The amounts so charged were included as part of the operating expenses of the stores, the credits going to Fire Insurance Reserve.

When a fire occurred, Merchandise and Store Fixtures were credited for their respective losses and the Reserve was debited. A positive effort was made to reduce fire hazards, one effort in this direction being a periodic inspection of fire risks by the supervisors. In case of fire, a store was opened as soon as possible afterward, since patronage might be permanently lost if customers had to go elsewhere. On one occasion a fire occurred within two miles of the warehouse on an afternoon before a holiday. Trucks were backed up to the store while the fire was in progress and most of the merchandise was removed before the water came through. The building was still usable after the fire so the equipment was repaired over the holiday, the merchandise was replaced, and the store was open for business as usual Monday morning.

Data for the years 1922–1931 are given in the table on page 630.

Date	Number of stores Dec. 31	Credits to the reserve	Losses	Transferred to loss and gain	Balance in the reserve Dec. 31
1922	19	$ 588.47	$.....	$.....	$ 588.47
1923	21	2,085.62	2,335.24	.....	338.85
1924	32	1,996.32	12.69	.....	2,322.48
1925	48	2,506.75	.....	2,918.20	1,911.03
1926	73	3,245.18	21.78	.....	5,134.43
1927	98	3,759.00	37.91	.....	8,855.52
1928	110	5,948.25	301.95	1,916.25	12,585.57
1929	278	10,294.25	57 60	10,236.65	12,585.57
1930	300	13,525.36	2,143.56	9,465.55	14,501.82
1931	306	8,087.00	143 70	7,943.30	14,501.82
		$52,036.20	$5,054.43	$32,479.95	

Credits to the Reserve	$52,036 20	
Less: Loss	5,054 43	$46,981.7
Transferred to Loss and Gain	$32,479 95	
Plus Final Reserve	14,501.82	46,981.77

As the reserve grew, various sums were transferred to Loss and Gain, appearing in the income statement as Other Income. The reserve was stabilized at $14,501.82 and amounts in addition to this were transferred to Loss and Gain at the end of the year. The executives believed that the charges to Insurance Expense represented about the amount which it would be necessary to pay in premiums if insurance were carried outside so that the current amounts carried to Loss and Gain from the reserve represented gains from the policy of self-insurance.

The item of $301.95 charged as a loss in 1928 was for part of a load of flour destroyed by water when a truck broke through a bridge. There was no fire but this seemed as good a method as any of charging off the loss.

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1. Should the company allow the insurance on the warehouse to lapse and carry that risk itself?

2. Assuming that outside insurance would have cost $52,036.20, what was the total gain from the policy of self-insurance?

3. Was the Fire Insurance Reserve an allowance or offset reserve, or was it a true proprietorship reserve?

4. Was the policy of stabilizing the Fire Insurance Reserve at $14,501.82 sound?

Atlas Powder Company

THE RELATION BETWEEN RESERVES AND INCOME

Balance sheets in comparative form for December 31, 1928, 1929, and 1930, are given below, together with comparative income accounts and surplus accounts for the same years.

References to the Reserve for Contingencies in the three annual reports concerned are given in the following paragraphs:

Adequate reserves for Depreciation, Uncollectible Accounts and Accidents have been set aside from earnings. In addition, a special appropriation of $2,500,000 has been made from Surplus at December 31, 1928, as a Reserve for Contingencies.

During the year it has been determined that certain idle explosives plants of the Company have become obsolete and should be abandoned and dismantled, and the depreciated book value, less salvage, written off on the books of the Company. Appropriate action has been taken to carry this into effect and certain other adjustments of asset values have been considered proper and advisable, all of which have resulted in charges against the Reserve for Contingencies of $685,309. Federal Income Tax accrual shown in the Income Account does not give effect to any tax saving resulting from these charges.[1]

Adequate Reserves for Depreciation, Uncollectible Accounts and Accidents have been set aside from Earnings.[2]

. . . . . .

Adequate Reserves for Depreciation, Uncollectible Accounts and Accidents have been set aside from Earnings. The same rates of depreciation heretofore in effect have been used and charged to earnings. Total Reserves have been decreased by charges to Reserve for Contingencies, anticipated by special appropriation to such Reserve in 1928.[2]

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1. On the basis of the data given, what appear to have been the effects of transactions involving reserves on the net income of the company for 1928, 1929, and 1930?

2. What further information, if any, would be necessary to a clear reporting of these transactions?

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[1] Annual report, 1928.
[2] Annual reports, 1929 and 1930.

ATLAS POWDER COMPANY
CONSOLIDATED BALANCE SHEETS—DECEMBER 31

	1928	1929	1930
ASSETS			
Cash	$ 1,950,376	$ 1,755,489	$ 1,887,874
Collateral Loans	4,400,000	1,600,000	300,000
U. S. Government Securities	....	750,000	1,250,000*
Notes Receivable—Customers	111,512	134,495	
Notes Receivable—Others	37,324	58,567	3,122,255
Accounts Receivable—Customers	3,458,670	3,131,991	
Accounts Receivable—Others	41,966	68,739	
Finished Product—at lower of cost or market	1,634,422	1,648,171	
Materials, Supplies and Product in Process—at lower of cost or market	2,553,008	2,363,934	3,065,410
Marketable Securities—at cost	1,438,478†	2,662,461†	953,072*
Stock of Atlas Powder Company—at cost	....	.....	303,616‡
Unpaid Employes' Stock Subscriptions	....	.....	584,416
Total Current Assets	$15,625,756	$14,173,847	$11,466,643
Plant Properties and Equipment	$13,688,792	$14,890,692	$15,159,673
Good-Will, Patents, etc	2,875,236	2,875,243	3,125,343
Securities of Affiliated Companies—at cost	1,785,023	1,894,282	3,895,470
Total Permanent Investment	$18,349,051	$19,660,217	$22,180,486
Deferred Items (Net)	175,244	164,961	184,585
Total	$34,150,051	$33,999,025	$33,831,714

* Valued at cost, which is lower than market.
† Includes acquired securities of Atlas Powder Company.
‡ 2,332 shares preferred, 1,329 shares common.

ATLAS POWDER COMPANY
CONSOLIDATED BALANCE SHEETS—DECEMBER 31.—(*Continued*)

	1928	1929	1930
LIABILITIES			
Accounts Payable	$ 774,245	$ 707,145	$ 573,540
Federal Income Taxes Accrued	723,751	288,171	117,652
Dividend Accrued on Preferred Stock	90,000	90,000	96,798
Total Current Liabilities	$ 1,587,996	$ 1,085,316	$ 787,990
Purchase Money Notes maturing 1928–1931	150,000	100,000	.....
Reserve for Depreciation	6,688,718	6,394,855	5,292,624
Reserves for Uncollectible Accounts and Contingencies			820,055
Capital Stock:			
Preferred Stock Outstanding, of $100 Par Value[1]	9,000,000	9,000,000	9,860,900
Common Stock Outstanding, of no Par Value[2]	8,714,625	8,714,625	8,714,625
Surplus	8,008,712	8,704,229	8,355,520
	$34,150,051	$33,999,025	$33,831,714

[1] Authorized $10,000,000; issued $9,000,000 in 1928 and 1929, $9,860,900 in 1930.
[2] Authorized 500,000 shares, issued 261,438¾ shares.

ATLAS POWDER COMPANY
SUMMARY OF CONSOLIDATED INCOME AND SURPLUS
INCOME ACCOUNT

	1928	1929	1930
Sales (Net)	$21,248,993	$22,011,930	$16,468,361
Cost of Goods Sold, Delivery and other Expenses	19,155,040	19,586,216	15,396,089
Net Operating Profit	$ 2,093,953	$ 2,425,714	$ 1,072,272
Other Income (Net)	383,930	394,464	322,684
Gross Income from Operations	$ 2,477,883	$ 2,820,178	$ 1,394,956
Income from Sale of Stock in Affiliated Company	4,151,001	. . .	. . .
Gross Income	$ 6,628,884	$ 2,820,178	$ 1,394,956
Federal Income Tax	789,219	277,486	148,524
Net Income for the Year	$ 5,839,665	$ 2,542,692	$ 1,246,432
Dividends on Preferred Stock	540,000	540,000	549,402
Amount Earned on Common Stock	$ 5,299,665	$ 2,002,692	$ 697,030
Amount Earned per share on Common Stock, Including Income from Sale of Stock in Affiliated Company in 1928.	$ 20	$ 8	$ 3
Amount Earned per share on Common Stock, Excluding Income from Sale of Stock in Affiliated Company in 1928.	6	8	3

SURPLUS ACCOUNT

Surplus, Beginning of Year	$ 6,254,787	$ 8,008,712	$ 8,704,229
Add: Net Income for the Year	5,839,665	2,542,692	1,246,432
Total	$12,094,452	$10,551,404	$ 9,950,661
Deduct: Appropriation for Reserve for Contingencies	2,500,000	. . . . .	. . . . .
Dividends: Preferred Stock	540,000	540,000	549,401
Common Stock	1,045,740	1,307,175	1,045,740
Total Deductions	$ 4,085,740	$ 1,847,175	$ 1,595,141
Surplus, End of Year	$ 8,008,712	$ 8,704,229	$ 8,355,520

Source: Company reports.

CHRYSLER CORPORATION

RESERVE FOR CONTINGENCIES

Balance sheets in comparative form for December 31, 1929 and 1930, are given below, together with the income summary and surplus account for the intervening period.

The only reference in the text to the Reserve for Contingencies is contained in the following paragraph:

The corporation has followed during the year the same conservative policies with reference to accounting and financial practices which have uniformly characterized its operations from the beginning. No expenses have been deferred; the cost of developing new models has been charged to current operations; properties have been adequately maintained; the reduction of the net investment in Permanent Assets is in keeping with a conservative depreciation policy; inventories have been carefully valued, to reflect fully the decline in commodity prices, and have been liquidated in unit volume to correspond with the current reduced scale of operations. In addition, reserves amply adequate to meet contingencies are maintained.[1]

---

1. What are the possible explanations for the change in the Reserve for Contingencies?

2. Do these explanations have any bearing on the income reported for the year 1930?

CHRYSLER CORPORATION AND SUBSIDIARIES
CONSOLIDATED INCOME SUMMARY
YEAR ENDED DECEMBER 31, 1930

Sales		$207,789,338
Cost of sales		183,138,645
Gross Profit		$ 24,650,693
Add:		
Interest and miscellaneous income		2,453,854
Total Income		$ 27,104,547
Deduct:		
Administrative, engineering, selling, advertising, service, and general expenses	$23,729,032	
Interest paid and accrued	3,099,693	26,828,725
Income Before Provision for Income Taxes		$ 275,822
Less provision for income taxes of United States and other countries		41,667
Net Income for the Year Ended December 31, 1930		$ 234,155

[1] Annual report, 1930.

CHRYSLER CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
AS OF DECEMBER 31

	1929		1930	
ASSETS				
Total Current Assets		$ 90,312,898		$ 74,028,993
Total Other Assets		8,919,526		8,664,835
Permanent				
Land, Buildings, Machinery, Equipment, Dies, etc	$131,135,183		$126,767,176	
Less Allowance for Depreciation, etc	47,511,002	83,624,181	52,594,553	74,172,623
Goodwill		25,000,000		25,000,000
Deferred		1,884,774		2,265,541
		$209,741,379		$184,131,992
LIABILITIES				
Total Current Liabilities		$ 18,927,720		$ 11,454,731
Total Funded Debt		49,765,000		47,583,000
Reserves				
For Contingencies, etc		10,500,690		5,870,929
Capital Stock				
Invested Capital		73,756,355		73,262,831
Surplus				
Appropriated on account of Repurchase of Capital Stock		2,704,450		3,197,974
Unappropriated		54,087,164		42,762,527
Total Surplus		$ 56,791,614		$ 45,960,501
		$209,741,379		$184,131,992

CHRYSLER CORPORATION AND SUBSIDIARIES
CONSOLIDATED SURPLUS ACCOUNT
YEAR ENDED DECEMBER 31, 1930

Balance January 1, 1930	$56,791,614
Net profit from operations for the year ended December 31, 1930, after providing for estimated income taxes	234,155
	$57,025,769
Dividends paid	11,065,268
Surplus—December 31, 1930	$45,960,501

Source: Company reports.

THE LIMMER AND TRINIDAD LAKE ASPHALT COMPANY, LTD., DAILY MIRROR NEWSPAPERS, LTD.

SECRET RESERVES[1]

Using Secret Reserves

The subject of hidden reserves is one on which the accountancy profession allows itself two opinions. Many leading accountants can see no harm in thus concealing the full strength of a position providing shareholders are not thereby misled by the secret maintenance of profits out of reserves in bad times; others condemn the practice under any circumstances. One drawback at least to the maintenance of reserves in secret can be seen in the accounts of The Cunard Steamship Co., Ltd. This company in 1932 made a loss of £927,261 which was covered by a transfer of £930,000 from reserves included under creditors. In 1931, when there was a loss of £553,204, £350,000 was taken from this source and the profit and loss account balance kept on the right side. Financial adjustments of this sort, however, cannot be kept going indefinitely. The composite creditor item is now down to £2,157,712 as compared with £3,785,063 in 1930, and the more that is taken out of it to meet losses the greater is the shareholders' uncertainty as to the company's capacity to continue the process. It may be said that shareholders would be no better off if the reserves now held in secret were published but at least they would know where they stood. Before the Cunard Company's accounts can be regarded as informative, each single item, creditors, open voyage accounts, deposits and reserves, should be stated separately instead of in one figure as at present.

The Long Way Round

Another aspect of this hidden reserve question, or, as it is called in this case, "Inner Reserve," can be seen in the accounts of The Limmer and Trinidad Lake Asphalt Co., Ltd. The trading profit of this company for the year to December last is stated to include £19,000 drawn from Inner Reserve, but at the same time the directors have taken £38,500 from the appropriation account to increase the general reserve, and this sum appears in the balance sheet as an addition to that account. Unfortunately, company administration has not yet advanced to that state of efficiency where one can expect to find an explanation of such curious operations accompanying the accounts. In any case, however, why should the figure of trading profits be involved with the matter at all? There seems to be no point in it if the position warrants an addition of £38,500 to general reserve out of the Year's available balance. The appropriate treatment would surely have been to transfer the amount direct into the published reserve in the balance sheet if it is considered essential that general reserve should be increased. There is a further amount of £11,000 included in the trading profit figure in respect of profit on sale of Government securities, but while the item would have been better stated separately, it does at least arise in the course of the year's operations.

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[1] *The Accountant*, 8 Kirby Street, London, E.C. 1, England, April 8, 29, 1933.

Creditors Mostly Reserves

The secretion of reserves under creditors can sometimes defeat its purpose by the inordinate size ultimately attained by the combined creditor-reserve item. It seemed impossible, for instance, that Daily Mirror Newspapers Limited should owe outside the company any substantial proportion of the £1,693,122 shown under "creditors, reserves for contingencies and surplus on sale of investments," when the rest of the balance sheet was considered. The cash item alone runs to a good deal over a million pounds. The position of this company as shown by its balance sheet is, in fact, so remarkable that attention to it has previously been drawn in this column with the remarks which such confusion of unrelated accounts in a balance sheet must obviously arouse. It was, therefore, interesting to see that the chairman shed a little more light on this position at the annual meeting. He recognised that the amount of this item was very large and pointed out that only a relatively small proportion of this sum represented amounts due to creditors at the date of the balance sheet, over £1½ millions being in the nature of reserves. Appropriate comment is summed up by asking what the balance sheet is for if not to make such positions as this clear.

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1. What methods other than those used by these companies might be employed to set up secret reserves?

2. In your opinion, is the use of secret reserves justified?

The statements of The Limmer and Trinidad Lake Asphalt Company, Ltd. follow:

PROFIT AND LOSS ACCOUNT
FOR THE YEAR ENDED 31ST DECEMBER 1932

	£	s	d	£	s	d
Dr.						
To Directors' Fees (other than Managing Directors)				3,599	15	0
To Income Tax				11,616	5	7
To Balance to Profit and Loss Appropriation Account				115,126	12	10
				£130,342	13	5
Cr.				£	s	d
By Trading Profit (including £19,000 from Inner Reserve and £11,000 from profit on sale of Government Securities) after charging all expenses, including Depreciation of Plant, Reserves for Maintenance and Work in Progress, and all other charges				109,635	16	7
By Transfer Fees				58	5	0
By Dividends and Interest on Investments						
Gross	26,689	1	5			
Less Tax deducted therefrom	6,040	9	7	20,648	11	10
				£130,342	13	5

Profit and Loss Appropriation Account

Dr.	£	s	d	£	s	d
To Transfer to General Benevolent Reserve				1,000	0	0
To Transfer to General Reserve				38,500	0	0
To Int. Div. of 6% free of Tax on the Participating Pref. and Ord. Shares	23,960	0	10			
Income Tax thereon	7,986	13	7			
				31,946	14	5
To Final Dividends of 8% free of Tax proposed on the Participating Pref. and Ord. Shares	31,946	14	5			
Income Tax thereon	10,648	18	2			
	42,595	12	7			
To Balance carried forward to 1933	39,036	3	4			
				81,631	15	11
				£153,078	10	4

Cr.	£	s	d	£	s	d
By Balance brought from Profit and Loss Account				115,126	12	10
By Balance brought forward from 1931	80,547	10	1			
Less Final Dividend for 1931 of 8% free of tax on the Participating Pref. and Ord. Shares including Income Tax thereon	42,595	12	7			
				37,951	17	6
				£153,078	10	4

Auditors' Report to the Members of the Limmer & Trinidad Lake Asphalt Co., Ltd.

We have examined the Balance Sheet with the Books of the Company, and we have obtained all the information and explanations we have required. We are of opinion that such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs according to the best of our information and the explanations given to us, and as shown by the Books of the company.

Cash, Stone & Co.
Chartered Accountants,
Auditors.

48 Copthall Avenue, London Wall, E. C. 2.
27th February 1933.

Statement Pursuant to Section 126 of the Companies Act, 1929

Each of the Subsidiary Companies has made a Profit. These Profits have been included in the above accounts in so far as they have been distributed as Dividends.

Courtauld Thomson,
F. M. Bond,
Directors.

THE LIMMER AND TRINIDAD
BALANCE SHEET,

	£	s	d	£	s	d
Capital						
Authorized:						
175,000 7½% Part. Pref. Shares of £1 each	175,000	0	0			
325,000 Ord. Shares of £1 each	325,000	0	0			
	500,000	0	0			
Issued:						
120,000 7½% Part. Pref. Shares of £1 each fully paid	120,000	0	0			
279,334 Ord. Shares of £1 each, fully paid	279,334	0	0			
				399,334	0	0
Sundry Creditors (including payments received in advance)	206,718	2	6			
Subsidiary Companies Trade Accounts	6,725	10	1			
Bills Payable	10,561	19	9			
				224,005	12	4
General Benevolent Reserve						
At 31st Dec. 1931	7,000	0	0			
Add Transfer from Profit and Loss Appropriation Account	1,000	0	0			
				8,000	0	0
Reserve Account						
Balance, at 31st Dec. 1931, including £84,000 Capital Reserve	361,500	0	0			
Add Transfer from Profit and Loss Appropriation Account	38,500	0	0			
				400,000	0	0
Profit and Loss Appropriation Account				81,631	15	11
Balance				£1,112,971	8	3

LAKE ASPHALT COMPANY, LTD.
31ST DECEMBER 1932

	£	s	d	£	s	d
Freehold Land and Buildings at cost less amounts written off						
At 31st Dec. 1931	42,507	17	7			
Added 1932	700	3	10			
	43,208	1	5			
Less Depreciation written off	548	8	0			
				42,659	13	5
Leasehold Property at cost, less depreciation						
At 31st Dec. 1931	1,430	19	5			
Less Depreciation written off	803	9	1			
				627	10	4
Plant, Machinery, and Motor Vehicles, at cost, less Depreciation						
At 31st Dec. 1931	112,144	17	3			
Added (net) 1932	11,960	12	3			
	124,105	9	6			
Less Depreciation written off	13,215	6	5			
				110,890	3	1
Loose Plant and Tools as valued by the Company's Officials				11,669	17	9
Office Furniture at cost, less depreciation				3,242	11	1
Stock in hand at cost, as certified by the Company's Officials, less Reserve				59,364	6	4
Sundry Debtors and Work in Progress						
Book Debts, less Reserve, and Payments in Advance	221,816	10	1			
Bills Receivable	345	4	0			
Subsidiary Companies						
Book Debts	1,165	12	9			
Loan Account	30,000	0	0			
Work in Progress, as certified by the Company's Officials, less Reserve	37,033	3	11			
				290,360	10	9
Investments at cost, less amounts written off British Government Securities (Market Value at 31st Dec. 1932 £334,717)	328,549	10	3			
Subsidiary Companies	85,715	6	4			
Trade Investments	45,015	14	2			
				459,280	10	9
Cash at Bankers and in hand				109,893	13	5
Goodwill at cost, less amount written off				24,982	11	4
				£1,112,971	8	3

Notes.

1. The Company has entered into Contracts for future Road Maintenance and the profit or loss on such Contracts will be dealt with over the period they cover.
2. The Company has guaranteed Advances up to £45,000 and the completion of certain road Contracts in respect of Subsidiary Companies.
3. There is a contingent liability of
   (a) £13,943 in respect of partly paid shares in Trade Investments.
   (b) £14,080 for final instalment of 3% Conversion Loan due 1st Feb. 1933.

COURTAULD THOMSON, F. M. BOND, Directors.

The statements of The Daily Mirror Newspapers, Ltd. follow:

PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 28TH FEBRUARY 1933

Dr.	£	s	d
To Debenture Interest	2,787	13	5
To Balance carried to Profit and Loss Appropriation Account.	294,340	6	6
	£297,127	19	11

Cr.	£	s	d
By Profit on Trading, Dividends and Interest received after providing for Income Tax, Working, Office and other Outlays (including Directors' Fees amounting to £850), Reserve for Contingencies, Depreciation on Plant, Type, &c.	296,452	3	5
By Transfer Fees, &c.	675	16	6
	£297,127	19	11

Appropriation Account

Dr.	£	s	d
To Dividends on Preference Shares	28,000	0	0
To Interim Dividends on Ordinary Shares (Four Quarterly Payments of 3¾ per cent)	210,000	0	0
By Provision for Pensions	10,000	0	0
By Amount Transferred to Reserve Account	20,000	0	0
By Balance carried to Balance Sheet	60,639	6	2
	£328,639	6	2

Cr.	£	s	d
By Balance of Profit and Loss at 28th February 1932	34,298	19	8
By Balance brought down	294,340	6	6
	£328,639	6	2

To the Members of The Daily Mirror Newspapers, Ltd.

We have audited the Balance Sheet and have obtained all the information and explanations we have required. In our opinion, such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs, according to the best of our information and the explanations given to us and as shown by the books of the Company.

Deloitte, Plender, Griffiths & Co.
Chartered Accountants,
Auditors.

5 London Wall Buildings, E.C.
3rd April 1933.

In compliance with Section 126 of the Companies Act, 1929, the Directors report that the Subsidiary Company made a profit for the year ended 31st December 1932.

Included in the Accounts is this Company's proportion of the dividend declared by the Subsidiary Company for the year in question, which, however, was met partly out of the undivided profit brought forward from the previous year.

John Crowley,
Wallace D. Roome,
Directors.

DAILY MIRROR NEWSPAPERS, LTD.
BALANCE SHEET, 28TH FEBRUARY 1933

LIABILITIES	£	s	d	£	s	d
Share Capital Authorised						
800,000 8% Cum. Pref. Shrs. of £1 each	800,000	0	0			
5,600,000 Ord. Shrs. of 5s. each	1,400,000	0	0			
	£2,200,000	0	0			
Share Capital Issued						
350,000 8% Cum. Pref. Shrs. of £1 each, fully paid	350,000	0	0			
450,000 8% Cum. Pref. Shrs. of £1 each, 2s. 6d. paid	56,250	0	0			
5,600,000 Ord. Shrs. of 5s. each, fully paid	1,400,000	0	0			
				1,806,250	0	0
£2,200,000 5% Guaranteed First Mortgage Deb. Stk. (Payments to date)	756,716	19	11			
Add Interest Accrued (Net)	2,090	15	1			
				758,807	15	0
Sundry Shareholders for Dividends:						
Unclaimed Dividends	1,374	17	3			
Dividend on Pref. Shrs. for half-year ended 28th February 1933, payable 1st May 1933	10,500	0	0			
				11,874	17	3
Reserve Account				220,000	0	0
Provision for Pensions				80,000	0	0
Creditors, Reserve for Contingencies and Surplus on Sale of Investments				1,693,122	4	1
Profit and Loss—Balance				60,639	6	2
				£4,630,694	2	6

ASSETS	£	s	d	£	s	d
Goodwill and Copyrights						
At formation of Company in 1920	516,289	19	2			
Less written off to 28th February 1927	516,288	19	2			
				1	0	0
Freehold and Leasehold Property, Machinery, Plant, &c., at cost after deducting amounts written off and including additions during the year				1,171,765	12	2
Stocks of Paper, &c., at Cost or Under				27,433	10	4
Investments at Cost or Under						
Shares in Subsidiary Company				64,534	16	8
Other Investments				1,922,730	13	10
Loan to Subsidiary Company				6,250	0	0
Debtors (Less Reserves for Returns, &c.), including Loan to Associated Company				203,373	7	8
Expenses of Debenture and Preference Share Issued to date (including Underwriting Commission and Brokerage £40,201 13s. 6d.).				68,327	7	3
Cash at Bankers and in Hand				1,166,277	14	7
				£4,630,694	2	6

There is a contingent liability in respect of the Company's joint and several guarantee of the Capital and interest of £3,000,000 of 6½% Mortgage Debentures issued by Anglo-Canadian Pulp and Paper Mills, Ltd.

On 1st July next these Debentures will be redeemed out of the proceeds of £3,230,000 new Anglo-Canadian Pulp and Paper Mills, Ltd. 5% Debentures to be acquired by this Company.

Approved on behalf of the Board,
JOHN CROWLEY, WALLACE D. ROOME, Directors.
W. JENNINGS, Secretary.

XXV. POLICIES IN THE DETERMINATION OF INCOME

International Harvester Company—No. 2

POLICIES IN THE DETERMINATION OF INCOME

The annual reports of the International Harvester Company give relatively complete information with respect to the principal policies affecting the amount of income reported. This is especially true of the schedules concerning reserves. The reserve for inventories has been considered in an earlier case.

Annual reports of the company are given for the period 1931–1935, inclusive, and each is complete except for the list of officers and the list of factories and branches. The material is included in the form in which it appeared in the reports, without attempts at summary, because that is the type of material with which an inquiry into the condition of a corporation is ordinarily begun.

Examine these reports critically from the point of view of an investor in the common stock, interested in the relative conservatism with which income has been shown in the past and in the prospects of earnings in the future. Determine which accounting problems are most significant in the measurement of income of this company and the relative importance of each. In each instance, appraise the relative conservatism of the accounting involved.

As a final step in the inquiry, suggest changes in the annual reports which would make them fulfill more completely their function as records of the stewardship of the management.

1931
REPORT TO STOCKHOLDERS
OF
INTERNATIONAL HARVESTER COMPANY

TO THE STOCKHOLDERS:

The Board of Directors submits the following report of the business and financial condition of the International Harvester Company and affiliated companies for the fiscal year ending December 31, 1931:

INCOME ACCOUNT FOR 1931

Gross Earnings before deducting Interest on Loans, Depreciation, etc		$12,859,391
Deduct:		
Interest on Loans	$ 75,713	
Ore and Coal Depletion	113,017	
Plant Depreciation	5,639,987	
Special Maintenance	232,322	
Provision for Losses on Receivables	5,451,814	11,512,853
Profit for year 1931		$ 1,346,538
Add:		
Reserves from prior years' earnings for decline in market values, etc., released to Income		11,000,000
Balance carried to Surplus		$12,346,538

SURPLUS DECEMBER 31, 1931

Balance at December 31, 1930		$59,108,107
Add:		
Profit for year 1931	$ 1,346,538	
Reserves released, as shown above	11,000,000	12,346,538
		$71,454,645
Deduct:		
Cash Dividends:		
Preferred Stock	$ 5,735,947	
Common Stock	11,022,962	16,758,909
Surplus at December 31, 1931		$54,695,736

INTERNATIONAL HARVESTER COMPANY AND AFFILIATED COMPANIES
CONSOLIDATED BALANCE SHEET, DECEMBER 31, 1931

ASSETS

Current Assets:			
Cash		$ 21,984,567	
United States Treasury obligations, all maturing in 1932		21,423,325	
Other Marketable Securities, at market or less		2,904,755	
Receivables:			
Dealers' and Farmers' Notes	$121,366,119		
Accounts Receivable	19,210,171		
	$140,576,290		
Deduct:			
Reserves for Losses	19,092,542	121,483,748	
Inventories:			
Raw Materials, Work in Process, Finished Products, etc		78,658,932	$246,455,327
Investments in Associated Companies			1,039,933
Deferred Charges			666,376
Property:			
Farm Implement Works and Twine Mills, Motor Truck and Tractor Plants, Branch Houses and Service Stations, Mines, Furnaces, Steel Mills, etc		$183,360,563	
Deduct:			
Reserves for Plant Depreciation		69,201,362	114,159,201
			$362,320,837

LIABILITIES

Current Liabilities:			
Accounts Payable:			
Current Invoices, Payrolls, Taxes, etc		$ 17,693,094	
Preferred Stock Dividend, payable March 1, 1932		1,439,951	
Common Stock Dividend, payable January 15, 1932		2,755,770	$ 21,888,815
Reserves:			
Special Maintenance		$ 12,246,816	
Development and Extension		3,032,863	
Collection Expenses		3,500,000	
Fire Insurance		9,766,267	
Contingent		5,000,000	33,545,946
Preferred Stock:			
Authorized, 1,000,000 shares, $100 par value. Issued, 821,243 shares			82,124,300
Common Stock:			
Authorized, 6,000,000 shares, no par value. Issued, 4,409,185 shares, less 157,534 shares in Treasury			170,066,040
Surplus			54,695,736
			$362,320,837

PROPERTY

Balance at December 31, 1930		$180,861,087
Add:		
Capital Additions during 1931:		
Farm Implement Works and Twine Mills	$1,259,486	
Motor Truck and Tractor Plants	1,266,507	
Branch Houses and Service Stations	944,726	
Mines, Furnaces, Steel Mills, etc.	709,529	4,180,248
		$185,041,335
Deduct:		
Plant property sold, dismantled, or charged off	$1,567,755	
Depletion of iron ore and coal	113,017	1,680,772
Balance at December 31, 1931		$183,360,563
Deduct:		
Reserves for Plant Depreciation		69,201,362
Net Balance at December 31, 1931		$114,159,201

WORKING CAPITAL

Current Assets:	
Cash	$ 21,984,567
United States Treasury obligations, all maturing in 1932	21,423,325
Other Marketable Securities, at market or less	2,904,755
Receivables, less reserves for losses	121,483,748
Inventories, valued at cost or market, whichever is lower, less substantial reserves for depreciated stocks and possible decline in market values, etc.	78,658,932
	$246,455,327
Deduct:	
Current Liabilities	21,888,815
Working Capital at December 31, 1931	$224,566,512

RESERVES

Plant Depreciation.—The annual deductions from earnings for plant depreciation provide for the impairment and consumption of the capital assets utilized in production and distribution. Such depreciation is based on rates established by recognized authorities and confirmed by experience in this industry.

Balance at December 31, 1930		$63,153,181
Add:		
Provision for 1931	$5,639,988	
Adjustment of prior years' depreciation (charged to Special Maintenance Reserve)	1,416,052	7,056,040
		$70,209,221
Deduct:		
Depreciation on properties sold and dismantled		1,007,859
Balance at December 31, 1931		$69,201,362

RESERVES.—(*Continued*)

Special Maintenance.—These reserves provide for relining of blast furnaces, maintenance of docks and harbors, conversion of power systems, and other renewals and replacements.

Balance at December 31, 1930		$13,641,089
Add:		
Provision for 1931		232,322
		$13,873,411
Deduct:		
Relining, renewal and other charges during 1931	$ 210,543	
Amount transferred to Plant Depreciation Reserve (adjustment of prior years' depreciation)	1,416,052	1,626,595
Balance at December 31, 1931		$12,246,816

Development and Extension.—Large expenditures are required in engineering research and in the development and improvement of all lines of power farming equipment to increase the efficiency of farm operations and reduce the cost of crop production.

Balance at December 31, 1930	$4,000,000
Deduct:	
Research Expenditures for 1931	967,137
Balance at December 31, 1931	$3,032,863

Losses on Receivables.—The annual deductions from earnings to provide for losses which may ultimately be sustained in the realization of notes and accounts receivable taken on each season's sales, are based on long experience and are adequate to cover bad debts incurred in the ordinary course of business.

Balance at December 31, 1930	$17,312,768
Add:	
Provision for 1931	5,451,814
	$22,764,582
Deduct:	
Bad Debts charged off during 1931	3,672,040
Balance at December 31, 1931	$19,092,542

Collection Expenses.—In most lines of business the time which elapses between the date of a sale and the collection of the proceeds in cash is comparatively short, and the need of a reserve to meet the future cost of collecting receivables outstanding would arise only in the event of liquidation. In the farm implement industry, where long credits in some lines are extended to the farming community, conservative management has adopted the principle of maintaining a reserve to meet future collection expenses.

Balance at December 31, 1931	$3,500,000

RESERVES.—(*Continued*)

Fire Insurance.—The Company carries a reasonable portion of its own fire insurance. Modern methods of fire protection and prevention are rigidly enforced at all the Company's properties, and experience demonstrates that the Fire Insurance Reserve provides ample protection for the limited risks which the Company assumes.

Balance at December 31, 1930	$9,539,775
Add:	
Credit for 1931 from regular charges to operations	286,112
	$9,825,887
Deduct:	
Losses by fire, etc., during 1931	59,620
Balance at December 31, 1931	$9,766,267

REMARKS

The world-wide depression seriously affected the volume of this Company's business in the United States and foreign countries. Sales for the year were forty per cent less than those of the previous year. No profit was derived from the farm implement business in the United States and Canada for the year 1931.

Financial.—The profit for the year was $1,346,000, or less than one-half of one per cent on the capital invested in the business.

Cash, Accounts and Bills Receivable and other current assets in foreign countries were written down in value to the current exchange rates prevailing December 31, 1931, or lower. Realizing the unsettled financial conditions and the increasing uncertainty of money values in many foreign countries, the Company had made provision in prior years for anticipated currency shrinkages and similar contingencies, and the substantial exchange losses for 1931 have been charged against this provision.

The Company closed the year with no bank or other loans outstanding. The ratio of current assets to current liabilities at December 31, 1931, was eleven to one.

Reserves established in prior years for the protection of the business in adverse times were drawn upon to the extent of $11,000,000, thus limiting the call upon Surplus Account to $4,412,000, for the payment of dividends declared in 1931. The remaining reserves are believed to be sufficient to meet any adverse conditions that may be reasonably anticipated.

Receivables.—The amount of receivables outstanding at December 31, 1931, was $12,800,000 less than at the close of the preceding year. Abnormally low prices for farm products with the resulting shrinkage in farm income have retarded collections. The reserve for losses, which amounts to thirteen per cent of the total receivables outstanding, is considered fully adequate. Careful consideration is given to the extension of credits.

Inventories.—There was a further reduction in inventories during the year. Materials were valued at cost or market, whichever was

lower; work in process and finished products were valued at replacement cost, based on normal output.

Unemployment.—The reduced manufacturing operations resulted in a severe curtailment in working forces and in number of days worked. The operating schedules at all plants in the United States and Canada were increased last fall to give employment to as many men as possible during the winter months.

To assist a large number of permanent employes who have been laid off on account of reduced operations, the Company has continued its policy of limited loans to be repaid from future earnings, and further substantial assistance is being extended to avoid distress among such employes. This plan has made it unnecessary for this group of employes to seek relief from civic or other local unemployment organizations.

In addition to the aid thus given direct, the Company has contributed substantial amounts to funds being raised throughout the country for unemployment relief.

Development and Extension.—Engineering research has been actively continued throughout the year. The reserve established from earnings in prior years for that purpose was drawn upon in the amount of $967,000 for the year 1931.

Capital Expenditures.—Owing to the reduced manufacturing program, capital expenditures during 1931 were much less than in previous years. The usual expenditures for repairs and renewals were made during the year to maintain the Company's plants and equipment at a high standard of efficiency. The rates of depreciation on plant machinery and equipment for 1931 were as liberal as in previous years, but the amount of the depreciation was less than for 1930, owing to the reduced use of such machinery and equipment.

Reaper Centennial.—During 1931 the Company celebrated throughout the world the one hundredth anniversary of the invention of the reaper by Cyrus Hall McCormick. A motion picture prepared for this occasion and working replicas of the original reaper were exhibited to millions of persons. After a nation-wide competition in which many thousands of 4-H Club boys and girls took part, Reaper Centennial scholarships at Agricultural Colleges were awarded to one hundred winners. Public interest in the Centennial was keen and widespread.

General.—In its current prices the Company is passing on to its customers all possible savings in manufacturing and distributing costs made and anticipated through lower prices of raw materials, reductions in salaries and wages and other economies.

This industry is now sharing in the distress of American agriculture. In fact, many or all industries are now sharing in that distress. There is a growing recognition of this fact and a growing belief that the originating impulse for relief of the depression will come with improvement in the prices of farm products.

In such a vicious circle as now exists one group cannot buy the products of another for lack of means. But agriculture, which supplies

the basic needs of food and clothing for all groups, seems the logical place to break the circle. An improvement in the buying power of the farm population would quickly start the wheels of industry turning and the benefits would spread to all. There are good grounds for believing that the present ruinous prices for farm products will not long prevail.

While the reduction in employment has resulted in adding to the pension roll the names of many employes of pensionable age and service, the funds provided for this purpose and placed in an irrevocable trust are proving sufficient to meet all pension obligations.

Herbert F. Perkins, who became president of the Company on July 5, 1929, retired on March 19, 1931, after thirty-two years of able and important service. Mr. Perkins continues to serve the Company as a member of the Board of Directors.

The books and accounts for the fiscal year have been audited by Haskins & Sells, Certified Public Accountants, whose certificate is presented herewith.

Under the trying conditions experienced during the year, the results for 1931 reflect credit upon the members of this organization, who have given the same loyal and conscientious effort that has been one of the Company's greatest assets in past years.

By order of the Board of Directors,
ALEXANDER LEGGE,
President.

Chicago, February 18, 1932.

HASKINS & SELLS
CERTIFIED PUBLIC ACCOUNTANTS
HARRIS TRUST BUILDING
CHICAGO

CERTIFICATE

February 18, 1932

The Board of Directors,
International Harvester Company:

We have examined the accounts of the International Harvester Company, of all affiliated companies operating in the United States and Canada, and of foreign affiliated manufacturing companies for the year ended December 31, 1931. We have also reviewed the annual reports of all other foreign affiliated companies.

We have satisfied ourselves as to the general correctness of the accounts. The companies have pursued a conservative policy in their capital additions; have valued all marketable securities at the lower of cost or market; have converted their foreign net current assets at prevailing exchange rates, or less; have charged foreign exchange losses against reserves accumulated from earnings in prior years; have estab-

lished ample reserves for depreciation, obsolescence, and for possible losses; and have made provision for all known liabilities.

The physical inventories of raw materials and supplies, work in process of manufacture, and finished goods have been priced at cost or market, whichever was lower, and substantial reserves, accumulated from earnings in prior years, have been deducted from the values so determined.

Subject to the foregoing, in our opinion the accompanying Balance Sheet and Income and Surplus Accounts set forth the financial condition of the companies at December 31, 1931, and the results of operations for the year.

(Signed) HASKINS & SELLS.

1932
REPORT TO STOCKHOLDERS
OF
INTERNATIONAL HARVESTER COMPANY

TO THE STOCKHOLDERS:

The Board of Directors submits the following report of the business and financial condition of the International Harvester Company and affiliated companies for the fiscal year ending December 31, 1932:

INCOME ACCOUNT FOR 1932

Loss before charging Interest on Loans, Depreciation, etc.		$ 523,566
Add:		
Interest on Loans	$ 15,442	
Ore and Coal Depletion	28,269	
Plant Depreciation	3,816,707	
Special Maintenance	163,713	
Provision for Losses on Receivables	3,035,182	7,059,313
Loss for year 1932		$ 7,582,879

SURPLUS DECEMBER 31, 1932

Balance at December 31, 1931		$54,695,736
Deduct:		
Loss for year 1932		7,582,879
		$47,112,857
Add:		
Reserves from prior years' earnings for decline in market values, etc., released to Surplus		10,000,000
		$57,112,857
Deduct:		
Cash Dividends:		
Preferred Stock at $7.00 per share	$5,727,895	
Common Stock at 45 cts. per share for first and second quarters, 30 cts. per share for third and fourth quarters	6,318,983	12,046,878
Earned Surplus at December 31, 1932		$45,065,979

International Harvester Company and Affiliated Companies
Consolidated Balance Sheet, December 31, 1932

Assets

Current Assets:			
Cash		$ 32,927,483	
United States Treasury short-term obligations.		20,448,553	
Other Marketable Securities, at market or less (including 3,487 shares preferred and 235 shares common stock of this company).....		3,493,431	
Receivables:			
Dealers', Farmers', and Motor Truck Users' Notes ..	$102,756,637		
Accounts Receivable (including $911,023 due from employes).....	16,994,845		
	$119,751,482		
Deduct:			
Reserves for Losses.....	19,989,911	99,761,571	
Inventories:			
Raw Materials, Work in Process, Finished Products, etc., at lower of cost or market, less reserves.....		76,347,673	$232,978,711
Other Investments (Including investments in Associated Companies)			1,558,891
Deferred Charges.....			449,177
Property:			
Farm Implement Works and Twine Mills, Motor Truck and Tractor Plants, Branch Houses and Service Stations, Mines, Furnaces, Steel Mills, etc..	$184,188,854		
Deduct:			
Reserves for Plant Depreciation.....		72,438,695	111,750,159
			$346,736,938

INTERNATIONAL HARVESTER COMPANY AND AFFILIATED COMPANIES
CONSOLIDATED BALANCE SHEET, DECEMBER 31, 1932.—(*Continued*)

LIABILITIES

Current Liabilities:		
Accounts Payable:		
Current Invoices, Payrolls, Taxes, etc.	$ 13,938,497	
Preferred Stock Dividend, payable March 1, 1933	1,440,819	
Common Stock Dividend, payable January 16, 1933	1,322,755	$ 16,702,071
Reserves:		
Special Maintenance	$ 12,309,845	
Development and Extension	2,015,657	
Collection Expenses	3,500,000	
Fire Insurance	9,987,646	
Contingent	5,000,000	32,813,148
Preferred Stock:		
Authorized, 1,000,000 shares, $100 par value. Issued, 823,325 shares		82,332,500
Common Stock:		
Authorized, 6,000,000 shares, no par value. Issued 4,409,185 shares, less 163,604 shares in Treasury		169,823,240
Earned Surplus		45,065,979
		$346,736,938

PROPERTY

Balance at December 31, 1931		$183,360,564
Add:		
Capital Additions during 1932:		
Farm Implement Works and Twine Mills	$381,940	
Motor Truck and Tractor Plants	799,507	
Branch Houses and Service Stations	337,634	
Mines, Furnaces, Steel Mills, etc.	114,797	1,633,878
		$184,994,442
Deduct:		
Plant property sold, dismantled, or charged off	$777,319	
Depletion of iron ore and coal	28,269	805,588
Balance at December 31, 1932		$184,188,854
Deduct:		
Reserves for Plant Depreciation		72,438,695
Net Balance at December 31, 1932		$111,750,159

Working Capital

Current Assets:	
Cash	$ 32,927,483
United States Treasury short-term obligations	20,448,553
Other Marketable Securities, at market or less	3,493,431
Receivables, less reserves for losses	99,761,571
Inventories, valued at lower of cost or market, less reserves	76,347,673
	$232,978,711
Deduct:	
Current Liabilities	16,702,071
Working Capital at December 31, 1932	$216,276,640

Reserves

Plant Depreciation.—The annual deductions from earnings for plant depreciation provide for the impairment and consumption of the capital assets utilized in production and distribution. Such depreciation is based on rates established by recognized authorities and confirmed by experience in this industry.

Balance at December 31, 1931	$69,201,363
Add:	
Provision for 1932	3,816,707
	$73,018,070
Deduct:	
Depreciation on properties sold and dismantled	579,375
Balance at December 31, 1932	$72,438,695

Special Maintenance.—These reserves provide for relining of blast furnaces, maintenance of docks and harbors, conversion of power systems, and other renewals and replacements.

Balance at December 31, 1931	$12,246,816
Add:	
Provision for 1932	163,712
	$12,410,528
Deduct:	
Relining, renewal and other charges during 1932	100,683
Balance at December 31, 1932	$12,309,845

Development and Extension.—Large expenditures are required in engineering research and in the development and improvement of all lines of power farming equipment to increase the efficiency of farm operations and reduce the cost of crop production.

Balance at December 31, 1931	$ 3,032,863
Deduct:	
Research Expenditures for 1932	1,017,206
Balance at December 31, 1932	$ 2,015,657

RESERVES.—(*Continued*)

Losses on Receivables.—The annual deductions from earnings, to provide for losses which may ultimately be sustained in the realization of notes and accounts receivable taken on each season's sales, are based on long experience and are adequate to cover bad debts incurred in the ordinary course of business.

Balance at December 31, 1931		$19,092,542
Add:		
Provision for 1932	$3,035,182	
Amount transferred from general reserves, accumulated out of prior years' earnings	3,800,000	6,835,182
		$25,927,724
Deduct:		
Bad Debts charged off during 1932		5,937,813
Balance at December 31, 1932		$19,989,911

Collection Expenses.—In most lines of business the time which elapses between the date of a sale and the collection of the proceeds in cash is comparatively short, and the need of a reserve to meet the future cost of collecting receivables outstanding would arise only in the event of liquidation. In the farm implement industry, where long credits in some lines are extended to the farming community, conservative management has adopted the principle of maintaining a reserve to meet future collection expenses.

Balance at December 31, 1932	$3,500,000

Fire Insurance.—The Company carries a reasonable portion of its own fire insurance. Modern methods of fire protection and prevention are rigidly enforced at all the Company's properties, and experience demonstrates that the Fire Insurance Reserve provides ample protection for the limited risks which the Company assumes.

Balance at December 31, 1931	$ 9,766,268
Add:	
Credit for 1932 from regular charges to operations	258,246
	$10,024,514
Deduct:	
Losses by fire, etc., during 1932	36,868
Balance at December 31, 1932	$ 9,987,646

REMARKS

Financial.—The year's operations resulted in a loss of $7,583,000. Sales for the year were 47 per cent less than those of the previous year, the greatest decline being in the sales of farm implements.

The Company closed the year in a strong cash position with no bank or other loans outstanding. Cash, receivables, and other current assets in foreign countries have been converted at exchange rates

prevailing December 31, 1932, or lower. The ratio of current assets to current liabilities at December 31, 1932, was fourteen to one. All taxes due and payable have been paid.

The deficit for the year made it necessary to transfer $10,000,000 from general reserves to surplus. These reserves, on which we also drew heavily in 1931, were established from earnings of prior years as a blanket protection against market declines in inventories throughout the world, decline in dollar exchange value of current assets in foreign countries, and other unforeseen contingencies. Years of experience have shown that a world-wide business such as ours is subject to many contingencies and losses not predictable as to time, place, nature or extent. This policy of providing general blanket reserves has seemed to the management the best protection against such contingencies, and we are fortunate in having them available at this time; they are necessary insurance, operating for the benefit of both stockholders and customers and should be renewed when earnings again permit. The balance of these blanket reserves not yet used is $15,000,000. This has been applied in the balance sheet as a deduction from inventories, such inventories having been valued at cost or market, whichever was lower. How much of these reserves may be required to meet further declines in prices and foreign exchange rates depends, of course, on the economic conditions prevailing during the next few years.

Receivables.—The amount of receivables outstanding at December 31, 1932, was $20,825,000 less than at the close of the preceding year. The percentage of maturing paper collected in 1932 was disappointing; but with the return of better prices for agricultural products these deferred payments will, in our opinion, be liquidated. Careful consideration has been given to the extension of new credits.

In addition to the provision of $3,035,000 for losses on receivables charged against 1932 earnings, the reserve for losses was further strengthened by transfer of $3,800,000 from general blanket reserves. The reserve for losses on receivables now amounts to 16.7 per cent of the total receivables outstanding and is considered adequate.

Of the $119,751,000 receivables outstanding at the close of the year, more than $40,000,000 consists of notes and accounts of jobbers, dealers, and commercial motor truck users.

Development and Extension.—Notwithstanding economies made in other branches of the business, engineering research and development has been actively continued throughout the year; and, as a result, our entire line of product is being constantly improved to meet modern agricultural requirements and to lower the costs of crop production. Research expenditures amounting to $1,017,000 were charged against the reserve for Development and Extension established from earnings in prior years.

Plant Properties.—The Company's plants and equipment were maintained during the year at a high standard of efficiency by the usual expenditures for repairs and renewals. Capital expenditures for 1932 were limited to current needs. Full rates of depreciation were charged

on buildings. While there was no change in the rates of depreciation on machinery and equipment, allowance was made for reduced use.

Unemployment.—The Company has continued its policy of assisting in every possible way to prevent distress among its employes who have been laid off because of reduced manufacturing operations and curtailed working hours. All available work has been shared among the greatest possible number of employes.

General.—While distressingly low prices for farm commodities during the year further curtailed the ability of the farmer to purchase our products, the Company looks forward to better prices for the farmer and to a consequent revival of its implement trade.

With improved lines of farm implements and motor trucks and with drastic economies effected by curtailment of expenditures, including reductions in salaries and wages, the Company expects to be in a satisfactory earning position upon the return of a more normal volume of business.

John W. Scott, for many years a director of this Company, died on May 6, 1932. His wisdom and counsel were greatly valued by the directors and officers of the Company.

The books and accounts of the fiscal year have been audited by Haskins & Sells, Certified Public Accountants, whose certificate is presented herewith.

The directors desire to express their appreciation to the entire organization for the manner in which it has met the difficult conditions of the year.

By order of the Board of Directors,
ALEXANDER LEGGE,
President.

Chicago, February 16, 1933.

HASKINS & SELLS
CERTIFIED PUBLIC ACCOUNTANTS
HARRIS TRUST BUILDING
CHICAGO

CERTIFICATE

February 15, 1933

The Board of Directors,
International Harvester Company:

We have examined the accounts of the International Harvester Company and of all affiliated companies operating in the United States and Canada. We have also examined the accounts or reviewed the annual reports of all foreign affiliated companies.

The companies have pursued a conservative policy in their capital additions; have valued all marketable securities at the lower of cost or market; have converted their foreign net current assets at prevailing exchange rates, or lower; have offset certain losses on foreign exchange conversions in the amount of $1,133,954 against credits arising from prior year exchange adjustments; and have made provision for all known liabilities. The current provision for plant depreciation has

been reduced because of decreased use of plant facilities; the accumulated reserves for depreciation, obsolescence, and special maintenance appear to be adequate. Current research expenditures have been charged against the reserve for development and extension.

The inventories of raw materials and supplies, work in process of manufacture, and finished products, have been priced at cost or market, whichever was lower, and from such valuation there has been deducted the remainder (after transfers of $3,800,000 to the reserves for losses on receivables during the current year) of general blanket reserves provided from earnings of prior years for possible decline in market values and foreign exchange, the remaining amount so deducted being $15,000,000.

Subject to the foregoing, in our opinion the accompanying Balance Sheet and Income and Surplus Accounts set forth the financial condition of the companies at December 31, 1932, and the results of operations for the year.

(Signed) HASKINS & SELLS.

1933
REPORT TO STOCKHOLDERS
OF
INTERNATIONAL HARVESTER COMPANY

TO THE STOCKHOLDERS:

The Board of Directors submits the following report of the business and financial condition of the International Harvester Company and affiliated companies for the fiscal year ending December 31, 1933:

INCOME ACCOUNT FOR 1933

Profit before charging Interest on Loans, Depreciation, etc.....		$10,453,833
Deduct:		
Interest on Loans.....	$ 9,402	
Ore and Coal Depletion.....	28,966	
Plant Depreciation.....	6,749,840	
Special Maintenance.....	229,894	
Provision for Losses on Receivables.....	5,321,988	12,340,090
Loss for year 1933.....		$ 1,886,257

SURPLUS DECEMBER 31, 1933

Balance at December 31, 1932	$45,065,978
Deduct:	
Loss for year 1933	1,886,257
	$43,179,721
Add:	
Reserves from prior years' earnings for decline in market values, etc., released to Surplus	10,000,000
	$53,179,721
Deduct:	
Cash Dividends:	
Preferred Stock at $7.00 per share	$5,718,965
Common stock at 60 cts. per share	2,523,041
	8,242,006
Earned Surplus at December 31, 1933	$44,937,715

INTERNATIONAL HARVESTER COMPANY AND AFFILIATED COMPANIES CONSOLIDATED BALANCE SHEET, DECEMBER 31, 1933

ASSETS

Current Assets:			
Cash		$ 27,034,528	
United States Government obligations, at lower of cost or market		25,652,871	
Other Marketable Securities, at lower of cost or market		9,143,318	
Receivables:			
Dealers', Farmers', and Motor Truck Users' Notes	$83,607,377		
Accounts Receivable	15,453,858		
	$99,061,235		
Deduct:			
Reserves for Losses	14,253,192		
Net Receivables (including employes, $487,186)		84,808,043	
Inventories:			
Raw Materials, Work in Process, Finished Products, etc., at lower of cost or market, less reserves		85,690,104	$232,328,864
Other Investments (including $522,082 investments in Associated Companies)			8,645,861
Deferred Charges and Credits (Net)			629,687
Property:			
Farm Implement Works and Twine Mills, Motor Truck and Tractor Plants, Branch Houses and Service Stations, Mines, Furnaces, Steel Mills, etc		$186,278,942	
Deduct:			
Reserves for Plant Depreciation		78,958,696	107,320,246
			$348,924,658

INTERNATIONAL HARVESTER COMPANY AND AFFILIATED COMPANIES
CONSOLIDATED BALANCE SHEET, DECEMBER 31, 1933.—(*Continued*)

LIABILITIES

Current Liabilities:		
Accounts Payable:		
Current Invoices, Payrolls, Taxes, etc	$17,404,175	
Preferred Stock Dividend, payable March 1, 1934	1,440,819	
Common Stock Dividend, payable January 15, 1934	661,457	$ 19,506,451
Reserves:		
Special Maintenance	$12,329,477	
Development and Extension	2,015,657	
Collection Expenses	3,500,000	
Fire Insurance	10,210,178	
Contingent	5,000,000	33,055,312
Preferred Stock:		
Authorized, 1,000,000 shares, $100 par value. Issued, 823,325 shares, less 6,400 shares in Treasury		81,692,500
Common Stock:		
Authorized, 6,000,000 shares, no par value. Issued, 4,409,185 shares, less 165,868 shares in Treasury		169,732,680
Earned Surplus		44,937,715
		$348,924,658

PROPERTY

Balance at December 31, 1932		$184,188,854
Add:		
Capital Additions during 1933:		
Farm Implement Works and Twine Mills	$ 615,382	
Motor Truck and Tractor Plants	1,169,000	
Branch Houses and Service Stations	300,781	
Mines, Furnaces, Steel Mills, etc.	664,668	2,749,831
		$186,938,685
Deduct:		
Plant property sold, dismantled, or charged off	$ 630,777	
Depletion of iron ore and coal	28,966	659,743
Balance at December 31, 1933		$186,278,942
Deduct:		
Reserves for Plant Depreciation		78,958,696
Net Balance at December 31, 1933		$107,320,246

Working Capital

Current Assets:	
Cash	$ 27,034,528
United States Government obligations, at lower of cost or market	25,652,871
Other Marketable Securities, at lower of cost or market	9,143,318
Receivables, less reserves for losses	84,808,043
Inventories, valued at lower of cost or market, less reserves	85,690,104
	$232,328,864
Deduct:	
Current Liabilities	19,506,451
Working Capital at December 31, 1933	$212,822,413

Reserves

Plant Depreciation.—The annual deductions from earnings for plant depreciation provide for the impairment and consumption of the capital assets utilized in production and distribution. Such depreciation is based on rates established by recognized authorities and confirmed by experience in this industry.

Balance at December 31, 1932	$72,438,694
Add:	
Provision for 1933	6,749,840
	$79,188,534
Deduct:	
Depreciation on properties sold and dismantled	229,838
Balance at December 31, 1933	$78,958,696

Special Maintenance.—These reserves provide for relining of blast furnaces, maintenance of docks and harbors, conversion of power systems, and other renewals and replacements.

Balance at December 31, 1932	$12,309,844
Add:	
Provision for 1933	229,894
	$12,539,738
Deduct:	
Relining, renewal and other charges during 1933	210,261
Balance at December 31, 1933	$12,329,477

Development and Extension.—Large expenditures are required in engineering research and in the development and improvement of all lines of power farming equipment to increase the efficiency of farm operations and reduce the cost of crop production. Expenditures for 1933 were charged to operating expenses.

Balance at December 31, 1933	$2,015,657

RESERVES.—(*Continued*)

Losses on Receivables.—The annual deductions from earnings to provide for losses which may ultimately be sustained in the realization of notes and accounts receivable taken on each season's sales, are based on long experience and are adequate to cover bad debts incurred in the ordinary course of business.

Balance at December 31, 1932	$19,989,911
Add:	
Provision for 1933	5,321,988
	$25,311,899
Deduct:	
Bad Debts charged off during 1933	11,058,707
Balance at December 31, 1933	$14,253,192

Collection Expenses.—In most lines of business the time which elapses between the date of a sale and the collection of the proceeds in cash is comparatively short, and the need of a reserve to meet the future cost of collecting receivables outstanding would arise only in the event of liquidation. In the farm implement industry, where long credits in some lines are extended to the farming community, conservative management has adopted the principle of maintaining a reserve to meet future collection expenses.

Balance at December 31, 1933	$3,500,000

Fire Insurance.—The Company carries a reasonable portion of its own fire insurance. Modern methods of fire protection and prevention are rigidly enforced at all the Company's properties, and experience demonstrates that the Fire Insurance Reserve provides ample protection for the limited risks which the Company assumes.

Balance at December 31, 1932	$ 9,987,646
Add:	
Credit for 1933 from regular charges to operations	248,786
	$10,236,432
Deduct:	
Losses by fire, etc., during 1933	26,254
Balance at December 31, 1933	$10,210,178

REMARKS

Financial.—The lack of demand for the Company's products which prevailed in 1932, particularly in the United States and Canada, continued during the first half of 1933. The first indications of revival in trade were noted in May, 1933, and the improvement continued throughout the remainder of the year. The total sales volume throughout the world for 1933 was slightly in excess of five per cent greater than for the preceding year. The net loss in 1933 was $1,886,000

as compared with a net loss of $7,582,000 in 1932. Economies in operating and distribution costs effected in 1933 account in large measure for this improved showing. While the results are far from satisfactory, the movement is in the right direction.

Following the policy pursued in the two preceding years, $10,000,000 was transferred from general reserves to surplus. This course appeared to be warranted by the cessation of declines in raw material prices and in foreign exchange rates, and by the apparent upward trend in business. There now remains $5,000,000 in the general or blanket reserves, and this amount is applied in the balance sheet as a deduction from inventory values.

At the close of the year the Company showed a strong cash position, having no bank or other loans outstanding. Current assets at December 31, 1933, were in excess of current liabilities in the ratio of nearly twelve to one. Of the Company's net working capital, $176,711,000 is held in the United States, $13,699,000 in Canada, and $22,412,000 in other countries. In view of the uncertainties of international exchange and the fact that working capital in foreign countries is more or less permanently invested in the business and not available for remittance to the United States, foreign net current assets have been expressed in the accompanying balance sheet in U.S. dollars at the same rates of exchange as were used in stating similar assets at the close of 1932, these rates being the approximate market at December 31, 1932.

Receivables.—Outstanding receivables at December 31, 1933, amounted to $99,061,000, which was $20,690,000 less than at the close of 1932. As a means of relief to its customers, the Company reduced interest rates in the United States and Canada beginning January 1, 1933, on all outstanding receivables as well as on notes accepted in new transactions. Improvement in the financial condition of farmers in the United States resulted in a material increase of collections for 1933 as compared with 1932.

In view of the large amount of receivables written off during the year it was deemed advisable to make a substantial provision for losses on receivables in 1933. This reserve now amounts to 14.4 per cent of the total receivables outstanding, which is believed to be adequate.

Other Investments.—Investments under this heading stand at $8,645,000 as compared with $1,558,000 in 1932. The two principal items reflected in this increase are advances to suppliers on long-term timber contracts and the conversion of frozen surplus cash balances in the Argentine into bonds of that country payable in U.S. dollars.

Development of Products.—As a result of engineering research in prior years, important developments in the Company's products were perfected during the year. These activities have been continued throughout the depression despite general business economies. The most conspicuous of these achievements was the commercial introduction of the small Farmall tractor known as the F-12. This tractor,

considerably lighter in weight and lower in price than other tractors in the McCormick-Deering line, was designed to meet the power requirements of the small farm and supplement the tractor equipment of larger farms. Its reception by farmers in both these classes measured up fully to the Company's expectation, and customer experience has amply proved its high efficiency. Concurrently there was a remodeling of the entire McCormick-Deering line of tractors with a marked increase in efficiency. These improvements include a small industrial tractor, a new design orchard tractor, a more powerful track-laying tractor, and a Diesel-type tractor. An incidental effect of these developments is a broadening of the market for tractor attachments and tractor-operated machines.

Other 1933 developments of special interest were the enclosed-gear mower, a cream separator with stainless steel disks, an all-steel manure spreader and an improved line of hammer mills.

In the motor truck line, the most important advance during the year was the addition of a half-ton model which, on account of its high efficiency and low price, is finding a ready market. This model was formerly produced according to the Company's specifications by another manufacturer; but the Company is now preparing to begin production of its own half-ton truck, to be known as Model C-1.

All expenditures during 1933 for engineering research and development have been charged as operating expense.

Plant Properties.—Capital expenditures for 1933 amounted to $2,749,000 as against $1,633,000 for 1932. These expenditures include the cost of completing buildings and equipment at the new factory at East Moline, Illinois, for the production of harvester-threshers and corn pickers, heretofore produced at Deering Works, Chicago. Early in the year it was decided to abandon the Deering plant because it was not adaptable to modern methods of manufacture and its operating costs were therefore too high. All buildings of this plant and the remaining equipment have been written down in the balance sheet to nominal figures, and the land is carried at its present estimated value. Other items of capital expenditure were for new equipment at the Company's three tractor plants and at the Fort Wayne motor truck plant.

It was deemed advisable to charge depreciation on all buildings, machinery and equipment against 1933 operations at regular rates, without allowance for restricted operations.

Industrial Relations.—Late in the year the Company announced that it would continue through the winter of 1933–4 the "made work" policy pursued during the two preceding winters. As a result, in addition to the forces then employed, approximately 4,000 long-service employes, who had been laid off at the United States and Canadian factories for lack of work, were recalled and are working full time.

The purpose of this policy is to help reduce unemployment in the various communities affected and thereby increase purchasing power. While this policy produces goods beyond present demands, the Company has full faith in the recovery of agriculture and believes that in the not distant future the goods will be needed.

Century of Progress Exhibits.—The Company's exhibits at the Chicago World's Fair proved noteworthy in respect to the interest they aroused and the attention they attracted from the opening of the exposition to its close. They were generally credited by the public, the press and the management of the Fair with being among the most interesting and comprehensive portrayals of progress on exhibition. The Company has agreed to continue its exhibits through the 1934 exposition with such modifications as may seem desirable.

Alexander Legge.—Through the sudden and untimely death on December 3, 1933, of Alexander Legge, the Company sustained the severest personnel loss in its history. During the ten-year period of his presidency, and in the preceding years in which he held the office of general manager and other executive positions, Mr. Legge exercised throughout the organization and in the administration of the Company's affairs a constructive and progressive influence which will long survive him. His intimate and sympathetic understanding of the farmer's problems, which he has left to the Company as a cherished tradition, and his broad knowledge of agricultural and economic conditions at home and abroad made him a tower of strength and an unfailing source of wise counsel to his associates in the Company and on the Board of Directors.

General.—Improvement in the price of some major crops already appears to have ushered in a revival of confidence among American farmers, and has brought about a measurable increase in their purchasing power. The trend of prices for other farm commodities, such as live stock, dairy products, poultry, etc., appears to be upward and as soon as those prices rise to satisfactory levels, it may be expected that the farmers will be in the market for new and improved machines which offer them the most immediate and available means of reducing production costs. The Company discounts completely all suggestions and forecasts of a return to primitive means and methods of agriculture. This opinion is fortified and justified by the attitude of both farmers and farm implement dealers.

During the latter part of the year, manufacturers generally found that increased cost of materials, reduction in working hours, and higher wage rates substantially increased costs. This Company is no exception to that trend.

In the earlier part of the year George A. Ranney, Vice President in charge of sales and for many years in charge of the Company's finances, resigned to become Vice Chairman of the three leading public utilities of Chicago. Mr. Ranney's resignation was accepted with great regret.

It is gratifying, however, that as a member of the Board of Directors and of its Finance Committee, he continues to give the Company the benefit of his counsel.

The books and accounts for the fiscal year have been examined by Haskins & Sells, Certified Public Accountants, whose report is presented herewith.

Reviewing the progress of the year, and considering the difficulties and obstacles that had to be overcome, the Directors express their appreciation of the courage and energy and resourcefulness displayed by the entire organization at home and abroad.

By order of the Board of Directors,
ADDIS E. MCKINSTRY,
President.

Chicago, February 28, 1934.

HASKINS & SELLS
CERTIFIED PUBLIC ACCOUNTANTS
HARRIS TRUST BUILDING
CHICAGO

CERTIFICATE

February 21, 1934

The Board of Directors,
International Harvester Company:

We have made an examination of the accounts of International Harvester Company (a New Jersey Corporation) and of all affiliated companies operating in the United States and Canada for the purpose of verifying the stated financial condition as of December 31, 1933, and of reviewing the operations for the year ended that date. We also made similar examinations of the accounts of the larger foreign affiliated companies and reviewed annual reports of all other foreign affiliated companies. With respect to records of notes and accounts receivable kept at branch houses and collection offices, which we did not visit, we reviewed reports of the companies' traveling auditors.

The companies have consistently pursued conservative policies in the valuation of their assets, in the determination of net income, and in providing for all known liabilities and possible losses. Pending the stabilization of international exchange, foreign net current assets have been stated in terms of U.S. dollars on the basis of the rates used by the companies at December 31, 1932, which rates were the prevailing market rates at that date, or slightly lower. The current provision for plant depreciation has been based, in general, on regular rates without adjustments, similar to those made in 1931 and 1932, for decreased use of plant facilities; the accumulated reserves for depreciation, obsolescence, and special maintenance appear adequate.

The inventories of raw materials and supplies, goods in process of manufacture, and finished products have been priced at the lower of

cost or market, and from such valuation there has been deducted the $5,000,000 remainder of general blanket reserves provided from earnings of prior years for possible declines in market values and foreign exchange.

In our opinion, subject to the foregoing, the accompanying consolidated balance sheet and related summaries of income and surplus of International Harvester Company and affiliated companies fairly present their consolidated financial condition as of December 31, 1933, and the consolidated results of their operations for the year ended that date, and have been prepared by the companies in accordance with consistent application of their system of accounting and with accepted accounting principles.

(Signed) HASKINS & SELLS.

1934
REPORT TO STOCKHOLDERS
OF
INTERNATIONAL HARVESTER COMPANY

TO THE STOCKHOLDERS:

The Board of Directors submits the following report of the business and financial condition of the International Harvester Company and affiliated companies for the fiscal year ending December 31, 1934:

INCOME ACCOUNT FOR 1934

Profit before charging Interest on Loans, Depreciation, etc		$20,856,619
Deduct:		
Interest on Loans	$ 58,024	
Ore and Coal Depletion	43,483	
Plant Depreciation	6,745,581	
Special Maintenance	310,607	
Provision for Inventory Reserve	3,500,000	
Provision for Losses on Receivables	6,250,287	16,907,982
Profit for year 1934		$ 3,948,637

SURPLUS DECEMBER 31, 1934

Balance at December 31, 1933		$44,937,715
Add:		
Profit for year 1934		3,948,637
		$48,886,352
Deduct:		
Cash Dividends:		
Preferred Stock at $7.00 per share	$5,717,304	
Common Stock at 60 cts. per share	2,546,736	8,264,040
Earned Surplus at December 31, 1934		$40,622,312

INTERNATIONAL HARVESTER COMPANY AND AFFILIATED COMPANIES
CONSOLIDATED BALANCE SHEET, DECEMBER 31, 1934

ASSETS

Current Assets:			
Cash		$28,807,293	
Marketable Securities, at lower of cost or market:			
United States Government obligations	$ 15,130,095		
Federal Intermediate Credit Bank Debentures	6,540,577		
Other Marketable Securities	12,640,268	34,310,940	
Receivables:			
Dealers', Farmers', and Motor Truck Users' Notes	$ 69,791,585		
Accounts Receivable	15,436,063		
	$ 85,227,648		
Deduct:			
Reserves for Losses	15,044,910		
Net Receivables (including employes, $467,803)		70,182,738	
Inventories:			
Raw Materials, Work in Process, Finished Products, etc., at lower of cost or market	$100,768,358		
Deduct:			
Inventory Reserve	8,500,000	92,268,358	$225,569,329
Other Investments (including $506,422 investments in Associated Companies)			8,812,062
Deferred Charges (less deferred credits, $375,432)			546,811
Property:			
Farm Implement Works and Twine Mills, Motor Truck and Tractor Plants, Branch Houses and Service Stations, Mines, Furnaces, Steel Mills, etc.		$188,537,995	
Deduct:			
Reserves for Plant Depreciation		84,197,399	104,340,596
			$339,268,798

INTERNATIONAL HARVESTER COMPANY AND AFFILATED COMPANIES
CONSOLIDATED BALANCE SHEET, DECEMBER 31, 1934.—(*Continued*)

LIABILITIES

Current Liabilities:		
Accounts Payable:		
Current Invoices, Payrolls, Taxes, etc.	$ 20,284,621	
Preferred Stock Dividend, payable March 1, 1935	1,440,819	
Common Stock Dividend, payable January 15, 1935	661,378	$ 22,386,818
Reserves:		
Special Maintenance	$ 12,332,019	
Development and Extension	2,015,657	
Fire Insurance	5,407,712	
Contingent	5,000,000	24,755,388
Preferred Stock:		
Authorized, 1,000,000 shares, $100 par value. Issued, 823,325 shares, less 6,601 shares in Treasury		81,672,400
Common Stock:		
Authorized, 6,000,000 shares, no par value. Issued, 4,409,185 shares, less 163,388 shares in Treasury		169,831,880
Earned surplus		40,622,312
		$339,268,798

PROPERTY

Balance at December 31, 1933		$186,278,942
Add:		
Capital Additions during 1934:		
Farm Implement Works and Twine Mills	$ 760,421	
Motor Truck and Tractor Plants	2,612,828	
Branch Houses and Service Stations	544,610	
Mines, Furnaces, Steel Mills, etc	420,508	4,338,367
		$190,617,309
Deduct:		
Plant property sold, dismantled, or charged off	$2,035,831	
Depletion of iron ore and coal	43,483	2,079,314
Balance at December 31, 1934, before deducting Reserves for Plant Depreciation		$188,537,995

RESERVES FOR PLANT DEPRECIATION

The annual deductions from earnings for plant depreciation provide for the impairment and consumption of the capital assets utilized in production and distribution. Such depreciation is based on rates established by recognized authorities and confirmed by experience in this industry.

Balance at December 31, 1933	$78,958,696
Add:	
Provision for 1934	6,745,581
	$85,704,277
Deduct:	
Depreciation on properties sold and dismantled	1,506,878
Balance at December 31, 1934	$84,197,399

Working Capital

Current Assets:	
Cash	$ 28,807,293
Marketable Securities, at lower of cost or market	34,310,940
Receivables, less reserves for losses	70,182,738
Inventories, less reserve	92,268,358
	$225,569,329
Deduct:	
Current Liabilities	22,386,818
Working Capital at December 31, 1934	$203,182,511

Reserves

Special Maintenance.—These reserves provide for relining of blast furnaces, maintenance of docks and harbors, conversion of power systems, and other renewals and replacements.

Balance at December 31, 1933	$12,329,477
Add:	
Provision for 1934	310,607
	$12,640,084
Deduct:	
Relining, renewal and other charges during 1934	308,065
Balance at December 31, 1934	$12,332,019

Development and Extension.—Large expenditures are required in engineering research and in the development and improvement of all lines of power farming equipment to increase the efficiency of farm operations and reduce the cost of crop production. Expenditures for 1934 were charged to operating expenses.

Balance at December 31, 1934	$2,015,657

Losses on Receivables.—This reserve provides for losses which may ultimately be sustained in the collection of Notes and Accounts Receivable.

RESERVES.—(*Continued*)

Balance at December 31, 1933		$14,253,192
Add:		
Provision from 1934 Earnings	$6,250,287	
Amounts transferred from other Reserves accumulated out of prior years' earnings:		
Fire Insurance Reserve	5,000,000	
Collection Expense Reserve	3,500,000	14,750,287
		$29,003,479
Deduct:		
Bad Debts charged off during 1934 (net)		13,958,569
Balance at December 31, 1934		$15,044,910

Fire Insurance.—Since 1905, the Company has carried a reasonable portion of its own fire insurance risks at Branch Houses and Motor Truck Sales and Service Stations. Modern methods of fire prevention and protection are rigidly enforced at all of the Company's properties. In view of the low loss experience, the Company has felt justified in transferring as of December 31, 1934, an amount of $5,000,000 from this reserve to Reserve for Losses on Receivables. The balance of $5,407,000 at December 31, 1934, provides ample protection for the limited risk which the Company assumes.

Balance at December 31, 1933		$10,210,178
Add:		
Credit for 1934 from Regular Charges to Operations		231,296
		$10,441,474
Deduct:		
Losses by Fire, etc., during 1934	$ 33,762	
Amount transferred to Reserve for Losses on Receivables	5,000,000	5,033,762
Balance at December 31, 1934		$ 5,407,712

REMARKS

Improved agricultural conditions and prospects resulted in a good spring trade, but during the latter part of the year the unprecedented drought greatly curtailed anticipated business. Notwithstanding the drought, the year's business showed a substantial increase in volume over 1933—chiefly in tractors, power farming equipment and motor trucks—and this increase was sufficient to produce a net profit of $3,948,000 for 1934 after several years of losses.

Receivables.—Notes and Accounts Receivable at December 31, 1934, aggregated $85,227,000, as compared with $99,061,000 a year ago. The Company has followed its established practice in charging off against its bad debt reserve all receivables determined during the year to be worthless, and all other receivables in the United States and Canada more than five years old (less recoveries during the year on debts previously written off) and adding to the reserve an amount deemed adequate to provide for future losses. The amount of uncollected 1929 receivables written off is large, because of the large volume

of business in 1929, the unfavorable collection conditions during the depression, and the disastrous drought during 1934. To meet this situation the bad debt reserve has been strengthened by merging the Collection Reserve of $3,500,000, transferring $5,000,000 from the Fire Insurance Reserve, which amount is no longer needed for that purpose, and charging $6,250,000 against 1934 income. The Bad Debt Reserve at December 31, 1934, is $15,044,000, which is considered adequate, assuming reasonably normal agricultural conditions; moreover, there should ultimately be some recovery on the receivables written off.

Working Capital.—The Company has maintained its strong cash position in order to finance the larger volume of business which should come with better and more normal times. As volume of business increases, the inventories and receivables will increase and cash will decrease.

Of the net working capital $163,766,000 is held in the United States, $11,764,000 in Canada and $27,651,000 in other countries. With respect to working capital in foreign countries represented by foreign current assets, inventories, receivables and cash, it should be stated that unrealized appreciation due to devaluation of the dollar has not been reflected in the books. The greater part of such working capital is not available for remittance as it is permanently employed in foreign operations, and only the income therefrom can be brought home from time to time. A write-up of the principal of such assets is unwarranted in view of the uncertainties as to future exchange levels; we believe it sound accounting to take up appreciation only when realized on actual transfers of funds. Therefore, these foreign current assets have again been expressed in United States dollars in the accompanying balance sheet at the same rates of exchange as were used in valuing similar assets at the close of 1932 and 1933.

Inventory Policy.—The Company's inventory reserve of $5,000,000 has been increased to $8,500,000, making the total reserve about 8% of the closing inventory, valued at cost or market. Material and labor costs have increased and low-cost goods in the inventory have been and are being replaced by similar higher-cost goods. This apparent profit in the constant minimum inventory which must be maintained to carry on business can never be realized and experience has shown that it is ultimately wiped out when the economic pendulum swings in the other direction. Sound accounting requires the building up of an adequate inventory reserve during periods of rising costs to offset the inevitable inventory shrinkage during periods of falling costs and prices. Recognition of this fact has been largely responsible for the Company's ability to weather the several economic crises in its history, and this policy will be continued.

Improving Company Products.—Among the more important engineering developments perfected during the year were the following: A full line of essential farm tools for use with the McCormick-Deering Farmall tractors, with better means for planting and cultivating;

three new types of harvester-threshers for special uses, with improvements in older types; refrigerating and milk cooling equipment; advancement in designing and producing Diesel-type engines for tractor and power unit adaptation; improvement of the McCormick-Deering TracTracTor models; a complete line of power units for stationary and portable uses requiring power for varying loads; re-styling and important mechanical improvements in the International motor truck line, and the addition to the line of the new 1½-ton Model C-30; also the beginning of large-scale production by the Company of its improved half-ton truck, the Model C-1.

Plant Properties.—Capital expenditures for 1934 were $4,338,000 as compared with $2,749,000 in 1933. These expenditures were principally for machinery, tooling equipment, etc., required in the manufacture of the new lines of tractors and motor trucks. Depreciation has been provided out of income at regular rates, and the properties have been maintained at a high standard of efficiency through expenditures for repairs and renewals.

General.—Present indications point to an increase in the total volume of business in 1935.

The demand for trucks in the 1½-ton class, for both farm and commercial use, has materially strengthened. Our new Model C-30 truck, which is in this class, has met with favor and a demand beyond expectations. Sales of Diesel tractors and power plants, for both agricultural and industrial purposes, are growing.

The Company is becoming a more important factor in the commercial and industrial field, as is evidenced by the improvement of its business in motor trucks of all sizes and industrial tractors, both crawler and wheel type, and in various models of power units.

Our successful small tractor has developed an extensive field on small farms which promises further increase during the year. There is an accumulated shortage of cost-reducing agricultural machinery on the farms, and with reasonably favorable crop conditions and prices, farmers should be able to better equip themselves for economical production.

While the prospects for a larger volume of business seem good, the Company is confronted with a serious problem due to mounting costs of manufacture resulting from higher material and labor costs. The increased volume of business has only partially offset this increased cost. In this connection it is significant that the total dollar volume of sales in 1934 was 41% of the volume in 1929.

The improvement in the Company's trade has enabled it to make a substantial increase in the number of employes on the pay roll. At the end of 1934 there were approximately 10,000 more employes at work than at the close of 1933.

The Directors wish to express their great appreciation of the ability, courage, loyalty and zeal shown throughout the year by the members of the Harvester organization. Those in the factories, in the offices,

and in the field are doing their part to bring about economic recovery and better times.

The books and accounts for the year 1934 have been examined by Haskins & Sells, Certified Public Accountants, whose report is presented herewith.

By order of the Board of Directors,
ADDIS E. MCKINSTRY,
President.

Chicago, March 6, 1935.

HASKINS & SELLS
CERTIFIED PUBLIC ACCOUNTANTS
HARRIS TRUST BUILDING
CHICAGO

CERTIFICATE

March 4, 1935

The Board of Directors,
International Harvester Company:

We have made an examination of the consolidated balance sheet of International Harvester Company (a New Jersey corporation) and affiliated companies as of December 31, 1934, and of the related summaries of income and surplus for the year 1934. In connection with the financial statements of the companies operating in the United States and Canada, we made a review of the accounting methods, examined or tested, in a manner and to the extent we considered appropriate in view of the companies' systems of internal accounting control, accounting records of the companies and other supporting evidence, and made a general review of the operating and income accounts for the year, but we did not make a detailed audit of the transactions. We also made similar examinations of the accounts of the principal foreign affiliated companies. With respect to the foreign affiliated companies not examined by us and the records of notes and accounts receivable kept at branch houses not visited by us, we reviewed, respectively, annual reports of the foreign affiliated companies and branch house annual reports supplemented by reviews of periodic reports of the companies' traveling auditors; and the accounts of these foreign companies and branch houses are included in the accompanying statements on such basis.

The inventories generally are based on physical inventories taken as of the close of the manufacturing or selling seasons and adjusted for the interim transactions from the inventory dates to the end of the year. The Fort Wayne and Springfield Works were not closed for inventory purposes, and the inventories at these two works are based partially on book records. The operating results of the selling companies are based on twelve-month periods ended November 30 or dates prior thereto. The net profits of selling companies operating in the southern hemisphere and gross profits of selling companies operating in the northern hemisphere, for the periods from the close of the selling

seasons to December 31, are deferred and applied as reductions of the inventories.

Pending the stabilization of international exchange, foreign net current assets have been stated in terms of U. S. dollars on the basis of the rates used by the companies at December 31, 1932, which rates were the prevailing market rates at that date or slightly lower. This basis of valuing foreign net current assets results in a conservative determination of current foreign earnings not transferred to the United States and eliminates from the accounts all unrealized exchange appreciation and unrealized market recoveries of exchange write-downs made in 1932 and prior years. Profits arising from the conversion into U. S. dollars of foreign funds transferred to this country have been taken into earnings.

The minority interest in the capital and surplus of subsidiaries, relatively small in relation to the aggregate capital and surplus of subsidiaries, is included in the accounts payable. Net gains of relatively minor amount arising from transactions in the company's capital stock have been classified as a deferred credit and deducted from deferred charges. During the year 1934, the reserve for collection expenses, $3,500,000, and $5,000,000 of the fire insurance reserve were transferred to the reserve for losses on receivables.

In our opinion, subject to the foregoing, the accompanying balance sheet and related summaries of income and surplus fairly present, in accordance with accepted principles of accounting consistently followed by the companies, their financial condition at December 31, 1934, and the results of their operations for the year.

(Signed) HASKINS & SELLS.

1935
Report to Stockholders
of
International Harvester Company

To The Stockholders:

The Board of Directors submits the following report of the business and financial condition of the International Harvester Company and affiliated companies for the fiscal year ending December 31, 1935:

Income Account for 1935

Sales of Farm Implements, Tractors, Motor Trucks, etc., in United States, Canada, and Foreign Countries		$217,583,447
Deduct:		
Cost of Goods Sold, Selling, Collection, Administrative and Operating Expenses (Net), including Taxes, Exchange Adjustments, and Provision for Losses on Receivables	$188,012,499	
Ore and Coal Depletion	850,535	
Plant Depreciation	7,842,364	
Addition to Inventory Reserve	5,000,000	
Reserve against Foreign Losses	4,000,000	205,705,398
Net Operating Income		$ 11,878,049
Add:		
Other Income (Less Federal Income Tax pertaining thereto):		
Interest on Receivables, Time Sales, and Investments	$ 7,291,415	
Miscellaneous Earnings (Less $78,586 Miscellaneous Losses)	448,774	7,740,189
Profit for Year 1935		$ 19,618,238

Surplus Account for 1935

Profit for year 1935		$19,618,238
Deduct:		
Cash Dividends:		
Preferred Stock at $7.00 per share	$5,705,516	
Common Stock at 15 cts. per share for first, second, and third quarters, and 30 cts. per share for fourth quarter	3,159,308	8,864,824
Surplus for the year 1935		$10,753,414
Add:		
Surplus at December 31, 1934		40,622,312
Earned Surplus at December 31, 1935		$51,375,726

INTERNATIONAL HARVESTER COMPANY AND AFFILIATED COMPANIES
CONSOLIDATED BALANCE SHEET, DECEMBER 31, 1935

ASSETS

Current Assets:			
Cash		$ 32,923,742	
Gold Bullion in London, England, at market value		3,175,573	
Marketable Securities, at lower of cost or market:			
United States Government obligations	$ 10,393,809		
Federal Intermediate Credit Bank Debentures	7,161,538		
Home Owners' Loan Corporation Bonds	3,561,875		
Other Marketable Securities	13,123,639	34,240,861	
Receivables:			
Dealers', Farmers', and Motor Truck Users' Notes	$ 78,489,531		
Accounts Receivable	22,009,237		
	$100,498,768		
Deduct:			
Reserves for Losses	15,704,036		
Net Receivables (including $385,354 from employes)		84,794,732	
Inventories:			
Raw Materials, Work in Process, Finished Products, etc., at lower of cost or market	$111,743,686		
Deduct:			
Inventory Reserve	13,500,000	98,243,686	$253,378,594
Property:			
Farm Implement Works and Twine Mills, Motor Truck and Tractor Plants, Branch Houses and Service Stations, Mines, Furnaces, Steel Mills, etc		$192,490,524	
Deduct:			
Reserves for Plant Depreciation		89,277,375	103,213,149
Other Assets (including $579,999 investments in Associated Companies)			7,870,508
Deferred Charges (less deferred credits, $365,316)			744,666
			$365,206,917

INTERNATIONAL HARVESTER COMPANY AND AFFILIATED COMPANIES CONSOLIDATED BALANCE SHEET, DECEMBER 31, 1935.—(*Continued*)

LIABILITIES

Current Liabilities:			
Accounts Payable:			
Current Invoices, Payrolls, Taxes, etc.		$ 30,582,059	
Preferred Stock Dividend, payable March 2, 1936		1,429,267	
Common Stock Dividend, payable January 15, 1936		1,273,564	$ 33,284,890
Reserves:			
Special Maintenance		$ 12,431,004	
Development and Extension		2,015,657	
Fire Insurance		5,596,320	
Contingent		9,000,000	29,042,981
Preferred Stock:			
Authorized, 1,000,000 shares, $100 par value. Issued, 823,325 shares, less 6,601 shares in Treasury			81,672,400
Common Stock:			
Authorized, 6,000,000 shares, no par value. Issued, 4,409,185 shares, less 163,412 shares in Treasury			169,830,920
Earned Surplus			51,375,726
			$365,206,917

PROPERTY

Balance at December 31, 1934			$188,537,995
Deduct:			
Plant property sold, dismantled, or charged off		$3,859,439	
Depletion of iron ore and coal:			
Regular provision	$100,536		
Special provision	750,000	850,536	4,709,975
			$183,828,020
Add:			
Capital Additions during 1935:			
Farm Implement Works and Twine Mills		$1,345,154	
Motor Truck and Tractor Plants		3,115,232	
Branch Houses and Service Stations		926,544	
Mines, Furnaces, Steel Mills, etc		875,574	
Office Building, Chicago, Ill		2,400,000	8,662,504
Balance at December 31, 1935, before deducting Reserves for Plant Depreciation			$192,490,524

RESERVES FOR PLANT DEPRECIATION

The annual deductions from earnings for plant depreciation provide for the impairment and consumption of the capital assets utilized in production and distribution. Such depreciation is based on rates established by recognized authorities and confirmed by experience in this industry.

Balance at December 31, 1934		$84,197,399
Deduct:		
Depreciation on properties sold and dismantled		2,762,388
		$81,435,011
Add:		
Provision for 1935:		
Regular	$6,767,230	
Special for increased use of machinery and equipment	1,075,134	7,842,364
Balance at December 31, 1935		$89,277,375

Working Capital

Current Assets:	
Cash	$ 32,923,742
Gold Bullion in London, England, at market value	3,175,573
Marketable Securities, at lower of cost or market	34,240,861
Receivables, less reserves for losses	84,794,732
Inventories, less reserve	98,243,686
	$253,378,594
Deduct:	
Current Liabilities	33,284,890
Working Capital at December 31, 1935	$220,093,704

Reserves

Special Maintenance.—These reserves provide for relining of blast furnaces, maintenance of docks and harbors, conversion of power systems, and other renewals and replacements.

Balance at December 31, 1934	$12,332,019
Deduct:	
Relining, renewal and other charges during 1935	457,786
	$11,874,233
Add:	
Provision for 1935	556,771
Balance at December 31, 1935	$12,431,004

Development and Extension.—Large expenditures are required in engineering research and in the development and improvement of all lines of power farming equipment to increase the efficiency of farm operations and reduce the cost of crop production. Expenditures for 1935 were charged to operating expenses.

Balance at December 31, 1935	$2,015,657

Losses on Receivables.—The Company has followed its established practice in charging off against its bad debt reserve all receivables determined during the year to be worthless, and all other receivables in the United States and Canada more than five years old (less recoveries

RESERVES.—(*Continued*)

during the year on debts previously written off), and adding to the reserve an amount deemed adequate to provide for future losses.

Balance at December 31, 1934	$15,044,910
Deduct:	
Bad Debts charged off during 1935 (net)	10,003,088
	$ 5,041,822
Add:	
Provision from 1935 Earnings	10,662,214
Balance at December 31, 1935	$15,704,036

Fire Insurance.—The Company carries a reasonable portion of its own fire insurance risks at Branch Houses and Motor Truck Sales and Service Stations. Modern methods of fire prevention and protection are rigidly enforced at all of the Company's properties.

Balance at December 31, 1934	$5,407,712
Deduct:	
Losses by Fire, etc., during 1935	73,315
	$5,334,397
Add:	
Credit for 1935 from Regular Charges to Operations	261,923
Balance at December 31, 1935	$5,596,320

Contingent Reserve.—

Balance at December 31, 1934	$5,000,000
Add:	
Provision from 1935 earnings on foreign business for possible losses abroad	4,000,000
Balance at December 31, 1935	$9,000,000

REMARKS

The Company's business in 1935 showed further improvement. The total sales for 1935 were $217,583,000, which is 57 per cent more than 1934, but 35 per cent less than 1929, the highest previous year. The 1935 sales were divided as follows:

In the United States	
Tractors (including Repair Parts)	$ 51,078,000
Farm Implements (including Repair Parts)	50,277,000
Motor Trucks (including Repair Parts)	48,291,000
Steel, Binder Twine, etc.	19,082,000
Total United States	$168,728,000
In Foreign Countries, All Products	48,855,000
Grand Total	$217,583,000

The larger volume of business resulted from increased farm income, accumulated need for replacement of farm implements and general

improvement in business, together with the introduction of new machines and models and increasing demand for the International motor truck line.

Net profits for 1935 were $19,618,000 or 6.2 per cent of the total capital invested in the business. This was the first year since 1930 that net earnings have been sufficient to cover preferred dividend requirements.

Working Capital.—The Company was in a sound cash position at the close of the year and prepared to meet the increased working capital requirements for 1936. Of the net working capital, $179,441,000 is held in the United States, $10,649,000 in Canada, and $30,002,000 in other countries. Pending a general stabilization of foreign currencies, the Company has continued its policy of valuing foreign current assets at the rates of exchange in effect at the close of 1932. In view of the fact that exchange restrictions, now effective in eight countries, prevent the conversion into dollars of a substantial part of foreign earnings and the fact that world uncertainties, political and economic, now cloud the Company's foreign investments with more than ordinary risks, the Directors have deemed it prudent to transfer $4,000,000 out of the earnings on foreign business to a contingent reserve for the protection of such business.

For many years the Company has centralized in London a part of the regular remittances from foreign subsidiaries as a general working fund for the requirements of the foreign business in all countries. During the past year a part of this fund was converted into gold bullion. The remainder is carried in sterling balances as heretofore.

The Company has continued its practice of building up a general inventory reserve during years of advancing material prices and production costs to provide against corresponding inventory shrinkage to be expected and heretofore experienced during periods of falling costs and prices. The amount provided out of 1935 earnings for this purpose is $5,000,000, bringing the total inventory reserve to $13,500,000.

Receivables.—Collection conditions generally improved during 1935. However, collections were seriously affected in extensive territories where there were crop failures due to rust, drought, or other causes.

Charge-offs against the bad debt reserve for the year amounted to $10,003,000 and the addition to that reserve out of 1935 earnings amounted to $10,662,000. These amounts are larger than normal, due to the effect of crop failures on collections of receivables of current and prior years. The reserve for losses on receivables as of December 31st stood at $15,704,000 as compared with outstanding receivables of $100,498,000.

Engineering Developments.—Engineering and other research continued in all branches of the business. Constant attention is being given to the development of new products. Among the more important engineering developments during the year were the following: Additions to the line of quick-attachable implements for Farmall tractors;

improvements in harvester-threshers and milk-cooling equipment; addition of new types and sizes to the present successful line of Diesel engines for tractors and power units; important mechanical improvements in the International motor truck line.

Capital Additions.—Capital expenditures for 1935 were $8,662,000 as compared with $4,338,000 for 1934. These expenditures were for buildings, machinery, tooling equipment, etc., for the increased production of tractors, motor trucks, and farm implements; modernization of certain steel mill units and additional branch warehouse and service station facilities. During the year, the Company contracted to purchase an office building in Chicago which transaction has since been consummated. This building will be used for general office requirements, beginning the latter part of 1937 when the lease on the present offices expires.

Depreciation has been provided out of income at regular rates and allowance has been made for the increased use of machinery and equipment due to greater production during 1935.

General.—During the year 1935, the Company had in the United States an average of 45,700 employes as compared with 32,900 during 1934, an increase of 39 per cent. Employes at the manufacturing plants and raw material properties in the United States have continued to work at the schedule of hours previously maintained under code regulations.

The trade outlook for 1936 in the United States and Canada is regarded by the management as favorable.

Death has recently deprived the Company of two valued members of the Board of Directors whose wise counsel will be sadly missed. John J. Glessner, one of the founders of the Company and a Director since its formation, passed away January 20, 1936, in his ninety-third year. Herbert F. Perkins, former President and a member of the Board since 1928, passed away February 1, 1936.

The Directors express their appreciation of the splendid spirit of loyalty and whole-hearted cooperation manifested by the Harvester organization in all departments and all countries in advancing the Company's interests during the year.

The books and accounts for 1935 have been examined by Haskins & Sells, certified public accountants, whose report is presented herewith.

By order of the Board of Directors,
SYDNEY G. MCALLISTER,
President.

Chicago, March 11, 1936.

HASKINS & SELLS
CERTIFIED PUBLIC ACCOUNTANTS
HARRIS TRUST BUILDING
CHICAGO

CERTIFICATE

March 9, 1936

The Board of Directors,
International Harvester Company:

We have made an examination of the consolidated balance sheet of International Harvester Company (a New Jersey corporation) and affiliated companies as of December 31, 1935, and of the related summaries of income and surplus for the year 1935. In connection with the financial statements of the companies operating in the United States and Canada, we made a review of the accounting methods and examined or tested accounting records of the companies and other supporting evidence in a manner and to the extent we considered appropriate in view of the ' systems of internal accounting control. We also made sim ' ations of the accounts of the principal foreign affiliated compani respect to the foreign affiliated companies not examined by us, w d the companies' annual reports, and the accounts of these com e included in the accompanying statements on the basis of such

The inventories generally are ba hysical inventories taken as of the close of the manufacturing or se easons adjusted for the interim transactions from the inventory dates the end of the year. The operating results of the selling companies a e based on twelve-month periods ended November 30 for companies operating in the northern hemisphere and June 30 for companies operating in the southern hemisphere. The gross profits of selling companies operating in the northern hemisphere and net profits of selling companies operating in the southern hemisphere, for the periods from the close of the selling seasons to December 31, are deferred and applied as reductions of the inventories. Reductions of aggregate inventory values for excess manufacturing burden from the close of the manufacturing seasons to the end of the year, inter-works profits, etc., have the effect of reducing the inventory valuation, before deducting the inventory reserve, somewhat below the lower of cost or market.

Pending the stabilization of international exchange, foreign net current assets (exclusive of goods of domestic manufacture held abroad, valued on a United States dollar basis, and gold bullion, valued at market) have been stated in terms of United States dollars on the basis of the exchange rates used by the companies at December 31, 1932, which rates were the prevailing market rates at that date or slightly lower. This basis of valuing foreign net current assets results in a conservative determination of current foreign earnings not transferred to the United States and excludes from the accounts all unrealized exchange appreciation since 1932. Exchange profits realized by the transfer of foreign

funds to the United States and by the acquisition of gold bullion with foreign funds have been taken into earnings. Some of the foreign net current assets are located in countries which impose restrictions on foreign exchange transactions.

The provision for plant depreciation for 1935 has been increased by the companies because of increased use of plant facilities, and a special provision was made for depletion; the combined provisions for depreciation and depletion are approximately $1,800,000 in excess of provisions computed on the bases followed in 1934.

The minority interest in the capital and surplus of subsidiaries, relatively small in relation to the aggregate capital and surplus of subsidiaries, is included in the accounts payable. Net gains of relatively minor amount arising from transactions in the company's capital stock have been classified as a deferred credit and deducted from deferred charges.

In our opinion, based on our examination and subject to the foregoing, the accompanying balance sheet and related summaries of net income and surplus fairly present, in accordance with accepted principles of accounting consistently followed by the companies, their financial condition at December 31, 1935, and the results of their operations for the year.

(Signed) HASKINS & SELLS.

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