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MONETARY POLICY
AND ECONOMIC STABILISATION

MONETARY POLICY
AND
ECONOMIC STABILISATION
A STUDY OF THE GOLD STANDARD

BY
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TO
D. H. MACGREGOR

PREFACE

THIS book was written partly in England, partly in America. The study and observation on which it rests were made in about equal measure in both countries. Perhaps I may hope accordingly that its analysis and conclusions will also be found equally applicable to each of the two nations in whose hands the future world course of monetary events mainly lies.

The problem of economic instability and its effects probably transcends in importance any others of our generation. This book is an approach to that problem from the viewpoint of the functioning of the monetary mechanism. I do not believe the whole problem can be solved by monetary manipulation alone. For the monetary mechanism cannot be studied in isolation, divorced from the "non-monetary" factors with which in actuality it is inextricably intertwined. I do believe, however, that no solution whatsoever is possible so long as the monetary system continues to function as it has since the war. I have therefore not hesitated to draw concrete conclusions and offer specific suggestions for reform, despite the limited compass in which a subject of such large scope has been treated. In dealing with these problems the economist who, having ascended into the rarefied regions of pure theory, fails to descend again to earth and apply his findings to pressing practical affairs, fails, in my opinion, to give of his best. Thus I have striven throughout to avoid discussing the monetary mechanism as if it operated *in vacuo*, namely, in a non-existent world of perfect competition and complete flexibility. For it is with *this* world, with all its imperfections, that we have to deal, however much more desirable some other kind of world may appear to be, if the latter is unattainable or has passed beyond hope of recall. The emphasis is laid throughout upon interpreta-

tion and analysis rather than upon the presentation of descriptive matter, but in the interests of general intelligibility I have as far as possible avoided employing technical terminology. In striving after definiteness in advancing proposals for policy, I have been acutely aware of the bewildering complexity of the subject, the present somewhat limited state of our knowledge, and the chaotic condition of world economic affairs: but responsibility for the future cannot be evaded by a course of inaction.

Though not designed primarily as a text-book, I have been including most of the subject-matter of this study in a course on money and banking at Columbia, so hope it may be found useful to other college teachers of the subject as well as of interest to the professional economist and the general reader.

My debt to numerous works by writers both dead and living will be evident on almost every page. Where I have been able to identify it, I have made acknowledgment in footnotes.

In some places, mostly in Chapters I. to III., I have made use of certain passages from the four special reports which I contributed to *Economic Reconstruction, Report of the Columbia University Commission*, published earlier this year by the Columbia University Press, to whom my acknowledgments are due. Chapter X. is partly based on an extensive report, shortly to be published, which I recently had occasion to submit to the American government in a technical capacity.

I have to acknowledge the kindness of various colleagues and friends who were good enough to read parts of the study and offer suggestions for its improvement. In the preparation of the manuscript for the printer I have a heavy debt to my sister Anne Gayer for her generous and painstaking assistance. The credit for the excellence of the index belongs to my former pupil, Miss Anna Jacobson.

ARTHUR D. GAYER

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CHAPTER I

THE TRADITIONAL GOLD STANDARD

INTRODUCTION.—(Under any conceivable form of economic organisation, whether capitalist or socialist, some kind of price system is inevitable, whatever the guise in which it appears.) The idea that some other kind of unit—of work, energy, physical output—can be *substituted* for a unit of value is mere confusion of thought, since these other units become themselves measures of relative value. A price system is a fundamental necessity for economic activity in general as a “coefficient” of economic choice. This is true not only of the expression of consumers’ preferences: the process of choosing between alternative methods of production requires that values be attributed to the different means of production available, and these again are coefficients of those choices that are expressed as positive acts of production or exchange. When these coefficients of choice, whether of consumers or producers, are expressed in units of money they are called prices, but their essential nature remains unchanged.

This fundamental truth, however, has nothing to do with the justification of the particular form of price system under which our economic activities have hitherto been conducted. It does not follow that the monetary and credit mechanism which determines the unit of price accounting in our present system of economic organisation is ideally the best possible, or even the best available at our present stage of world economic development. In its present form

this system is of relatively recent origin, and has evolved into this form only during the last century or so: since the war, moreover, it has undergone much basic modification. Always subject to some criticism, especially during periods of economic stress, it has in recent years been subjected to a veritable torrent of adverse criticism and demands for drastic and wholesale reform. Many indeed have gone so far as to find in the failure of our monetary system to function smoothly the main source of business instability in general and of the recent catastrophic economic collapse in particular. This very breakdown, however, has raised anew the whole question which a few years ago appeared to many, in fundamentals, to have been satisfactorily settled, and has given us freedom, in determining our future course, to choose between a return to the old system in rehabilitated or reformed shape and a refashioning of our monetary institutions on new foundations. The choice is one of the most momentous facing our generation, fraught with economic and social consequences of the first order of historical magnitude.

THE PRE-WAR GOLD STANDARD.—Money may be briefly defined as the common unit of value in terms of which economic transactions are expressed. As such its two main functions are to serve as a medium of exchange and a standard of value. The latter purpose involves the time element inherent in the postponement of payment. Thus it becomes immediately apparent that, in addition to the other qualities traditionally enumerated as desirable, it is vitally important that the particular commodity, such as gold, selected to serve as the common denominator of value, should possess reasonable stability. Under modern conditions a stable standard of deferred payments is particularly important by reason of the time element present in the vast majority of economic transactions. Changes in

the value of money not only produce an unintentional redistribution of national income, they also cause violent dislocation of productive activity, because of the ever-widening range and magnitude of contractual obligations involving deferred payments of amounts previously determined. Thus an element of confusion and uncertainty is introduced into economic life which, at times of rapid change in the value of money, can easily create disturbances serious enough to shake the very foundations of economic society. Judged by the test of stability in value, a money based on gold has shown itself to be far from ideal.

Prior to the war, and again prior to the recession, far the greater portion of the civilised world adhered to some form of monetary system based on gold. Though the precious metals have been in use as money for many centuries, gold monometallism on an international scale and understood as an international standard dates in the Western world only from the second half of the nineteenth century. Even a century ago almost the entire world operated under either silver monometallism or bimetallic standards. The gradual transition to a virtually single international system based on gold was the direct result of the Californian and Australian gold discoveries of 1848-1849. Its initial success was due to the cheapening of gold these discoveries produced: it has subsequently enjoyed popularity only in similar periods of rising prices.¹ The rising prices produced by the greatly increased output of South African and Klondyke gold in the middle nineties ensured its final triumph. The growth of the international bimetallic agitation was directly attributable to a falling price level, its decisive defeat to the rising price trend

¹ "The popularity and unpopularity of the standard from time to time is closely correlated to the tendency of the price level. Thus the movement of prices furnishes the most convenient guide to the movement of opinion" (T. E. Gregory, "Gold Standard", Gold Supplement of *The Times*, June 20, 1933).

which followed these new gold supplies. Had it not been for the latter circumstance, bimetallism would very likely have triumphed eventually.¹

THE CARDINAL FEATURES OF THE PRE-WAR GOLD STANDARD.—Despite important differences of detail as between the countries adhering to the gold standard in pre-war days, its underlying principles were everywhere the same. It was characterised by two salient features. The first was the statutory obligation to redeem notes in gold coin. The standard unit of account was defined by statute in terms of a fixed weight of gold of specified fineness. Gold was thus given an invariable price, but its value—its exchange ratio with other goods or purchasing power—was left free to vary with its fluctuating supply and demand. The former depended upon the output of the gold mines and its consumption in the industrial arts and otherwise; the latter was determined by the aggregate volume and average rapidity of monetary transactions, and the monetary institutions and banking practices of the community in question; in other words, by the extent to which “substitutes” for gold were in use in the shape of paper currency and credit superstructure.² Commercial banks regulated their advances by their cash holdings, and these in turn depended upon the gold stocks of central banks. Changes in the price level were, therefore, in the last analysis the resultant of changes on the one hand in the total volume of the means of payment and the method of their employment, including the velocity of circulation, and changes on the other in the volume of production and

¹ It is interesting to note that both in England, which had been *de facto* on a single gold standard throughout most of the eighteenth century, and in the United States, where it may be dated in practice from a process beginning in 1834, the gold standard originated in an accidental overvaluation of silver under nominally bimetallic standards.

² The question is treated in detail in Chapter IV. below.

trade. The supply of money was thus not deliberately controlled by any central authority to meet the needs of business, but was left to the reputedly semi-automatic regulation of so-called natural forces, most important among them the cost of production of gold. The primary economic function of the gold standard intranationally was thus to place some limit to the supply of money and credit, and supposedly to prevent excessive fluctuations in the volume of the total media of payments. Such shortcomings as this arrangement manifested were felt to be a price well worth paying for the freedom it ensured from intervention and possible abuse by political authority.

But the pre-war gold standard also served an *international* function of regulation. One of its basic foundations was the free movement of gold to and from the industrial arts and the free international movement of gold within the narrow range of the gold points effected through the sensitive mechanism of the foreign exchanges. Indeed, the maintenance of a parity in foreign exchanges within narrow limits was perhaps the chief aim of the international gold standard. The latter demanded from and ensured to every country adhering to it not indeed a common price level but internationally a closely equilibrated price and income structure; the penalty for divergence of prices in any one country far above the world gold price level being the enforced departure of that country from gold. The currency mechanism itself brought about the restoration of equilibrium, provided certain rules were observed, whenever temporary disequilibrium between any one currency and the rest occurred. For such benefits as each derived from participation in an international system autonomy of action in domestic monetary policy, except between narrowly restricted limits, was the sacrifice demanded. Thus, though unconsciously, a double preference was

implied: first, for such instability of prices as was experienced under the gold standard over the uncertainty and possibly greater instability of a money divorced from a metallic base; and secondly, for stability of international exchanges as compared with possible stability of the internal price level.

An important corollary follows. Any one country could, and still can, under the gold standard, pursue in isolation a deflationary course to its heart's content in opposition to the rest of the world: the only effect will be a piling up of reserves. But the converse is not true. Unless other countries are following the same path any country which embarks on an inflationary policy or attempts to arrest a process of deflation is subject to the peril of being forced off the gold standard, no matter what its previous accumulation of gold. Recent experience has once again conclusively shown that even abundant gold reserves accumulated in previous periods of prosperity can in these circumstances be rapidly exhausted by an external drain resulting from sudden nervous withdrawals of foreign short-term funds and a flight of capital, as well as from internal hoarding. In other words, central banking authorities must so control the total volume of the media of payments as to prevent or correct an adverse balance of payments and check a resultant gold export. If world gold prices are falling a country has the choice between two and only two courses: to maintain its price level stable above that prevailing abroad at the cost of losing gold and perhaps being forced eventually to abandon the gold base; or to lower its entire internal price and money income structure in line with the fall of world gold prices.

CENTRAL BANK FUNCTIONS UNDER THE GOLD STANDARD.
—To achieve these ends certain duties have been traditionally regarded as devolving upon central banks. Under an international gold standard the paramount duty of a

central bank, to which all other functions are subordinate, is to maintain its currency at par with gold. In order to protect the paper money of the country by redeeming it in gold on demand, central banks must hold the ultimate reserves of the country and make sure that adequate specie or bullion supplies are available. Control over the total volume of the media of payments to effect this end has traditionally been attained by manipulation of the discount rate supplemented and reinforced if necessary by the appropriate purchase and sale of securities in so-called open-market operations. In addition, and apart from a variety of important but incidental functions performed by them, central banks have a second main duty, namely, to harmonise external and internal requirements in matters of monetary policy, to the extent permitted by the gold standard, by providing credit as far as possible in the volume required for internal industrial, commercial and financial needs, in other words to preserve internal stability. When, as not infrequently, a conflict occurs between the internal requirements of production and trade in the matter of monetary policy and the international exchange value of the currency, the former have to be subordinated to the latter for the protection of the gold base under the gold standard. Monetary policy has to be determined not by domestic requirements, but by the demand and supply conditions of foreign exchange. Thus the international character of the gold standard, made effective by the free movement of gold, has definite consequences for the maintenance of internal stability. It assures stable parities of exchange by permitting or creating variations in the level of domestic prices. The attempts of various central banks and treasuries since the war to pursue at once, or to reconcile, the two policies of internal stability and stability of the international exchange value

of the currency unit have inevitably broken down. For, short of international central bank co-operation under some modified gold standard which might combine these two objectives, they are in the last analysis incompatible.

Indeed, it is only in relatively recent times that central banks have learned how to preserve external stability through the mechanism of centralised control of gold movements by using the instruments of discount policy and credit control. The Bank of England, which has systematically practised such control in one form or another for perhaps a century, has been an exception rather than typical. The deliberate control of gold movements through central bank policy did not emerge in France or Prussia till the eighteen-fifties. In the United States it came into existence only with the establishment of the Federal Reserve system, and in Canada during the war. Even during the present century the tendency of rates to be changed more or less automatically upon variations of gold reserves around a certain conventional amount or percentage ratio to notes, through export or import of gold, has held good neither absolutely nor universally. By various means many central banks have attempted to exercise some control over gold movements without alteration of discount rates, while others have held such large reserves that only exceedingly heavy gold losses have necessitated increased rates. Conversely, almost all central banks have tended to some extent to bottle up gold when they received it without permitting it to exercise its full influence upon the total volume of the means of payment and the general level of prices.¹ In general, however, gold movements prior

¹ As Mr. Keynes has pointed out, central banks are "all natural gold hoarders", always glad to take gold when they comfortably can, so that it is often absorbed without producing its full effect on the price level; while conversely in periods of gold shortage they attempt as far as possible to avoid putting more pressure on business than is absolutely necessary. (*A Treatise on Money*, vol. ii. p. 205.)

to the war, by their direct and indirect influences, acted as a corrective of temporary disturbances of international equilibrium. Since the war the principle and practice of control have undergone great extension, but they have been increasingly utilised, as will be shown later, to effect rather the contrary purpose of *preventing* gold movements from influencing the internal price structure, with consequences of the utmost importance.

The advantages of the gold standard can be enjoyed only if gold movements are allowed to exercise their full effects on prices and no attempts are made through monetary action to minimise or offset them. One of the cardinal "rules of the gold standard game" is that the internal price structure should be kept continuously in harmony with and responsive to the external world level. It is the duty of central banks under the gold standard not to protect the domestic credit structure and price level from the repercussions of gold movements, but rather to see that they respond to the latter. The consequences of the widespread belief and practice to the contrary are examined fully below. Loss of gold demands, not the manufacture of credit to offset it, but credit contraction; conversely gold imports, unless permitted to have their full influence in raising prices, will sooner or later create maladjustments of a serious nature if not directly for the country receiving gold, at least for the gold-standard area at large. The benefits of a semi-automatic international standard and of national monetary autonomy cannot both be secured short of international co-operation under a "managed" gold standard.

THE "AUTOMATIC" FUNCTIONING OF THE GOLD STANDARD.—In one sense the functioning of the gold standard has never been wholly automatic, though prior to the war this characterisation was better justified than it has been

since. For with the growth in all monetary systems of credit superstructures resulting from the development of note issue and deposit banking, constant action on the part of central banks has been needed in controlling the volume of bank credit to correct gold movements in order to preserve the free convertibility of the currency into gold. The very maintenance of convertibility has called for monetary management, and in that sense and measure the pre-war gold standard was a managed standard. Management was, and is, demanded under the gold standard merely to keep it such. The differences in management between pre- and post-war years are differences of degree rather than of kind, though in some respects of great magnitude and importance. Yet within these limits of compliance with the "rules of the game" the gold standard may justifiably be designated an automatic standard. The mechanism, however, is often misrepresented by oversimplification. In practice complicated situations often arise not susceptible of solution by facile reference to cut-and-dried rules. Thus, to anticipate problems examined in detail below, the raising of its official rates by a central bank upon an outflow of gold in order to contract credit may in certain circumstances have the effect of attracting both foreign funds and money hoarded domestically in such quantity that the central bank's contraction of credit is compensated by an enlargement of credit granted by commercial banks. Clearly, in these circumstances, which find conspicuous illustration in the United States in the years immediately preceding the Stock Exchange collapse of 1929, the attempt of the central bank to influence the price level through contraction of the total media of payments is frustrated. The converse is true of the situation which may be brought about by gold imports: a lowered discount rate may discourage foreign balances and induce

domestic capital to search for more remunerative investment abroad. Such instances, all too often ignored, can easily be multiplied of phenomena which in practice modify the doctrine of free automatism in vital respects.¹

The British Committee on Finance and Industry well pointed out in the Macmillan Report, writing before Britain's departure from gold, that "It is not advisable, or indeed practicable, to regard our monetary system as an automatic system, grinding out the right result by the operation of natural forces aided by a few maxims of general application and some well-worn rules of thumb. The major objectives of a sound monetary policy—for example, the maintenance of the parity of the foreign exchanges without unnecessary disturbance to domestic business, the avoidance of the Credit Cycle, and the stability of the price level—cannot be attained except by the constant exercise of knowledge, judgment and authority."² The only question which occurs to mind is whether the implied assumption is justified that the objectives enumerated are not self-contradictory under the traditional semi-automatic gold standard.

MONETARY MANAGEMENT UNDER GOLD AND FREE STANDARDS.—The characteristic which distinguishes currencies on and off the gold standard respectively lies not in

¹ "But if low money rates induce an increased domestic use of credit they may start a spiral of expansion, the last phase of which is the inflow of the gold which flowed out at the beginning. We completed this full cycle between 1927 and 1929. We witnessed the paradox of large imports of capital into the country which, on monetary grounds, should have been supplying capital to other countries. . . . The most significant aspect of the movement was that it was in response to high money rates ascribable in part to the Reserve banks' efforts to check domestic credit expansion. . . . There is frequently a sharp contrast between the internal and the external results of a change of bank rate." Similar instances can be cited from recent English and German experience. "The Reichsbank has found that, when it put up its rate in order to decrease credit, short term balances flowed in from abroad; and when it put down the rate in order to increase credit, these balances went out again" (Professor John H. Williams in *Gold and Monetary Stabilisation* (Chicago, 1932), pp. 151-2).

² *Report of Committee on Finance and Industry*, Cmd. 3897, 1931, p. 118.

monetary management as such but in its object. In the former case the management is directed towards keeping the purchasing power of the currency on an equality with gold. The ultimate responsibility for the domestic price level must always, inevitably, rest with central banks. Under a paper standard, since they enjoy a monopoly in regulating the supply of the means of payment, any purchasing power can, whatever the wisdom of the course and its after effects, be given to the currency; under the gold standard central banks exercise their powers of control for the different purpose of maintaining external harmony with the world gold level. The essential difference between a metallic and an inconvertible paper currency is thus that the former has a fixed gold value and a fluctuating purchasing power, while the latter has an indeterminate gold value but may, subject to certain qualifications, be given any desired purchasing power. The international gold standard affords a mechanism for maintaining stability of exchanges at the price of compelling the internal price and money income structures of all countries adhering to it to conform to those of all the others; the reverse being true of independent currencies cut loose from gold.

Thus a fundamental conflict exists between the principles of the traditionally automatic gold standard and a conscious deliberate policy of monetary stabilisation. In order that the gold standard should operate efficiently, banking systems should always be "loaned-up"; if central banking authorities are, on the other hand, to enjoy any discretion in monetary policy they must be in possession of surplus reserves. The gold standard mechanism demands that gold flows should have their full effect alike upon the countries receiving and losing gold; central banks concerned to preserve stability of prices, to mitigate industrial fluctuations and to avoid creating disturbances in business

activity, naturally attempt to counteract these movements by open-market operations. Furthermore, economic developments in the post-war world have made it increasingly clear that the gold standard can no longer be operated upon its original premises. The changes in its structure and functioning which have brought about this condition of affairs must next be examined.

CHAPTER II

THE FUNCTIONING OF THE POST-WAR GOLD STANDARD: I. INTERNAL MECHANISM

STRUCTURAL CHANGES: THE WITHDRAWAL OF GOLD COIN.—One of the most conspicuous and far-reaching changes which has distinguished the structure of the post-war from that of the pre-war gold standard has been the almost entire disappearance of gold coin from circulation. The gold coin withdrawn during the war was never returned to circulation but remained in the vaults of central banks to swell their reserves. The few attempts made by certain countries to revive this wasteful form of currency fortunately proved failures, the public showing a decided preference for notes. Till the suspension of the gold standard a not inconsiderable absolute amount of gold coin, and in the United States a larger volume of its virtual equivalent, gold certificates, still circulated, but the aggregate gold circulation throughout the world since the war has been *relatively* very small. The result has been that gold reserves, instead of being partly scattered in the hands of the public, have been concentrated in the hands of central banks, whose holdings have in consequence been much increased.

STRUCTURAL CHANGES BY THE GOLD-BULLION AND GOLD-EXCHANGE STANDARDS.—Along with the withdrawal of gold coin from circulation and the cessation of minting, certain new forms of the gold standard, not indeed previously unknown either in theory or even in certain cases in prac-

tice, emerged into widespread use after the war. Under one of these variants of the traditional gold standard, commonly known as the gold-bullion standard, the obligatory conversion of notes into gold remained, but they were redeemable not in gold coin but in gold bars in amounts above a legal minimum sum. When England returned to the gold standard in 1925 it was this form of it, advocated over a century earlier by David Ricardo, which was adopted. The Bank of England was merely obligated by statute to buy and sell gold bars at fixed prices in unlimited quantities above the legal minimum amount of sixteen hundred pounds sterling. The significance of this innovation was the frank recognition of the principle examined more fully in Chapter V. below, that gold reserves exist primarily not to ensure the convertibility of notes into coin, whose circulation is superfluous, but for export in meeting temporary deficits in the balance of foreign payments. Several other countries followed England in adopting this system, some in the modified form of the Banque de France, which was given the option of redeeming notes in either gold bullion or gold coin.

The other form of the gold standard which was adopted on a wide scale after the war was the so-called gold-exchange standard. Before the war, redemption of notes had in actual practice often been effected in many cases in foreign exchange and gold bullion as well as in gold specie, but the last-mentioned method was the only one which was made legally obligatory on demand. Many central bank reserves included foreign exchange before the war, but their number considerably increased, and in many cases foreign exchange rates have been regulated chiefly by purchase and sale of foreign exchange by these central banks. The Reichsbank adopted this system for an

indefinite period, the Banque de France from September 1926 to June 1928, the latter accumulating a huge volume of foreign exchange.¹ But the modification of the statutes of central banks permitting them to effect redemption of notes either in gold or foreign exchange at their option² has been a structural change of equal significance as the inclusion of foreign exchange in largely increased amounts in the central bank reserves of a much greater number of countries than resorted to this practice prior to the war.

RESERVE RATIOS.—These reforms of the gold standard, the withdrawal of gold coin from circulation and the widespread adoption of the gold-exchange standard, effected a great reduction in the monetary demand for gold after the war. The latter innovation was indeed introduced, under the influence of the Genoa Conference and the aegis of the League of Nations, precisely with the idea of effecting this objective of averting a threatened shortage of the supply of gold in relation to the prospective greatly increased demand which would result from most of the world going back on to the gold base. But other changes in the structure of the post-war gold standard tended in the opposite direction of increasing instead of reducing the demand for monetary gold. One of these was the increasing strictness of the statutory requirements regarding minimum reserves of central banks. These were raised in two respects. The minimum gold cover for note issues was increased from the 33 per cent which was the commonly prevalent minimum ratio before the war to 40 per

¹ *The Functioning of the Gold Standard*, Memorandum submitted to the Gold Delegation of the Financial Committee of the League of Nations by Dr. Feliks Mlynarski, p. 8: "The development of this custom is shown best by the following figures. At the end of 1913, the foreign exchange reserves of Central Banks amounted to about \$350 million, whereas at the end of 1928 they had increased to about \$2000 million."

² The central banks of Danzig and Estonia were actually placed under statutory obligation of redeeming their notes *exclusively* in foreign exchange (*op. cit.* p. 9).

cent in many cases; and secondly, there was a wide extension of the practice requiring the maintenance of a minimum reserve not only against note issues but also in a certain proportion against other demand liabilities of central banks. The rationale, wisdom and consequences of this practice are examined in Chapter V. below.

CHANGES IN THE FUNCTIONING OF THE GOLD STANDARD.

—But the changes in the functioning of the gold standard which characterised the post-war period, some of which developed as a direct outcome of the structural modifications which it has undergone, others of which occurred independently in consequence of deep-seated changes in the conditioning economic environment in which the gold standard operates, are of greater importance than the structural differences just enumerated.

These changes have been of the most diverse kind, but one and all they had the effect, individually and cumulatively, of rendering the gold standard of the post-war decade a far less automatically functioning arrangement than it was before the war. Though it was never possible, even in pre-war days, as indicated above, to dispense entirely with monetary management under the gold standard, an increasingly large measure of management, and of a more complex kind, became necessary after the war. The traditional popular exposition of the working of the gold standard has run in terms of the effect which gold outflows (and *mutatis mutandis* inflows) have on prices and the balance of payments through producing a shrinkage of the monetary circulation by forcing a curtailment of credit by the central bank which leads to a general lowering of the price level; thus making the country a good one to buy from cheaply and so increasing its volume of exports and improving its foreign balance of payments; which in turn checks the outflow of gold and so corrects the original

source of the trouble. That such an account amounted by oversimplification almost to a caricature of actual practice even of pre-war times we have already seen. The account has become even less true of post-war conditions in consequence of the weakening of such correlation as existed in pre-war days between international movements of gold and changes in price levels. The point requires further elaboration since it is a development not only inconsistent at bottom with the essence of the gold-standard mechanism as understood before the war but at variance with the real nature of a freely automatic metallic standard as such.

"OFFSETTING."—In the nineteenth century general price movements in different countries showed a marked tendency to move harmoniously together over the whole gold-standard area. In the post-war period this process of approximate equalisation or at least congruous movement has been prevented from occurring to anything like the same extent by reason of two sets of factors. The first of these "interferences" consists in a considerable departure from the pre-war conception and practice of the gold standard as involving the necessity that gains and losses of gold by central banks should be followed by cheap and dear money policies respectively for the purpose of influencing the price level and money-income structure to the full extent demanded by the increase or diminution of gold reserves. Pre-war practice rested on the double assumption that countries losing gold would put into effect policies which would produce a lower level of prices and money incomes, and countries which were gaining gold would do the reverse. The efforts of central banks in post-war years, however, have been directed in many instances, not to seeing that these results were produced, but that they were *prevented* from occurring. Thus the assumptions underlying pre-war practice have often not been valid in

the post-war world. Instead of gold movements being given their full effect on the price and cost structure, the tendency has often been to *offset* their influence by deliberate monetary policy taking the form of an *expansion* of bank credit upon the occurrence of a gold outflow and its *contraction* following an inflow. This policy is of course wholly incompatible with the maintenance of the internationally integrated and approximately uniform price and income structure which is the very core of the gold standard. A country which, like the United States, receives gold in consequence of a favourable balance of trade, notwithstanding its heavily creditor position, should in the interests of international equilibrium have a sharply rising level of prices and money incomes. But if it counteracts gold imports by letting its central-banking system sell securities and prevent credit expansion, the international readjustment which is required will not take place. Conversely, if gold exports from a country whose internal price-cost structure is too far above the international level, as was the case with Great Britain, are offset by the central bank's creation of credit, again the maladjustments are not corrected. In both cases the policy of internal stabilisation may be the more desirable, and indeed in practice the only possible course to pursue, as being a preferable alternative to permitting the price and income structure to rise in the one case, to fall in the other, to the level demanded for the preservation of international equilibrium. But it is a policy which is utterly at variance with the international integration of domestic price levels which the free flow of gold should bring about. The two policies are antithetical, and the attempt at compromise between them ultimately ends in complete breakdown of the gold standard.

Domestic monetary policy has thus largely frustrated the effects gold movements should have. The second of

the two factors in the post-war world which have prevented gold movements from producing an approximate equalisation of prices is the increasing extent to which economic structures have offered resistance to monetary policies and prevented them from achieving their objective when necessary in raising, but more particularly in lowering the money-income level. A flexible price level moved up and down by monetary policy in response to fluid gold movements demands a flexible cost structure. If the pressure or relaxation exerted by credit restriction or expansion is not passed down all along the line to the different factors of production in due proportions, its effects are obstructed and maladjustments of one kind or another are bound to develop. The extent to which increasing rigidities of the economic structure have developed in the post-war decade has fundamentally altered the whole problem and necessitates re-examination of the basic premises upon which the pre-war gold standard rested.

Yet it was not so easy to put pre-war principles into practice in the post-war world. Consider the case of Great Britain. During the period after 1925 the British price structure was clearly out of equilibrium with the world level, as a result in large measure of the initial overvaluation of sterling at the time the gold standard was restored. London was in consequence exposed to the persistent threat of a net export of gold. Yet no appropriate contraction of credit was effected.¹ "You will find", later stated a Deputy Governor of the Bank of England, Sir Ernest

¹ "Even when we did not actually lose gold we only retained it by all sorts of devices—including, so it is said, occasional appeals *ad misericordiam* to French bankers not to withdraw their balances. The sterling exchange tended continuously to be in the neighbourhood of the gold-export point during the greater part of the period" 1925-29. But no contraction of credit took place. Deposits of the London Clearing Banks "actually increased from a yearly average of £1623.2 million in 1925 to £1762.5 million in 1929" (Lionel Robbins, *The Great Depression* (London, 1934), pp. 27-8).

Harvey, "if you look at a succession of Bank returns, that the amount of gold we have lost has been almost entirely replaced by an increase in the Bank's securities."¹ Yet can anyone doubt, in view of the magnitude of the difficulties involved in the reduction to a lower level of the internal cost structure, and especially of wage rates, that the alternative "orthodox" policy could not have been carried out without provoking disastrous social consequences? Here domestic non-monetary factors offered the most stubborn sort of resistance to the effects which should have followed the application of traditional monetary measures for the correction of internal disequilibrium with the international situation.

But it is to the United States that we must turn if we would see most clearly illustrated the absurd conclusions to which we are led by the demand for pre-war orthodoxy in the operation of the gold standard in the changed conditions of the post-war world. Those who condemn the pre-depression policy of the Federal Reserve authorities in their departure from gold-standard orthodoxy should in consistency realise that these principles would have required that an inflationary boom of probably much larger proportions should have been allowed to develop at certainly a much earlier date. For America had a greatly excessive gold stock, and on pre-war principles should have permitted it to have its full influence in raising prices. In no other way could she, with her high tariff wall, or possibly even without it, have developed a sufficiently large adverse balance of trade to relieve her of her surplus gold. The critics of the post-war pre-depression "stabilisation" policy of the Federal Reserve Board, about which we shall have more to say later, and which was certainly not

¹ Minutes of Evidence before British Committee on Finance and Industry (The "Macmillan" Committee), vol. i. Q.353.

free from serious errors, cannot have it both ways. If monetary "management" is wrong in principle, the Federal Reserve Board should have refrained from all active "interference", and desisting from "artificial" attempts to control the price level, should have allowed it to soar upwards to the full extent justified by the gold reserves, to a point where the process was arrested by the growth in volume of foreign imports. It is unreasonable to demand on the one hand that the Federal Reserve system should, on pre-war central-banking principles, have refrained from practising deliberate control of the price level, and on the other that it should on post-war principles have ignored, as indeed it largely did, the historic index of the reserves and exercised *more* credit control to prevent the development of a boom. In fine, on pre-war theory of the full utilisation of gold reserves there should have been not less, but more inflation between 1921 and 1929. This is quite apart from the effects, mentioned above, which attempts to control the volume of credit in response to gold movements by means of discount-rate manipulation are quite likely to have—a rise in bank rates attracting, a fall driving away short-term liquid funds in excessive volume, thus frustrating all influence exerted on the price level.

GOLD MOVEMENTS, DISCOUNT RATES AND PRICE LEVELS.—The reciprocal influence of gold movements and changing price levels on each other constitutes the basic article in the dogma of the semi-automatic functioning of the gold standard. In post-war years, however, the great growth in the accumulation and international flow of short-term capital, and the circumstance that the world is financially more closely knit than in pre-war days, have had the effect of much weakening this connection. "To-day the inflow or outflow of gold, by causing a raising or lowering of the price of discount credit, causes such a rapid and consider-

able shifting of the liquid funds on the world money market that the direction of the movement of gold is bound to change *before any alteration in the price level can take place*. . . . The classic contention that 'the export of gold means a fall in prices' has become an anachronism. To-day a change in the price of credit alone suffices, not merely to check the inflow or outflow of gold, but to change an outflow into an inflow or *vice versa*. The dear-ness of credit attracts foreign capital like a magnet. . . . Under present conditions, a Central Bank must operate by means of a strong credit policy maintained over a fairly long period, if it wishes to influence the level of prices. . . . The gold standard now is, and must be in an increasing degree, a manipulated standard. . . . The movement of gold, the volume and price of credit and the changes in price-levels have lost their mutual correlation. Harmony has given place to discord."¹ Under the post-war operation of the gold standard the international levelling of prices demanded by the gold standard no longer takes place automatically through the influence of gold move-ments, if it is effected at all, and domestic price levels have in consequence grown increasingly independent of each other. The internationally interrelated price and money-income structure ruling throughout the entire area of the gold standard has been becoming a myth in the post-war world. Before the crisis local price levels, instead of moving up and down together, moved at certain periods upwards in some countries, down in others, and in others again remained stable.

¹ *The Functioning of the Gold Standard*, Memorandum submitted to the Gold Delegation of the Financial Committee of the League of Nations by Dr. Feliks Mlynarski, pp. 15-17. When the discount rate was raised in the United States in 1928, the amount of bank acceptances purchased by foreign Central Banks increased by over \$200 million in six months. Conversely the Bank of England experienced a large and rapid withdrawal of deposits whenever it lowered its rates below that of the Federal Reserve banks (*ibid.* p. 19).

The pre-war connection between international gold flows and local price levels was weakened in another important respect by the great extension of the gold-exchange standard system. This device possessed the very great merit of reducing the world's monetary demand for gold by the inclusion in central-bank reserves of foreign exchange convertible into gold at will. In practice, except in times of panic, the foreign exchange was not so converted. But it may be, and often was, easily transferred from one centre to another, especially if, as we have seen, higher money rates attracted it elsewhere. But in their effects on price levels such international movements of short-term liquid funds differ radically from international gold movements. The latter, if not counteracted by central-banking policy, have an influence on the price levels of both the country losing and the country receiving the gold. Shifting liquid balances, in contrast, have a one-sided effect. The reciprocal effect of the transference of central-banking reserves has been distorted. Credit in the country of a central bank acquiring or losing foreign exchange may be correspondingly relaxed or restricted, but no effect at all need be felt upon the credit structure of the country from which the balances are being withdrawn or in which they are deposited. If these foreign-exchange reserves were concentrated in foreign central banks this might not happen: the supreme banking authorities would be in a position to take such action as was deemed appropriate upon their increase or diminution. But in actual practice it is with the commercial banks that these funds are mainly deposited. This latter fact aggravates the disturbance they are likely to create and constitutes another disadvantage of the gold-exchange standard. Large accumulations of short-term balances by foreign countries applying the gold-exchange standard have been

a strain upon and a threat to the great monetary centres where they are deposited, inasmuch as they can be turned into gold or transferred elsewhere without warning. In order to protect themselves against this danger and to be prepared for emergencies the central banks of these world money markets have been compelled to keep larger gold reserves than they would otherwise have needed, thus to some extent offsetting the economies in the use of gold effected by the gold-exchange standard mechanism itself. The influence of large floating foreign central-bank balances whose movements are quite unpredictable cannot but be a factor making for much uncertainty and disturbance. It must in justice be observed, however, that the dislocation produced by sudden transfers of liquid funds from centre to centre did not become a serious source of embarrassment and menace till after Britain's departure from gold and the losses it occasioned to the countries holding short-term balances in London.

SHORT-TERM LIQUID FOREIGN BALANCES.—In recent years the total volume of liquid capital in the world has been abnormally large in relation to long-term investment. In addition to the foreign exchange held as part of their reserves by central banks operating under the gold-exchange standard, short-term balances have also been held in foreign countries on an extensive scale by countries not actually on the gold-exchange standard. "The existence of such large balances held on foreign account, and liable to be shifted quickly, has been a prime factor in the monetary instability of the post-war period."¹ In view of the heavy losses suffered by many gold-exchange standard countries from the depreciation of sterling consequent upon England's abandonment of gold, the system has

¹ *Report of the Gold Delegation of the Financial Committee of the League of Nations*, p. 54, para. 216.

been much discredited, and it is pretty certain that it cannot be rehabilitated to the extent of effecting as great an economy in the use of gold as before the depression.

In this connection the very different reasons for the recent international movements of short-term capital, as contrasted with those by which they used to be motivated, ought to be noted. Prior to the war, and indeed prior to the depression, these movements were usually rational movements based on calculations of gain, capital flowing away from centres with low money rates in the direction of centres with high rates. Since the crisis they have been rather in the nature of panicky flights from centres whose secure attachment to the gold standard has come under suspicion. These highly nervous short-term balances have thus become a disrupting influence of the first magnitude because of the danger of their being withdrawn when withdrawal was likely to do most injury by creating a situation similar to the wholesale irrational panic-inspired runs which sometimes force commercial banks to close their doors.

The havoc they wrought as the depression deepened is well enough known. The desperate anxiety for liquidity which developed as the crisis intensified imposed a tremendous strain on the world's money markets in exposing them to the menace of sudden heavy demands which were wholly incalculable because they were of a non-economic kind but sprang from fear. They first shook Germany, then forced England off gold, and constituted a continuous threat to the United States till she too left the gold standard. The Bank for International Settlements estimates the total short-term international indebtedness at the beginning of 1931 at over 50 billion¹ Swiss francs—over \$9½

¹ Throughout this study the word billion is used in the American sense, to mean a thousand million.

billion at par—and comments thus on the effects of their rapid shifting from centre to centre: “Previous experience had seemed to show that in ordinary times large transfers of credits took place at a moderate rate. The pace at which funds moved was, with rare exceptions, largely determined by the rapidity with which new funds could be actively employed in trade and industry. . . . When, however, short-term funds are recalled, not with the object of re-investment at home or elsewhere but as a result of the breakdown of confidence, the wholesale demands for immediate transfers are almost certain to break the system at some point. . . . The classical remedy of increase of the discount rate proved inoperative in checking the withdrawal of foreign funds, for the reason that mobile capital was seeking security, with little or no return, rather than high interest rates coupled with currency and credit risks.”¹ Central banks have attempted to protect themselves against these dangers by building up large reserves and striving after liquidity. But the collective result of their individual efforts in indulging in a wild scramble for gold has only made matters worse for all. For, as the Gold Delegation has pertinently remarked, “Any fresh shock to confidence starts a sudden transfer of funds which imposes a strain upon the banking system against which no protective measures can be effective and which has in fact forced many countries off the gold standard. In so far as commercial banks endeavour to accumulate large cash reserves with their Central Banks, or Central Banks to accumulate large reserves in gold, they further depress prices and increase the dangers against which they are trying to guard themselves.”² Yet individually each is

¹ Second *Annual Report* (1931–32) of the Bank for International Settlements (Basle, 1932), p. 11.

² *Report of the Gold Delegation*, p. 43, para. 155.

powerless to do otherwise, for it is compelled to act in this manner by the necessities of the gold standard as long as it attempts to continue its adherence to that system.

These abnormally large amounts of internationally held liquid capital have not merely generated international uncertainty and instability instead of performing their traditional functions of correcting, through gold movements, the international disparities in price levels. They have also led to internal instability and confusion, as a result of the effects upon the reserve base produced by gold imports, but more especially by gold exports. When large and rapid foreign gold drains occur in nervous situations, they can provoke domestic alarm and apprehension which finds expression in internal hoarding of gold and currency, and a flight of capital. The acute sensitivity of short-term capital in post-war years and its abnormal volume have tended to aggravate gold flows and have often set in motion a train of consequences cumulative in their effect. This has been as true of periods of rising prices and expansion as of periods of deflation. For, as shown above, a rise of prices in any one country, whether of commodities or securities, may not have the effect of inducing the gold export which, according to classic monetary theory, should result and thus restore equilibrium by bringing prices down again. Its effect may instead be to attract capital and produce a gold inflow which encourages prices to rise still higher, as happened in the New York stock-market boom of 1928-29. The reverse sequence holds good of periods of falling prices. In such conditions monetary policy can hardly consist in mechanical reflex action regulated by gold movements along traditional lines: deliberate management becomes inevitable. The problem is not as simple as orthodox theory has represented it, and the responsibility for conscious

control of credit, price levels and gold flows cannot be evaded.

ENGLAND'S FORMER LEADERSHIP IN THE GOLD STANDARD.—Such success as the international gold standard enjoyed in pre-war days was in large measure attributable to the international commercial and financial dominance of one country, Great Britain. By reason of the immense volume of her foreign investments and the conservatism, allied to an absence of political pressure, with which they were made; the complete freedom of her gold and foreign-exchange markets; her whole-hearted adherence to the principle and practice of free trade in goods; and lastly, the freedom of the Bank of England from interference from the Treasury, Great Britain enjoyed a position of undisputed leadership and power in the operation of the gold standard. For the half-century before the war London's predominance in the world's financial markets rendered the value of gold and the value of sterling virtually synonymous: sterling was indeed the international standard.

England's relative decline in international trade and finance has introduced an element of uncertainty and confusion into the situation. As no other centre has been qualified to assume London's rôle of unchallenged supremacy, there have been in recent years, in place of one, three great world financial centres which in their administration of the gold standard have often pulled in opposite directions and worked at cross purposes, and which have offered the choice between three depositaries for mobile short-term balances.

Great Britain employed her international lending power as the world's leading creditor country in a manner consistent with the requirements of this position. The two countries which, largely by the fortunes of war, fell heir to the ground she lost, namely, the United States and

France, have signally failed, partly by reason of inexperience, partly by force of circumstances, to utilise their creditor power similarly in the purchase of additional foreign products in appropriate volume or in making additional foreign loans on long term in a steady continuous stream, with caution and on the basis of economic expectations alone. On the contrary, whereas England operated on an extraordinarily small gold reserve, they have taken a large part of their annual surplus in gold or in short-term liquid claims. As regards foreign investment, one of the two, France, has shown, for a variety of not incomprehensible reasons, great reluctance to lend abroad on long term, lending instead on short term to a disproportionate extent. She has in addition been influenced in her foreign lending by non-financial considerations of a diplomatic sort which have rendered her an uncertain creditor and made the movement of French balances quite incalculable. The United States, on the other hand, has exercised her power to lend abroad spasmodically, by violent fits and starts, and with great imprudence. Both countries have been influenced, moreover, by isolationist sentiments which have militated against the smooth working of an international standard.

It is hardly necessary to stress yet once again the self-contradictory policy pursued by the United States in insisting on the payment of war debts—which must have created confusion in the best of circumstances, since these large payments did not represent earnings of productive investments—while she prevented by her tariff barriers their payment in the only possible way in which it could have been made: the injury which this course of action inflicted on the world at large ultimately engulfing her too. The method whereby the United States was enabled to continue so long her anomalous rôle of a creditor on large

scale which yet enjoyed a favourable balance of trade was through a tremendous process of foreign lending, much of which was grossly improvident and the proceeds of which were partly used by the borrowers for non-productive purposes. From the point of view of both her own interests and those of the world at large the United States has shown herself a most unsatisfactory creditor country. She has functioned vigorously in this respect only intermittently, unlike London in pre-war days, which could be relied upon to distribute capital throughout the world in a fairly steady flow. In the supply of and demand for short-term accommodation her influence has also been disturbingly sporadic as a result of stock-market booms and the attraction they have exercised on foreign liquid capital. Till 1928 the volume of foreign loans floated in New York kept increasing: then that source of foreign borrowing, which had come to be regarded as permanently available, suddenly began to dry up. American capital issues for foreign account dropped from \$841 million in the first half of 1928 to \$409 million in the second half of that year and to \$218 million in the second half of 1929.¹ American and French influences together have rendered the flow of world capital for foreign investment much more irregular than before the war, when Britain played so large a part in its total international movement, with effects upon both borrowers and lenders proportionately disturbing.

NATURE OF THE POST-WAR GOLD STANDARD.—To sum up: Since the war it has become an anachronism to speak of the semi-automatic functioning of the gold standard; the gold standard has become a managed currency. It has been a system not automatically operative but one involving considerable, if insufficiently effective management. The choice before us, under existing conditions, does not

¹ *Report of the Gold Delegation*, p. 19, para. 50. (Corrected figures.)

lie between an automatic regulator of money and a managed currency, with or without a gold base. We cannot, even if we would, avoid the necessity of control. The only choice concerns the form of control we adopt and the objectives we deem most essential in the determination of its policy. The supporting foundations of a free uncontrolled gold standard have long ago been sapped beyond repair. Gold movements have been determined more often than not by changes in interest rates rather than by relative changes in price levels. Central banks have regulated domestic price structures largely independently of gold flows. In the United States particularly the connection between the gold reserve and the credit superstructure has been increasingly ignored. In the pre-war sense she has not been on the gold standard since the war, though having a currency so amply covered by gold. The Federal Reserve's management of currency and credit has determined rather than been determined by the changing value of gold. By the consistent utilisation of the devices of "offsetting" and "sterilising", which the United States was in a position to practise by virtue of her huge gold stocks, the total media of payments were regulated till the depression independently of her reserves and to suit supposed domestic business needs. The value of gold was the value arbitrarily given the dollar by the American monetary authorities. The international gold standard in the post-war decade till 1929 was in reality an international standard based upon the dollar. Similarly, in the case of Great Britain, gold flows have been prevented from exercising their full effect on the domestic price and money-income structure. The speedy communication of impulses from without to national economic structures has been increasingly impeded by deliberate action dictated by the force of circumstances, with the result that gold has

not been permitted to perform its essential function of enforcing international equilibrium and establishing a single internationally integrated price and income structure over the whole gold standard area. The non-monetary factors which have been largely responsible for this development are examined in the next chapter.

CHAPTER III

THE FUNCTIONING OF THE POST-WAR GOLD STANDARD: II. THE CONDITIONING ECONOMIC ENVIRONMENT

INFLEXIBILITIES OF THE PRICE STRUCTURE.—The difficulties under which the gold standard has functioned in post-war years have been only partly due to the changes in internal structure which it has undergone. Equally or more important have been the non-monetary changes in the conditioning economic environment in and through which any monetary standard has to function and which constitute its limiting conditions. The gold standard is at bottom a monetary instrument demanding flexibility of economic structures, but since the war it has been operating in a world of growing economic rigidities. Whether the fault lies with the gold standard itself or with attempts at artificial control of economic factors, there can be no difference of opinion that either the monetary mechanism must conform to the nature of its economic environment, or the environment be adapted to the needs of the monetary standard. The question, however, is not so much whether in theory it is ideally preferable to force economic activity to proceed flexibly in the Procrustean bed of an automatic international monetary system such as the gold standard, or to fashion the monetary system to fit the unyielding framework of a relatively rigid economic structure. In theory, under ideal conditions, either alternative would do equally well. For with complete elasticity of economic

factors, with the prices of all goods and services moving equally freely and promptly up and down—which in practice is of course a totally unattainable goal, if for no other reason at least because of long-term contractual obligations—almost any demands of the monetary standard could be easily met, however exacting. While conversely if the monetary mechanism, including the processes of investment, were so completely under control that we could make it behave exactly as we wanted, the rigidity of non-monetary factors might not so greatly matter. The question, rather, is this: which end is more easily attainable without producing undesirable social and economic consequences—whether to attempt to reverse the apparent tendency of economic development in recent decades, or to modify or change our monetary system?

It is well to be quite clear what we have in mind in speaking of the unprecedented development of inflexible elements in the economic structure in post-war years, familiar enough though this territory is to all students of economics. For these rigidities are of the most diverse and varied kind, and in lumping them together when discussing the extent to which inflexibility in general can be mitigated, we are in danger of overlooking fundamental differences as between those inflexibilities which are desirable and those which are not, and again as between those which there is some hope of reducing and those which for better or worse must in the conditions of the world to-day be accepted as ineradicable.

A régime of relatively free competition, domestically and internationally, with mobility not only of goods but also, in reasonable measure, of labour, is indispensable for the smooth and semi-automatic functioning of the gold standard. A completely competitive régime has of course never existed. It is a methodologically useful fiction when

recognised as such and created for speculative purposes: one which can be employed without danger provided that one remembers that deductions based on this simplified caricature are not applicable to real life without further ado. Yet in the nineteenth century free competition did play so much greater a part in regulating economic life than it does to-day that we are justified in loosely characterising the system as it then existed as one of free competitive enterprise, and of treating obstructions to the natural play of economic forces as so many exceptions to the rule rather than as the rule itself, relegating trusts, trade unions, railroads, public utilities, the state's economic activities and so on to the subsequent portions of our texts. It is questionable if this assumption is any longer justifiable in the post-war world of the twentieth century.

Since the war, and indeed ever since the pure philosophy of economic individualism began to wane during the latter decades of the nineteenth century, the tendency has been for the economic system to be subjected to an increasing degree of conscious direction and control, both as a whole and in its component parts. The instances which immediately spring to mind are numerous, obvious and familiar. They fall roughly into two classes: those resulting from the assumption by the state of an ever-widening range of economic functions, governments having to an increasingly large extent themselves undertaken or attempted to control or guide certain types of economic activity; and, on the other hand, the efforts which private business itself has exerted to exercise artificial control over prices, output, conditions of production, etc., in the interest of larger returns than those yielded by free competition. Thus, apart from the effect of the variety of unavoidable frictions inherent in the functioning of all human institutions, the processes of pure or perfect competition have

encountered an increasingly large degree of interference imposed both from without by public authority and from within by industry itself. Some types of control fall into both categories, or cut across this division. The result has been that the monetary mechanism in effecting readjustments and correcting disequilibria has met resistances both national and international in considerable areas of the price structure which have been rendered inflexible by governmental regulation and large-scale organisation both of capital and labour: rigidities in wage rates and in certain commodity prices; railway and public utility rates; social service costs; the salaries of public officials; and a widening range of contractual obligations. These factors will be briefly considered in succession.

CONTRACTUAL AND CUSTOM-FIXED OBLIGATIONS.—The direct and indirect charges on industry which are fixed by contract have grown much heavier in recent decades as a result of the increasing variety of economic services which the state has been performing. The inflexibility of these charges is not equally great in all cases. Most rigid of all are payments unalterably fixed in terms of money over a long period of years, such as interest on long-term government securities, except where this can be reduced by debt conversion operations. The importance of this factor has grown since the war in proportion to the vast increase in the indebtedness of governments, both central and local, throughout the world.¹ There is no way of permanently reducing this element of rigidity short of reducing the magnitude of public debt from its present high level. The possibility of so doing depends in turn upon the extent to

¹ The importance of government debts lies chiefly in their contribution to the tax burden. But taxes, though a flexible element, unfortunately possess a perverse flexibility, showing a cyclical variation in the wrong direction. During depressions they become an increasingly heavy burden on industry, so that their reduction is particularly urgent, but it is precisely at such times that they rise.

which governments can, and should, permanently cut down their expenditures by divesting themselves of many of the additional functions which they have been discharging in recent years, or alternatively can have recourse in larger measure to a pay-as-you-go policy of financing out of tax receipts. These observations apply equally, *mutatis mutandis*, to the fixed-interest-bearing securities of private enterprise.

Only less rigid are many types of payments which are not contractual in the same sense as interest on bonded debt but which are fixed by statute or custom. Into this category fall disbursements under unemployment insurance systems, public health services, pension schemes and the like. The stubborn resistance likely to be offered to any downward revision in these social service charges is sufficiently clearly illustrated by recent European, and particularly British experience. And though they have hitherto bulked proportionately larger in the budgets of many European countries than in that of the United States, their rapid extension there also must be expected, a prospect which should be welcomed if not on economic, then on social and humanitarian grounds. Once introduced, here is an element of inflexibility which can be reduced only with the greatest difficulty and at the risk of provoking widespread popular discontent and disturbance.

Another inelastic factor is found in the salaries of public officials. Inasmuch as these are based on long-term calculations of governments and long-range expectations on the part of those entering the civil services, they cannot be easily given greater flexibility. Reductions can, it is true, be effected in periods of depression without much difficulty because the recipients are relatively powerless to resist them; but this practice cannot be often repeated without

detriment to the public interest, because the calibre of the personnel attracted and hence the quality of public administration is likely in the long run to suffer deterioration. Greater flexibility in this respect is not desirable unless it means more flexible upward as well as downward movement in response to cyclical changes in business activity. It is, moreover, inequitable that public servants should be asked to accept salary reductions in bad times, except in the gravest of emergencies such as we recently passed through, unless they can also share more fully in the fruits of prosperity. Stability of income, as well as security of employment, is one of the advantages which they are entitled to enjoy in compensation for the relatively lower scale of earnings, as compared with that of private business, which they accept.

These are only a few examples of rigidities which it would be very difficult to reduce. The greatest opportunities for introducing greater elasticity into public expenditures, provided comprehensive long-range plans to that end were carefully formulated well in advance, lie in capital outlays on permanent public improvements being undertaken on a flexible basis. But there it is emphatically not in the interests of economic balance that public works expenditures should be reduced in periods of depression and expanded in boom times. For such a policy would have the effect during booms of intensifying inflationary tendencies by increasing the pressure on the supply of labour and materials, and conversely of deepening the severity of depressions by reinforcing the decline in private spending by a curtailment of public expenditure. Rather should the volume of public works be so controlled as to vary in the *opposite* direction to the fluctuations in private business in order to offset them and thus serve as a compensating force. The question is more fully discussed in Chapter X.

below, and is mentioned here merely in order to raise the question whether it is desirable to introduce greater flexibility into public expenditures in general if the purpose is to make them vary in the same direction as the other elements in the economic structure.

But another aspect of the problem is presented by the extension of the area of the economic activities of governments. Government expenditures, for whatever purpose, differ radically in principle from the spending of private enterprise in not being made under the spur of the profit motive. Two systems of organisation of economic activity thus exist alongside each other, mutually interacting but conducted on principles which often dictate opposed policies. Thus not only is a high degree of flexibility an indispensable condition for the smooth working of a freely competitive system, but a limitation of the sphere of governmental action to the irreducible minimum is almost equally desirable. The oil of public regulation and the water of free enterprise do not mix readily or satisfactorily. Indeed part of the underlying trouble with our system to-day is that, being a compromise, it possesses the flexibility of neither a truly competitive order nor of a wholly regulated one. The proportion of national income which passes through the hands of public authorities has markedly increased almost everywhere since the war. The great variation in the methods by which both the figures of national income and public expenditures are calculated render illegitimate direct comparisons between different countries, but the sharply upward direction of the movement in all cases is beyond dispute. The percentage which total expenditures of all public authorities were of estimated national income increased in Germany from 15.7 in 1913-1914 to 27.6 in 1928-29; in Sweden from 15.5 in 1913 to 21.8 in 1928; in the United States from 8.5 in 1913 to

15.3 in 1929.¹ Since then there has, for obvious reasons, been a further rise in these proportions. The increasing concentration of spending power in the hands of governmental authorities, and in consequence the growingly important rôle played by the state in economic life, is clearly revealed.²

WAGES.—Since the great bulk of wage payments are disbursed by private enterprise on short-period terms, the same problem does not arise in connection with them as in the case of contractual obligations or those fixed by law and custom for relatively long periods. Yet the popular resistance to downward revision of wage scales in periods of falling prices is notorious, and even where it can be successfully accomplished the social friction engendered is likely to be considerable. The difficulty is especially great where strong labour unions exist to offer organised opposition. In their absence, on the other hand, the difficulty lies in pushing up wage levels rapidly enough in periods of rising prices, because of the opposition of employers. This is an equally great evil from the point of view of flexibility of the price structure, inasmuch as the excessive profits which result encourage inflationary overexpansion with subsequent reaction into depression.³ Those who demand greater flexibility of wage rates in periods of declining economic activity—meaning thereby less resistance to reductions—should in logical consistency remember that, if flexibility is a virtue, less time-lag in the rise of wages

¹ *World Economic Survey*, 1931-32, p. 247.

² Cf. the observations of the Gold Delegation: "The changes contractually fixed have increased; others have passed up the scale from readily variable to rigid or barely flexible. With this increasing rigidity there has been a loss of tensile strength, and when forces have come into play which have tended to drive down this or that category of values, the whole mechanism has failed to adapt itself, and, because of this failure, has been strained to or beyond breaking point" (*Report of the Gold Delegation*, p. 20, para. 56).

³ See below, Chapters VI. and XI.

on the upswing of the cycle is every bit as desirable so that maladjustments may be prevented from developing: and they should be prepared to show how this greater flexibility of movement in *both* directions is to be secured. The ill-effects likely to result from relatively inflexible wage rates combined with fluid profit margins find equally good illustration in the opposite experiences of Great Britain and the United States during the years 1925-29. The relative stagnation and abnormal unemployment suffered by the former after her return to gold at the pre-war parity of exchange were due in at least large part to the difficulty encountered in reducing wages in proportion to the increased value of sterling and to the extent necessary for Britain to recapture her quota of world foreign trade. On the other hand, the development of the boom in the United States during this period must be partly attributed, as is shown below, to the failure of wages to rise sufficiently to compensate, under a relatively stable wholesale price level, for rapid reductions in unit costs of production, and thus to keep profits in check.

MONOPOLY PRICES.—Space does not permit a discussion of the problem and extent of monopoly and quasi-monopoly control of the prices of raw and manufactured products and of certain services, conspicuously those of railways and public utilities. Consider the case of the United States, where the law has been more hostile to monopoly than in most countries. Despite a succession of “anti-trust” measures the range of products and services falling into this class has grown steadily wider. Right through the first three years of the depression the price of certain steel products, for instance, fell hardly at all. The same is true of the rates charged by most public utilities, which have grown in relative importance in the national economy, while railroad rates were actually raised in some

instances.¹ Numerous similar examples could be cited from other countries, Germany in particular, of the prices of cartellised products being increased when the general level of prices was falling.

The subject is too familiar to need elaboration. The point of importance is that this sort of partial price stabilisation is worse than no price stability at all because it throws the entire burden of the readjustment made necessary by any shift in the general price level upon the remaining area of uncontrolled flexible prices, thereby greatly intensifying their fluctuation and creating violent disequilibrium throughout the whole price structure. Such stability of individual prices in certain limited areas during the transition from one general level of prices to another is purchased, however, at the cost not only of greater price instability elsewhere, but also of instability of output and employment in the industry itself which produces the controlled article. Conditions in the U.S. steel industry may again be instanced as a case in point.

The same is true of the internationally traded commodities controlled under various cartels, pools, valorisation schemes and the like. Attempts at the artificial control of the supply of many raw materials—wheat, sugar, coffee, rubber, silk, silver, copper—have prevented the natural adjustment of prices to underlying changes in conditions of demand and supply and rendered them unresponsive to movements in the general price level. The fact that these interferences have in the past failed to maintain themselves permanently has served only to make the ensuing collapse all the worse. Though such price-supporting measures

¹ One of the reasons why freight charges not only did not come down but were actually permitted to rise, thus imposing a crushing burden on industry in face of the precipitous price decline, was the difficulty encountered in reducing the wages of railway labour. Furthermore, the Reconstruction Finance Corporation, by its loans to the railways, prevented the process of debt inflation.

tend to break down in periods of sufficiently severe business decline, the problem is how to prevent their formation at other times so that the continuance and extension of overproduction leading to subsequent violent collapse are not encouraged. The effect of all these operations, which have taken a great variety of forms, and whether undertaken by governments or private interests, is to impair the safety and usefulness of the organised machinery of the commodity markets. They make doubly difficult the rational prediction of the probable future behaviour of prices upon the basis of statistical information and so weaken one of the basic supports of a freely competitive system.

TRADE BARRIERS.—The gold standard cannot function properly unless the international movement of goods, as well as their internal exchange, enjoys a reasonable degree of freedom from restraints. Trade barriers destroy the relatively uniform world price level whose establishment is at once the virtue of and a necessity for the gold standard. But during post-war years the price levels of different countries have been growing more local. The varied restrictions placed upon the free international flow of goods have become not less but more insurmountable. From the point of view of pure economic theory, which irrefutably demonstrates the advantages of free trade under the flexible competitive conditions it assumes, this tendency, fundamentally inconsistent as it is with the needs of an international monetary system, must be regarded as retrogressive and vicious. Since, however, it exists and shows small sign of waning, it must be recognised and reckoned with. But to attribute the victorious growth of tariffs and trade barriers, on the basis of free trade sympathies rooted in nineteenth century classicist economics, solely to the selfish pressure of the sectional

interests likely to be benefited by them, is too superficial an analysis and misses an important point. Unquestioned and deplorable as is the existence of these factors, there is a deeper explanation for their surprising success in the post-war world.

This has been the desire of individual countries to get their foreign balances into proper equilibrium with their general economic conditions, these somewhat crude artificial means being employed both because the international mechanism through which equilibrium was established in pre-war days has no longer functioned satisfactorily and because of the increasing difficulty which has been encountered in making the necessary internal adjustments required by changing external circumstances. Tariffs and trade barriers have, in other words, been utilised to some extent because other adequate methods of control for the correction of maladjustments have not been available and because equilibrium was no longer being established by the free play of unimpeded economic forces. If this analysis does not apply to the post-war tariff history of all countries, for instance the United States, it does fit the case of Great Britain, who forsook her traditional free trade policy reluctantly and adopted restrictive measures as a means of self-protection. The growth of so many rigidities and interferences imposed both from within the national economy and from without by other nations made recourse inevitable to such counter controls as were available. No country can tolerate being at the mercy of world forces working out automatically, or under the influence of other countries, an equilibrium which is not in harmony with its own peculiar conditions and to which it has not the elasticity to adapt itself. A large measure of freedom from outside interferences which make themselves felt through an international monetary

system may be necessary for the pursuit of social and economic ends which are deemed desirable nationally but conflict with world trends. Some sacrifice of the benefits of full participation in a completely international system might in these circumstances reasonably be regarded as a price worth paying. It is here, and not in crude protectionist fallacies of the popular sort, that are to be partly found the deeper roots of what must otherwise appear the inexplicable movement towards national self-sufficiency and economic isolation so rampant since the war. Such considerations have nothing in common with discredited protectionist doctrines, but transcend that historic controversy.¹

The course of events during the depression has shown in their clearest light the real motives and purposes which have inspired the imposition of tariffs, import quotas, exchange restrictions and the rest. It was concern to restrain trade sufficiently to reduce excessive foreign payments in gold. The imposition of these restrictions was for the defence of the country's currency. While they are certainly causes of the destruction of international trade and of deepening depression, they are yet at the same time symptoms and results of international tension. It is characteristic of an automatic competitive system that each separate nation—just as each business concern within the latter—is individually powerless to refrain from such mutually injurious policies, but is compelled rather to resort to them in self-defence. *In the long run*, it is true,

¹ The partial justification of restrictions on international trade in the modern world in giving the free hand which a nation is likely to find indispensable when carrying out great social and economic experiments finds illustration in the one which is proceeding in the United States to-day. One need not ask how compatible a substantial general lowering of American tariff barriers would be with the necessities of the economic transformation, whatever we may think of it, which is being attempted under the Industrial Recovery and the Agricultural Adjustment acts while these experiments are still in process of being put through.

such measures are unnecessary, but only *providing that the necessary internal adjustments can be made without intolerable strain* and without provoking undesirable social and economic friction. Trade barriers interfere with the working of international trade, but they may facilitate as well as retard the establishment of international equilibrium, and even be essential for the maintenance of the gold standard.

THE LIMITS OF FLEXIBILITY.—The ultimate ideal of those who emphasise the need of flexibility in the economic system is a world in which individual prices are so fluid that they would all move up and down promptly and in unison in response to any changes in general economic conditions. In such a world, as has already been pointed out, movements in the general level of prices would be of no consequence since they would cause no disturbance in the internal relations between particular prices within the total cost-price structure which, by exaggerating or impairing actual or prospective profits, are the root cause of all the trouble.

A moment may be well spent in examining the logical implications of this conception of a completely elastic system. In the first place, as shown above, it would stress equally the need for greater flexibility of movement in certain individual elements in both the upward and downward direction. If the "stickiness" of these factors is harmful during the declining phase of the cycle in preventing necessary readjustments, their tendency to lag is just as injurious on the upswing, though the evil effects are not seen at the time, because maladjustments are permitted to develop. Demonstration of the need for reductions all along the line during depressions is not sufficient: it is also necessary to show how corresponding increases are to be effected during periods of expansion.

In the second place, greater flexibility should mean

greater flexibility throughout the entire price structure: it should apply to all elements, not merely to a few selected ones. Obvious though this observation sounds, the advocacy of greater flexibility has in the past too often boiled down in practice to a one-sided demand for wage cuts during depressions and thus has amounted to a defence of other inflexible elements at the expense of labour. But if increased flexibility is to be understood as meaning increased *general* flexibility it should imply during periods of severe price decline a drastic writing down of capital liabilities unimpeded by any government interference designed to mitigate this ruthless but rapid process of liquidation through wholesale bankruptcy and foreclosure alike in the manufacturing, agricultural and financial spheres regardless of social consequences. Rather on these principles should the government, if it intervenes at all, do so for the purpose of encouraging and expediting this process. Those who argued both in England and the United States for thoroughgoing deflation throughout the entire price-cost-debt structure during the depression before their respective departures from gold were at least logically consistent, however limited was their perception of social realities. For a policy of genuine balanced deflation, which aimed at bringing costs below prices, and one of inflation, aimed at raising prices above costs, have more in common with each other (since both seek to establish proper internal relations in the cost and price structure) than has either with the attempt to ride both horses at once or alternately. Nothing could be more inconsistent and doomed to failure than a policy of deflating with one hand by reducing wages, refusing adequate assistance for unemployment relief out of public treasuries and curtailing public works expenditures, while simultaneously preventing deflation by supporting with public

funds the weaker banks, railways and insurance companies, as was done by the United States and a great many other countries. Elasticity in the economic system should imply at such times a deflation not only of wages but also of capital structures, even if this involves the widespread collapse of big businesses, railways, insurance companies and savings banks. It should also mean leaving the farmers to their fate and allowing nature and the law to take their course—provided the farmers do not resist nature by taking the law into their own hands, as they began to do in America.¹

Whether such a policy, granted it could be put into effect, would be ultimately successful in achieving its object is a question of great speculative interest and complexity into which we cannot enter at this point. It will be sufficient here to point out that, since the processes of deflation have a cumulative effect, there is no assurance that a general indiscriminate reduction in money costs effected by general wage reductions will not, by curtailing spending funds an equal amount, cause prices to drop to the same extent. For equilibrium to be restored, costs must fall *faster* than prices so that a profit margin may emerge. There seems to be no *a priori* reason why in theory contraction of money wages and other expenditures should not set in motion a train of events which continues indefinitely. Considerable obscurity shrouds the nature and

¹ Recent American experience is a lesson in the danger of being blind to the "human equation". As Professor Edie has well said, "the hard-boiled deflationists and bitter-end liquidationists of this era [1932-33, in America] . . . simply overplayed their hands. They recognised no limit of endurance on the part of the public, no end to the amount of punishment that the people could take. In a sense, these stubborn deflationists were the real inflationists. Their very extremism engendered a reaction in the opposite direction. When they saw the jig was up, they played the true rôle of Jeremiahs and flooded the country with pious lamentations and dire warnings. They had been run over by a steam roller they had not seen coming, namely, the human equation. They still think it wicked that this steam roller came along" (L. D. Edie, *Dollars*, Yale University Press, 1934, p. 227).

operation of the actual forces which in the past have in practice always arrested this process at some earlier or later point, even when deliberate recourse has not been had to measures for countering further deflation. The vital need at such times is not for everybody, the government included, to economise indiscriminately, that is, spend less all around, for it stands to reason that recovery cannot be brought about in that fashion. To argue thus is to be guilty of the fallacy of composition in assuming that what is good individually for A or B or C each in isolation, the others remaining unaffected, is therefore necessarily good collectively when applied to A and B and C together. Looking at economic society as a whole, it is in the last analysis precisely by "taking in each other's washing" that we live.

Finally we must consider not only what sort of economic flexibility is desirable, but how far we may reasonably hope to bring it about in actual practice under conditions as they are. We must take the world largely as we find it, and make the best of it we can, however much more desirable some other kind of world may appear to be, if it is likely to be unattainable. When the various elements of rigidity existing in our economic system to-day are passed one by one in review, even as rapidly as was done above, the possibility of their being mitigated without more harm than good being done is seen to be rather slender, and this quite apart from those rigidities which by their very nature are ineliminable because inherent in our type of economic order.¹

¹ Logically a wholly flexible system "implies a State in which all members of the community are common stockholders who receive in 'dividends' a share of the national output of goods and services, their 'dividends' rising and falling as the national output rises and falls. . . . In logic and theory such a case holds good. Can it be applied to the world as we know it to-day?" (*Monetary Policy and the Depression*, Report of Royal Institute of International Affairs, 1933, p. 51).

Delving deeper beneath the surface we find a twofold explanation of the growing inflexibility of the economic structure. One is rooted in the basic principles of its operation, the other is the inevitable outcome of the trend its development has shown during the past half-century or so. In the first place the underlying assumption of the system of "free private competitive enterprise" is that the general interest is best promoted by each individual pursuing acquisitively his own narrow ends. It is the essence of the *laissez-faire* philosophy that the concern of each country, business firm or individual should be first and foremost with its or his own private interests, and only secondarily, and in so far as it affects these interests, with the good of the whole. But freedom implies freedom, whether for capital or labour, to combine as well as to compete. When individual units discover that their private ends can be better furthered by combination than by competition an inner contradiction is revealed in the philosophic foundations of the system. The dilemma is then presented either of freedom having to be curbed so that competition may be enforced; or of combination being permitted to the possible disadvantage of the public interest and the detriment of the competition which is supposed to promote it. The reason for this dilemma is of course that the sharp opposition of competition and combination is a false anti-thesis. The tendency, however, towards co-operation, association and tighter organisation gathers momentum like the proverbial rolling snowball for the simple reason that it has both proved profitable in many cases of those groups, sections or interests which have adopted these devices; and because the others must often also follow suit and resort to them as a means of self-protection.

The war greatly accelerated this tendency and produced a permanent weakening of the flexibility of the economic

system, as a result of the centralisation of control over industrial processes, the wage and price fixing operations, and similar measures which it necessitated. The pre-war system was of course as far from being completely flexible as the post-war system wholly inflexible; but the impetus given by the war to cartellisation of industry on the one hand, and rigidity of the labour market on the other, is beyond question. The "free market" of pre-war capitalism, already somewhat impaired, was further greatly restricted by a permanent growth of state intervention and monopolistic control. These two factors are not unrelated: the first has fostered the second, which in turn has reinforced the first. Direct state intervention and assistance have been largely responsible for the survival of these monopolistic influences, whether of labour or capital. Cartels and tariffs, rigid wages and unemployment insurance hang together—not to mention more direct governmental intervention in the formation of commodity-price supporting schemes. The question, however, is how flexibility in these spheres is to be restored. It would require no less than that "the policies of States in relation to industry must undergo complete revision".¹ But will the revision be permitted by the interested parties, who, just because they are so well organised, can exert such powerful influence upon government? The recent trend in almost any country could be cited as illustration to the contrary. One example will be enough. It is a significant feature of the "New Deal" in the United States that the support of capital and labour was purchased respectively by suspension of the anti-trust laws and government encouragement of labour organisation.

The other reason for the growing rigidity of economic processes in the modern world is found in their increasing

¹ Lionel Robbins, *The Great Depression* (London, 1934), p. 190.

complexity, the "lengthening" of the processes of production and the increasing interval between the first step and the last. This development is a characteristic and concomitant of economic advance. The successive stages of transformation through which goods have to pass before they reach the final consumer have become more numerous, more complicated and in the aggregate more time-consuming. This is merely another way of saying that the accumulated stock of capital equipment with which production is carried on grows *pari passu* with and is a measure of economic progress: the productive process has become what has been described as more "roundabout". But a flexible economic system demands not only flexibility of prices, but flexibility of the "real" factors whose demand and supply are pivoted upon and guided by price movements. It requires, in other words, that productive factors should be easily transferable from one use to another, that productive resources, both capital and labour, can be easily diverted from one channel into another, the losses incurred by the capitalists being taken promptly, and labour moving fluidly to other occupations. With the growth of fixed capital and the increasing specialisation of labour this transference is becoming not less but more difficult and painful to effect.

Finally, the vision of an elastic system responding freely in all its component parts to movements in the general price level and promptly making the necessary readjustments wholly ignores inelasticities of demand and supply which are not due to "institutional frictions" and the resistance offered by human contrivances but are rooted in the productive technique and organisation of the processes involved. The production of raw materials and food-stuffs is a conspicuous case in point of output which cannot by its nature respond promptly to changes in prices. It

requires years for the adjustment to be made. A falling demand for manufactured products is met by a reduction of output which goes some way towards mitigating the severity of the drop in price. But agricultural production cannot in such circumstances be quickly curtailed; and the drop in price is made all the more precipitous by reason of the fact that all demand schedules expressed in terms of money move to the left in periods of a generally declining price level. Space does not permit a discussion here of the technical aspects of this problem; but the familiar phenomenon of a glut of agricultural products in depressions is sufficient evidence of the failure of output to make the prompt response to price movements required by the doctrine of flexible adjustments. In the short run, production is quite likely to be actually increased rather than curtailed, especially by predominantly agricultural and debtor countries in their desperate efforts to keep up the value of their exports sufficiently to cover their imports and payment of debt-charges; thus depressing world prices still further and setting up a vicious circle from which the only way of escape is through financial collapse or at least the abandonment of the gold standard. This is just one example of a whole range of ineradicable inflexibilities which the advocates of an elastic system tend to pass over too lightly.

CHAPTER IV

GOLD AND PRICES

GOLD STOCKS AND PRICE TRENDS.—Certain prominent economists have asserted that the trend of world prices is determined by the rate of money gold accumulation. More specifically they have usually argued that the world's total gold stocks, or monetary gold stocks, must accumulate at approximately 3 per cent per annum to support a stable level of world prices. The present chapter is devoted to a critical examination of this theory, followed by an analysis of the mutual interaction of the supply, demand and value of gold at the present time and their probable future movements, with a view to estimating the adequacy of the world's gold supply to support stable prices, in the event of a general re-establishment of an international gold standard.

CASSEL'S ESTIMATE.—Professor Cassel has established for the latter half of the nineteenth century and the first decade of the twentieth, when most of the great commercial nations of the world were on some form of the gold standard, a surprisingly close correlation between the secular trend of commodity prices and the rate of increase of the world's gold supply. When charted, a remarkable correspondence is revealed between the movements of the wholesale index and the curve for the "relative total supply of gold". The latter shows the changes in the percentage ratio of the actual total stock of gold accumulating from year to year to the "normal stock of gold" calculated for

each year by applying to the initial stock in 1850 the average annual rate of increase over the whole period 1850 to 1910.¹

Cassel claims that over the period 1850 to 1910 "the main cause of the secular variations of the general price level lies in the changes of the relative gold-supply".² He argues that a yearly inflow of new gold amounting to 3 per cent of the existing total world supply is a condition for the maintenance of a stable price level. Sauerbeck's index of wholesale commodity prices in England was the same in 1850 and 1910, and between 1850 and 1910 the increase in the world's stock of gold amounted to a compound annual rate of increase of 2.79 per cent. If during this period, Cassel argues, the accumulation of gold had increased every year by 3 per cent (2.8 per cent + 0.2 per cent for wastage and loss), the secular trend of prices would have moved neither up nor down, though business-cycle fluctuations would still have been superimposed upon this stable level.³

KITCHIN'S ESTIMATE.—The late Joseph Kitchin reached very similar conclusions. Over the same period of years, 1850 to 1910, he found that the curve of wholesale prices moved upwards and downwards in even closer conformity with the movements of the curve of the *monetary* gold supply than with the total supply of gold. The trend of the wholesale index shows a very close correspondence with his curve of the "relative supply of monetary gold", which represents the changes in the percentage ratio of the actual world stock of gold money in each year (as calculated by

¹ *First Interim Report of the Gold Delegation*, Annex X, "The Supply of Gold", by Professor Gustav Cassel.

² *Theory of Social Economy*, 1924, p. 447.

³ W. Woytinsky computes that the world's stock of gold must increase 3.142 per cent annually to keep prices stable ("Das Rätsel der langen Wellen", *Schmollers Jahrbuch*, 55 Jahrgang, Viertes Heft, 1931, p. 30).

him) to the stock of gold money as it would have been if it had increased at an even rate throughout the period.¹ Kitchin found that the ratio of actual stocks of monetary gold to what they would have been if increased 3·1 per cent per year roughly coincided with the actual movement of the wholesale price index over the period 1850 to 1910. In other words, when the world's stock of monetary gold increased more rapidly than 3·1 per cent per year, prices showed a rising trend; when it increased less rapidly, prices declined. The similarity with Cassel's methods and results is striking; the differences are that Cassel relates price trends to total world gold stocks, Kitchin to total reserves of monetary gold; and that while Cassel's formula works out at 2·8 per cent, Kitchin's figure is 3·1 per cent.

OTHER ESTIMATES.—Professors Warren and Pearson have recently calculated on the basis of a wealth of statistical material that for seventy-five years before the war wholesale prices rose if the world's monetary stocks of gold increased faster than the production of basic commodities and fell if gold increased less rapidly. They state the "law of the relationship of gold to prices" as follows: $\text{World gold stocks} \div \text{production of all basic commodities} = \text{wholesale prices of all commodities}$. From 1839 to 1914 the total production of all commodities in the United States is computed to have increased at the compound rate of 4·03 per cent per year, as compared with a normal yearly increase of 3·15 per cent in the world's physical volume of production between 1865 and 1914, according to Dr. Snyder's index. The conclusion reached is that the production of gold must be sufficient to add 3·15 per cent to monetary stocks and take care of industrial demand if

¹ *First Interim Report of the Gold Delegation*, Annex XI, "The Supply of Gold compared with the Prices of Commodities".

wholesale prices are not to fall.¹ This is found normally to require a world's gold production equivalent to 5.6 per cent of world's monetary gold stocks. It is claimed that when gold production is higher than that amount, prices show a rising trend; conversely, when production falls below that amount, declining prices follow.² On the basis of these calculations they argue that the supply of gold has not been keeping pace with the normal growth of production and is sufficient at present to support prices only at about the pre-war level if the world goes back on gold on the old terms and uses it with pre-war efficiency.³ They trace the recent depression to a precipitous collapse of the price structure directly caused by a gold famine which in turn is attributed to the post-war re-establishment of the gold standard. Credit expansion, they argue, cannot relieve a shortage of gold except for a brief period because gold imposes a definite limit to it: sooner or later the normal relationship between gold reserves and the monetary superstructure must be re-established. The fact is cited that whereas for the five years preceding the war the average amount of monetary circulation plus bank deposits per dollar of gold in the United States was \$11.23 and from 1923 to 1927 averaged \$11.56, in 1920 it reached \$14.92 and in 1928 \$14.13. Thus the argument runs that

¹ "It should be noted that it is the monetary stocks of gold and not gold production that has to increase 3.1 per cent per year to maintain stable prices. It is, of course, the total stocks and not the production of a single year that determines value" (G. F. Warren and F. A. Pearson, *Prices*, p. 81, note).

² It is found that "for 75 years before the World War, world monetary stocks of gold had to increase at the same rate as the world physical volume of production in order to maintain stable commodity prices in England. If gold stocks increased more rapidly than other things, prices rose; if they increased less rapidly, prices fell." The same principle is found to apply to the United States, France, Germany and Denmark "regardless of the differences in the commodities included in the index numbers for the different countries and regardless of the banking systems" (*ibid.* pp. 80-82).

³ "The abnormally high prices from 1915 to 1930 were explained, in part, by the reduced demand for gold, and, in part, by the low production of other things" (*ibid.* p. 81).

credit expansion postponed the collapse, but could not eventually prevent its occurrence.¹

The accuracy of the statistics and the statistical methods employed by Cassel, Kitchin and Warren and Pearson have been challenged.² We need not, however, enter into this question. Accepting the computations at their face value, let us assess the validity of the conclusions drawn on the basis of them.

Dr. Feliks Mlynarski has shown that if silver is introduced into the calculations of the rate of increase in monetary metallic stocks required to keep prices stable an entirely different figure from those of Cassel, Kitchin and Warren and Pearson is obtained. He justifies the inclusion of silver on the grounds that in 1850 the gold standard existed virtually in Great Britain alone, the rest of the world employing a bimetallic standard or silver monometallism. At that date indeed gold reserves were only about one-third as large as the reserves of silver. By 1910 the relation was reversed, reserves of monetary silver amounting to little more than one-fifth the size of gold reserves. Silver must thus be taken into account along with gold in evaluating the influence of metallic reserves on the level of prices, since it has played an important part in determining the latter. But taking silver into consideration, the yearly average increase in the monetary metals during this period amounts not to 3 per cent, but only to 0.78 per cent. Even were this figure corrected to allow for metal lost through "wear and tear", the average inflow of

¹ G. F. Warren and F. A. Pearson, "The Physical Volume of Production of Gold, Silver and Other Commodities", and "The Relationship of Gold to Prices", in the *Journal of the American Statistical Association*, March 1933, Supplement, pp. 113-26; *Prices* (1933), chap. v. The argument is examined in Chapter VI. below.

² See, e.g., J. T. Phinney, "Gold Production and the Price Level", *Harvard Quarterly Journal of Economics*, August 1933, and Rufus S. Tucker, "Gold, Prices and Prosperity", *Annalist*, New York, December 1, 1933.

monetary metals during the period 1850 to 1910 could not have exceeded 1 per cent per annum.¹

Similar results are obtained by Dr. Wilcoxon, who has estimated that if the hypothesis is tenable that it is the rate of money gold accumulation which determines world price trends, then for the period 1800 to 1929 the rate of money gold accumulation required to maintain the price level stable was 2.65 per cent per year. But if allowance is made for the influence of silver as a monetary base, the rate of accumulation needed for both metals together is found to have been only 1.414 per cent. Furthermore, if the period analysed is reduced to 1869–1924 the required rate for gold alone is found to be 2.08 per cent per year and for the gold-silver formula only 0.72 per cent. "The demand for the precious metal money to maintain the price levels of the world has decreased to a remarkable extent during the last century and a quarter. . . . For those who pin their faith upon such a (gold-price) hypothesis, prices should rise as long as the gold value of the stocks of gold and silver money continue to augment faster than 0.72 per cent per year."²

FACTORS INFLUENCING THE DEMAND AND SUPPLY OF GOLD.—But what is the value of these formulae over and above such interesting historical relations between gold and prices as they may establish for the period under consideration? Do they possess any relevance for the question of the present or future adequacy of the world's gold supplies? In other words, can it be assumed that the ratio established for the past between gold stocks and price trends, even disregarding the differences in the figures of different computers, will apply in the future, or is it the

¹ Mlynarski, *op. cit.* pp. 37–41.

² L. C. Wilcoxon, "World Prices and the Precious Metals", *Journal of the American Statistical Association*, June 1932, pp. 129–40.

result of conditions influencing the demand for and supply of monetary gold peculiar to that period, and not likely to hold good in the future?

Under the gold standard movements of the price level express changes in the relative volume of goods and services on the one side and the total effective media of payment on the other; the latter in turn bear some relation, but not an inelastic and unchanging one, to the gold reserve base. Thus the value of goods in terms of gold is *in the long run* clearly the resultant of the interaction of the forces of the demand for and supply of gold.

Now the demand for gold, broadly speaking, is determined by four factors: the industrial consumption; the demand for hoarding or saving purposes by the East; the extent of the adoption of gold as a monetary standard; and, where so utilised, the development of "substitutes" for money in the shape of notes and credit superstructure. All these factors have varied considerably from one period to another, and the cumulative effect over a term of years can be very great. In estimating the influence therefore of gold on the price level, the demand for it requires as careful examination as does the supply, and presents a more complex problem for analysis.

During the sixty years prior to the war the demand for gold to serve as a monetary base underwent very considerable changes. The passage of a great part of the world from bimetallic or silver standards to the gold standard greatly increased the demand for gold. Meanwhile, from 1849 to 1871 the supply of new gold also increased enormously. From 1871 to about 1891 this high volume of production was not maintained, but from 1891 to 1913 the world's gold output, this time from the South African mines, again came on the world's markets in a veritable deluge.

The discontinuance of bimetallic and silver standards and the almost universal adoption of the gold standard by the twentieth century has removed one of the factors which played so important a part in the demand for gold during the period 1850 to 1910. With almost the entire world on gold in 1914 the new demand for this purpose was rapidly abating.

But the demand for gold during and since the war has also been greatly influenced by the development of very important economies in its use. These have constituted an exceedingly important factor in the situation, and need only be briefly enumerated at this point to show how greatly the terms of the problem of the mutual interrelations of gold supplies, the demand for monetary gold and the resultant price level have altered since the half-century preceding the war. The following are the chief developments which have radically affected the conditions of demand:

(a) The withdrawal of gold coin from circulation, and its concentration in the vaults of central banks where it can support a credit superstructure very many times its value.

(b) The wide-scale adoption of the gold-exchange standard in place of the gold specie or bullion standard. Even though this development necessitated the maintenance of larger gold reserves by the central banks of the great international financial centres, the net economy effected on balance prior to 1929 in the use of gold was enormous.

(c) The progressive establishment and development of central banks throughout the world. The economy effected by the establishment of the Federal Reserve system in the United States need only be mentioned as a case in point.

(d) And finally, passing over minor economies, the

growth in the use of deposit currency, a "substitute" for gold of the first importance.

In the light of these considerations how much faith can be reposed in the conclusion or implication, based on nineteenth century experience, that a rate of money gold accumulation of approximately 3 per cent per year will be needed to keep prices stable in the future? The answer is that no figure found applying to that period has any relevance to the problem to-day. The demand for gold was anything but "normal" while almost all the commercially advanced nations were passing from silver and bimetallic standards to the gold base. On the other hand, even before the war, and apart from other economies, the rapid development of banking, the use of cheques, the improvement of clearing facilities, etc., during certain periods of this half-century constituted a factor which considerably reduced the demand for gold.¹ In other words, these two sets of forces offset each other: when cancelled out they leave a residue of a quite unknown and mathematically incalculable quantity. It is purely fortuitous that in the nineteenth century they are found, in interaction, to have required a certain yearly increase in gold stocks to maintain a stationary price trend. Nothing in these calculations, therefore, shows whether to keep prices constant at some other period, under different conditions of demand for gold, a similar increase in supply was or will be just enough, too much or too little: the hypothesis affords no basis whatsoever for forecasting purposes. Not until we examine in detail all the concrete factors bearing upon the

¹ The accumulation of bank deposits must be taken into account in estimating the annual increment of gold stocks needed to keep the level of prices at a constant figure, for the rate of economic progress is of course as powerfully influenced by the development of credit substitutes as by the flow of gold itself. Between 1850 and 1910 the volume of bank deposits accumulated at a much faster pace than the volume of gold.

present and probable future demand for gold—the size of reserves, the use of credit substitutes, the extent to which gold is employed as a monetary standard, the form in which the latter is operated, the volume of work that money has to perform in turning over goods—can we say whether the rate of gold production, whatever it may add each year to the existent stock, is likely to be adequate to support a stable trend of world prices. The problem of the adequacy of present world gold reserves to support stable prices is not of course disposed of by dismissing the 3 per cent formula. It may remain true that the world will one day face a prospective gold shortage despite our present rate of production. But the likelihood or reverse of this will be quite independent of the fact how the rate of production compares with the rate during the nineteenth century or any other period, when conditions were so different from those of to-day.¹

FUTURE GOLD PROSPECTS.—What, then, are the prospects, assuming a general return to the gold standard, of the future supply of gold proving adequate to support a stable level of world prices in the light of the probable developments influencing the demand for gold so far as they can be evaluated on the basis of the statistical and other information available to-day?

Kitchin estimated for the Gold Delegation that gold production would reach a peak of \$410 million in 1932 and steadily decline thereafter to \$384 million in 1938, and \$370 million in 1939 and 1940; after 1940 the prospects, unless new sources of supply were discovered, were

¹ All that we can say *a priori* is that "the demand for money increases as national wealth grows, and if for any reason production of gold falls behind this rate of increase and is not sufficiently compensated by economies in the use of gold, conditions would be created which would tend to restrict the basis and hence the pyramid of credit and so to depress prices" (*Report of the Gold Delegation*, p. 30, para. 105).

in his opinion likely to be still worse, in view of the probable rapid decline of South African production.¹ Such a diminishing output of gold would be a serious matter, since it could mean a protracted downward trend in world prices, with all its attendant evils, unless it were to be used with much greater efficiency than hitherto. With the steady growth in the world's production and trade which we may normally expect in the future, and with the expanding volume of bank deposits which they will necessitate, a steadily *increasing* inflow of gold into reserves is ordinarily required to prevent the price level from falling. The larger the volume of business, the larger must be the total media of payments needed to keep prices stable, and the larger consequently, other things equal, the metallic foundation.

THE ELASTICITY OF GOLD PRODUCTION.—Into the technical questions of the possible future discovery of new gold-bearing strata, or the fuller exploitation of known deposits, or the development of improved processes for the extraction of gold, we are not qualified to make an independent enquiry and must accept the findings of the specialists. In Kitchin's opinion the prospects in these particular directions were not encouraging. To-day they look more hopeful. In this connection it should be emphasised, however, that if a decline in production does happen to be permanently averted through the discovery of unknown sources or new technical methods, such discoveries will be, not indeed wholly, but so largely

¹ *Interim Report of the Gold Delegation*, p. 12 and pp. 55-62 (Annex VII., "Production and Consumption of Gold, Past and Prospective"). Writing elsewhere about the same time (1930), Kitchin predicted "a total output within £1 million or so of the present rate until 1934 . . . followed by a fall to £76 million by 1940, to £60 million by 1945, and to £55 million by 1950—that is, as compared with 1929, a drop of 2 per cent by 1935, 9 per cent by 1940, 28 per cent by 1945 and 34 per cent by 1950 . . . the prospect is that there will be a considerably accelerated fall between 1940 and 1945" (*The International Gold Problem*, p. 61).

fortuitous that no rational estimates of future expectations can be justified in taking them into account.

The economic, as contrasted with the physical, aspects of the problem, however, require further examination. The elasticity of gold production in response to the changes in production costs which result from general movements in the price level is one of these factors. With lower production costs, so the traditional doctrine runs, it becomes profitable to work poorer hitherto unexploited strata. Output can accordingly be expected to increase when the world level of the price-cost structure is lowered as a result of a shortage of gold supplies. Thus the shortage which was responsible for depressing prices is automatically remedied. Falling prices stimulate gold production, which in turn checks falling prices. The reverse is true of increasing output and a rising trend of prices. In other words, since forecasts of the amount of gold likely to be produced in the future are usually made on the basis of a given value of gold in terms of goods and services, they are liable to be vitiated by the fact that the profitability of gold production depends on the value of gold and its costs of production.

That there is some truth in this argument is undeniable: it finds confirmation in the experiences of the last few years. Under the spur of lowered costs South Africa's gold production markedly increased and reached new high levels. The decline in the cost of cyanide, machinery, labour, etc., greatly stimulated existing fields and brought back into operation others which had been discarded.¹ The same is true of nearly all the other important gold-producing areas. The decline in production costs has been due to a variety of factors: improvements in mining and metallurgical technique; lowering of labour costs, which

¹ For figures showing the reduction in production costs per ton in the Rand see Gold Supplement of *The Times*, June 20, 1933, article on Gold Production.

has permitted operations to be expanded in both South Africa and Canada; the discovery of new deposits in Canada; the stimulus to production given by the increased price of gold consequent upon the decline first of the Canadian dollar and then the South African pound in relation to gold currencies when these monetary units were severed from the gold base. The world's gold production has in consequence substantially exceeded the estimates Kitchin made for the Gold Delegation, and his predictions of a rapidly approaching shortage have not yet been fulfilled. Instead of being approximately the same in 1932 as in 1929, the world's total output exceeded the most optimistic expectations, increasing over this period more than 20 per cent.¹

Yet the elasticity of the supply of gold in response to changes in costs of production must obviously be severely restricted in degree by the physical limits of the technical possibilities of an extension of production. Barring the discovery of new fields or improved processes of extraction, and given a substantial rise in the world price level which is likely once again to raise gold production costs, there is no certainty that the danger of an eventual gold shortage has been permanently removed merely in consequence of the recent great increase in the annual volume of output alone.

THE DEMAND FOR GOLD.—But gold consumption also shows some elasticity in response to changes in the general level of prices. Variations in the world's monetary gold

¹ The annual figures were (in millions of dollars): 1929, 405; 1930, 431; 1931, 459; 1932, 492. The increase was sustained in 1933 and 1934. Between 1910 and 1915 annual world gold production had averaged \$450 million, reaching the figure of nearly \$470 million in the record year 1915. Thereafter the decline was rapid until 1922, when the output amounted to only \$320 million. The years 1923 and 1924, however, saw a rapid increase and 1925 and 1926 a slow increase. Between 1926 and 1929 production was fairly steady around \$400 million annually. (*Federal Reserve Bulletin*, October 1932, p. 625, April 1933, p. 233, and June 1933, p. 373.)

stocks depend not only on the amount of new gold produced but also on the proportion of this taken by the industrial arts, the amounts taken for hoarding or saving purposes in India, China, Egypt and elsewhere, and the amounts disgorged from such hoards. A marked and sustained rise in the value of gold is likely to produce a diminished demand for gold for industrial uses and to allow the gold available for monetary purposes to be correspondingly increased. Furthermore, it is likely to have a slackening effect upon the flow of gold to India and the East, and may indeed, if the fall in prices is severe enough, actually reverse its direction, as shown by the recent movement of gold out of India. Thus monetary gold stocks can be augmented from non-monetary sources and Eastern hoards. Finally, economies in the use of monetary gold itself and the effects of lowering the gold content of currency units must be taken into account. These various influences may be briefly examined in succession.

INDUSTRIAL CONSUMPTION OF GOLD.—Since the onset of the depression there has been a substantial decline in the absorption of gold by industry and the arts. "There have been times within the last 20 years when the net industrial consumption of gold, according to accepted estimates, has exceeded \$100,000,000 per year, but it has remained below that figure since 1921 and averaged about \$70,000,000 to \$80,000,000 during the period 1924–1929. In 1930 the net industrial consumption decreased to about \$50,000,000, and in 1931 it was certainly much less than this when allowance is made for the increased amount of old gold that was sold to dealers in bullion in Great Britain, Australia and elsewhere, after the departure of a number of countries from the gold standard gave rise to a premium on gold in their local currencies."¹ Since these

¹ *Federal Reserve Bulletin*, October 1932, p. 626.

words were written this decline in industrial consumption has undoubtedly been carried further. The level of consumption in the future will depend both upon the price and the value of gold: in other words upon the gold contents of the monetary units with which the gold standard is re-established, which will fix its price in the national currency, and the general level of prices, which will determine its value relative to other goods.

INDIA.—The rapid rise in monetary gold stocks since the depression, however, is explained less by increased output or reduced industrial consumption than by the sudden change of India, contrary to all expectations, from an importer of gold on a large scale to an exporter. Throughout and after the war, till around 1926, the annual additions to the private hoards of India were very rapid and that country drew gold to herself from the rest of the world in large quantities. Between 1926 and 1930 the rate of increase of private holdings slackened somewhat, but still remained large. Altogether, during the post-war decade India's absorption of gold has been something like \$90 million annually. Since February 1931, however, private holdings in India have rapidly declined, the aggregate net amount released between that date and June 1933 being nearly \$390 million (dollars at par).¹ In consequence, the normally steady tide of gold to India has been reversed and has flowed strongly in the opposite direction. Between

¹ *Federal Reserve Bulletin*, August 1933 and previous issues. "The recent release of gold by the Indian people reflected at first the use of their savings under the stress of severe depression, and for some months the gold released from private holdings was taken into government reserves in India. But in September 1931, when India followed England in the suspension of the gold standard, it became profitable to dispose of the gold on the London bullion market, where a premium could be obtained equivalent to the discount of the rupee in relation to gold currencies. This premium, amounting at times since then to as much as 30 per cent, not only led to exportation of the metal from India but greatly intensified the release from private holdings" (*Federal Reserve Bulletin*, October 1932, p. 626).

June 1931, when gold began to flow out, and June 1933 the total net export of gold from India aggregated over \$370 million.¹ In other words, instead of absorbing upwards of a quarter of the world's total gold production India exported in 1932 the equivalent of two-fifths of the output for that year, which itself set a new high record in production. A reversal of the usual tide of gold to India is not in itself an altogether new phenomenon, as she has disgorged gold in previous years of depression, as for example in 1921, when \$50 million was exported, but such a powerful outflow is unprecedented. Gold has also been coming on to the world's markets, though in much smaller quantity, from China. The possibility, however, of the outflow of gold from India drying up if the rupee appreciates in terms of gold must not be overlooked. Nor can it be expected to continue unabated with the lifting of the depression.

HOARDING IN WESTERN COUNTRIES.—The various economic forces just enumerated have thus had the effect of rapidly increasing the supply of gold available for monetary purposes during the depression. Production has mounted to new record figures as a result of improved technique, a plentiful supply of cheap labour and an enhanced price of gold in terms of depreciated paper currencies. Industrial consumption has markedly receded, and gold instead of being absorbed by India on a large scale has been released in substantial amounts. But all this additional gold which has become available for monetary purposes has not found its way into monetary employment. The holdings of central banks and treasuries have not benefited correspondingly because the crisis of confidence let loose by the abandonment of the gold standard first by Great Britain and then by a number of other

¹ *Federal Reserve Bulletin*, August 1933 and previous issues.

countries produced widespread hoarding of gold in Europe and America. This hoarding reduced central-bank gold stocks in some cases and went some way towards counterbalancing the gold released from the East, reduced industrial demands and increased production. Hoarded gold is customarily treated as part of the total monetary gold stock and referred to as gold in circulation in the case of the Western countries, in contrast to the private holdings of Eastern countries, which are regarded as "non-monetary gold", because the former is likely to find its way back eventually into monetary uses. It is difficult to secure accurate comprehensive figures of the amount of gold hoarded,¹ but gold reserves of the central banks and governments of the world have been as follows during recent years (figures for end of year, in millions):²

1928	\$10,028	1931	\$11,291
1929	10,306	1932	11,897
1930	10,917	1933	11,930

FUTURE PROSPECTS OF THE ADEQUACY OF MONETARY GOLD SUPPLIES.—This hoarding of gold in Western countries in recent years may be assumed to be a temporary phenomenon. With business recovery and the return of confidence it can be expected to find its way back into the vaults of central banks and treasuries. But the other

¹ Sir Henry Strakosch has estimated the amount of gold going into (+) or coming out (-) of "hoards" as follows for the most important countries in 1930, 1931 and 1932 (in millions of gold £s):

	U.S.A.	France	Holland	Switzerland	United Kingdom	India
1930	..	- 1	..	..	+ 7	+ 13
1931	+ 75	+ 30	+ 3	- 19	- 1	- 26
1932	- 83	+ 52	+ 12	+ 30	+ 18	- 39

(Gold Supplement of *The Times*, June 20, 1933, article on Monetary Gold Stocks.)

² Total for fifty countries, *Federal Reserve Bulletin*.

economic factors which have increased monetary gold supplies in recent years are also likely, as we have seen, to be affected by any improvement in economic conditions. The disgorging of gold by the East cannot be expected to continue unabated indefinitely. Industrial consumption is also unlikely, if prosperity returns, to remain permanently at its present low level. The future volume of production will depend both upon the future course of metallurgical and mining technique and the world level of prices and costs. If the price level at which the gold standard is eventually restored is closer to the 1926 figure than to its present level, the terms of the problem will be greatly altered. Another factor which will obviously be of great importance will be the gold content at which currencies are revalued upon a return to metallic payments. Revaluation has already tremendously increased American reserves. The future demand for gold will also be influenced by the effect which the depression proves to have upon the law and practice regarding monetary gold reserves, and this in three respects. Central banks are not unlikely in the future, in view of recent experiences, to attempt to hold larger surplus or operative reserves than in the past:¹ unless this tendency is counterbalanced by a relaxation of statutory reserve requirements, it will be a factor making for an increased demand for gold. In the second place, the influence of recent events on the gold-exchange standard is bound materially to increase the demand for gold. Central banks are unlikely to hold reserves in foreign

¹ "As in the regulation of armaments, we have to face the fact that each country will inevitably play for its own individual safety. That safety under the international gold standard . . . is to be looked for in a large reserve of gold out of which a 'run' for gold on the country by persons and institutions outside it may be met when it occurs. The danger of such runs has been much increased since the War by the slovenly conduct of national finances" (Professor Edwin Cannan, "The Future of Gold in Relation to Demand", *Economic Journal*, June 1934, p. 183).

exchange to anything approaching the extent they did prior to the depression. Lastly, the situation will be much affected not only by the aggregate volume of monetary gold reserves of the world as a whole, but by the distribution of that gold between the different countries.

To sum up, the prospect for the immediate future is emphatically not one of gold shortage. On the contrary, there is very grave danger of the gold required to support the present price level being superabundant. The surplus reserves of the United States, France, England and many other countries are at the moment large enough to allow a tremendous expansion of credit. Almost without exception the central banks have a substantially higher ratio of reserves, revaluation apart, than in the past. As a whole they are in a position, so far as gold reserves are concerned, to supply a very much larger volume of credit than they are doing at present. The ratio of gold reserves to total bank deposits in both the United States and Great Britain showed a steady secular fall till 1929. As compared with 1914 the gold reserves of the world were being used to support a much larger volume of credit. Since 1929, as a result of the severe fall in the price level, this tendency has been reversed and the ratio of gold to total bank deposits has risen markedly. Thus in the immediate future, as soon as confidence returns and money is turned over at a more normal rate, the problem will be one rather of preventing an excessive rise of prices, should we return to gold.

Looking beyond the immediate future, however, the problem may yet arise of the world having some day to contend with an inadequate supply of monetary gold if world prices rise much above their present low levels and reserves are not used with more than pre-depression efficiency. The economic forces determining the demand for gold which were examined above can be expected to

postpone such a day for a considerable time but, in view of the many uncertain and unpredictable elements involved, it would be hazardous to assume that the eventuality has been permanently removed if the world returns to gold on the old terms and fails to take the precaution of effecting economies in the use of gold for monetary purposes. The nature and extent of the opportunities for effecting such economies are discussed in the next chapter.

CHAPTER V

GOLD ECONOMIES, GOLD RESERVES, AND THE SILVER QUESTION

THE WITHDRAWAL OF GOLD COIN.—In the event of a general return to the gold standard, what measures would be required to ensure the most efficient utilisation of gold in monetary systems?

The first and most obvious of these measures would be the withdrawal into the reserves of central banks, and their replacement by notes, of all gold and gold certificates still in circulation or in the vaults of commercial banks. The circulation of gold coin and gold certificates fully covered by gold is an illogical, useless and expensive anachronism, particularly as the public has shown a decided preference for notes and other means of payment. But this is an economy which has already been effected for the most part. Kitchin estimated that the withdrawal of gold coin during the war added over \$2 billion¹ to the gold reserves. Relatively very little room is left for further substantial economies in this direction.² Another desirable minor economy would be the withdrawal, in all countries where they are in circulation, of bank-notes of small denominations, and their replacement by subsidiary coins, thus relieving gold reserves of unnecessary strain. The encour-

¹ Billion in the American sense, meaning a thousand million.

² Professor L. D. Edie estimates that gold in circulation, including commercial banks, throughout the world in 1933 (excluding India, China and Egypt) amounted to only approximately \$1 billion, as compared with over \$4 billion in 1913 (*Dollars*, p. 81).

agement of the fuller use of cheques in the place of notes for the payment of salaries, wages and taxes would obviously also help.

THE GOLD-EXCHANGE STANDARD.—A factor of major importance in the monetary demand for gold in coming years will be the future of the gold-exchange standard. The Genoa Conference pinned high hopes to this device for reducing the demand for gold, and it became part of the currency systems of a number of countries. But many countries which adopted it, such as Germany and Poland, already tended before the depression to regard it as a transitional stage to a full gold standard, because of considerations of national prestige and the ready availability of reserves in times of war and emergency. The Gold Delegation was of the opinion that the gold-exchange standard "still offers the cheapest, and in some cases the only, method by which countries which are unable themselves to afford the heavy expense of a gold-standard system, may yet participate in the advantages of stable exchanges which such a system will again offer, if and when it is restored".¹ But they recognised that recent events, and particularly the heavy losses incurred by many gold-exchange standard countries through the depreciation of sterling when England left gold, have greatly weakened the future prospects of this standard. In their efforts to avoid such losses in the future, their use of this device is likely to be much more restricted than before the depression. To-day the employment of foreign balances as reserve money is completely at an end, and the practice will not be easily re-established. The prospect is therefore that not only cannot we look for further opportunities of using gold economically through an extension of the gold-exchange standard in the future, but that on the contrary

¹ *Final Report*, p. 55, para. 221.

we shall need a much greater absolute amount of reserves to support a given level of world prices with all the world back on gold unless means are found of counteracting this increased demand.

POST-WAR GOLD RESERVES.—The largest opportunities of using gold more efficiently in the future lie in the reduction of the gold reserves held by central banks against notes in circulation and other sight liabilities. The problem has two aspects: the customary margin kept by central banks over and above the legal minimum gold cover; and the actual statutory reserve requirements themselves. There is much room for reductions in both directions.

That actual reserves should in practice be kept by central banks somewhat above the legal minimum is obviously necessary and reasonable enough, yet the margins which many countries have been in the habit of keeping have been altogether excessive. One need only point in this connection to the United States, with its huge store of "free gold" (even before revaluation), a store which incidentally did not serve to keep her on the gold standard. Though an extreme case, this was not an isolated one. The same situation has existed in greater or less degree in a number of other countries. The ratio of gold and foreign exchange to notes and deposits was as follows for various countries in May 1930, a relatively normal year: France, 78·4 per cent; Belgium, 61·3; Netherlands Bank, 77·9; Swedish Riksbank, 82·1; National Bank of Copenhagen, 69·6; Switzerland, 88·7; Italy, 57·6; Poland, 61·3; South African Reserve Bank, 91·3; Chile, 89·9 (in 1929, 105·9). The ratio of gold to notes and deposits in the United States was 77·4 per cent for the same year, in Great Britain 34·1.¹ The Bank of England has been quite excep-

¹ C. H. Kisch, Statistics of Central Banks, in *The International Gold Problem*, pp. 138-9.

tional in the slenderness of the gold reserve with which it has managed to operate. Different countries admittedly have different needs in the matter of margin in their conventional reserves for a variety of reasons. The tendency on the part of central banks, however, has been to attempt to keep reserves large enough not merely to meet their average needs but rather to satisfy their greatest potential requirements and protect themselves against all eventualities. Naturally the result has been that the demand for gold has been and is much greater than need be.

The reason for these large reserves is to be found in the catastrophic collapse of the price level which has been experienced on two occasions since the war. That central banks should wish to possess huge gold reserves in such circumstances, to be in a strong position to meet such emergencies and keep themselves on the gold standard, is not unnatural, even though the present depression has given clear demonstration that in face of a severe price fall no reserve is large enough to afford absolute safety. In the case of individual countries, especially France and the United States, special factors, examined elsewhere more fully, partly account for these excessive accumulations. In many countries, especially those which have recollections of periods of paper currency inflation, popular sentiment plays a not inconsiderable part by holding the half-formed idea that the only really honest paper money is that which is fully backed by gold—a psychology characteristic unfortunately not only of the Continental European peasant but till recently widely prevalent also in America.

FUNCTIONS OF GOLD RESERVES.—The idea still persists to-day that the primary function of gold reserves under the gold standard is to ensure convertibility of notes. This was unquestionably their original purpose, but it has ceased to

be true in modern times. When gold coins were in circulation and notes formed an important element of the total means of payment, gold and notes were alternative currencies. Under modern conditions, however, it is the superstructure of credit which provides by far the greater part of the media of payment, and it is the volume of this which has to be watched by the central currency and banking authorities. Here the historic index of the gold reserves is indeed of the utmost importance, but not for the purpose of maintaining *direct* internal convertibility of notes in the strict sense. This is seen most clearly in the case not of such countries as the United States, which had redemption in gold coin, but of those operating under the gold-bullion and gold-exchange standards. In these cases, such for example as Great Britain, where the redemption of notes was provided for by the Act of 1925 only in relatively large amounts, the real purposes of gold reserves are revealed as their being meant for export and serving the demands made by membership in an *international* system based on gold. The determining consideration, and the proper yard-stick to apply to the size of gold holdings, is the magnitude of the probable external drain, the amount a country is likely to require for equalising the balance of its international payments in the interval during which corrective measures are being applied internally to remove the causes of the gold export and thus restore equilibrium. The amount of gold required by a central bank is therefore the amount which will ensure reasonable safety in meeting an adverse external balance of payments. Only if and in so far as legal regulation of the volume of the note issue serves this fundamental purpose has it any meaning or justification. In the light of this circumstance, it is quite irrational to compare gold reserves with the volume of notes outstanding, and it is logical to compare it with the

volume of credit only in so far as and to the extent that the latter has a bearing upon the liabilities a country may encounter in its international balance. Not without justice has the idea that gold is held as a backing for notes been characterised as a "mediaeval notion".¹

The rationale and wisdom of legal stipulations requiring the holding of certain minimum reserves, when viewed in this light, need further examination. The reserve ratio fetish, which has always existed in the United States, has greatly spread in recent years, being embodied in the central-bank statutes of certain countries only during the last decade. The situation is wholly anomalous. Large gold reserves are kept for emergencies, but the law expressly forbids the greater part of those reserves to be used in any circumstances. For as soon as they fall, in theory below, in practice near to that figure, gold payments are suspended and the standard is abandoned. Many central-bank statutes permit a reduction of reserves below the ordinary legal minimum requirements in emergencies on payment of a graduated penalty tax. But such elastic clauses in minimum reserve laws have proved a dead letter, central banks being reluctant to avail themselves of these provisions. For practical purpose they might as well not exist at all: statutory reserves are stubbornly adhered to as long as possible and regarded as inviolable. The entire amount of gold held as legal reserves is thus a dead asset, instead of being available for use. Since statutory reserves cannot be used they are self-contradictory in nature and only the surplus *above* these legal requirements is operative and

¹ In answering the question, Why do banks keep gold? Sir Basil Blackett states: "I think the first, and most important, answer is because other central banks keep gold. Perhaps another answer would be because the banks think that people think they ought to keep gold, or even because the banks think that people think that the banks think they ought to keep gold" (*The International Gold Problem*, pp. 178-9).

effective for doing the real work of reserves. Minimum reserves might as well lie at the bottom of the sea. If they were all suddenly to vanish into thin air, leaving not a trace behind, it would make not a particle of difference to anyone provided only that no one were any the wiser for their disappearance. The legal regulation of reserves resembles, as Professor Foxwell once remarked, the ordinance enacted by the city fathers to prevent a shortage of cabs—that there should always be one cab stationed at every cab-rank. And indeed experience has shown that statutory minimum reserve requirements may be wholly unnecessary for the maintenance of confidence in a currency: till 1928 the statutes of the Banque de France prescribed no fixed minimum reserve ratio, leaving the matter to the discretion of the Banque's authorities.

What, then, is the right policy for regulating gold reserves? Some authorities go so far as to argue that statutory requirements should be entirely abolished. To this point we shall return later. It follows, however, from what has already been said, if gold is to be used with full efficiency under a reformed international gold standard, that reserves should at least be substantially reduced. A lowering of the percentage from 33 or 40 to, say, 25 would release a great deal of gold for active employment, enlarging the operative reserves by that amount. If agreement among the Great Powers were secured, this course of action would involve no danger whatsoever.¹ But it should be observed that the mere cutting down of legal reserve ratios will be wholly ineffectual in promoting gold eco-

¹ This was the opinion of the Gold Delegation: "The whole system of defined ratios has proved itself in the light of the special circumstances of post-war years to be too rigid and inadaptably . . . reserves are primarily required to meet possible deficits in the balance of payments. . . . We are of opinion that it would be advantageous to reduce the reserve ratios from their present high levels" (*Final Report*, p. 53, paras. 211, 212. Majority opinion).

nomies unless it is accompanied by a corresponding reduction to lower proportions of total actual reserves.

THE SCIENTIFIC CALCULATION OF RESERVES.—If calculated on scientific principles, how large would be the gold reserves kept by central banks in the light of the above discussion? Though not of course needing to bear any special relation to the note issue, a minimum gold holding of strictly moderate amount along the lines of the British fiduciary system might be fixed with advantage to give confidence to the public and for meeting emergencies. Beyond that the central bank would keep adequately large but not excessive reserves to ensure it comfortable latitude of action, allowing these reserves to fluctuate about an average holding deemed suitable to its special circumstances. The criterion would be the magnitude of the foreign drain to which it might be unexpectedly exposed, and the period of time required to put corrective measures into effect to counteract these international demands. In other words, the maximum should be placed at a figure allowing a sufficient margin of safety above the probable requirements to meet a short period adverse balance of payments, consideration also being given to the greatest extent to which in practice contraction of the total media of payments can be rapidly effected. Thus calculated, the reasonable gold requirements of central banks would vary widely from one country to another according to a complex of different economic circumstances. International centres, or predominantly agricultural countries, or those whose external trade was relatively large compared with their internal trade, or those which were heavily debtors on balance, would require larger reserves than others, because of their being more exposed to the danger of sudden large foreign drains. In view of these differences in the economic situations of different countries, the same

reserve is not the correct one for all. We can only say in advance that the chief consideration should be the extent of the country's foreign connections, since it is these rather than its domestic trade that determine a central bank's liquidity. In all cases, however, it is essential to take into account the largest contraction which in practice the country can be expected to tolerate. "Every country—or nearly every country—will, if subjected to more than certain pressure, suspend gold payments rather than subject itself to that degree of credit contraction which is necessary to restore its exchanges. It is no use for it to hold more gold than it is prepared to lose under those conditions. It is not the shortage of gold that leads countries to suspend gold payments: it is the belief that the necessary monetary contraction or credit contraction is greater than their economic system can stand. So that the gold reserves held by some of the countries in South America, or by Australia in the past, have really been greater than was necessary, because those countries suspended gold payments when they lost comparatively little of their gold. They did not suspend gold payments because they were short of gold, but because the maintenance of gold payments would put an undue strain on their economic system."¹

Thus under an ideal monetary system based on gold, gold reserves would be deprived of their currency significance and would be accumulated by central banks not in any proportion to liabilities but used merely for

¹ R. G. Hawtrey in *The International Gold Problem*, pp. 159-60. Elsewhere Mr. Hawtrey points out that Australia had nearly the largest gold reserve per head in the world, about the same per head as France or the United States, and little less than the Argentine (*op. cit.* p. 102). Since these words were written, the experience of America in having to abandon the gold standard while in possession of unprecedentedly large gold stocks because she was unable or unwilling to take the risk of allowing further deflation illustrates this argument in the clearest possible light.

facilitating international settlements. Credit policy would still need to be guided by the fluctuations of these gold reserves, exactly as to-day, but external use would be their sole purpose.

The argument is sometimes advanced that the increase in statutory reserve minima is necessary in view of the withdrawal of gold coin from circulation, inasmuch as this has rendered central-bank reserves the one and only source of gold in times when an adverse balance of payments leads to gold exports. But the reasoning is fallacious. We have seen that large minimum reserves afford no protection in such circumstances, since they are untouchable by law. The discontinuance of gold in circulation might justify, it is true, the maintenance of larger surplus reserves, in other words, larger operative or effective reserves. Raising the legal minimum itself, however, is an illogical procedure, based upon a confusion of thought. It defeats the very purpose it was meant to serve inasmuch as instead of increasing, it has the opposite effect of reducing the working reserve.

POST-WAR INCREASES IN LEGAL RESERVE REQUIREMENTS.—Since the war, statutory minimum reserve requirements, instead of being relaxed for the purpose of economising gold, have become more rigorous. Before the war a minimum cover of one-third for the note issue was considered sufficient in the case of most central banks, and the requirement of reserves against other sight liabilities was quite exceptional. Since the war the statutory requirements have been raised to 40 per cent or more, and sight liabilities as a rule are included in the calculation.

The consequence of these changes can best be illustrated by a few figures. At the end of 1928 the aggregate note issue of all central banks in the world amounted to approximately \$18 billion, and their other sight liabilities

to over \$6 billion. A 40 per cent gold cover behind both these sums amounts to \$9600 million; a 33 per cent cover to \$8000 million. The difference in average minimum reserves raises gold requirements by \$1600 million. If central banks had lowered their average reserves to the pre-war level, gold requirements for note issue cover would have been reduced by \$1200 million and for other sight liabilities by \$400 million, or \$1600 million altogether.¹ If reserves against notes in circulation had been reduced to 33 per cent and those against other sight liabilities been abolished, gold requirements would have dropped by \$3600 million.

The position at the end of 1930 was estimated to be as follows by the Gold Delegation.² Total notes and other sight liabilities of central banks (excluding the U.S.S.R.) amounted to \$22,450 million; their gold reserves to \$10,780 million; and their legal minimum gold requirements to \$7760 million. The amount of surplus gold reserves above the legal minimum requirements thus amounted to over \$3000 million. Had legal requirements been reduced to an average ratio of 25 per cent of total sight obligations, it is estimated that the surplus reserves would have amounted to about \$5170 million. Had they been lowered to 20 per cent, the free gold would have been raised to about \$6310 million. The corresponding figures for the end of 1931 would have been \$5350 million and \$6480 million respectively.

SHOULD LEGAL RESERVES BE ABOLISHED?—In light of these circumstances, there is much force in the argument

¹ F. M. Mlynarski, *The Functioning of the Gold Standard*, p. 75. "The first sum would be six times, the second eight times, as large as the annual influx of new gold for monetary purposes. . . . The danger of a shortage of gold would then disappear for several decades to come" (*ibid.*). Cf. "Gold, Supply and Demand", by A. Loveday in *Interim Report of the Gold Delegation*, Annex XIII, pp. 88-120.

² *Final Report*, p. 53, para. 212.

advanced in authoritative quarters that all legal provisions regarding reserve ratios and minimum reserves should be entirely abolished. This was the opinion of the minority group of the Gold Delegation. "The legal regulation of percentage reserves should be abolished and it should be left to each Central Bank to consider what amount of gold it thinks appropriate to meet the demands which are likely to arise."¹

Were it possible to ignore human foibles and prejudices, irrational though they may be, these arguments would be unanswerable. But popular opinion had probably better not be disregarded. The wiser course would be to make, if possible at not too great cost, some concession to the common superstition that a minimum reserve is indispensable.² The psychology of people may make it difficult to work a system which is really sounder if they perversely do not believe in it, for the belief in fetishes is with diffi-

¹ *Final Report*, p. 71.

In this recommendation Professor Cassel fully concurred. "The most efficient means for increasing the gold reserves actually disposable is therefore to abolish all such enactments. A mere reduction of legal reserve requirements, as proposed by the Gold Delegation of the League of Nations, would be insufficient, and, besides, almost impossible to attain by international agreement" (*The Crisis in the World's Monetary System*, p. 92).

Professor Sprague speaks in the same sense: "There is no particular ratio between gold on the one hand and currency and credit on the other that is needed to ensure safety and the satisfactory functioning of the banking system of a country" (*Selected Documents Submitted to the Gold Delegation*, p. 38: paper on "Price Stabilization"). "The universalisation of gold reserve ratios appears to me to be the most serious obstacle in the way of meeting a situation that will arise in the event of declining gold production. . . . It cannot be too strongly emphasised that there is no particular ratio between gold on the one hand and credit and currency on the other that is required to support and give strength to the credit structure" (*ibid.* p. 55: paper on "The Working of the Gold Standard under Present Conditions").

² Though the necessity of maintaining reserves for merely psychological reasons, "to promote confidence", can be much exaggerated. As Mr. Keynes points out, "public opinion is always content with what it is used to, as, for example, in pre-war days the very small reserves of the Bank of England promoted just as much confidence as the very large reserves of the Bank of France, so that it is, indeed, a source of weakness to get the public into the habit of expecting the permanent and continuous maintenance of large free reserves" (*A Treatise on Money*, vol. ii. p. 275).

culty exorcised by rational demonstration alone. Probably the best we can hope for, till public opinion is better educated, is a compromise between the present system and the ideal. If the whole loaf of complete removal of all statutory minimum reserve requirements is probably as yet unattainable in practice, the half loaf of their drastic reduction would still be worth having.

FOREIGN EXCHANGE AS A COMPONENT OF RESERVES.—The extent to which economies in the use of gold can be effected in the future through the use of foreign exchange to supplement gold reserves depends upon how strong the natural reluctance felt to-day for holding foreign assets in view of recent losses proves to be. It would not be necessary to permit such holdings of foreign exchange to be legally reckoned as part of the statutory reserve. If surplus reserves were to be held in substantial amounts in this form the benefits would still be considerable. The practice was widespread before the breakdown of the gold and gold-exchange standards. But even if it can be restored, which is highly dubious, the dangerous strain to which it can expose the great international financial centres will have to be clearly recognised and provision made accordingly. Some means would have to be found of enabling the central banks in these international markets to exercise some control over the foreign balances held in their commercial banks so that they will be in a position to cope with the danger of sudden withdrawals. Otherwise they would, as in the past, be under the necessity of holding large gold reserves so that sudden large foreign demands for gold could be readily met without embarrassment. The huge foreign exchange reserves held in American banks by foreign central banks before the crisis was one element explaining that country's vast stock of "sterilised" gold. Special reserves had to be kept against short-term liquid

funds held in New York by central banks which applied the gold-exchange standard and thus exercised a potential demand for gold. America's gold reserves were somewhat less excessive in reality than they appeared.

SILVER FOR RESERVES.—Before the war silver was included in the fundamental reserves of many countries; after the war the tendency in all reforms of statutory reserves was to eliminate it.¹ The result was to increase still further the pressure on gold produced by successive restorations of the gold standard and by the increase in minimum reserve requirements.

If central banks were permitted to hold increased quantities of silver in their legal reserves, and adopted this practice, an important economy in the use of gold would be effected. This suggestion has nothing whatsoever in common with bimetallism and is in no way incompatible with a full and true gold standard. A maximum limit, as regards quantity or ratio, could be imposed on such silver reserves. They would occupy a place definitely subordinate to gold, and be held at silver's current value in gold. The proposal is merely for a resumption and extension of pre-war practice. Gold's special function in equalising international payments could be performed equally well by silver in all respects save one, silver's defect being the price fluctuation to which it is subject. If, however, the amount of silver included in the fundamental reserve were, say, 5 or 10 per cent of the note cover and of the reserves against other sight liabilities, or some such ratio, the central banks would not be exposed to serious risks from variations

¹ But many central banks are still specifically authorised by law to include silver in their minimum metallic reserves against notes or demand liabilities. Besides China, amongst these are Bolivia, Hungary, Japan, Manchuria, Netherlands, Peru, Poland, Union of South Africa, the U.S.S.R. and a number of smaller countries. Silver is also included in the monetary reserves of the treasuries or banks of India, Ceylon, Mexico, New Zealand, the United States and some other countries.

in the price of silver.¹ Reductions in the legal and actual reserve of central banks to a sufficient extent to economise gold in the degree required would, it is true, be a preferable means of reducing the demand for gold because silver is unsuitable for *extensive* inclusion in metallic reserves. But if it proves impossible to secure adequate reserve reductions and other gold economies, the use of silver to a limited extent might be desirable. The main result would be that the reserves buried at the bottom of the vaults of central banks, and which never move in international exchange, would consist in small part of silver instead of entirely of gold.

THE SILVER QUESTION.—But is there anything to be said for using silver more extensively in other monetary ways? Should the world “turn to silver” in any real sense, or “do something for silver”? The case for bimetallism or symmetallism need not detain us: it is examined in Chapter IX. below. As a commodity, on the other hand, silver would appear, in comparison with other commodities, to have received recently, especially from the American government, all the help that it can reasonably expect. But in the United States silver is not an economic but a political issue.

With the fortunes of silver as an individual commodity

¹ Cf. Mr. James P. Warburg's recent suggestion that “some small part, let us say one-fifth, of the metal cover required as legal minimum reserve against issue, might be allowed to consist optionally of gold or silver provided that a central bank, electing so to hold silver for a fifth of its metal cover, would carry it at or below a price to be agreed upon. . . . This proposal is very limited in value, its chief merit consisting in the creation of a stabilising factor in that presumably central banks would be tempted to buy if silver fell below the agreed price, and to sell if it rose above” (open letter to Senator William E. Borah, November 30, 1933, reprinted in Mr. Warburg's *The Money Muddle*, New York and London, 1934, p. 256). President Roosevelt's silver message to Congress of May 22, 1934, proposed the use of silver in America's monetary stocks “with the ultimate objective of having and maintaining one-fourth of the monetary value in silver to three-fourths in gold”, the President to be authorised and “directed” to buy the silver necessary to attain this ultimate objective.

monetary authorities are not concerned. It has been depressed by curtailment of government demand, mainly through the post-war debasement of subsidiary coins and the placing of India on a gold base, which released her Treasury stocks of silver. In general, however, the course of the gold price of silver since 1914 has closely followed the course of general wholesale commodity prices.¹ Since 1928, the decline in price it has undergone has been no greater than that of the principal staple commodities.²

In Western countries silver is not a commodity of prime importance either in value or output. The American agitation for government assistance is comprehensible in light of the fact that American capital controls two-thirds of the world's mine output and nearly three-quarters of the world's refinery output of silver.³ But even in the United States it is not an important commodity. In 1931 the entire silver output was worth about half the value of the year's peanut crop or 1 per cent of the wheat crop of the country. The seven silver-producing states, however, send fourteen senators to Congress. The argument for giving silver producers a subsidy, by purchases at a price above the market, as under the American silver buying programme, or otherwise, is, in general principle, no better or worse than that for subsidising other interests.

The argument on behalf of the more extensive monetary use of silver—bimetallism apart—is threefold: that it would aid recovery by increasing purchasing power; that it would permanently broaden the metallic base; and that it would increase the buying power of the East. The first argument is quickly disposed of: silver purchases by the state, such as those undertaken by the American govern-

¹ T. E. Gregory, *The Silver Situation* (Manchester, 1932), pp. 36-7.

² For comparative figures see H. M. Bratter, *Should We Turn to Silver*, pp. 7-9 (University of Chicago Press, Public Policy Pamphlets, No. 6, 1933).

³ Bratter, *op. cit.* p. 4.

ment, put money in the pockets of producers and holders but increase general purchasing power only to the same extent, and no more, than similar expenditures for other purposes. As a recovery expedient, the use of silver to broaden the metallic base—the second argument—is quite unnecessary, in view of the huge idle reserves which most countries already possess to-day. What can be said for it as a permanent measure has been said above. There remains only the question of the extent to which a rise in the price of silver would benefit the silver standard countries. This in practice means China.

But China buys more silver than any other country. As an importer she does not *buy with* silver, she normally, as an exporter, *buys* silver. She would not, therefore, find a rise in the value of silver to her advantage, because it would compel her to give more of her goods in exchange for a given amount of silver. In other words, higher silver prices would temporarily stimulate China's commodity imports, but they would correspondingly decrease her exports. For this reason they would not be welcomed by the commercial and financial community of China. The same circumstance explains the desire of exporters to China to have the price of silver raised.¹ The real desideratum in the trade relations between silver and gold standard countries is less a rise in the price of silver than the elimination of excessive fluctuations. "From the point of commercial relations with silver-using countries, particularly China, trade interests would best be served, not by a rise in the price of silver as such, but by a rise in the general level of commodity prices."² A sharp rise in the gold

¹ "Why should it be good for China to raise her unit's value, if it is good for the United States to depreciate its dollar? If the gold countries want higher price levels, why should the silver countries want lower price levels?" (J. P. Warburg, *The Money Muddle*, p. 268).

² World Economic Conference, *Draft Annotated Agenda* submitted by the preparatory commission of experts (Geneva, 1933), p. 18.

price of silver, without a similar rise in other gold prices, would merely spell deflation and depression for China and further complicate the problem of silver stabilisation by encouraging large exports of silver from that country.¹

¹ These words were written before (and have been amply confirmed by) the recent protest of the Chinese to the American government regarding the latter's silver policy—on just the grounds indicated above. The effect of that policy on China is thrown into clear light by the imposition on October 15, 1934, of a graduated export tax tantamount to an embargo on the shipment of silver out of the country, to check a phenomenal outflow which threatened to denude it of currency.

CHAPTER VI

GOLD AND THE DEPRESSION

GOLD SHORTAGE AND THE PRICE COLLAPSE.—Was there a gold shortage in 1929? Or to express the question more fully, Was the precipitous drop in world prices which began in 1929 due in any way to a failure of gold supplies to keep pace with the growth of economic activity? The argument of Professors Warren and Pearson may be cited as an example of those which claim to prove that it was. They point out that in 1929 the world's monetary stocks of gold were 52 per cent above the five-year pre-war average, when the world's physical volume of production of all commodities was 40 per cent above pre-war. Prices in 1929 averaged 139 in the United States. They compute that the amount of gold required to support that price level, with all the world back on the gold base and with the volume of production of 1929, was about double that of pre-war ($1.39 \times 1.40 = 1.95$). To sustain this price level would have required about 28 per cent more gold stocks than existed in 1929 ($1.95 \div 1.52 = 1.28$). "The attempt of all the gold-using world to return to a gold basis brought prices back to their normal relationship to gold. . . . The low value of gold and resulting high prices from 1916 to 1928 were due to low demand for gold for monetary uses. The gold panic of 1929 and the collapse in the price structure were due to a sudden world-wide return of the demand for gold. On the pre-war relationships of gold to production of commodities there was about enough gold to sustain

pre-war prices. . . . But all the gold-using countries that had not reduced the weight of gold in the coins had become adjusted to a commodity price level of about 40 to 50 per cent above pre-war." The price collapse is thus traced to the return to gold in succession of all those countries which had left it during the war—Germany in 1924, Great Britain and the Netherlands in 1925, Belgium in 1926, Italy in 1927, France in 1928. The great depression is thus traced to "high demand for gold following a period of low demand for gold".¹

This line of reasoning is often summarily dismissed with the observation that a permanent shortage of gold would have shown itself not in a catastrophic drop in prices following a relatively stable level maintained over a long period, but in a slow steady decline. But this argument in itself is unconvincing. For the return to gold, though it was not accomplished at one stroke, could quite well have exercised a pressure of a cumulative sort. An expansion of credit beyond the normal ratio which it bears to gold reserves can temporarily offset increased demands for gold but cannot be indefinitely maintained unless banking practices and the habits of the business community are permanently altered or undergo a secular change. Between 1925 and 1929 the great expansion of credit in the United States could have offset a growing gold shortage. An inflationary boom can supervene upon a declining trend of gold production and prices, but when it eventually collapses prices are likely to be carried below the pre-boom level to a new secular low point. Thus it is quite possible for an increasing pressure on gold supplies

¹ G. F. Warren and F. A. Pearson, *Prices*, pp. 114-16, 125. "In 1929 we therefore had a combined situation of the business world adjusted to a price level about 40 or 50 per cent higher than the world gold supply could be expected to support, a rate of gold production too low to support even pre-war prices and a frantic demand for gold" (*ibid.* p. 106).

exercised persistently over a number of years to produce a sudden violent fall in prices instead of a steady protracted decline.

PRICES AND THE GROWTH OF GOLD RESERVES.—The problem therefore requires deeper probing. The examination in detail, however, of the various elements entering into it would not seem to show substantial grounds for believing that a permanent gold shortage was a large factor in producing the price collapse. The argument just mentioned leaves out of account the effect which all the economies in the use of gold effected during and since the war have had in permitting a higher level of prices than that of 1913. Whatever was the rate of gold production as a whole since the war, or even the increase in monetary gold, and no matter how it compared with the growth of world production and trade, the gold which has to be considered as influencing prices is the *effective* monetary gold stock, namely, the amount held by central banks and treasuries. For it is on this base that is built the pyramid of credit, the most important means of payment.

Now owing to the withdrawal of gold coin from circulation, etc., the proportion of the total stock of gold money in the hands of central banks and treasuries rose from 62 per cent in 1913 to 92 per cent in 1929.¹ Over this period these gold reserves were increasing at the compound rate of approximately 5 per cent per annum, an accumulation which would have allowed prices, other things being equal, to have been substantially above their 1913 level in 1929.² Between the end of 1921 and the end of 1929 the world's

¹ Joseph Kitchin, "Gold Production" in *The International Gold Problem*, p. 67.

² *Ibid.* "If the 3.1 per cent of 1850 to 1910 still holds good, it . . . would indicate a price level of 131 at the end of 1929 on the basis of 100 for 1913. The actual level for December 1929 was 129 in this country (Great Britain), 132 in the United States, 126 in the five leading countries, and perhaps 132 the world over."

stock of monetary gold in the hands of central banks and governments rose from \$8030 million to \$10,306 million,¹ which represents an annual average geometrical increase of about 3.2 per cent. Since 1925 the annual increase over the preceding year of the world's monetary gold stocks, including "other" stocks besides reserves (but excluding Eastern hoards), has been as follows: 1926, 2.47 per cent; 1927, 0.97; 1928, 4.27; 1929, 1.98; 1930, 4.32; 1931, 4.43; 1932, 5.51.² The yearly increase has been particularly high since the recession, but the average for the whole period has been comfortably above 3 per cent per annum.

INCREASED EFFICIENCY IN THE USE OF GOLD.—The *effective* stock of gold money was thus increasing very satisfactorily. But it was not only growing but was being used more efficiently: total gold reserves were supporting a permanently larger superstructure of credit as a result of the post-war changes in the mechanism of the gold standard. The effects of these economies in the use of gold cannot of course be exactly measured, but they must in the aggregate have been considerable. The inclusion of foreign exchange in fundamental reserves of central banks under the gold-exchange standard, since it permitted gold to do the same work so to speak twice over, made possible the creation of a much larger volume of credit against each dollar of gold in the world than before the war, even allowing for the greater gold reserves that the central banks of the world's great financial centres needed in consequence to carry. Since foreign exchange in central-bank reserves was till 1930 as good as gold it exercised the same influence on the level of prices as gold itself and must therefore be included in any calculation of the world's "effective" gold

¹ *Federal Reserve Bulletin*, June 1933, p. 368.

² Sir Henry Strakosch, "Monetary Gold Stocks" in Gold Supplement of *The Times*, June 20, 1933. (Computed on the basis of figures of the Gold Delegation and the League of Nations Statistical Year Book.)

stocks. The inflow of foreign exchange into central banks grew from \$828 million at the end of 1925 to \$2208 million at the end of 1929, an increase of \$1380 million.¹ Adding these figures of foreign exchange to those of metallic reserves, we find that the increase in effective reserves of gold and its equivalent increased during these years at an annual rate very much greater than 3 per cent—in fact, about 6 per cent yearly.

These considerations do not, it is true, completely refute the argument that the price collapse was due to gold shortage, as the Gold Delegation and other commentators imply. For we do not and cannot know what rate of increase in monetary gold stocks, even after allowing for all the economies in its use which were being effected, was needed to prevent the price level from falling in view of the increasing demands being put on the gold supply. From 1924 onward, the return to gold of so many countries, two in 1924, seven in 1925, two in 1926, five in 1927, four in 1928, some twenty in all in a period of four or five years, cannot but have had the effect of producing a severe pressure on the available gold supplies and forcing the price level down sooner or later unless offset by an accelerated accumulation of world monetary gold stocks.² The pos-

¹ Mlynarski, *op. cit.* p. 52.

² At the end of 1920 the United States was the only one of thirty-two countries listed by Mr. Hawtrey remaining on the gold standard. Up to the end of 1924, though a beginning was made with the restoration of the gold standard, foreign exchange was employed for reserves, and no great competitive demand for the available supply of gold resulted. Between the end of 1924 and the end of 1928, however, all but six of these thirty-two countries returned to the gold standard. With the exception of Spain they all returned to gold before the middle of 1931. Though on the whole a scramble to secure metallic reserves was avoided as far as possible, the pressure on the world's available monetary gold supplies was inevitably increased. (R. G. Hawtrey, *The Gold Standard in Theory and Practice*, p. 122.)

Germany and France on their return to gold adopted the gold-exchange standard; but in 1929 France adopted the gold bullion standard. Germany's intention was to do the same, and she was so advised to do by the Young Commission. Other lesser countries harboured the same ambition, feeling that foreign exchange might not in all circumstances—especially in times when war threat-

sibility still remains therefore that despite the greater efficiency with which gold was being employed, prices could not have been maintained at the 1928 level with virtually all the world going back on to gold. But it is a thesis which cannot be substantiated, and the analysis of the situation made above affords small grounds for belief in its truth. On balance the evidence hardly points to the conclusion that the precipitous price collapse was due to inadequacy of available gold supplies as such.

THE MALDISTRIBUTION OF GOLD RESERVES.—But if the price collapse cannot be attributed *directly* to an absolute gold shortage, what of the argument that the failure to utilise monetary gold supplies to the full extent, in other words “sterilisation”, coupled with their maldistribution as between the different countries, had much to do with it? This does not necessarily amount to arguing that the breakdown was due to “monetary factors” rather than to the development of serious “real” maladjustments which inevitably resulted in a violent price recession. For gold maldistribution may itself have been a cause, though also in part an effect, of these maladjustments.

At the end of 1928 the central-bank and treasury gold holdings of the United States and France amounted together to \$4993 million; those of the rest of the world to \$5018 million. (Excluding the U.S.S.R., \$4926 million.) These two countries were thus in possession at that date of half the world's aggregate stock of gold reserves. By the middle of 1931 their share had increased to over three-fifths, their holdings amounting to \$6804 million, those of the rest of the world to only \$4579 million. (Excluding the U.S.S.R., \$4318 million.)¹ The view that

ened—be quite “as good as gold”, and that the gold-exchange standard carried the stigma of economic inferiority and financial dependence. Thus steady pressure was exercised by European central banks to increase their gold holdings.

¹ *Report of the Gold Delegation*, Annex of Tables, pp. 78-81.

the fundamental cause of the price collapse is to be found in this maldistribution of gold holdings is best expressed in terms of the argument of the signatories of the note of dissent to the Gold Delegation's final report. "The recent drastic fall in prices has been caused by a maldistribution of monetary gold rather than by any shortage of the world's monetary stocks of gold as a whole." Until 1928 the surplus in the balance of payments of the United States and France "had been adjusted by a corresponding export of capital by the United States mainly in the form of long-term investments and by France mainly on short-term, but from that year onward this export of capital began to dwindle. At the same time, both these countries placed obstacles in the way of the inflow of commodities. The result has been that the only way in which the debtor countries could meet this gap in the balance of payments was by sending gold to the creditor countries." The surplus in the balance of payments of the United States and France is of course traced ultimately to their substantial war debts and reparations receipts. "Had these two countries not received reparation and war debt payments, they would obviously not have been in a position to draw these sums of gold to themselves . . . the payment of reparations and war debts has been the basic cause of this one-sided distribution of gold. In the normal course of international trade and in the absence of these abnormal influences, such a surplus in the balance of payments could never have arisen." The reason why the collapse did not occur till 1929 was to be found in the large export till then of American capital. When these foreign loans began to dry up because of the development of the New York Stock Exchange boom, collapse became inevitable because payment of reparations and war debts could be made only in gold. Had the countries receiving this gold

allowed it to have its full influence on their internal price levels, it is argued, the inflow would have ultimately been checked and reversed. But instead it was partly "sterilised", so that prices did not rise early enough in the United States, while the loss of gold exercised a downward pull on the price levels of other countries.¹

GOLD MALDISTRIBUTION AND THE PRICE COLLAPSE.—Much of this analysis is not open to dispute, but it overlooks certain very important factors. Altogether too much emphasis is laid on sterilisation of gold by the United States in the sense that gold did not have its *potentially* full effect on prices, and too little on the fact that much more effect was given it than proved good for her own economic health and ultimately, through her influence, for the health of the world at large. In so far as the United States and France did not or could not allow the gold they gained to influence their internal price levels to the full, it may be said to have been partially sterilised, whether deliberately or involuntarily. But paradoxically the trouble leading to the depression can be traced as truly to too much as to too little gold. Its growing concentration in a few countries

¹ *Report of the Gold Delegation*, pp. 65-6. Professor Cassel argues similarly that "the fundamental cause was the claim of reparations and war debts, combined with the unwillingness of the receiving countries to receive payment in the natural form of goods and services. This underlying cause became effective when France, in 1928, entered the gold standard system and began to draw gold to herself on a large scale, and when, at the same time, America ceased that export of capital which previously had served to maintain equilibrium in her balance of payments. The consequence was such a drain on the gold reserves of other countries as to cause the breakdown of the international gold standard system" (*ibid.* p. 74). Had their increased gold reserves been used by the gold-receiving countries in a normal way "prices in France and the United States would have risen above the price-level of the outside world. This would have led to an export of gold which would have saved the outside world from a further fall in prices and helped it to maintain the gold standard. Thus it may truly be said that the breakdown of the gold standard was the result of a flagrant mismanagement of this monetary mechanism. *The payment of war debts in conjunction with the unwillingness to receive payment in the normal form of goods led to unreasonable demands on the world's monetary gold stocks; and the claimants failed to use in a proper way the gold they had accumulated*" (G. Cassel, *The Crisis in the World's Monetary System*, pp. 71-2. The italics are Professor Cassel's).

reduced the monetary reserves of the rest of the world and eventually compelled those countries which were losing gold to institute credit restriction. But meanwhile it was the possession of such huge gold stocks by the United States which permitted the development of a tremendous inflationary boom which ended in inevitable collapse and pulled down world prices.

The progress of the United States and France in "mopping up" a steadily increasing proportion of the world's gold is reflected in the following figures: In 1913 these two countries, together with Switzerland, Holland and Belgium, had 44 per cent of the world's gold; at the end of the war, $51\frac{1}{2}$ per cent; in the middle of 1929, 58 per cent; at the time of the Hoover moratorium, $65\frac{1}{2}$ per cent; and at the end of 1931, 71 per cent. The rest of the world, excluding Russia, had, at these same dates, respectively $39\frac{1}{2}$, 43, $41\frac{1}{4}$, $32\frac{1}{4}$ and 26 per cent.¹ Between the end of 1928 and the middle of 1931 the United States increased her central gold reserves by over 22 per cent and France by over 77 per cent; in the rest of the world, excluding the U.S.S.R., they fell by over 12 per cent.² During the year 1929 the central-bank reserves of the United States increased by \$154 million and of France by \$384 million. The total increase of all central-bank reserves during that year amounted to \$387 million. Thus the reserves of the rest of the world fell during the year by \$151 million.³

¹ Joseph Kitchin, in Supplement of London *Economist*, January 21, 1933.

² *Report of the Gold Delegation*, p. 37, para. 127.

³ *Ibid.*, Annex of Tables, pp. 78-81. During the next three years the percentage increase (+) or decrease (-) was as follows in these two countries and Great Britain:

	1930	1931	1932
U.S.A.	+67	-36	-1
France	+96	+120	+118
Great Britain	+2	-27	-1

(Sir Henry Strakosch, "Monetary Gold Stocks", in Gold Supplement of *The Times*, June 20, 1933.)

From 1926 the world price level was tending slowly downward as a whole, but the movement of local price levels was often in opposite directions. In Great Britain their tendency was markedly downward, in the United States from the middle of 1927 to September 1929 they moved slowly and irregularly upward, in France from the last quarter of 1927 to the first quarter of 1929 they moved upward more rapidly. In neither of these latter two countries, however, did the new gold which flowed in have its full effect in raising prices. In the case of France the explanation is in part to be found in the functioning of the Banque de France, with its inability to engage in open-market operations. In the case of the United States, in pursuance of the Federal Reserve's post-war policy of "stabilisation", expansion was not allowed to reach the limits permitted by the gold reserves, which continued far in excess of the legal minimum. Thus for different reasons gold was to this extent being "sterilised" in both countries. Yet because of the naïvety of the Federal Reserve's stabilisation policy, the gold imports did allow a tremendous speculative security and real-estate inflation to occur, which in 1929 demanded severe credit restriction. Thus first the rest of the world had to impose credit restriction because of gold being drained to the United States and France, and then the United States itself also had to impose credit restriction in 1928 because of the consequences of having too much gold. The New York Federal Reserve rediscount rate was advanced steadily from $3\frac{1}{2}$ per cent in January 1928 to 5 per cent in July and the Reserve banks sold securities for the purpose of curbing the stock-market speculation. In 1929 restrictive measures became more severe and were being applied by *both* New York and London. Meanwhile real maladjustments in the structure of production of a most serious sort had been developing,

which, with the reaction, required for their correction the most powerful liquidation. Thus maldistribution of gold, despite there being no absolute world shortage, can in a very real sense be blamed for the collapse of prices, though ultimately responsibility lies chiefly with those factors—war debts, reparations, trade barriers and so forth—which produced this maldistribution and only secondarily with the mistaken monetary policies which did nothing to counteract their consequences effectively.¹

THE DIFFICULTY OF CORRECTING THE SITUATION.—Yet the difficulties in the way of correcting the situation should not be minimised. The tendency of the United States to draw gold to herself when her favourable balance of payments ceased to be offset by heavy foreign lending could not easily be checked, because the very attempt to control overexpansion at home tended to encourage and be frustrated by a still further inflow of gold from abroad. Nor in the case of France could the influx of gold have been easily counteracted, for reasons explained below. Yet though the gold thus absorbed in abnormal quantities by these two countries was followed by no *proportionate* credit expansion, such as should have occurred according to the traditional principles of the gold standard, yet sufficient expansion did occur in the United States to engender extravagant overproduction and sow the seeds of a subsequent violent reaction.

In some ways the problem was unusually complex. Things did not work out as they should have done according to the gold standard "rules of the game". The origin

¹ In criticising the argument that maldistribution of gold was a factor in causing the depression, Professor Robbins states that "in so far as there was maladjustment it caused, not deflation, but inflation" (*The Great Depression*, p. 29). This is quite true. But if gold maldistribution was largely responsible for causing the great inflation, and the inflation inevitably ended in violent collapse into depression, then surely one may justifiably argue that maldistribution had much to do with the latter.

of the 1928-29 boom in the United States has often with justice been traced to the cheap-money policy of the Federal Reserve system in 1927. The gold holdings of the system were reduced between spring 1927 and summer 1928, due to low rediscount rates and large open-market purchases of securities. The policy achieved its immediate double objective of stimulating domestic business recovery from the recession of 1927 and of helping Europe to secure some of America's gold. Unfortunately it soon proved *too* successful. That the tremendous speculative boom which was encouraged at home was not in commodities, as in the post-war boom, but in securities and real estate, made things no better; for whereas rising commodity prices might have reversed the direction of the gold tide, the rise in call money rates and the expectation of still higher security prices drew additional gold to America. The shrinkage of the hitherto large volume of her foreign lending, which alone had made possible the payment of large war-claims in face of almost impenetrable tariff barriers, strongly reinforced the tendency of gold to flow in. It is no wonder that the gold-standard mechanism, working in the traditional manner under quite new conditions, and contending with forces with which it was never expected to cope, should have broken down under the strain.

THE CHARGE OF GOLD "STERILISATION" IN AMERICA.—The charge often brought against the Federal Reserve authorities, especially by European commentators, of having partially sterilised their huge gold holdings prior to the depression, appears to find confirmation in the fact that the figures of the "free gold" of the entire Federal Reserve system increased markedly between 1924 and 1929. Monthly averages of weekly data corrected for seasonal variation were as follows (in millions of dollars):

Month	1924	1925	1926	1927	1928	1929
March . . .	661	822	916	892	914	1125
June . . .	571	893	876	865	1111	1082
September . .	492	919	949	813	1095	1118
December . .	675	903	934	696	1088	782

Yet there was no active sterilisation in the sense that the volume of credit was deliberately contracted or prevented from expanding. At least till 1928 quite the contrary was the case. America received most of her gold during the war and in the years 1921 to 1924. After 1924, till the depression, gains and losses about cancelled out. (See table on page 106, below.) Between 1921 and 1924 credit was substantially expanded; between 1924 and 1929 it was further very greatly expanded. During the latter half of 1927 and the first half of 1928 it even expanded on a declining gold base. Monetary circulation plus individual deposits per dollar of gold in the United States increased as follows:¹

1924 .	\$10·64	1927 .	\$12·19
1925 .	11·80	1928 .	14·13
1926 .	12·08	1929 .	13·39

FEDERAL RESERVE POLICY AND THE GROWTH OF BANK CREDIT.—Yet these figures do not tell the full story. For the explanation of the great credit expansion prior to the depression we must look beyond the misleading reserve ratios (of gold to Federal Reserve notes and demand deposits) of the system as a whole, and consider the movement of member-bank reserve balances, upon which bank credit is created in the United States, and the principal factors influencing these balances. When we

¹ Source: *Annual Reports* of the Comptroller of the Currency and of the Secretary of the Treasury. Figures of gold coin and bullion exclude gold bullion and foreign coin outside the vaults of the Treasury, Federal Reserve banks and Federal Reserve agents. Figures of individual deposits are for all reporting banks.

do this we can see that though America was not using her gold to the full, there was considerable credit relaxation and that gold inflation on a large scale was allowed to develop. Between January 1924 and October 1929 member-bank reserve balances increased 25 per cent, though gold reserves remained virtually unchanged, as shown by the accompanying table.

(In millions of dollars)

Dates	Gold Reserves ^a (End of month)	Member-Bank Reserve Balances (Monthly Average of Daily Figures)	Member-Bank Net Demand Plus Time Deposits (Call Dates)	Total Reserve Bank Credit Outstanding (Monthly Average of Daily Figures)	Member-Bank Borrowings at Federal Reserve Banks (Monthly Average of Daily Figures)
1924, Jan. .	\$3888	\$1911	\$25,027 ^b	\$1041	\$574
June .	4095	2001	26,042	886	370
Dec. .	4090	2182	28,273	1288	301
1925, June .	3962	2141	28,658	1118	437
Dec. .	3985	2219	29,913	1507	688
1926, June .	4055	2206	29,977	1185	473
Dec. .	4083	2218	30,362	1445	668
1927, June .	4202	2301	31,460	1081	429
Dec. .	3977	2399	32,870	1568	529
1928, June .	3732	2355	32,629	1531	1019
Dec. .	3746	2367	33,397	1824	1013
1929, June .	3956	2314	32,302	1317	978
Oct. .	4023	2386	32,269	1450	885
Dec. .	3900	2395	33,030	1643	803
Percentage Increase Jan. 1924 — Oct. 1929 . .	3	25	29	39	54

Source: *Annual Reports of the Federal Reserve Board and Federal Reserve Bulletins.*

^a Gold coin in circulation excluded.

^b December 31, 1923.

The two large-scale operations of the Federal Reserve banks in the purchase of government securities during this

period are reflected in the great increase of member-bank reserves by over \$200 million in 1924 and by nearly the same amount in 1927. The principal changes in holdings of government securities during these years were as follows:¹

Dec. 1923—Sept. 1924, purchase of	.	\$510 million
Nov. 1924—March 1925, sale of	.	260 „
April 1926, purchase of	.	65 „
Aug. 1926—Sept. 1926, sale of	.	80 „
May 1927—Nov. 1927, purchase of	.	230 „
Jan. 1928—April 1929, sale of	.	405 „
Oct. 1929—Dec. 1930, purchase of	.	560 „

These changes in Federal Reserve holdings of United States securities and the variations they produced in the reserves of member banks supply the key to the understanding of developments in the credit situation during these years. American commercial banks do not ordinarily carry large surplus reserves. They attempt to keep their reserves fully invested. Thus changes in reserve money normally produce variations in credit conditions. The variations of the curve of member-bank “net demand plus time deposits”, which indicates the credit made available to the customers or depositors of these banks for use, are usually found to follow closely the variations in the curve of “member-bank reserve balances”. This is only to be expected: for the more money the banks acquire as reserves, the greater obviously is their lending power. Turning to the movement of member-bank demand and time deposits during these years, shown together in the table above and separately in the accompanying table, we find that between the end of 1923 and October 1929 they undergo a 29 per cent increase. Taken as a whole this

¹ *Reports of the Federal Reserve Board.*

LOANS AND DEPOSITS OF ALL MEMBER BANKS

(In millions of dollars)

Call Dates	Loans ^a	Investments	Net Demand Deposits	Time Deposits ^b
1923, Dec. 31 . .	\$18,842	\$7,645	\$16,376	\$8,651
1924, June 30 . .	19,204	7,963	16,838	9,204
Dec. 31 . .	19,233	8,813	18,468	9,805
1925, June 30 . .	20,655	8,863	18,277	10,381
Dec. 31 . .	21,996	8,888	19,260	10,653
1926, June 30 . .	22,060	9,123	18,804	11,173
Dec. 31 . .	22,652	8,990	18,922	11,440
1927, June 30 . .	22,938	9,818	19,250	12,210
Dec. 31 . .	23,886	10,361	20,105	12,765
1928, June 30 . .	24,303	10,758	19,191	13,439
Dec. 31 . .	25,155	10,529	19,944	13,453
1929, June 29 . .	25,658	10,052	18,977	13,325
Oct. 4 . .	26,165	9,749	18,952	13,318
Dec. 31 . .	26,150	9,784	19,797	13,233
Percentage increase, Dec. 1923—Oct. 1929	39	28	16	54

Source: *Annual Reports* of Federal Reserve Board and *Federal Reserve Bulletins*.^a Includes rediscounts and overdrafts; excludes acceptances of other banks and bills of exchange sold with endorsement.^b Includes postal savings deposits.

increase was perhaps not abnormal for the entire period. The significant feature of the series, however, is the sharp rise which is revealed in 1924 and 1927. Member-bank deposits show a sudden upward spurt in these years, by over \$3 billion during the course of the former, and \$2½ billion in the latter year. These increases are directly traceable to the rise in the amount of reserve balances supplied to member-banks by the Federal Reserve banks through open-market operations on those two occasions. These two great additions to the lending and investing power of the member banks are thus attributable to the Federal Reserve policy pursued in these years, and the main basis of the

expansion was in turn provided by the excessive stocks of gold held by the system, though the rapid increase of these had come prior to 1924.

EVIDENCES AND EFFECTS OF CREDIT OVEREXPANSION.—Accompanying the growth of member-bank demand deposits by 16 per cent and of time deposits by 54 per cent, an increase is seen over this same period (January 1924 to October 1929) of 39 per cent in loans and 28 per cent in investments of member banks. But does this considerable credit expansion in itself afford evidence of inflation? To cite as such the mere fact of the increase, without reference to any criteria, as has so often been done, is unconvincing. Credit expansion constitutes inflation only if its growth is excessive relative to the behaviour of other economic factors. Now during the period January 1924 to October 1929, when member-bank reserves increased by 25 per cent, deposits by about 30 per cent, and loans and investments together by rather more, the physical volume of production rose from 100 to 121 (125 in June 1929). In other words it grew by nearly the same amount as did bank credit. Wherein, then, lay the inflation? Those who argue that there was none till 1929, except on the stock markets, usually point to the remarkable stability of the wholesale commodity price level during these years. "It is impossible", says Cassel, for instance, "to speak of an inflation of the American credit system" because there occurred "no rise of the general level of commodity prices".¹ It is, however, an unjustified assumption that an expansion of credit which keeps pace with the growth of production, and thus keeps prices stable, is necessarily healthy—in other words that no inflation can occur under a stable price level. With an increasing volume of output should not the price level have *fallen*? Again no dogmatic

¹ G. Cassel, *The Crisis in the World's Monetary System*, p. 59.

answer can be given to this question without reference to the movement relative to one another of different economic factors. The only meaning that can be given to the term inflation is capital overexpansion induced by excessive profits, current or prospective. A credit expansion sufficient to keep prices stable when productivity is increasing can only be healthy if monetary costs are also rising quickly enough to keep profits in check. This did not happen between 1924 and 1929, so that the stability of prices during these years allowed excessive and steadily increasing profits to be made (see below, pp. 118-20) and did constitute an inflation which produced and justified a huge stock-market boom.

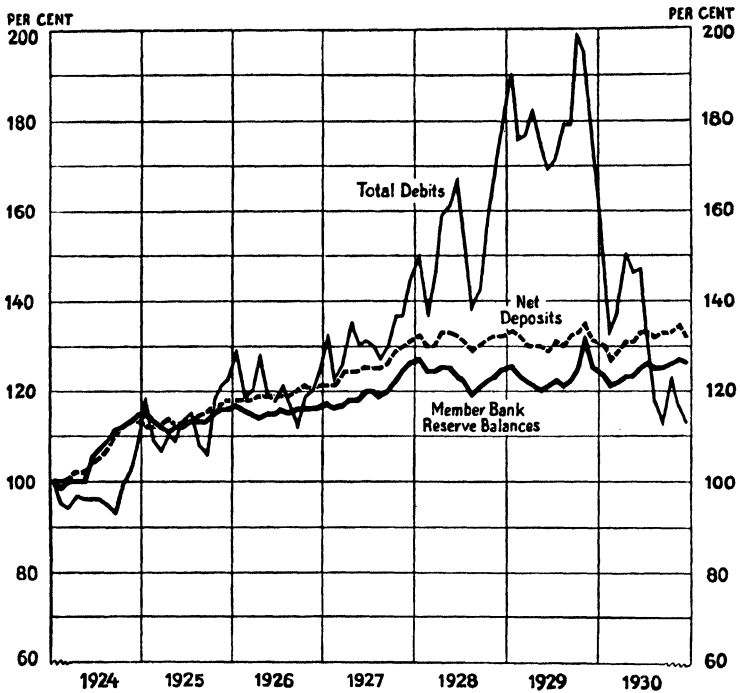
The inflation is evidenced less in the figures of member-bank deposits or loans than in those of debits, which reflect the velocity of bank-credit turnover including stock-exchange transactions. Between January 1924 and October 1929 total debits to individual account in 141 cities increased by no less than 130 per cent. Figures are as follows (in millions of dollars):¹

1924, January .	\$41,498	1927, June .	\$56,820
June .	40,230	December .	65,441
December .	49,157	1928, June .	72,485
1925, June .	48,631	December .	82,386
December .	54,399	1929, June .	69,666
1926, June .	50,662	October .	95,527
December .	57,070	December .	66,752

Under American reserve requirements member-bank reserve balances fail to reflect fundamental changes in the demand for credit. This failure "became a major factor in the credit situation in 1928 and 1929 when an extraordinary demand for funds from the stock market was met

¹ *Annual Reports of the Federal Reserve Board.*

without an increase in reserve requirements of member banks. In fact, the aggregate legal requirements of member banks for reserves were about \$75,000,000 lower in September 1929, at the very peak of the stock-market boom,



LEGAL RESERVES, NET DEPOSITS AND ACTIVITY OF
DEPOSIT ACCOUNTS AT MEMBER BANKS

From *Member-Bank Reserves* (see footnote, p. 112)

than in December 1927, despite a situation in intervening months in which the demand for stock-exchange loans was sufficient to require brokers to increase their borrowing by over \$4,000,000,000 at rates which in some months averaged nearly 10 per cent. This situation arose because corporations and other non-banking lenders, seeking to profit

by high rates, drew upon their balances with member banks and loaned funds in huge volume directly to brokers, permitting an extraordinary demand for credit to be met without any increase in the deposits against which member banks were required to maintain reserves. The activity of these deposits increased rapidly, however, as is shown by the chart."¹

The following table shows how greatly the velocity of bank deposits increased over this period:

INDEX OF VELOCITY OF BANK DEPOSITS ^a
(Base, 1919-25 = 100)

Dates (Daily Basis)	New York City	140 Cities (outside New York City)	141 Cities (including New York City)
1924, Jan.	102	99	100
June	100	97	100
Dec.	99	92	100
1925, June	112	99	105
Dec.	115	100	109
1926, June	115	101	108
Dec.	124	101	113
1927, June	128	106	117
Dec.	136	104	123
1928, June	177	119	148
Dec.	201	121	165
1929, June	182	126	149
Oct.	244	137	195
Dec.	139	115	129
Percentage increase, Jan. 1924—Oct. 1929 . . .	139	38	95

Source: Federal Reserve Bank of New York, Reports Department.

^a Seasonal eliminated. Velocity based on relation of debits to individual account to demand deposits in weekly reporting member banks.

Between January 1924 and October 1929 the increase was less than 40 per cent in 140 cities outside New York, but

¹ *Member-Bank Reserves*, Report of the Committee on Bank Reserves of the Federal Reserve System (Washington, 1931), pp. 10-11.

in the latter it was no less than 140 per cent, clearly reflecting the tremendous stock-exchange speculation.

INFLATION UNDER STABLE PRICES.—Summing up our analysis of developments during these years, the causal sequence appears to have been as follows. Gold holdings were so huge that their variations had little significance and allowed credit policy to be dictated by supposed internal business needs. The traditional gold standard connection between the gold base and the credit superstructure had almost completely vanished. In pursuance of supposed business needs member-bank reserves were greatly increased, especially on two occasions, by the open-market purchase of securities in large volume by the Federal Reserve banks. This permitted sufficient credit expansion to keep prices stable despite a rapid reduction of costs. Since wages failed to rise correspondingly, excessive profits resulted and generated great capital overexpansion and security speculation, which was financed, without much further expansion of bank credit, by increased velocity of turnover.¹ When in 1928–29 credit expansion was followed by credit restriction, and this policy was being pursued in both New York and London, violent reaction became inevitable. All that the stability of the price level up to 1929 meant was that but for credit expansion it would have fallen: in its failure to do so, credit flowed strongly into the securities and real-estate markets. There is a world of difference between a fall of prices due to a

¹ Even when maladjustments are not created by an expansion of the effective money supply in keeping with the growth of production and trade, there is of course no need for *both* the credit volume *and* its velocity of turnover to increase in full proportion to the growth of business in order to keep the price level stable. If they do, the “needs of trade” are taken care of twice over, the effective money supply *outruns* the growth of business, and a speculative and inflationary movement is let loose. The figures given above show that this is just what happened in America during the boom years. The reverse is true of a deflationary movement: prices fall more than in proportion to the contraction of the credit volume because velocity slows down.

contraction of the means of payment and one brought about by cost reductions due to technological improvements. With an unresponsive wage level the latter can be quite healthy. Conversely stable prices can be maintained in face of an increased volume of production only if the total effective means of payment are enlarged, namely, by relative inflation. The explanation of the stability of the price level between 1924 and 1929 is found in the tendency of an enlarged volume of output to depress unit prices being offset by a compensating expansion in the means of payment. Thus those who claim that there was considerable inflation in the United States during these years, and those who hold that her gold was being partially "sterilised", are arguing at cross purposes. According to the orthodox rules of the gold standard, prices in America should have risen considerably, in view of her huge surplus gold reserves, as shown by the Federal Reserve's "free gold": from the standpoint of monetary "neutrality" they should, in light of cost reductions, have fallen sharply. A more detailed examination of the "non-monetary" aspects of this problem is undertaken below after a brief discussion of the circumstances and consequences of France's excessive gold accumulations, and the situation in other countries.

EXPLANATION AND CONSEQUENCES OF THE FRENCH HOARD.—The effects of huge gold holdings on the French monetary situation were somewhat different from those they produced in America. The French hoard was the resultant of the combined operation of some half-dozen factors which may be briefly enumerated, without attempt to arrange them in order of importance: First, the return of France to the gold standard at a gold content of the franc which proved to have undervalued it externally and stimulated a favourable balance of trade, together with

high and mounting tariffs; second, the deliberate accumulation of large gold stocks by the Banque de France for the purpose of giving assurance regarding the absolute security of the restored gold standard; third, the receipt on balance of a large net annual sum on account of reparations and war-debts payments; fourth, the reluctance of the French public to invest abroad on long-term, a fear partly born of disastrous losses incurred during the previous period of inflation, coupled with restrictions on the flotation of foreign capital issues in Paris; fifth, the repatriation in a powerful stream of short-term balances held abroad which had fled to other countries for safety during the franc's depreciation; and finally, the difficulty of giving increased gold reserves their full effect in raising prices through credit expansion, a difficulty which resulted from the peculiar nature of a central bank which could not engage in open-market operations.

These factors, especially the last-mentioned, justify French authorities in denying that active gold "sterilisation" was practised by the Banque de France.¹ Nothing was done deliberately to produce this effect—though it is equally true that nothing was or perhaps could have been done in the circumstances to prevent it. On the contrary, gold imports were received in a steady stream while the discount rate was as low as anywhere in the world and short-term capital available in great abundance. Under the

¹ After France returned to the gold standard, the growth of the note issue kept pace with the gold reserves and foreign assets of the Banque de France. Between the third quarter of 1928 and the third quarter of 1929 the latter increased from 61,140 million to 64,353 million francs, while notes in circulation against them increased from 61,757 million to 65,747 million francs (*Annuaire Statistique de la France*: quarterly averages of figures for end of each month). Nor do the deposits of commercial banks, though they fell, show deliberate sterilisation. Cash reserves expressed as a percentage of deposits fell rapidly in the second half of 1927 and continued to decline slowly through 1928 and 1929. (See T. Balogh, "The Import of Gold into France", *The Economic Journal*, September 1930, p. 447.)

statutory limitations imposed upon the Banque's freedom of action, and given the other non-monetary circumstances mentioned, it could hardly have helped accumulating gold in excessive amounts. It remains true, however, that France, after every allowance is made for the relatively much larger holdings of gold normally required by her currency and credit system than is the case with Great Britain or the United States, had secured much more than her fair share of the world's monetary gold stocks.¹ Under such conditions the gold standard cannot reasonably be expected to function satisfactorily. It is true that as a result of the inelasticity of the peculiar statutory provisions governing her central bank France's absorption of gold was largely a passive process. But the international consequences of the process were no different for being involuntary. Still another illustration is afforded of the post-war gold standard failing to function semi-automatically as an instrument for producing international integration of price-cost structures.

GOLD AND CREDIT IN ENGLAND, GERMANY AND OTHER COUNTRIES.—In the meantime, while America was receiving gold and inflating and while France was also receiving gold and not inflating, England was tending to lose gold but not contracting. Despite the persistent tendency of the dollar-sterling exchange to hover near the gold export point between 1925 and 1929, no restrictive credit policy was put into effect. Deposits of the London clearing banks increased over this period by 8 or 9 per cent.² Nothing, in other words, was done to correct Britain's state of continued disequilibrium with the rest of the world.

¹ The question is one of some technical intricacy. See T. Balogh, "The Import of Gold into France", *The Economic Journal*, September 1930; R. G. Hawtrey, *The Art of Central Banking*, chap. i., "French Monetary Policy"; and *The International Gold Problem*, pp. 157-9.

² For figures see above, Chapter II. p. 20, footnote.

Inflation was also taking place in Germany. From 1924 to 1929 net capital imports (long- and short-term) amounted altogether to about 17,500 million reichsmarks, being particularly heavy in 1927 and 1928. Gold reserves and foreign assets which could legally replace gold as primary cover for notes increased between the third quarter of 1925 and the third quarter of 1929 from 1487 million to 2507 million reichsmarks (quarterly averages of end of month figures), or 69 per cent; while total credits of the big banks rose from 4783 million to 11,129 million reichsmarks, or 133 per cent. But the expansion was almost world-wide. The cash ratios of commercial banks (percentage ratio of holdings of coin, notes and balances with the central banks to total deposits, notes and cheques) fell for Canada from 13.3 in 1925 to 10.1 in 1929, for South Africa from 14.5 to 11.1, for Australia from 19.8 to 15.9, for New Zealand from 12.9 to 10.9.¹ Between the same dates, the percentage increase in total deposits (corrected for changes in wholesale prices) was as follows for these same countries: 27, 50, 24, 20.² Measured against a 1924 base these figures would naturally be much larger.

AMERICAN "STABILISATION", 1925-29.—It is difficult to decide how far the Federal Reserve system's policy prior to 1929 was deliberately directed towards keeping stable the wholesale commodity price level.³ At the time, this reputed policy, which was probably pursued half consciously and falteringly, evoked much enthusiasm from

¹ *Commercial Banks, 1913-1929*, pp. 50, 52 (League of Nations).

² *Ibid.* pp. 30-35.

³ At the stabilisation hearings in 1928 before the House Banking and Currency Committee the authorities of the Federal Reserve Bank of New York expressed vigorous opposition to the suggestion that they should assume the obligation of keeping prices stable. It is quite intelligible that they should not have wanted this responsibility imposed on them by law; and it is doubtful whether they consistently pursued a "stabilisation" policy. There seems, however, to be no question that they were at least much influenced by the notion that business conditions must be sound so long as the price level remained stable.

advocates of monetary stabilisation. It is not difficult to see, especially in retrospect, why, if it was actually put into effect, it was bound to end in economic collapse. Since the problem is both intricate and still imperfectly understood, it is worth examining in some detail.

In itself the commodity price level can be a very deceptive index of economic health and criterion for banking policy. Monetary stability cannot be identified, irrespective of the behaviour of "non-monetary" factors, with a stationary price level. Thus far in this study the term stability has been used, for want of a better term and at the risk of some misunderstanding, as implying the elimination of severe cyclical fluctuations, but not necessarily as excluding or being inconsistent with a gradual upward or downward movement of the secular trend. This usage is defended below (Chapters XI. and XII.). The preservation of a proper balance between different factors within the cost-price structure is more important than the movement of the general price level in itself. Only under certain appropriate conditions of behaviour, relative to each other, of these factors will a constant price level prevent economic disequilibrium and subsequent reaction. These conditions were not present in the United States, the centre of world fluctuation, during the years leading up to the crisis of 1929.

RELATIVE MOVEMENTS OF PRICES, COSTS AND PROFITS.—The truth of this statement finds illustration in the comparative course of prices, wages and profits during this period. Between 1924 and 1929 aggregate net profits of all American corporations increased over 60 per cent. The prosperity was not evenly spread. The boom was predominantly industrial, the rise in profitability being chiefly a feature of manufacturing industry. Even before the depression agriculture was experiencing a relative decline,

AGGREGATE NET INCOME OF ALL CORPORATIONS IN THE UNITED STATES,
1919-32 ^a

(In millions of dollars)

Year	Amount	Year	Amount
1919	6910	1926	6630
1920	4280	1927	5730
1921	-70	1928	7500
1922	4300	1929	7950
1923	5720	1930	1260
1924	4870	1931	-3240
1925	6830	1932 ^b	-4930

Source: Solomon Fabricant, *Recent Corporate Profits in the United States*, National Bureau of Economic Research, New York, Bulletin 50, 1934. Figures are those reported for income tax purposes to the U.S. Treasury.

^a After payment of income taxes but before payment of dividends. Exclude tax-exempt corporations and life insurance companies.

^b Preliminary estimate.

not only in the United States but all over the world. Moreover, in manufacturing industry itself the rate of profits in certain branches was low, as, for example, in textiles and rubber, leather and lumber products. Nor were certain countries, such as Great Britain and some areas of central Europe, enjoying any very great prosperity. Furthermore, the figures of the table above do not show the trend in the *rate* of profits, since changes in invested capital are not taken into account. No reliable figures are available indicating the movement in the net worth of all corporations in the United States for this entire period. But between 1924 and 1929 the ratio of net income to capitalisation (stockholders' equity) of a representative sample of 71 large manufacturing corporations, after payment of federal income tax, showed a rapid rise from 1924 to 1926, a relapse in 1927 and renewed sharp increases in 1928 and 1929.¹

¹ R. C. Epstein, *Industrial Profits in Prosperity and Depression, 1919-1932*, National Bureau of Economic Research, New York, Bulletin 44, January 1933.

The rate of return (after tax) on the book value of stock equity (profits accruing to stockholders) of all corporations in the United States was 5.3 per cent in 1927 and 6.2 in each of the years 1928 and 1929; for all manufacturing corporations the figures are 6.2, 7.6 and 8.3 per cent respectively.¹ This represents a rise in the rate of profits between 1927 and 1929 of about 35 per cent. There is, however, great variation as between different industrial groups. The majority of those engaged in or connected with the production of consumers' goods show either no rise or a fall. Thus for textiles the figures for 1927, 1928 and 1929 respectively are 5.4, 3.5 and 2.9 per cent; for leather products 7.4, 4.8 and 3.9; for rubber products 5.1, 0.3 and 2.5. For foods, beverages and tobacco the showing is somewhat better—6.7, 7.9 and 7.7 per cent. But for agriculture the figures run 1.3, 2.2, 1.4; for trade 5.5, 6.4 and 4.9; and for service 4.0, 4.1 and 3.8. On the other hand, the rate of profits of groups connected with the production of producers' goods or durable consumers' goods rose appreciably with the cyclical upturn: and it is the fortunes of these branches which are particularly significant in analysing a boom and the connection with it of monetary policy. The percentages for metals and metal products (including automobiles) are respectively 7.1, 8.8 and 10.9, for chemicals 5.4, 9.1, 9.9, and for mining and quarrying 0.7, 1.8 and 2.7. The figures for public utilities and transportation also show a rise—4.8, 5.1 and 5.8.²

¹ Fabricant, *loc. cit.* In evaluating these figures allowance must be made for some probably general write-ups of assets in 1928 and 1929.

² Much the same story is told by figures of the ratio of net profits to gross income. For all manufacturing corporations the percentage rises between 1927 and 1929 from 6.0 to 7.6, for mining and petroleum from 4.3 to 9.1, for chemicals from 7.2 to 8.8, for metals from 7.0 to 9.1 (L. R. Robinson, "Corporate Earnings on Share and Borrowed Capital in Ratios of Gross Income", *Journal of the American Statistical Association*, March 1934).

What was the cause of this very rapid growth of profits? The complexity of the problem and the obscurity and manifold ramifications of many of the forces involved preclude dogmatic conclusions, but the following factors would appear to be significant in throwing light on the situation. Throughout the entire period 1921 to 1929 wholesale commodity prices were relatively stationary: between 1925 and 1929 they fell about 8 per cent. The same is true of the cost of living: between the latter two dates it fell only about 2 per cent. During this whole period the physical volume of production in manufacturing industries was rapidly increasing. Total pay-rolls, however, were rising only very slowly. Thus the labour cost per unit of output was falling steadily. But more than this, since both the total numbers employed and their average hourly earnings remained almost stable, or rose only very slightly, the output per man-hour shows a rapid rise, the average annual increase being about 4 per cent. (As might have been expected, a more than average rise follows each of the depression years 1921, 1924 and 1927, whereas the peak years 1923, 1926 and 1929 are years of correspondingly low increases in efficiency. See table next page.)

CAUSES AND CONSEQUENCES OF INCREASING INDUSTRIAL PRODUCTIVITY.—There is a variety of possible explanations of this great increase in the output per man-hour in manufacturing industries during these years. It could conceivably have been partly due, without any introduction of new techniques or improvements in organisation, to changes in the relative importance of different industries within the total productive structure, those with high output per man-hour possibly gaining over those with relatively low output. Putting aside this factor as one upon which little light is at present available and which hardly appears *prima facie* to provide a large part of the explana-

tion, the increased output per man-hour might well seem to afford clear evidence of increased labour efficiency, in view of the failure of pay-rolls and employment to increase materially. But an increase in output per man-hour resulting from an enlargement of the scale of production may be due to either increased efficiency of labour as such or to

INDEXES OF PRODUCTION, WAGES, EMPLOYMENT AND
LABOUR COSTS IN MANUFACTURING INDUSTRIES
(1920 = 100)

Year	Physical Volume of Production ^a	Pay- rolls ^b	Labour Cost per Unit of Output ^c	Hourly Earn- ings ^d	Output per Man-hour ^e	Employ- ment ^f
1920	100	100	100	100	100	100
1921	77	65	84	87	103	76
1922	100	69	69	82	118	83
1923	118	87	74	89	121	96
1924	110	81	74	93	126	89
1925	124	86	69	92	133	93
1926	127	88	69	94	135	94
1927	124	86	69	95	137	92
1928	131	86	66	95	145	90
1929	140	92	66	97	148	94

Sources: ^a Federal Reserve Board, corrected figures. (See *Journal of the American Statistical Association*, December 1930, p. 457, and December 1932, p. 386.)

^b Federal Reserve Board.

^c Index of Factory Pay-rolls ÷ index of Physical Volume of Production × 100.

^d National Industrial Conference Board: Average Hourly Earnings in twenty-four Manufacturing Industries.

^e *Journal of the American Statistical Association*, December 1932, p. 387. (Index of Hourly Earnings ÷ index of Labour Costs.)

^f Federal Reserve Board. (The full-time equivalents of these figures show only trifling differences.)

the employment of more capital equipment and relatively fewer workers. In this connection it should be noted that the increased productivity of American industry was partly due to the movement towards large-scale organisation and the application of mass methods in new fields, industrial and commercial, including retail trade. The increased

efficiency and profits of these big business enterprises was not a net gain, but effected partly at the expense of smaller and weaker competitors.

In so far as the figures cited above reflect increased efficiency of labour they must, with a stable level of prices and virtually stable earnings, have meant increased profits. In so far as they are explained by an accelerated substitution of capital for labour the rise in the volume of output per man-hour does not necessarily argue increased profits, since the increased capital employed would entail additional charges. The figures of the table below showing the growth of horse-power employed between 1923 and 1929 indicate that this process was an important factor in the situation during these years. To the extent that the increase in output was due to increased capital outlay the failure of employment and pay-rolls to rise is partly explained. The rapid process of replacement and extension of fixed capital does, however, point to rising profits, because it must have been effected under the stimulus of increased profits, actual or prospective.

The biennial census of manufactures throws some light on the problem. The accompanying table shows that "the

Year	Value added by Manufacture (\$000,000)	Number of Wage Earners Employed (Average for the Year)	Wages Paid (\$000,000)	Horse-power employed	Price Index of Finished Products (U.S. Dept. of Labour) (1926 = 100)
1923	25,850	8,778,000	11,009	33,094,000	99.2
1925	26,778	8,384,000	10,730	35,773,000	100.6
1927	27,585	8,350,000	10,849	38,826,000	94.5
1929	31,885	8,839,000	11,621	42,931,000	96.2

value added by manufacture"—which is the difference between the value of the output and the value of the

materials used and hence represents the aggregate of the wages, salaries, interest, depreciation, rent and profits involved in manufacturing processes—rose between 1923 and 1929 by \$6035 million, or about 23 per cent, but pay-rolls by only \$612 million, or less than 6 per cent. How much of this difference, amounting to \$5423 million, went to pay for the new capital equipment which the increase of 30 per cent in horse-power employed indicates? It is difficult to estimate the total value of the additional capital outlay, which includes much more than new manufacturing plant, but Mr. Hawtrey has argued that “If it is estimated at \$2,000,000,000 to \$2,500,000,000 a year, the addition to plant in six years would be from \$12,000,000,000 to \$15,000,000,000 and the interest and depreciation charges would be perhaps \$3,000,000,000”. Admitting that “this is a very rough calculation”, it “would point to an additional profit of some \$2,000,000,000, an increase much more than in proportion to output”.¹ ✓

RELATIVE PRODUCTION OF INVESTMENT AND CONSUMERS' GOODS.—Further evidence of growing maladjustment during this period is afforded by the relative rates of the growth of production respectively of consumers' goods and of capital goods (both producers' and durable consumers' goods). The table below indicates that capital formation was proceeding more rapidly between 1924 and 1929 than the output of perishable and semi-durable con-

¹ R. G. Hawtrey, “Speculation and Collapse in Wall Street”, *The Art of Central Banking*, chap. ii. p. 47. “The increase in profits was the fruit of improved processes and improved organisation.” As regards the necessary resources for new investment, “it is true in this respect, as so often in economic affairs, that to him that hath shall be given. . . . When industry is profitable, plenty of fresh capital is available, and an intelligent use of the fresh capital leads to increased profits. And abundance of capital resources stimulates invention because it provides the necessary opportunities to apply new processes.” This capital was largely supplied “not by issues in the market at all, but by the limitation of dividends and the retention of a large proportion of profits in the business in the form of reserves” (*ibid.*).

INDEXES OF PRODUCTION, BY INDUSTRIAL GROUPS
(1923-25 = 100)

Group	1924	1925	1926	1927	1928	1929	Percentage Increase, 1924-29
Iron and steel .	89	106	113	104	119	130	46
Non-ferrous metals	99	107	112	109	115	125	26
Petroleum-refining.	99	115	127	136	152	168	70
Minerals . .	96	99	108	107	106	115	20
Construction ^a .	94	122	129	129	135	117	24 ^b
Automobiles . .	91	107	108	86	110	135	48
Leather and products	95	97	99	103	102	104	9
Textiles . . .	91	104	104	113	107	115	26
Foods . . .	103	98	97	96	98	97	-6

Source: *Annual Reports* of the Federal Reserve Board.

^a Construction contracts awarded (value).

^b Between 1924 and 1928 the increase was 44 per cent. The drop in 1929 was chiefly due to a sharp decline in residential construction, as money rates became higher.

sumers' goods. The relative overinvestment in the output of durable goods is unmistakable.¹

MALDISTRIBUTION OF THE INCREASE IN NATIONAL INCOME.—Thus, in fine, during the years preceding the crash, while wholesale prices and wages continued relatively stable, profits were increasing exceptionally fast as a result of rapid cost-reducing advances in productive technique and organisation. Judging merely by the price index, no inflation is revealed; judging by the figures of bank credit and security prices, the development of a large-scale inflation appears to be beyond question. Our analysis has shown that prior to 1929 a genuine profit inflation of considerable magnitude got under way despite the stability of the commodity price level. Since the rise in wages did

¹ Preliminary figures of the National Bureau of Economic Research, New York, as yet unpublished, of capital formation in the United States, show, between 1924 and 1929 (at 1929 prices), an increase of nearly 50 per cent in the annual output of producers' durable goods and of over 31 per cent in consumers' durable goods (construction excluded), but of only between 16 and 17 per cent in perishable and semi-durable consumers' goods.

not keep pace with the advance in manufacturing technique and the growth of production, the increasing output of industry was, under stable prices, inevitably being faultily distributed. The recipients of fixed or relatively inflexible incomes, such as the holders of fixed-income bearing securities, were not participating in the growth of the national dividend, or were being benefited in much less than full proportion. The economic position of wage and salary earners was not markedly improved either by a material rise in money earnings or a fall in the cost of living. Most of the increase in production flowed to profit-recipients. In light of these circumstances the rapid increase in the price of shares shown below in the index of common stock prices becomes easily comprehensible. The rise, at

Year	Wholesale Commodity Prices ^a (1926 = 100)	Cost of Living ^a (June figures) (1913 = 100)	Common Stock Prices ^b (1926 = 100)
1922	97	166	68
1923	101	170	69
1924	98	169	73
1925	104	173	90
1926	100	175	100
1927	95	173	118
1928	97	170	150
1929	95	170	190

Sources: ^a Bureau of Labour Statistics, U.S. Dept. of Labour.

^b Standard Statistics Company (about 421 issues.)

least till the development of a runaway market in 1928-29, was fully justified by the great rise in the profits of industry produced by the defective distribution of output. The growing maladjustments in the internal cost-price structure were bound sooner or later to have an explosive effect in either the commodity or security markets. The disproportionate rates of growth of investment and consump-

tion progressively increased till the failure of the income of the final consumer in the end checked the process.¹

EXPANDING PROFITS, THE STOCK MARKET AND THE FEDERAL RESERVE SYSTEM.—This situation goes far towards explaining the monetary aspects of the inflation. The rapid accumulation of profits both made possible progressively greater capital expansion and also in large measure freed the money market from dependence upon commercial credits furnished by the central-banking system. High dividends facilitated the raising of fresh capital by the issue of new securities. Corporate savings were also piling up.² An overliquid market was also created because the requirements of industry for bank credit were, with a stable price level, increasing approximately only in proportion to the growth of production—*i.e.*, less rapidly than the accumulation of profits. The excessive supply of liquid funds inevitably found its way into the stock market, where it provided speculators with plentiful resources to finance a huge bull movement by means of security loans. The superabundance of domestic funds was further reinforced by a powerful influx of foreign capital attracted by rising stock market quotations. The efforts of the Federal Reserve system to curb the inflation were largely frustrated by the

¹ Whereas wholesale prices fell substantially in many countries during this period, the cost of living everywhere showed stubborn resistance to the decline. The figures below may be compared with the American statistics cited above. The percentage changes in wholesale prices and the cost-of-living index respectively between April 1925, when Britain returned to gold, and the end of 1929 were as follows in various countries: England, - 22.5 and - 5.2; Germany, - 6.1 and + 11.5; Sweden, - 25.1 and - 5.6; Switzerland, - 18.3 and - 4.7; Netherlands, - 12.8 and - 6.7. (Mlynarski, *op. cit.* p. 60.)

It is of course retail, not wholesale prices which determine the real value of the ultimate consumer's income. The figures show that such reduction as occurred in wholesale prices was not reflected in the cost of living.

² Total annual corporate savings in the United States are estimated to have been as follows between 1924 and 1929 (in millions of dollars): 1924, 1440; 1925, 2810; 1926, 2180; 1927, 950; 1928, 2330; 1929, 2170. (Solomon Fabricant, *Recent Corporate Profits in the United States*, National Bureau of Economic Research, Bulletin 50, New York, 1934.)

imperfect control which it was able to exercise over the money market: it could not control the flow of funds from private and foreign sources which helped finance speculative excesses. The stock-market boom was the direct outcome of abnormal profits and these in turn made the boom possible. In the circumstances, with the different factors in the internal cost-price structure behaving the way they did, the stock-market speculation and the capital over-expansion which it fostered could terminate only in a drastic fall in the price level. The structure of industry had been violently distorted by lop-sided development. Relative to the means of the ultimate consumer, the vast expansion of capacity in durable goods industries and the huge volume of domestic and factory building erected were altogether excessive. Violent maladjustment in "non-monetary" factors developed under stable prices in consequence of a defective distribution of national income.¹

¹ Since inflation and deflation are loose terms employed by different writers to convey various meanings, it may be mentioned at this point, though the meaning will usually be clear enough from the context, that both terms are used throughout this study in the most comprehensive sense. By inflation and deflation are meant respectively an expansion or contraction of the total *effective* means of payment, however caused, in relation to the work that this money in the widest sense has to perform in effecting the exchange of goods and services. The qualification "effective" is used advisedly to allow for changes in the velocity of turnover of both currency and bank credit. Such inflation or deflation is usually, but not necessarily, reflected in an upward or downward movement of the general *average* level of prices. Thus for convenience and brevity the long upward trend of prices following the gold discoveries in the fifties and nineties of the last century is sometimes designated as primarily a prolonged gold inflation; the rapid rise of prices in America after the post-war depression, a cyclical credit inflation; and the post-war rise in prices in most European countries, a huge currency, or fiat-money or paper-money inflation. Scientific precision naturally somewhat blurs these sharp distinctions. No implication regarding causes is intended by the use of these terms, nor whether these movements are predominantly attributable to "monetary" or "non-monetary" factors. The stability of prices in the United States prior to 1929 may be called "relative inflation" for the reasons explained above: because with a rapidly expanding volume of output prices can be prevented from falling only by a concurrent increase in the total media of payments. Even this need not necessarily constitute inflation, but in this case it did—if not price inflation, certainly profit inflation—in consequence

PRICE STABILISATION AND ECONOMIC INSTABILITY.— Under the conditions prevailing in the years preceding the recession, the United States required, for the maintenance of economic equilibrium, not a stationary price level but a rapidly falling one which would have prevented the growth of excessive profits and given the wage and salary earner a larger share in the increased product of industry. Or conversely, with a virtually constant price level, dis-equilibrium might have been avoided had wages risen more rapidly, tariffs been lowered and increased imports accepted, taxation been sharply raised and public-works outlays and governmental expenditures in general been curtailed. The progressively increasing productivity of American industry demanded either an increase in consumers' money incomes, which would have distributed a larger volume of purchasing power to absorb this enlarged output, or a fall in the price of finished goods corresponding to the reduction of unit costs, which would have enabled wage and salary earners to command an increased volume of purchases with the same monetary incomes. In either case, harmony between the rates of consumption, saving and investment would not have been disturbed. Since neither the price of finished goods fell nor wage levels rose, the increase in real income to which the fixed-income classes were entitled and which increased industrial efficiency demanded to keep the wheels of industry turning steadily did not materialise. Profit inflation encouraged a rate of capital expansion which could not be maintained, and inevitably resulted in disastrous price collapse. The credit policy pursued during this period allowed too much of the available national resources to be diverted into

employed relative to the profits criterion. The movements of bank credit and prices have no meaning in this context except with reference to the movement of "non-monetary" factors.

capital development and not enough into increasing consumers' real incomes. The trouble lay largely in inflexibilities of wage levels as truly as in the frequently cited case of England, though the circumstances were the very opposite, rigidity in America manifesting itself in their sluggishness in moving upwards under expanding profits, instead of, as in England, offering resistance to downward revision in face of deflationary pressure.

It may be argued that, things being what they were, the correct monetary policy for America was not the one of credit relaxation pursued in 1924 and 1927 but of credit restriction, though in view of her immense gold reserves there was absolutely no justification whatsoever, but the very reverse, for the latter policy according to the gold standard "rules of the game". Ignoring its repercussions on the outside world, which might have been extremely serious, a policy of credit restriction, had it succeeded in producing a lower price level at home, might, by checking the growth of profits, have prevented excessive capital being attracted to the automobile industry, construction and the production of producers' goods, in a word, overinvestment in durable capital equipment and the speculative orgy in securities and real estate. In fairness to the Federal Reserve authorities, however, the difficulties in the way of such a policy from the world point of view should not be minimised. Credit restriction by the United States at a time when the rest of the world was attempting to get back to the gold standard must inevitably, by drawing gold to her, have greatly aggravated Europe's difficulties, to whose condition the United States could not, even in self-interest, have been wholly indifferent.

The great American stabilisation experiment may thus, assuming it was deliberate and ignoring the practical diffi-

culties of the situation, be characterised as resting on a basic fallacy. It was price stability which, in view of a rapid advance in efficiency unaccompanied by a corresponding increase in the earnings of fixed or sticky income recipients, was purchased at the cost of a colossal unstabilisation of the productive system which finally produced a catastrophic, because long-delayed, fall in prices. The widespread attempts of cartels, monopolies and raw-material producers to hold up prices in the face of falling costs through price maintenance and valorisation schemes and the like could in the long run have had no other outcome.

CHAPTER VII

GOLD AND PAPER STANDARDS¹

THE QUESTION OF THE MONETARY STANDARD.—In view of the unsatisfactory manner in which the gold standard has been functioning in recent years and the uncertain prospects of its better behaviour in the future, unless drastically reformed, it is worth considering whether and on what terms a return to a full international gold standard at a fixed invariable rate is desirable, and what conditions are prerequisite for its restoration. Whether or not one agrees

¹ In practice, of course, no absolutely clear-cut distinction can be drawn between gold and paper standards. The great variety of currency systems existing in the world to-day shows that there are degrees of being on and off gold. A few countries only are left with a genuine gold standard, one under which the home currency can be converted into gold, and *vice versa*, at fixed rates, and which permits gold exports more or less freely. Another group, however, such as Italy and Poland, have what may be called an artificial gold standard, for they do not readily convert home currency into gold, their exchanges are pegged, and the balance of foreign payments is closely controlled. In countries such as Germany, again, the claim to be on the gold standard is little more than a transparent pretence. By means of a veritable zariba of restrictions, controls and regulations, the value of the nationals' currency in the country is kept at par with gold but may not be used outside, while the balances of foreigners, when not completely frozen, can be used only at a loss, *i.e.* are substantially depreciated. In other countries imposing similar controls, such as Austria and Yugoslavia, the internal as well as the foreign section of the currency is depreciated. In contrast to all these countries exercising artificial regulation, the off-gold countries, England, Scandinavia and the sterling bloc, are virtually free from exchange regulations. Conversion of gold into notes at a fixed price is suspended in England, but she retains a free gold market and is subject to international short-term capital movements. Apart from a depreciated, and manipulated, foreign exchange rate and a varying internal price for gold, such currency systems, though off gold, show more resemblance to the traditional gold standard than do many of the artificially controlled systems still ostensibly attached to gold. The United States dollar is rather in a class by itself. Though recently revalued at 59 per cent of its old gold par, the prohibition of domestic holding of gold and the embargo on its free export have not been raised, and a huge stabilisation fund is available for manipulating the exchanges. (See below, pp. 199-200.)

with the characterisation of the gold standard as a "barbarous relic", it remains true that the case for its retention, like that of so many other hoary institutions which have ceased to give real satisfaction, rests less upon such inherent merits as it possesses than upon the difficulty of deciding what to put in its place, despite the plethora of proposals for alternative monetary systems. It is not a sufficient defence of the full gold standard to point to the various shortcomings to which "managed" currencies, with or without a gold base, are subject, and to dismiss them cavalierly. The faults of the semi-automatic gold standard itself cannot be ignored, but must rather be recognised as the necessary price which has to be paid for the enjoyment of its benefits. In this chapter, therefore, the comparative merits and defects of gold and free systems (whether cut loose completely from gold or attached to it only in some flexible manner) will be analysed in general. The examination of concrete proposals for monetary reform will be deferred till the next chapter. First, however, it is necessary to say something about the relative importance of "monetary" and "non-monetary" factors, the effects of price instability, and the extent to which the banking mechanism can in fact exercise control over the price level.

MONETARY AND NON-MONETARY FACTORS.—The highly vexed question whether "monetary" or "non-monetary" factors are to be held primarily responsible for cyclical fluctuations of business activity need not detain us long, even though one's views in the matter are likely to have important implications regarding the degree to which it is felt that the banking mechanism can exercise effective control over financial, industrial and commercial processes for the prevention or mitigation of economic instability. The adequate consideration of this problem would demand

more extensive and technical discussion than there is space or opportunity to indulge in within the compass of this essay. Let it, then, be granted comprehensively, in dismissing the issue regarding causes as being impossible of solution here, first, that fluctuations of business activity and the total media of payment may be generated in a variety of ways; secondly, that many disturbances clearly may be "non-monetary" in origin, as for instance, wars, political upheavals, shifts in demands, changes in productive technique, tariff alterations, even unbalanced economic development and large-scale misdirected efforts, and a host of other changes which need not be enumerated; and thirdly, that whether fluctuations are produced primarily by alterations in the structure of industry affecting the volume of monetary transactions or primarily by variations in the supply of money, all fluctuations are monetary in the sense that they are accompanied by changes in the relative flows of the volume of goods produced and of the effective volume of the money supply respectively. Even were it to be granted, in order to forestall argument (though many would vigorously deny it), that the monetary mechanism under the gold standard is not primarily or at all responsible for *generating* business fluctuations, there would still remain the further question whether it is not defective in preventing the occurrence and mitigating the consequences of mistakes in the non-monetary sphere. The answer to this question will, it is true, be partly, but not wholly, dependent upon the answer given to the first question of the origin of business cycles, those inclining to the "monetary" view tending to regard the latter as capable of control through monetary action, those believing that business depressions are due to the development of structural maladjustments tending to distrust "artificial" monetary correctives. A brief discussion of the possibilities

of central banks exercising control over the volume and terms of bank credit with a view to maintaining stability should therefore be in place.

In this controversy much ink has been spilt in argument at cross purposes. There is nothing necessarily inconsistent between many of the statements made on opposing sides. As implied above, one school of thought may be right in holding that price disturbances are attributable to the development of maladjustments fundamentally non-monetary in nature and origin; the other may be equally justified in arguing that the monetary mechanism should, and could if properly operated, adjust itself to non-monetary changes in such manner as to help prevent or offset or remedy these maladjustments.¹ Again, though it is admittedly easier through monetary policy to put a curb on overexpansion on the upswing than to stimulate recovery in a severe depression, still, if booms can be checked by such means, the ensuing depressions would also be mitigated. "The fact that a motor-car is not well adapted for getting itself out of a ditch once it has fallen in does not prove that it is beyond the powers of good driving to keep it in the middle of the road."² The majority group of the Gold Delegation in its final report expresses the opinion that "it is neither possible nor desirable, by the application of monetary policy, to correct fluctuations in the price

¹ It would, for instance, be patently absurd to argue that the recent economic breakdown was predominantly due to "monetary" causes and to ignore the effects of increased trade barriers, huge international political debts, the growing rigidity of economic structures, and other elements reviewed in Chapter III. above; but an unstable monetary system can greatly intensify the difficulties produced by such non-monetary factors. Similarly the experiences of America, Australia and other countries during the depression have given evidence that monetary measures cannot alone and of themselves remedy maladjustments. But they have also shown that the restraints imposed by maintenance of the gold standard can present an almost insuperable obstacle to the application of non-monetary measures for the deliberate stimulation of recovery. (See Chapter X. below.)

² Macmillan Report, p. 95.

level due to non-monetary causes".¹ Whether or not this is so, however, may depend upon whether conditions under the gold standard or paper currencies are meant. In this case the context shows that the reference is clearly to the former; but in failing to consider the alternative case the authors of the statement are guilty of begging the question, which by implication they answer in the negative, whether, if currency contraction and price decline can be arrested by abandoning gold, it is worth doing so, rather than to cling to that standard. It has already been conceded above, indeed explicitly argued, that control over internal movements of the price level must be narrowly circumscribed under a freely automatic gold standard to conform to world movements, the essence of that standard consisting precisely in the subordination of domestic to international factors. It cannot be argued, however, nor can the Gold Delegation majority have meant to imply, that these arguments hold good for a currency cut loose from gold. Pre-war, post-war and more recent experiences have alike conclusively demonstrated that prices can be raised under a paper standard, whatever the expediency of such a course and its after effects, to almost any extent by currency and credit expansion. The examples of European post-war inflation can be passed over as too glaringly obvious to mention. But more recently Great Britain, Sweden and the countries of the sterling bloc in general have convincingly demonstrated their ability, since they went off gold three years ago, to keep their wholesale price levels not only stable, but much more so than those of the countries which continued on the gold standard, and at a level considerably above the latter. Whether price-level variations are primarily attributable to disturbances of the equation between the goods flow and the money flow

¹ P. 48, para. 183.

originating on the latter, the monetary side, or on the former, the non-monetary side, there remains a theoretical possibility of keeping prices relatively stable provided the monetary factor, namely, the effective supply of the means of payment, can be controlled.¹

Even under a free paper standard, which does not narrowly circumscribe any individual country's freedom of action as does gold, it may not be easy in practice, and *a fortiori* it may not be desirable, to correct fluctuations in the price level by the application of monetary measures. There is considerable variation in the degree of control possessed by different central banks over their own monetary and banking systems, and hence in their power to regulate the effective supply of the total means of payment. The control of the Bank of England over the creation of bank money and credit is, for example, much more complete than that of the Banque de France, the Reichsbank or the Federal Reserve authorities, for different reasons in each case.² Moreover, it is notoriously more difficult to stimulate recovery from a depression through monetary action than to check an incipient boom, for, as repeated experience has shown, business may fail to respond in a bad depression to reduced rediscount rates even when reinforced by large-scale open-market operations. But what this means is that, if the desired end of credit expansion and rising prices cannot be attained

¹ Mr. Keynes has used a good analogy which illustrates this point: "To maintain that the supplies in a reservoir can be maintained at any required level by pouring enough water into it, is not inconsistent with admitting that the level of the reservoir depends on many other factors besides how much water is poured in—for example, the natural rainfall, evaporation, leakage and the habits of the users of the system" (*A Treatise on Money*, vol. ii. pp. 339-40).

² The practical difficulties involved for central banks in promoting price stability through monetary policy are well brought out in the evidence (especially of Governor Strong) before the U.S. Congressional Committee on the "Stabilisation bill" of 1927. (Stabilisation: Hearings before the House of Representatives Committee on Banking and Currency, 1928. H.R. 7895, Pts. I.-III.)

directly by traditional methods, recourse must be had to supplementary measures, such as enlarged public works programmes, which will increase expenditures and purchasing power and thus stimulate both capital goods industries and the demand for consumer goods. The question is discussed more fully elsewhere (Chapter X. below). Though it is true that, once maladjustments have been allowed to develop during a boom, recession and some readjustment are unavoidable, yet the aim of a policy of monetary control would be precisely to prevent the development of inflationary overexpansion. Furthermore, such readjustments as were found to be necessary would surely be much more easily effected under *relative* stability of the price level than when there is superimposed upon them a drastic price deflation going far beyond the lengths required to effect these readjustments. There is a world of difference between a necessary measure of corrective liquidation involving some lowering of the general price level and the purely destructive price deflation produced by a panic-generated passion for liquidity accompanied by a wild international scramble for gold. It is one of the gravest defects of the gold standard, as hitherto operative, that it works by a process of overcompensation, alternately in one and then in the other direction, first allowing credit to be overexpanded and prices to rise excessively, and then enforcing as a corrective a disproportionately large measure of credit destruction and price deflation.

The argument so often advanced, as for instance by the Gold Delegation majority, that measures of credit expansion "may in some cases even lay the basis for a new expansion of credit which it may prove difficult to control",¹ may be quickly disposed of. It amounts to taking the risk of starving the patient to death by refusing him

¹ *Final Report*, p. 47, para. 176.

food for fear that if allowed to eat he might kill himself by gluttony. Experience, especially post-war experience, has shown that inflation can be got in hand even at an advanced stage. Nor is it true, as demonstrated by the post-war stabilisation of many much-inflated European currencies, that inflation must always of necessity be followed by a deflationary reaction. France, Italy, even Germany, all experienced inflation without subsequent deflation. It is especially under the gold standard that inflation is likely to be followed by deflation.

THE CONTROL OF INFLATION.—This is not to deny that the difficulties, both technical and non-economic, in controlling inflation once it has got under way may be considerable. The current American situation is worth brief analysis as an example. The fear of inflation to-day of the "orthodox" sections of American opinion, which must appear to us somewhat hysterical, is, though excessive, by no means baseless. The situation contains highly explosive material. Metallic reserves are dangerously large and the excess reserves of member banks stand at a fantastically high figure. Devaluation of the dollar added \$2808 million to the gold stock. Gold inflow resulting from its external undervaluation has added \$650 million more. Surplus reserves of the member banks exceed \$1 billion. They could be increased by expenditure of gold in the possession of the Treasury to four times that sum. As an average, member banks are legally required to keep about 10 per cent of their deposits in reserves at the Federal. If they were to make loans and investments freely they could, against such surplus reserves, theoretically expand their deposits by \$40 billion, an amount nearly \$15 billion in excess of total demand deposits of all commercial banks in 1928. Raising Federal Reserve rediscount rates, to be effective, requires that member banks be in need of Federal

Reserve accommodation. Increased rates might moreover meet Treasury opposition, because of the increased cost of government borrowing it was likely to entail. Open-market sales of government securities by the Federal Reserve banks to reduce member-bank reserve balances might also encounter Treasury opposition while the budget continues badly out of balance.

Under recent banking legislation, however, the Federal Reserve Board may raise member-bank reserve requirements, when needed, to restrict the expansion of bank credit. This weapon, if vigorously employed, could unquestionably, despite its bluntness, be highly effective. Used in conjunction with the other traditional weapons, the technical possibility exists of curbing a runaway boom. But the extent to which effective measures are likely to be taken is a practical issue. Nor is it only the political factor which is involved. The timing difficulty in controlling an inflationary movement, whose solution must rest largely on judgment, is also present. For control, to be effective, must be imposed before the process has gathered momentum, in other words while the majority is still convinced that the expansion is "sound". Exercised at a later stage, restriction may produce a violent recession. It is difficult at the time to recognise an incipient inflation as such. It is equally difficult, in practice, for central bankers to put a damper on it, by reason of the violent chorus of denunciation for destroying prosperity which they are likely to encounter from business men, bankers, politicians and most economists. So long as the inflation takes the form of credit expansion and not fiat-money excesses, the great majority of "sound money" men will be unlikely to see danger in it.

EFFECTS OF PRICE INSTABILITY.—The disastrous consequences of instability in the standard of value need not be dwelt upon at length. Recent experiences in particular

have made our realisation of the evils of violent price fluctuations only too painfully keen. The confusion introduced into national economic life and the cruel injuries and injustices inflicted on society by price chaos have often been described in detail.¹ The evil has a twofold aspect. Rapid changes in the price level, by causing dislocation and disturbance throughout the whole price-cost structure, have a calamitous effect upon *productive activity*; but they also arbitrarily alter the *distribution*, as between different classes of society, of the national income which is the product of that economic activity. In addition they play havoc with smooth economic and consequently with political relations not only between classes but also between nations. A sharp fall in prices demands readjustments in the distribution of income and the structure of production of a drastic, far-reaching and difficult kind throughout the whole price system, national and international. The Macmillan Committee's summary of the consequences of a fall in prices may perhaps be quoted.² The general effects of rising prices being broadly the reverse of those described, the account is applicable, *mutatis mutandis*, to the period of inflation during which the seeds of business depression are sown:

"(i) All incomes fixed in terms of money, such as

¹ The following accounts may be especially mentioned: *Report of the Gold Delegation*, pp. 41-5; "Economic Consequences of Changes in the Value of Gold", by Sir Henry Strakosch, in *Selected Documents Submitted to the Gold Delegation*, pp. 20-36. Two diagrams accompanying this paper are extremely valuable in showing respectively the redistribution of wealth brought about by price changes of different magnitudes, and economic growth as it might be under stable prices. These were published originally as a supplement to the *London Economist* of July 5, 1930, and are also reproduced in the appendix to Sir Basil Blackett's *Planned Money* (1933). See also Keynes' classic treatment of "Consequences to Society of Changes in the Value of Money" in the first chapter of his *Monetary Reform* (1923), and L. D. Edie, *Money, Bank Credit and Prices* (1928), pp. 75-92. The latest treatment, very detailed and supported by much statistical material, is to be found in G. F. Warren and F. A. Pearson, *Prices* (1933), chaps. xi. to xix. inclusive (pp. 183-291).

² Report of the Committee on Finance and Industry, 1931 (Cmd. 3897), pp. 86-92.

interest on the National Debt, debentures and other fixed-interest securities, remain unaltered. Thus incomes derived from those sources are able to purchase an increased proportion of the national output at the lower price level now prevailing. . . .

“(ii) Many other incomes . . . are fixed by custom or by statute. . . . The recipients benefit in the same way. . . .

“(iii) The proportion of the national output which can be purchased by these classes of recipients being increased, the amount left for distribution between the remaining sections of the community is reduced, with the result that so long as salaries and wages are unchanged, the final residue available for profits is inadequate.

“(iv) The attempt to effect an adjustment sets in train a series of consequences making for acute trade depression and unemployment.

“(v) In the sphere of international debts also a large fall of prices greatly increases the real burden falling upon the debtor nations.”

A severe fall in prices, the Committee goes on to say, “upsets the entire balance of every kind of money settlement. . . . It brings with it the problem of reducing costs. . . . The burden of reducing costs is thrown on business men to effect as best they can.” The process of adjustment involves great friction. In so far as it fails to be effected, “the result is that business, being unprofitable, is depressed, output is reduced and unemployment results”.

“In the direction of public finance also, a large fall in prices produces serious reactions affecting the equilibrium of the National Budget by its operation both on the revenue and on the expenditure of the State.”

But a sharp rise in the value of money acts not merely as an economically disruptive influence but also as an acute social irritant. “In many respects it is the social rather

than the directly economic consequences of falling prices which are the most serious. For price changes raise delicate issues of equity between different classes of the community, the resolution of which presents great difficulties. The payments received by the factors of production ultimately constitute income, and income is received by men and women with standards of social justice, with ideas of settled expectation and with a natural reluctance to make the necessary sacrifices. The tensions so set up are paralleled by the tension between creditor and debtor nations. Thus violent price changes . . . initiate social as well as economic disturbances which leave no part of the national or international order unaffected. But we feel that the significance of what has been taking place in recent months is not always fully grasped. A study of history would, we believe, confirm the opinion that it is in the changes in the level of prices and in the consequent alteration in the position of debtors and creditors, entrepreneurs and workers, peasant and the tax-gatherer, that the main secret of social trouble is to be found. Looked at from this point of view the events of the last decade are of the most extraordinary kind. A very violent depreciation of money was sufficient in the immediate post-war period to destroy over a large part of the continent of Europe all rational economic calculation and all orderly social and economic development. This violent movement was followed in turn by a period of relative stability in which material well-being progressed markedly. This phase has now been followed by a violent down-turn of prices the effect of which upon political and social stability have already been very great. The problems thus raised transcend in importance any others of our time and generation." One need not remark how much truer these words have been made by the bitter experiences of the interval

which has elapsed since they were written over three years ago. It is doubtful whether the economic order can hope to survive in its present form unless it succeeds in devising a stable standard of value.

THE CASE FOR THE GOLD STANDARD: FOREIGN TRADE AND INTERNATIONAL LENDING.—The advocates of the traditional gold standard usually rest their case on a twofold ground: the superiority of an international over a local standard for the promotion of international economic relations; and the practical difficulties of preventing a paper or otherwise free system from passing out of control, whatever its ideal advantages in theory.

Differently expressed, the first count in this defence is that the full gold standard affords international commerce and finance the great boon of permanent stability in the foreign exchanges. Variations of rates are automatically restricted within the narrow limits of the gold points. The very real advantage of this convenience need not be stressed to a generation which has witnessed the hazards and uncertainties introduced by exchange fluctuations into foreign trade during post-war and more recent years of independent currencies. It is a twofold evil which impedes not only international trade but also international investment. For the former there is a partial remedy, for the latter none at all. Short of the development of an international system of paper standards linked together under the leadership of one or two great powers, which might conceivably secure relative fixity of exchange rates, this advantage can be enjoyed only under an international gold standard. The risks introduced into short-term foreign trade transactions by fluctuating currencies can in some measure be eliminated or mitigated by the development of "forward exchange" markets. But the extent to which exchange risks can be avoided or reduced by recourse to

these markets in the present stage of their development should not be exaggerated. They are as yet far from perfectly organised and tend to function best just when the need for them is least, namely, in times of relative stability, and least adequately when their advantages would be greatest, in periods of wide fluctuation and uncertainty. In the course of time this weakness could probably be eliminated under an interconnected system of universally operative autonomous standards, and, at least in more or less normal periods, forward exchange markets could doubtless be organised in all the leading currencies and for varying maturities. The other difficulty, however, the impediment which fluctuating exchanges impose in the way of international lending, would still remain. Hedging on the forward exchange markets is not possible in this case. The risks of loss through exchange variations would be much increased, and would have to be borne by either borrower or lender. Were the full international gold standard permanently abandoned, one of the conditions which would have to be accepted would be a relative contraction, though by no means necessarily a complete cessation, of the volume of international investment. As argued below, this might not, for some countries, be too high a price to pay for the benefits of national autonomy in monetary policy. But the connection between exchange stability afforded by the gold standard and the very rapid development of both international trade and investment during the half-century preceding the war was by no means accidental, and the process must have been markedly slower had not the gold standard afforded such good security against unforeseeable exchange risks. The development of an international monetary standard and of an international economy proceeded *pari passu*, and had inevitably so to proceed. Conversely the recent breakdown

of the gold standard is in part attributable to its being, as we have seen, an international instrument in a world of growing economic nationalism.

Another factor must also be taken into account in the case of certain countries. Were Great Britain or the United States singly to retain a free standard indefinitely in a world in which both the other and most of the remaining countries had returned to gold, its position as an international financial centre would inevitably be weakened and it would gradually lose ground in financial leadership. In a world, however, in which the other great financial centres were also off gold, this relative disadvantage would disappear.

The choice between stability of exchanges and stability of the internal price level must, when these ends prove incompatible, be influenced primarily by the relative importance of foreign trade and investment to the economic life of the country in question. For such a country as the United States, if it could be attained, stability of internal prices would appear to be the more important in view of the overwhelmingly larger volume of transactions which are upset by internal as against foreign exchange instability. Many students of the problem have argued that internal stability is to be preferred even in the case of a country whose foreign trade is of such vital importance to her as is Britain's.¹ But here obviously the choice is much more doubtful.

THE CASE FOR THE GOLD STANDARD: THE DANGER OF A

¹ "So far as foreign trade is concerned, I think that the advantage of fixing the maximum fluctuations of the foreign exchanges within quite narrow limits is usually much overestimated. It is, indeed, little more than a convenience. It is important for anyone engaged in foreign trade that he should know for certain, at the same time that he enters into a transaction, the rate of foreign exchange at which he can cover himself. . . . It is not important that the rate of exchange at which he covers himself this year should be exactly the same as the rate at which he covered himself for a similar transaction last year" (J. M. Keynes, *A Treatise on Money*, vol. ii. p. 333).

PAPER CURRENCY'S MISMANAGEMENT.—The second part of the argument in support of the full gold standard amounts to a preference for placing the monetary system at the mercy of uncertain, unpredictable and uncontrollable economic forces impinging from without rather than to entrusting the management of such a tremendously potent factor for social good or evil to the frailty of human nature. It is not merely that the authorities charged with exercising these vast powers might be beset with the temptation to take the easiest course and lack courage to pursue the general public good in face of pressure from powerful sectional interests, they might also often lack the knowledge and understanding to make wise decisions in complex, obscure but highly important situations. The strength of the gold standard is felt to lie in the greater freedom it enjoys from political pressure than any other standard. Against the danger of inflation gold does afford the security of an objective restraint upon the unlimited manufacture of a costless means of payment.

In periods of stress, however, the pressure required to maintain the gold standard may quite likely become an intolerably heavy burden. When that happens, the tendency is for the gold standard to be abandoned anyway, either unceremoniously or with pious expressions of pained regret. It is thus with much justice that its critics charge it with being a fair-weather device. Indeed it is true that in the past the gold standard has tended to receive all the credit for the smooth functioning of industry, trade and finance in times when it has been subjected to no unusual strain, while paper currencies have received the blame for the uncertainty and confusion of those periods of stress when, not being strong enough to weather them, the gold standard has broken down. The abuse of overissue which free currencies have experienced on spectacular occasions

in the past, since it was inevitable in the circumstances, affords no evidence of inherent weakness in such standards. These experiences, however, though unjustifiably, have coloured popular opinion with a prejudice against paper or otherwise "managed" currencies, despite the fact that the repeatedly made charge that there are no examples of a paper standard which has not ultimately suffered severe depreciation is, as shown below, emphatically not true. The memories of post-war inflation in Europe and of the Greenback era in the United States go far to explain the quite irrational preference for, and sentimental attachment to, gold as such in the minds of many individuals and whole nations, when the circumstances are quite different from those just mentioned, and call for unprejudiced examination of the facts of the situation. It is natural that prudent people should hesitate to entrust the determination of the standard of value to treasury officials and central banking authorities in view of the ignorance and folly they have sometimes manifested in their past performances. But the possibilities of managed currencies cannot be fairly evaluated on the basis of experience with them when they have been adopted involuntarily under the stress of an acute crisis or emergency which has broken the gold standard. Furthermore, whether we like it or not, the monetary standard of the future, even if based on gold, is bound to be, as we have seen, an increasingly managed one under which the policy of central banks will as much determine as be determined by the value of gold.

VIEW OF THE GOLD DELEGATION.—It was in the consciousness of the national and international difficulties of managing a paper system that the majority of the Gold Delegation, writing in June 1932, before the worst of the deflationary crisis had yet occurred, and while America was still on gold, expressed the opinion that "at the present

stage of world economic development the gold standard remains the best available monetary mechanism". The following reasons were advanced.¹

The Delegation "is impressed by the practical difficulties and dangers of regulating currencies which are not on a common world basis, and by the very great desirability of agreement upon an internationally accepted standard in order to facilitate the free flow of world trade. Whatever the theoretical advantages that may be urged in favour of other monetary systems, their universal adoption presents very grave, if not insuperable practical difficulties at the present time. The Delegation is, moreover, of the opinion that, granted the general acceptance of certain guiding principles, the gold standard is capable of functioning in such a way as to achieve most of the advantages of stability and justice claimed for alternative standards more broadly based on commodities other than gold." The Delegation went on, however, to enumerate various measures of international co-operation whose fulfilment they regarded as essential for the restoration and the maintenance of the gold standard on an international scale. Amongst these are mentioned the restoration of a reasonable degree of freedom in the movement of goods; a satisfactory solution of the problem of reparations payments and war debts; and the adoption, as a guiding principle, of the general rule that gold movements should not be prevented from making their influence felt both in the country losing gold and in the country receiving gold (para. 81). In view, however, of the uncertain prospects of achieving substantial progress in the near future in the first and third directions mentioned, one may wonder whether the traditional full gold standard does still remain "the best monetary mechanism" for the present-day world:

¹ *Final Report*, pp. 23-4, para. 78.

failing general acceptance of these essential "guiding principles" the "theoretical advantages" of alternative standards are deserving of more serious consideration.

These points were stressed by the signatories of the note of dissent—M. Albert Janssen, Sir Reginald Mant and Sir Henry Strakosch—who refused to endorse without qualification the majority's statement that the gold standard remained the best available monetary mechanism. "We would only go so far as to say that the gold standard is the best mechanism *if properly managed*. . . . We only advocate a general return to the gold standard if and when there is adequate assurance that the 'rules of the game' will be observed."¹ Had the Gold Delegation been writing a year later it is not unlikely that the consensus of opinion might have tended more in the direction of the views expressed by the minority.

EXCHANGE STABILITY AND INTERNAL PRICE STABILITY.—The arguments in support of independent standards, being largely the reverse of the case for the gold standard, rest ultimately on an emphasis upon the paramount importance of securing relative stability in the internal cost-price structure even at some sacrifice of fixity of exchange parities; and upon the increasing extent to which the inflexibility of many economic factors prevents the gold standard, in a world of growing organisation internally and economic nationalism as between countries, from accomplishing the objectives which it achieved in earlier times. It is not in the supposed export bounty which they

¹ *Final Report*, p. 73. Professor Cassel in his memorandum of dissent is more emphatic. Arguing that "the destruction of the old gold standard system has, in fact, gone much further than a temporary abandonment of the gold standard by some few countries would denote", he asserts that "it is an open question whether it will be possible in the future to restore the gold standard as an international monetary system. It is quite possible that the difficulties will prove insuperable and that the paper standard system will attain such a stability as to become generally acceptable" (*ibid.* p. 75).

are thought to confer that the chief advantage of free standards lies. That advantage can be enjoyed only so long as paper currencies are externally undervalued—as indeed they usually have been in the past—and even so is problematic in view of the likelihood of import restrictions being imposed by other countries to protect themselves against “exchange dumping”, quite apart from the fact that they also can have recourse to deliberate exchange depreciation. The great virtue of a paper standard is that it permits the internal value of the currency to be adjusted to a point at which domestic prices and costs are in equilibrium, by allowing the foreign exchange value of a currency to be adjusted to the internal price and money income level instead of demanding an adjustment of the latter to the external gold level. This consideration is of especial importance to countries such as Great Britain which suffer from unusually rigid economic structures, but it is of sufficiently great importance to all countries.

GOLD MOVEMENTS AND INTERNAL STABILITY.—The majority of the Gold Delegation express the opinion that “in considering monetary policy from the national point of view the primary index should be the historic index of the gold reserve”.¹ They deplore the measures taken in recent years by central banks to offset gold movements as being “fundamentally in contradiction with the gold standard system”. So far, so good. But earlier on the same page they suggest that “the criterion of monetary and economic policies should be their success over a period of years in maintaining the average level of wholesale prices of important international commodities relatively stable” (para. 193). How these two frequently conflicting principles are to be reconciled is nowhere clearly explained.

¹ *Final Report*, p. 50, para. 195.

It looks suspiciously like a desire to have the best of both worlds: an attempt which, by the nature of the case, is, as we have seen, in the long run foredoomed to failure. Post-war American monetary policy was largely of this character, with consequences which have already been examined. The truth being, of course, that the Federal Reserve system has had no choice, though on gold, but of operating a managed currency ever since the war, as a result of what has been aptly described as "the fundamental conflict between the principles of central banking and the principles of the gold standard".¹ Central banks not unreasonably feel it necessary to hold surplus reserves for protection against internal and external drains, but the gold standard assumes that banking systems are "loaned up", that gold reserves are being fully utilised. It has already been shown how attempts to control credit by manipulation of the discount rate can be frustrated by its effects upon the movement of short-term foreign balances. "To insist upon playing the rules of the gold standard by a full utilisation of gold is, under such conditions, to find oneself upon the horns of a dilemma. . . . Granting much to the abnormality of recent conditions, it seems clear not only that the gold standard cannot be operated under modern conditions upon its original principles, but also that, however managed, it cannot serve as the sole criterion of credit policy. There is a logical conflict between the gold standard and domestic monetary stability. The former imposes external control; the latter must, in many circumstances, insist upon internal control."²

Prior to the depression, the Federal Reserve system was enabled, by virtue of its huge gold stocks, to flout "the

¹ Professor J. H. Williams, "Monetary Stability and the Gold Standard" in *Gold and Monetary Stabilisation* (Harris Foundation Lectures, Chicago, 1932), p. 148.

² *Ibid.* pp. 152-3.

rules of the game" by failing to allow these reserves to have their full influence upon the total volume of the means of payment and adapt its policy to the supposed internal needs of business. By doing so, it departed very far from the traditional and orthodox principles of the freely automatic gold standard and strayed into the realms of monetary management. Member-bank reserves afforded a cushion between gold reserves and the volume of the credit superstructure, so that America was able in large measure to ignore gold movements prior to the depression. Till that time it seemed utterly impossible that the gold standard should be threatened by gold drains from the United States, in view of her vast gold holdings. In 1923-24 large-scale open-market security purchases by the Federal Reserve system for the stimulation of business could be undertaken with complete safety because America was then alone of the great powers on gold, and could pursue a policy adapted to domestic conditions, regardless of the rest of the world, without imperilling her gold holdings. From 1930 onwards, the case was different: most of the world had gone back on to the gold base. Even in 1932-33, despite numerous departures from gold, the Franco-Flemish group still remained on that standard and constituted a threat to America's adherence to the gold base whenever she might have embarked on an inflationary policy. Thus the policy of "reflation" was definitely precluded so long as the United States was concerned about retaining the gold standard. For no matter how vast gold reserves may be, they can, in certain circumstances, be drained away in almost no time at all.

Thus already, prior to the depression, the gold standard had become a managed standard, inasmuch as the value of gold was being artificially determined by central banking policy. Stabilisation of the price level through rediscount

policy is a course of action utterly at variance with the cardinal principle of the gold standard in its pre-war form of allowing gold movements to exercise their full effect on prices. It is unreasonable to require countries to let gold movements have their full influence on the price level to their own detriment in the interests of other countries, yet if they do not do so they violate the principles of the gold standard to the ultimate injury of all adherents to the system alike, themselves included. This dilemma between domestic and international needs did not, though it was present, cause serious difficulty prior to the war merely because international finance and commerce were dominated by a single centre. London's supremacy was undisputed, and to her course other countries had perforce to adapt their monetary policies whether it suited their internal conditions well or ill, so long as they wished to remain members of the international system and participate fully in its benefits. But these conditions no longer obtain. Instead of one, there have in recent years been three great creditor nations with the power to influence world credit conditions, two of which, moreover, have been to a large extent insulated against international gold movements by the possession of a great hoard of that metal.

Under the strict gold standard the internal control of prices is stultified by the necessity of maintaining stability of exchanges with other gold-standard countries. An expansive or restrictive credit policy, independently instituted by any one country, is visited by an excessive loss or gain of gold. Each gold standard country must, by the same token, take part in these general credit movements and keep pace with the others, if it is not to suffer from disturbances in its gold reserves. In fine, not only does the gold standard permit business fluctuations, it compels all countries which adhere to it to participate in them. In

depressions this circumstance can easily produce violent destructive liquidation passing far beyond the limits required for the correction of maladjustments. An almost simultaneous competitive raising of bank rates by all gold standard countries has very different results from the raising of its rate by any one of them singly for the purpose of counteracting a gold outflow. The international money flow is not thereby changed, but merely slowed down in general, and pressure is put upon internal business and international trade over the whole gold-standard area. The raising of the New York Federal Reserve rate in 1929 for the purpose of curbing stock exchange excesses was followed by a general raising of rates throughout the world and led to a competitive scramble for gold. The traditional gold standard is likely to work well enough in periods of "normal prosperity", but it permits and even encourages, as any fully international standard must do, the development of maladjustments on a world-wide scale by spreading the effects of excesses in either direction. In periods of crisis, particularly, it tends, before it breaks, to reinforce rather than alleviate depression.

INTERNAL AND INTERNATIONAL NEEDS IN MONETARY POLICY.—These observations indicate that the heart of the monetary problem lies in the clash between internal and international requirements. The narrow issue of possible conflict between a policy of domestic stabilisation and one of foreign exchange stability raises the much broader question of the choice between using the monetary mechanism to serve the needs of the nation's internal economic development and of keeping it responsive to the sometimes exacting demands of the international situation. We are not entitled to assume that these two ends must always be in harmony. On the contrary, there is nothing in the nature of things which could lead us to expect that they

should be. Fixed exchange parity, which gives room for free play only within the narrow limits of the gold points, demands that all readjustments should be made *internally* by each member of the gold standard system through pressure brought to bear upon a flexible domestic structure. This burden of readjustment may, however, as we have seen, be imposed upon an economic system which lacks sufficient elasticity to allow it to be adapted to the framework of the international system, save with the most painful difficulty. This is not a fault of the gold standard as it has hitherto functioned, or even of the gold standard as such. A reformed full gold standard, managed under central bank co-operation, or even a truly international paper system, one which laid emphasis on international economic integration, would encounter the same dilemma to some extent, and have in large part the same defect, though satisfactory compromise could probably be reached more easily in this case. The question is thus not the narrow one of when, and on what conditions, or even whether we should return to gold, but the broader one of whether it is advisable to return to a fully international standard at all.

CONSEQUENCES OF UNEQUAL RATES OF ECONOMIC ADVANCE UNDER AN INTERNATIONAL STANDARD.—The question is considered more fully in Chapters VIII. and IX. below, but a few further words of elucidation may not be out of place at this point. All countries would benefit from relative stability in their internal price levels, but the form and conditions of stability are by no means likely to be identical in all cases.¹ Different countries enjoy on the one hand

¹ The term stability, as used thus far in this study, should not be understood as being synonymous with a rigidly inflexible or "constant" price level or as necessarily excluding either *moderate* short-period movements in the price level or a *gradually* rising or falling secular trend. It is merely meant to denote the elimination of violent oscillations. If, thus employed, the term is admittedly un-

divergent rates of economic development, and, on the other, varying degrees of flexibility in their cost structures. In addition they differ widely in respect to a great many other economic factors—the relative importance of their foreign trade, their debtor or credit position on balance, the division of national activity between agriculture and manufacturing, and so forth. The kind of movement in the price level which satisfactorily meets the needs of one country need not be well adapted to the needs of others. Thus, a country which is undergoing rapid development as a result of technical improvements which produce unit cost reductions, is likely to be most benefited in the long run by a slowly falling price level, unless money wages and other costs are raised correspondingly rapidly. Otherwise the excessive profits which will result must produce overexpansion, maladjustment and eventual reaction. The economic development of other countries, however, which will be proceeding largely independently, may be quite different. They may be advancing at a slower rate, or stagnating, or even conceivably retrogressing. Again, varying degrees of flexibility in their economic structures may render wage readjustments relatively easy or highly difficult to effect. In consequence their positions may be such for one reason or another that their needs will be best served by a fairly constant price level, or by one which declines only very slowly, or perhaps even by one which rises gently.

These hypothetical reflections find a wealth of concrete illustration in the world's economic development during the post-war decade. It should be sufficient, however, to

satisfactory because open to misunderstanding, it is used for want of one which would better express our meaning. The question of the kind of movement in the price level which would be most desirable—and most easily attainable—for the preservation of a moving equilibrium in the cost-price structure is considered at greater length in Chapter XI. below.

mention one example, the contrast between the situations in this respect of the United States and Great Britain. As already shown in Chapter VI., the best price level for the United States during the period of rapid mechanisation and consequently falling real costs from 1925 to 1929 would, in view of the failure of wages to rise correspondingly fast, have been one which fell more rapidly than it actually did, so that inflated profits might have been prevented. During these same years Great Britain's wholesale price index moved down slowly in step with America's, but in doing so imposed a great strain upon her economic life. In contrast to the United States her needs would have been best served, in view of her less rapid technical advance coupled with the rigidity of her wage rates, by a price level which fell *less rapidly* than it actually did, or by one which remained constant or even perhaps which rose slowly. Moreover, an international monetary standard which imposes uniformity upon all its adherents irrespective of individual differences in their circumstances, visits the sins of one upon the others in spreading deflation from a country where it is needed for the correction of capital overexpansion to others where inflationary overdevelopment has not occurred, and which, therefore, do not require deflation.

It is partly because of the uniformity which the gold standard imposes, despite divergent rates of economic development, that so many countries have had recourse in increasing degree to the expedient of trade barriers and similar restrictions, in order to secure that measure of domestic freedom which they find imperative for their national economic needs, but which is denied them by participation in an international system. In the exigencies of the gold standard itself are to be found, to some extent, the origin and explanation of the post-war tendency

towards economic "autarchy". Thus the international gold standard, which at once has for its rationale the facilitation of world economic intercourse and demands for its successful operation a large degree of freedom in international trade, paradoxically encourages the erection of obstructions to the free flow of goods and often does almost as much indirectly to hinder as it does directly to promote the volume of world trade. That this statement is no exaggeration is vividly shown by the amazing and self-contradictory spectacle presented to-day of nations imposing exchange and other restrictions on international trade to protect the external values of their currencies when the whole purpose of exchange stability is the promotion of international trade and investment.¹

These considerations do not constitute a conclusive case against an international standard in view of the many advantages it has been shown to possess in other directions. They do show, however, that its merits are counter-balanced by defects of a very serious order. To point out these shortcomings does not amount to a plea for "economic nationalism" but is rather a frank recognition of the

¹ The following recently expressed opinion is of great interest as coming from a Director of the Bank of England and a former Treasury official of distinguished practical experience in international financial affairs:

"In sacrificing stability of internal prices to stability of the external exchanges and in ignoring the economic and financial independence of the units of which the world is made up, the attempt to treat it as a financial unit capable of using to advantage a single monetary standard has been the direct cause of economic friction between the nations. 'This high man, aiming at a million, misses an unit.' For the gold standard yokes together in an uncomfortable partnership individual economic units of which the pace and direction of development are dissimilar and divergent. Just because they feel themselves hampered by the financial tie, the nations are driven, in defence of their right to decide the course of their own national life, to adopt economic expedients, such as high protective tariffs, prohibitions, currency and exchange restrictions, transfer moratoria, and such like, which play havoc with all forms of international intercourse. With their prices tied to the chariot wheels of gold, stability in their internal trading and productive activities is beyond their reach, and the absence of assured stability at home makes them set up barriers against the external world and minimises the extent of the contributions they can make to world interchanges" (Sir Basil Blackett, *Planned Money*, 1933, p. 179).

frequent divergence of the needs of different nations. The dilemma of an international standard is the necessity of simultaneously preserving the benefits of exchange stability between the various countries adhering to it and ensuring them individually sufficient local autonomy in their internal credit policies. If these two ends cannot be satisfactorily reconciled, there remains the possibility that something short of a fully international semi-automatic monetary standard may perhaps be found in the future to serve best a world which is as yet neither internationally united nor internationally homogeneous.

CHAPTER VIII

GOLD AND PAPER STANDARDS—*Continued*

INTERNATIONAL INVESTMENT.—It has been shown that fluctuating exchanges between free paper currencies by increasing the hazards of foreign lending impede the free international investment of capital. Paradoxical though it may sound, in view of the large volume of American foreign investments during that period, a source of disturbance and danger to the gold standard during the post-war decade in the world at large was the reluctance, bred of uncertainty and lack of confidence in the future, to lend abroad on long-term. Increasing recourse was had to the method, fraught with danger in times of economic tension, of financing by short-term credits. The desire to hold resources in a liquid form created serious technical problems for the banks and exposed them to considerable dangers which eventually some found themselves unable to cope with except at the cost of abandoning gold. The marked disparity between long- and short-term interest rates during these years was evidence of this reluctance to make long-term investment in face of the possibilities of renewed inflation.

Despite this, however, and granting the necessity of a secure international monetary standard for the full development of a system of world-wide investment and the exploitation of backward countries by the industrialised and financially powerful nations, it is arguable whether complete *laissez-faire* in international lending is either

desirable in theory or can be expected to work successfully in practice in the post-war world. Conscious planning and control need to be introduced into the system of international lending no less than into other spheres of monetary policy. Foreign investment requires to be carefully directed or encouraged to flow into channels where its employment will be economically productive in the broad sense and not merely financially profitable in the narrow meaning. Not all foreign loans foster the growth of world production and the international exchange of goods and services. Long-term loans from one highly industrialised country to another, unless there exists between them a large element of reciprocity in their trade relations (except for the purpose of affording support in emergencies or aiding urgent economic rehabilitation), need careful scrutiny. It is undesirable that the state should collectively assume economic risks which ought, under a system of private enterprise, properly to be borne by its nationals individually, but the freedom to lend to foreign countries becomes a mockery when, as in recent years, it comes to mean excessive prodigality alternating with almost complete cessation induced by catastrophic losses. Some form of public control or guidance becomes imperative in these circumstances. International loans are only justified when the payment of interest and principal can be made out of the proceeds of a trade between the lending and borrowing countries which is mutually complimentary. Loans from highly industrialised to newly developing and predominately agricultural communities, such as those of South America, Africa, Australasia and the Far East, fall on the whole into this category, because the borrowing countries can use the funds thus secured in purchasing the manufactured goods of the lending country, thus increasing its exports, and can make the necessary payment of

interest and principal in effect by means of their own exports of raw materials and foodstuffs. No country, however, can hope indefinitely to continue the export of both capital and manufactured goods to other countries. Into the complexities of the concrete situation we cannot enter here. There might, for instance, be much scope for international lending and trade between Great Britain, despite its vast industrial development, and such other highly industrialised countries as the United States and Germany.

In the post-war decade, however, foreign investment all too frequently took the form of loans not to private enterprises based upon a strict estimate of their earning capacity, but of loans based on public credit to foreign governments, central or local. Whether or not these loans were justified financially, they were often not justified economically in view of the economically unprofitable though socially laudable purposes to which they were put. Such international lending does not automatically promote the development of healthy international economic relations and may ultimately prove to do more harm than good by creating serious maladjustments.

GOLD AND THE SEVERITY OF BUSINESS CYCLES.—Though it is true that short-term fluctuations of economic activity have no direct connection with variations in the supply of gold, being characterised by alternate expansion and contraction of the total effective supply of the means of payment, business cycles are profoundly affected by the gold standard in three important respects. Whether the business cycle is regarded primarily as a monetary phenomenon or not,¹ there can be no question that control exercised to

¹ Some students of the problem argue with Mr. Hawtrey and Professor Cassel that the business cycle, whatever its "causes", should be regarded primarily as a monetary phenomenon. Thus Mr. Hawtrey, though admitting that "it would certainly be unwarrantable to argue that the trade cycle or credit cycle is *caused* by the gold standard itself" (*The Gold Standard in Theory and Practice*, p. 84),

mitigate its severity must, short of international action, be narrowly restricted under the international gold standard in the subordination of internal monetary policy to the exigencies of world movements. The violence of business fluctuations tends in consequence, as we have seen, to be aggravated by the cumulative effect of interdependent forces operating in the same direction. This process is likely to be especially marked in times of unusual tension, when the shortcomings of the gold standard are seen in their clearest light. For at such moments the desperate anxiety of central banks each to protect the metallic base of its own currency is liable to produce a feverish and senseless scramble for gold. This may impose terrific deflationary pressure on the price level and business activity to the extent even of causing a veritable panic which can only end in countries with less ample reserve or less flexible price structures being overwhelmed by the storm and being forced off gold.¹

SECULAR PRICE TRENDS AND PERIODS OF PROSPERITY AND DEPRESSION.—Apart, however, from its effects in precluding any serious attempts to mitigate cyclical fluctuations and in intensifying panics through purely destructive

claims that "the trade cycle is a credit cycle and is traceable to a defect in the gold standard as a regulator of credit. Conformity to the gold standard sooner or later keeps a credit movement within bounds but *not soon enough*. The credit cycle occurs because it takes years for the restrictive influence of gold to make itself felt" (*ibid.* p. 82). Similarly Professor Cassel and the signatories of the note of dissent to the Gold Delegation's *Final Report* clearly believe that it is possible at least to control the business cycle through monetary action (*Gold Report*, p. 69). The majority of the Delegation, however, were, as indicated above, of the opinion that the elimination of short-term fluctuations in the price level is impossible and that it is not desirable to use monetary policy as an instrument for correcting fluctuations due to "non-monetary causes" (*ibid.* pp. 48-9, para. 183-6).

¹ As Mr. Keynes has wittily said, the object of bankers under a gold standard must be "to keep in step with the average behaviour of the banking systems of the world as a whole. Their idea is not to keep sober, but, in accordance with a perfect standard of manners, to enjoy just that degree of tipsiness (or sick-headache) as characterises the company as a whole" (*Treatise on Money*, vol. ii. p. 222).

price deflation, the working of the international gold standard influences not only the amplitude of business cycles as such, but the relative duration of the different phases composing it. The effect of variations in gold supplies, relatively to the monetary demand for gold, upon the secular trend of prices, is not open to question. The historical data assembled by Professors W. L. Thorp and W. C. Mitchell demonstrate in the clearest manner that the relative duration of periods of prosperity and depression is directly attributable to the direction of the secular trend of the wholesale price level, as shown by the following table:¹

Period	Secular Trend of Prices	Years of Prosperity per Year of Depression
U.S.A.		
1790-1815	Prices rising	2.6
1815-1849	Prices falling	0.8
1849-1865	Prices rising	2.9
1865-1896	Prices falling	0.9
1896-1920	Prices rising	3.1
ENGLAND		
1790-1815	Prices rising	1.0
1815-1849	Prices falling	0.9
1849-1873	Prices rising	3.3
1873-1896	Prices falling	0.4
1896-1920	Prices rising	2.7

In periods of rising-price trends the peak of each business cycle must be higher than that of the preceding one; the phase of expanding activity and rising prices is thus likely to be of relatively prolonged duration, and the cyclical fall to be correspondingly mild. With an upward trend of prices the depression period of the cycle is mini-

¹ W. C. Mitchell, *Business Cycles* (National Bureau of Economic Research, New York, 1927), p. 411.

mised and severe panics are less likely to occur. In periods of declining-price trends, on the other hand, the depression phase of the cycle is accentuated and the expansive phase relatively short-lived. Crises especially are liable to manifest great violence, and the recovery from them to be slow, because sufficiently severe liquidation must be effected to bring prices down to a new permanently low level.

Apart from cyclical fluctuations, it is true that in the nineteenth century the gold standard was successful in affording reasonable stability in the price level over relatively long periods of time. Between 1826 and 1924 the price index in Great Britain fluctuated only between 70 and 130, a variation which is very moderate compared with its movements during the much shorter period since 1914. Yet there were great changes in both the world supply of and the demand for monetary gold during the century preceding the war. The resultant relative secular stability of prices was not wholly fortuitous, because the search for new sources of gold and new methods of exploitation is likely to be prosecuted with especial vigour during periods of relative scarcity. Yet a large element of sheer chance remains in the adequacy of the volume of the gold supply which will be forthcoming at any given time in response to increased demand. There are no scientific grounds for the belief that a gold shortage will always be automatically rectified, and that the supply of gold will roughly keep step with the monetary demand for it.

THE PREREQUISITE CONDITIONS OF A RETURN TO GOLD.—No reasonable advocacy of a return to gold can take the form of proposing that we simply restore the gold standard as it existed prior to the depression, without remedying the various defects which have been revealed in it as being responsible for its breakdown. What, then, are the

minimum conditions under which a return to a full international gold standard with fixed parities might be considered? The necessary requirements are briefly as follows:

(1) The first and most obvious condition has all along been a satisfactory settlement of the war debts and reparations question, preferably by virtual cancellation, to remove this mischievous factor from interference with the normal current of international trade. The recent action of America's European debtors has probably now effected such a settlement.¹ Readjustment in certain cases of private debts to prevent further defaults will also be necessary.

(2) Second is the re-establishment of a reasonable degree of freedom in the international flow of goods and services by the removal of the more obnoxious forms of trade barriers, conspicuously exchange restrictions and the like. Though they would not all need actually to be removed before any permanent restoration of the gold standard could be undertaken, the assured prospect in advance of their tolerably speedy relaxation thereafter should be a pre-requisite condition for any such return to gold. It should, however, be recognised that the reduction of import duties, quotas, and so forth, is likely to be a slow and uncertain process, dependent on international bilateral or multilateral action and conflicting in many cases with policies dictated by internal needs. America's Industrial Recovery Act and Agricultural Adjustment Programme may be cited in this connection. A certain

¹ Any satisfactory permanent settlement by agreement could probably only be effected through reduction of these debts to a point at which they could be commercialised, namely, capitalised and sold in the form of securities to the American investing public in the course of a few years. The "Finnish proposal" of cancellation of interest payments and spreading of principal repayments over a long period of years does not go nearly far enough.

measure of control over the foreign trade of the country in question in the interests of long-range national plans will make essential the retention of certain trade restrictions.

(3) Third is a general and sufficiently specific undertaking by central banks that in the future management of the gold standard "the rules of the game" will be better observed than in the past, and particularly that gold movements will be permitted to exercise their full influence on the price levels of the countries both losing and receiving gold.

But willingness on the part of central banks to observe the rules of the game will not be enough in itself. The readiness and co-operation of their respective national governments in doing likewise is equally necessary. For we have seen how inextricably intertwined are monetary and non-monetary factors, how intimately, for example, monetary policy is affected by tariffs or international political debts. Without the steady co-operation of governments the sincerest efforts of central banks to observe the rules of the game must often be frustrated.¹

(4) This undertaking, however, would have to be coupled with another measure of co-operation between

¹ "For it has become clear that a war-debt policy, a new tariff act, and capital exports, both long- and short-term, have a monetary significance quite as marked as, say, the movement of the discount rate on the activity of the 'open market' operations. Historically, these various 'policies' (in so far as they are specifically formulated at all) are framed by entirely separate authorities or institutions which have no relations with one another. Congress enacts tariffs without considering their effects on outstanding indebtedness or exporters' interests; public and private debts are expressed in rigid treaties or contracts, with no allowance for price fluctuations which effect their economic significance; private bankers decide on long-term and short-term capital movements; and the Federal Reserve Board decides—under various types of political pressure—upon discount or 'open market' policy. Clearly, the first step is closer co-ordination of *national* powers. Then the logical second step might be a measure of international co-ordination of the separate national authorities" (Harry D. Gideonse, "The United States and the International Gold Standard", p. 4, reprinted from the *Annals of the American Academy of Political and Social Science*, vol. 171, January 1934).

central banks providing for common policies in the joint management of the gold standard to preserve reasonable stability in the value of gold. Return to the full gold standard on any other terms would be highly hazardous and might prove most unfortunate. Hitherto the Bank of England has repudiated any responsibility for the price level. It has taken the attitude that the violent post-war movements in world prices were in no way attributable to central-bank policy and that the latter could not control and should not attempt any deliberate control of such movements. Much the same attitude has been taken by most of the Federal Reserve Board authorities. In this respect the late Governor Strong of the Federal Reserve Bank of New York was a conspicuous exception. Yet central banks must assume the responsibility of co-operating to exercise deliberate control of world price movements if the gold standard is to function satisfactorily in the future. The consequences of their refusal to do so in the past have been disastrous.¹

To put this condition into effect, agreement will probably be required among the Great Powers that efficient utilisation of gold will be practised, in order to remove all fear of an undesirable rise in its value some time in the future. The drastic modification, or possibly even total abolition, of stipulations regarding note cover and legal reserves now in force, and other measures, indicated in

¹ Cf. the strictures of an American critic: "England failed in the main objective [of permanently re-establishing a world-wide gold standard] because she decided to take the world back to gold without accepting any responsibility for the future value of gold. When the value of gold began to appreciate sharply, she blamed outside countries, she blamed overproduction and maladjustment, she blamed war debts and reparations, she blamed everything and everybody except the do-nothing attitude of the central banks, singly and collectively, including the Bank of England. If any major lesson is to be learnt from the whole episode, it is the lesson that the gold standard is unsafe for the world unless financial leadership accepts the responsibility of combating with monetary weapons great tidal waves of inflation and deflation" (L. D. Edie, *Dollars*, pp. 237-8).

Chapter V. above, for the economical use of gold, may require careful consideration.¹

(5) But none of these measures can accomplish much without some previous restoration of more normal activity and employment. Provisional exchange stabilisation would be conducive to this end. A general rise in the world level of wholesale commodity prices, however, and the restoration of some measure of equilibrium between prices, wages and debt-charges, would first have to be effected before a return to an unqualified gold standard at a fixed invariable rate could be safely considered.

(6) In addition to international action along the above lines, certain internal reforms on the part of individual countries will also be indispensable. Each of these must therefore make sure that its internal economic structure possesses sufficient flexibility to permit its adherence to an international system with prospect of success. However improved, an international monetary standard cannot hope to function well without such a condition being fulfilled.

¹ It would also be desirable to confine the holding of monetary gold to central banks and treasuries, for use in settling international balances of payments. Unless they alone are permitted to buy gold (and the right to do so is denied to private hoarders), it is doubtful whether they can succeed in preventing violent fluctuations in its value. This would mean that notes would be redeemable in gold bullion only for export, international shipments being made only between central banks. International agreement to the cessation of internal redemption in gold may be difficult to secure, for France would doubtless prove a stumbling-block, but it would be indispensable to the proposal, since without it gold hoarding through such a country would be open to anyone anywhere else in the world. It follows that gold miners should be compelled to offer their output to their respective treasuries or central banks, selling to industry only under government permit.

Cf. L. D. Edie, *Dollars*, pp. 82-3: "The United States would be ill advised to return to a gold basis in any form unless the private hoarding privilege in other countries is abolished. The world has already abolished the private use of gold as a medium of exchange and should now take the further step of abolishing the private use of gold as a store of value. This would redefine the status of gold in such a way as to protect its value from the fluctuations of irresponsible private demand for monetary purposes. Private hoarders would object to such a step, but if they still desired to hedge against inflation by holding a stake in the precious metal, they could exercise that desire by purchasing the shares of gold-mining companies."

The matter cannot, however, just be left to chance, and the end achieved by a purely negative hands-off policy. The mere absence of regulation, restraint or organisation is as likely to produce rigidity, or at least stickiness, as flexibility in certain factors.¹ Much doubtless could be done to reduce the inflexibility of cartel and artificially controlled prices by withdrawing the support of protective tariffs and other forms of government assistance;² and to restore flexibility to wages (in Britain) by certain revisions in the unemployment insurance system. But in general, systematic economic planning by deliberate institutional arrangements is required under modern conditions in order to secure flexibility. Economic planning does not necessarily imply price-fixing, the restriction of output with its concomitant reduction of real income, and the creation of a more rigid economic structure. On the contrary, it could and should be directed towards the creation of a more flexible one. A certain measure of planned flexibility can be combined with and facilitate the aim of planned economic stability. This would require machinery for making continuous orderly internal adjustments in a number of basic cost factors.³ Such schemes would not merely be in harmony with the modern trend of economic organisation, they would positively necessitate well-developed trade associations and trade unions.⁴

¹ The movement of wages in the United States during the boom years may be instanced as a case in point. See Chapter VI. above.

² See Lionel Robbins, *The Great Depression*, pp. 189-90.

³ Such as interest charges, depreciation, wage rates, the prices of basic fuel and metal products, railway and public utility rates, and so forth. Correction of disequilibria must be much more difficult when the entire burden of effecting readjustment throughout the cost-price structure is thrown on a single cost factor, whether interest rates or wages, instead of being spread over all the more important ones.

⁴ It was no accident that one of the first countries to begin emerging from the depression, Australia, was one which already possessed elaborate machinery of this kind for effecting readjustments. (See Professor D. B. Copland's recent book, *Australia in the World Crisis*, Cambridge, 1934.) The lesson of Australia is most instructive—especially when contrasted with American conditions and experience.

(7) Greater flexibility of many internal factors will be required to ensure the successful functioning of the gold standard, but in some respects less freedom will be necessary. In particular, much more control than hitherto will have to be exercised over the volume of foreign lending to see that it is brought into some sort of harmony with the volume of the foreign balance. For, as shown above, there are no grounds for the widespread but naïve belief that these two forces must of necessity be automatically equated.¹ Some means would also have to be found for handling short-term foreign credits in a less dangerous manner than in the past, in order to prevent sudden panicky migrations of such liquid capital from again producing the damage they wrought in 1931. The collection and publication of exact statistical information would be a minimum requirement, so that the precise facts of the current situation might at least be known. "The experience with the crash of the *Credit Anstalt* and the subsequent breakdown in Germany and Great Britain brought

¹ "The belief in an extreme mobility of international lending and a policy of unmitigated *laissez-faire* towards foreign loans, on which most Englishmen have been brought up, has been based . . . on too simple a view of the causal relations between foreign lending and foreign investment. Because—apart from gold movements—*net* foreign lending and *net* foreign investment must always exactly balance, it has been assumed that no serious problem presents itself. . . . All this, however, neglects the painful, and perhaps violent, reactions of the mechanism which has to be brought into play in order to force *net* foreign lending and *net* foreign investment into equality. . . . If English investors . . . begin to buy more American securities than before, why should it be supposed that this will be naturally balanced by increased British exports? For, of course, it will not. It will, in the first instance, set up a serious instability of the domestic credit system—the ultimate working-out of which it is difficult or impossible to predict. . . . It is, therefore, a serious question whether it is right to adopt an international standard, which will allow an extreme mobility and sensitivity of foreign lending, whilst the remaining elements of the economic complex remain exceedingly rigid. If it were as easy to put wages up and down as it is to put bank rate up and down, well and good. But this is not the actual situation." The volume of foreign lending may be altered by tens of millions in a few weeks, "yet there is no possibility of rapidly altering the balance of imports and exports to correspond" (J. M. Keynes, *A Treatise on Money*, vol. ii. pp. 335-6).

out the almost fantastic ignorance among bankers of one another's involvements in those countries."¹

The resumption of the full gold standard is desirable only if these guarantees are secured for its good behaviour in the future. They will admittedly require the practice of much more continuous co-operation among central banks of issue than seems likely at the moment to be forthcoming in the near future, but a return to gold in the strict sense on any other conditions might involve a cost heavier than the probable benefits. The wisest course would then be to concentrate on internal stabilisation under a semi-autonomous standard, either cut loose from gold or attached to it under some flexible arrangement. The dangers of a premature return to the full gold standard, if fresh difficulties in the future are to be avoided, are pointedly illustrated by England's post-war experience.

If it is felt that the advantages of an international standard outweigh its defects, then probably a reformed gold standard, operated under the conditions indicated above, granted they can be put into effect, will for some time to come be the best choice, in view of the impossibility likely to be encountered of securing the necessary

¹ Harry D. Gideonse, "The United States and the International Gold Standard", p. 5, reprinted from the *Annals of the American Academy of Political and Social Science*, vol. 171, January 1934. Professor Gideonse makes a further interesting suggestion. "If in addition it should be found possible to agree that short-term credits should always be placed through the creditor country's central authority via the international centre and the debtor country's central authority, one of the major items of unsettlement would be near control, because of the co-ordinated knowledge as to the credit risk. The Basel statistics would reveal unhealthy accumulations at an early stage. Concentrating withdrawals through the Bank's machinery would be a guarantee against a 'run' on a weak centre. . . . This would not involve yielding vital authority to the Bank at Basel. It would merely substitute one instrument for another, and co-ordinate the various national policies by the regular publication and examination of relevant statistical material. If there is to be any salvaging of the gold-exchange standard after the disastrous experience since 1931, it will almost certainly have to be based upon some such method of handling short-term deposits in foreign centres. This would virtually make the Bank for International Settlements the administrator of the gold-exchange standard."

agreement on any alternative international standard cut loose from gold. The retention of gold as a currency base in these circumstances, with its value kept reasonably stable through central bank co-operation, would possess many substantial advantages. The choice which lies before us, however, is not one between a managed and an automatic system. Whatever standard is adopted, whether a local or an international one, will require a great deal of management. The emphasis in one case will be laid on internal control, in the other on international management. Even the Gold Delegation majority, who showed themselves unsympathetic in general to the idea of monetary management, recognised that management through international co-operation will be needed to make a rehabilitated international gold standard function adequately in the future.

PAPER MONEY AND INFLATION.—The statement has often been made that currencies divorced from gold have always come to grief in the past and suffered damaging depreciation through excessive overissue.¹ Spectacular instances of unrestrained inflation, especially during post-war years, are usually cited as evidence. But the fallacy of the notion that free standards must necessarily get out of control can easily be exposed. It is supported by neither English nor American experience. During the periods when England has been off gold, from 1797 to 1821, from 1914 to 1925, and again since 1931, 38 years in all out of 138, the paper currency was never abused by inflationary excesses. In America no wild inflation has occurred under paper money since the Revolutionary War. Even during the Civil War, in 1864, when the price level in England under the gold standard stood at 127, it was 193 in the

¹ See, for instance, Professor Lionel Robbins on "Paper Systems" in the Gold Supplement of *The Times*, June 20, 1933.

United States (base, 1910-14 = 100). The worst periods of inflation in the United States since the Revolutionary War have occurred *under the gold standard*: in 1920, when wholesale prices stood at 226 (base as above), and during the stock market boom of 1928-29.

It is strange that the statement that free currencies are uncontrollable should still be made by monetary authorities in the light of the experience with them during the last few years, a period of acute economic pressure. For paper currencies have shown themselves far more stable than gold currencies between 1931 and 1934, despite the critical difficulties of the times and the grave temptations they offered to governments to indulge in inflationary finance. During these years it was not the pound sterling, the Canadian dollar, the Scandinavian currencies and so forth, which were unstable, but the American dollar, the franc, the mark and other gold currencies. The paper moneys of the "sterling area" retained a remarkably steady purchasing power on the whole—altogether too steady in the opinion of those who would have liked to see a deliberate expansionist policy adopted to correct the previously deflationary trend of prices—while gold underwent an outrageous appreciation in value. The percentage change in the wholesale commodity price level is shown below for various countries respectively on and off gold between September 1931, when England left the standard and March 1933, when the United States did so.¹ (See table on following page.)

Nor did the countries which went off gold merely suffer less from price declines. In general they weathered the economic storm markedly better than those which continued on the gold standard, and escaped further deteriora-

¹ *Federal Reserve Bulletin*; figures for Sweden and Australia from *Statistical Year Book of the League of Nations*, 1932-33.

Month	U.S. (1926 = 100)	France (1913 = 100)	Ger- many (1913 = 100)	Nether- lands (1913 = 100)	Eng- land (1913 = 100)	Sweden (1913 = 100)	Canada (1926 = 100)	Aus- tralia (1913 = 100)	Japan (Oct. 1900 = 100)
Sept. 1931 .	71	473	109	91	99	107	70	128	150
Dec. " .	69	442	104	85	106	111	70	131	151
March 1932 .	66	444	100	82	105	109	69	132	159
June " .	64	425	96	78	98	108	66	128	146
Sept. " .	65	413	95	76	102	110	67	132	167
Dec. " .	63	413	92	76	101	108	64	126	185
March 1933 .	60	390	91	72	98	105	64	123	177
Percentage change, Sept, 1931-March 1933 . .	-15.5	-18	-17	-21	-1	-2	-9	-4	+18

tion of conditions. During this same period of eighteen months the monthly index of industrial production fell 8 per cent in Germany, 12 per cent in France and 22 per cent in the United States; in Great Britain it rose 8 per cent and in Sweden fell only 4 per cent. In Britain the number unemployed (insured persons) rose about 2 per cent; in the United States estimated unemployment increased over 80 per cent.¹ Britain balanced her budget while the United States, though still on gold, was experiencing the greatest peace-time budget deficits in her history.

On the whole, if there has been excess in the management of the free currencies, it has been an excess of prudence and caution: they have been operated almost as if they were gold currencies, and the freedom of action given by severance from the gold base has been used seemingly only to prevent further disastrous deflation, and not, except in the case of the United States at the present time, to put into effect a positive policy of reflation.² If free

¹ Figures of the American Federation of Labor, published in the *American Federationist*. Between these same two dates the U.S. Bureau of Labor index of factory employment declined 24 per cent, and of pay-rolls 37 per cent.

² The countries which went off gold do not appear to have attempted to raise prices but merely to stabilise them at the level then prevailing, in the hope that

currencies can be managed with such conspicuous success in affording stability of prices in times of acute stress, how much better are the prospects of their successful control in more normal periods? Great Britain and the countries which followed her off gold in 1931 were spared the long and agonising process of devastating deflation to which the United States was subjected during the next eighteen months by her desperate attempt to cling to gold at all costs. The cost was too high, and incurred with less excuse than in the case of other gold-standard countries. In clinging to gold so long before she was driven off, England had at least her great prestige as an international financial centre and her relatively vastly more important foreign trade to consider. France, Germany, Poland, Italy and the rest, in view of very recent experiences, had intelligible if unjustifiable grounds for fearing that abandonment of gold would spell excessive inflation. America in clinging to gold precluded every course of action for the deliberate encouragement of business recovery, largely it would appear, through sheer timidity. In the end, the attempt to preserve the gold standard, after it had come near wrecking the entire economic life of the nation, issued in failure; and the United States found it necessary to abandon gold after all. The great sacrifice made to retain it was made in vain.

conditions would improve as a result of increased exports being stimulated by falling exchanges. This hope was largely disappointed in consequence of the continued deflation in the gold standard countries and the multiplication of trade restrictions. The paper countries, however, did not actually inflate, in the sense of increasing the volume of spendable funds put into circulation. In England, for instance, neither currency nor bank deposits show any inflation since she went off gold. The volume of cash in circulation has remained much the same. Total deposits of the London Clearing banks increased between the last quarter of 1931 and the last quarter of 1933 from an average of £1686 million only to £1901 million (about 13 per cent). Over the same period the gold reserves of the Bank of England rose from £126.6 million to £191.8 million (over 50 per cent). In addition, an unknown reserve in foreign exchange, which could hardly have been less than £175 million at the latter date, was held by the Equalisation Fund.

It is true that Great Britain and the other paper-standard countries did not derive much positive benefit from their abandonment of gold, but merely the negative, though very considerable one, of being spared the evils of further deflation. The depression on the whole in these countries grew no worse, as it continued to do in the gold-standard countries, but it showed no signs of being alleviated for a year or more. Prices on the average did not rise internally. This was partly a result of Great Britain's failure to pursue a deliberate expansionist policy, but it was also because the abandonment of gold by these countries did not relieve but intensified the pressure on world gold prices by reinforcing the wild scramble for gold. In other words, the sharp exchange depreciation of paper-standard currencies was accompanied, generally speaking, by a further fall in gold prices rather than by a rise in the internal price levels of paper-money countries.¹

The reason why paper currencies have often depreciated badly in the past has not been, except in the most superficial sense, the abandonment of gold, but force of circumstances. The ultimate cause of inflation is the emergency, whether war, political crisis or economic collapse, which compels resort to inflationary finance and cannot be weathered otherwise, and so breaks the gold standard.

¹ It is beyond question that the collapse of the international gold standard in 1931 aggravated the world depression by producing deflationary effects upon countries still on gold. The reasons were various. Heavy losses were sustained by foreign central banks upon reserves kept in the form of sterling balances which had not been withdrawn before the suspension of gold by England. This meant not only a fall in the value of these reserves but provoked severely deflationary attempts on their part to re-establish liquidity and ensure its future maintenance. In the second place, the export bounty enjoyed by England from sterling's depreciation placed her foreign competitors in gold-standard countries at a disadvantage and compelled them to lower costs and prices. Moreover, the contraction of British demand in the commodity markets due to the increased sterling costs of imports tended to lower world gold prices. Finally it was the desire to limit imports, prevent loss of gold and protect the currency, which was largely responsible for the imposition of exchange restrictions, import embargoes, quota regulations and other such trade barriers.

Wild inflations are always due to government bankruptcy, as during the American, the French, the German and the Russian revolutions alike. Under such conditions it is hardly surprising that moderation of issue is not practised, since gold is abandoned precisely for the purpose of obtaining relief from the intolerable financial strain imposed by the emergency. Once the latter has been weathered, experience has shown that the currency usually undergoes no further depreciation. Thus the gold standard is no real protection against inflation: when conditions make imperative the resort to inflation, or to counter-deflationary measures, the gold base is anyhow abandoned. In times of serious crisis it proves a failure because the attempt to put the currency system in a straight-jacket is bound to break down.

Furthermore, the inflation which has occurred under paper money has often proved less destructive and inflicted less injury than the deflation which the exigencies of the gold standard have on occasions imposed. German post-war inflation eventually ended in complete monetary chaos, but the inflation of the French and Belgian francs, the Italian lira and other falling currencies, enabled their respective countries to avoid the worst of the post-war depression. On the other hand, whatever the complete explanation of England's prolonged and continuous industrial stagnation during the decade following the war, there can be no doubt that the deflationary pressure required by the policy of financial purism in putting her back on gold at the pre-war parity was a serious contributing factor.

CHAPTER IX

ALTERNATIVES IN FUTURE MONETARY POLICY

IMMEDIATE STEPS TO RECOVERY.—Detailed discussion of the immediate day to day measures necessary for world economic recovery would be out of place in this study. Furthermore, the present situation and the outlook in the immediate future are still too uncertain, and it is impossible as yet to see in perspective and properly evaluate the measures of economic reconstruction which are being put into effect at the moment in certain countries, conspicuously the United States. The general nature of the conditions which have to be satisfied in order to ensure enduring recovery may, however, be fittingly outlined.

On the desirability of a rise in the world price level for some time to come there is general agreement, if not on the best means of achieving that end.¹ The rise should obviously be gradual, and, if deliberately fostered, should

¹ There are some who, inspired by a semi-religious zeal for deflation as such, might dissent from this statement, and would certainly strongly disapprove of any deliberate measures taken to raise the price level. Their mentality is rooted in a sort of financial puritanism. Believing that the inflationary boom was morally sinful and due to collective extravagance and unsound business practices, they regard the depression as a richly deserved act of divine punishment and the suffering it inflicts as the penalty for unrighteousness. Deliberate human intervention to evade this process of education through suffering or to alleviate its effects thus becomes an act of impiety. Inflation is regarded not so much as inexpedient, which it may or may not be, as sacrilegious: and the gold standard is worshipped as a golden calf. It has been deemed worth while to probe these psychological roots because they have played an extraordinary, though quite subconscious, part in much recent monetary thought. The ancient dogma of the "unseen hand" would seem to have survived after all and emerged in a new guise.

be associated with general confidence in the price-raising methods or impulses utilised. Nor does this mean that a rise in the prices of all commodities and services would be desirable, or that the degree of rise in all cases should be the same. On the contrary a reduction of certain prices would be highly beneficial,¹ while as regards the others it is in general the most depressed which stand most in need of increase. Apart, however, from a rise in the *general* level of prices for a time there is little hope of increasing production and trade or of correcting the still paralysing disparity (in certain countries) between debts, other costs and income. The absorption of the vast mass of unemployed and the redemption of many industries, including the great basic industry of world agriculture, are impossible apart from the revival of business which is reflected in rising prices.

It should be clearly realised, however, that rising prices are not an end in themselves. Only in so far as it accompanies and results from increased activity, and facilitates the re-establishment of a profit margin between cost factors and selling prices, is a rise in the general level of prices desirable. To argue otherwise is to place the cart before the horse. Profits cannot emerge as long as prices continue to fall faster than costs, but they likewise cannot emerge if costs increase more rapidly than prices, or if the rise in prices is based on nothing more substantial than an ephemeral speculative movement or is otherwise artificially engineered and unaccompanied by an increase in effective purchasing power.² We cannot enter here into the examin-

¹ For example building costs, in those countries where they have not fallen sufficiently, conspicuously the United States, are a serious obstacle to revival of capital investment.

² The relevance of these statements to recent American experience need hardly be expressly stated—though no judgment is implied regarding the wisdom, in the circumstances, of the measures adopted.

ation of the best methods of accomplishing the desired objective of increased business activity accompanied by rising prices. On the whole the direct methods of monetary manipulation for increasing the total volume of the means of payment, though they may be efficacious when resorted to in moderate measure and under careful guidance, need to be supplemented and reinforced by indirect measures, such as large and well-timed programmes of public works, discussed below in Chapter X. For the direct methods—fiat-money issues, deliberate exchange depreciation, etc., even low central-bank rediscount rates supported by large-scale security purchases—all possess in varying degrees the serious limitation that though they may increase the potential supply of money, they do not, simply of themselves, increase the demand for it. Something more than making borrowing easy or money cheap is required to create bank deposits, stimulate investment, and encourage business activity. Effective measures are needed to increase purchasing power and the demand for producers' goods if the rise in prices is to be well founded.

Granting that a rise in prices, subject to the conditions just mentioned, would be beneficial, how great a rise is desirable? The frequent suggestion that the 1926 or 1929 price level should if possible be restored is more than dubious. Since the recession much drastic readjustment has taken place in a great many countries both through the scaling down of the debt structure and through wage and salary reductions. If the 1926 or 1929 price level were restored, these factors would also have to be readjusted upwards again. Reason has also been shown elsewhere in this study for believing that the 1929 price level was too high, if not in Great Britain, certainly in the United States (where the agitation for its restoration is strongest) because, as a result of cost reductions, it fostered the boom by

creating excessive profits. Moreover, since 1929 further cost reductions, effected through improvements in productive technique as well as through reductions in monetary wages, have continued rapidly, as in most previous depressions. Again, in view of divergent movements in both prices and costs in different countries during the last few years, widely different price levels will be healthy for a restoration of normal activity in the future. In no case can any definite figure be prescribed in advance as the goal at which to aim. This will depend upon a complex of factors, prominent among them the relative movements of wages and profits, which at the moment are quite incalculable. The criterion will be a balanced condition of full normal employment and activity, with costs and receipts in a relation which makes economic enterprise profitable but not excessively so. Needless to say, the actual decision will in practice be difficult to make and will demand the exercise of much judgment. Furthermore, though the ideal level would be the one which effects the best mutual adjustment between debts, wages, freight and utility rates, and other costs, it may be advisable to accept a compromise between this level and a practical one set by considerations of expediency on account of the dangers of prolonged disturbance of credit and investment conditions.

BIMETALLISM AND SYMMETALLISM. — Bimetallism adopted by any country singly possesses all the disadvantages of a free paper currency in cutting off that country from enjoyment of the fullest economic intercourse with the rest of the world, without possessing its virtue of conferring real freedom in domestic monetary policy. It thus combines the worst features of both gold and paper standards while it is actually in operation, and tends in practice to become gold or silver monometallism. If, on the other hand, it were to be adopted internationally

with a uniform ratio between the two metals in all countries, bimetallism would have virtually all the benefits of the gold standard and would probably confer somewhat greater stability at least in the secular trend of prices. The world's output of silver has shown a fairly close correspondence with the production of basic commodities,¹ probably because much of the silver production is connected with the production of other metals, whereas gold discoveries are largely fortuitous. Prices on a silver basis in China have shown more stability than gold prices in the United States during the last few decades. Gold and silver used jointly as a monetary base on an international scale would be likely to give more stability than the former alone. For many centuries bimetallism worked tolerably well and would have worked better had the same ratio between the two metals prevailed in all countries. In spite of great changes in the relative production of gold and silver, their relative values remained remarkably stable between the limits of a 14 : 1 and 16 : 1 ratio for about two and a half centuries till the early eighteen-seventies, in other words till the demonetisation of silver in Europe and the United States and the appreciation of gold due to the almost universal adoption of the gold standard. If bimetallism were adopted by most of the world at the same ratio and approximately the correct one, neither metal could drive the other out of use except through a quite phenomenal change in the relative supply of the two; in other cases compensatory action as between monetary and industrial demands would tend to keep them both in monetary use.

An improvement on bimetallism, but one which would still retain many of its defects, is the variant known as symmetallism, suggested by Alfred Marshal almost half

¹ See G. F. Warren and F. A. Pearson, *Prices*, chap. viii. pp. 139-49.

a century ago,¹ under which currency would be redeemable not in gold *or* silver but in both, *i.e.*, in a given weight of gold plus a given weight of silver in proportions fixed once for all upon the introduction of the scheme. It possesses the advantage of bimetallism in broadening the monetary base to include two metals instead of one: if the values of the two relative to goods were moving in opposite directions, greater secular price stability would be secured than with either one alone. It is free from the danger of one or other metal being driven entirely out of monetary use. It is subject, however, to bimetallism's other defects.

For the case against bimetallism, as also against symmetallism, at the present time on both practical and ideal grounds is overwhelming. The degree of international co-operation which would be required to establish and maintain the system, without which it would not work satisfactorily, would be even greater than in the case of an internationally managed gold standard, and beyond hope of achievement in present conditions. Furthermore, although, if once established, it would probably give greater secular price stability than an unregulated gold standard and would require less management than one under international central-bank control, yet there is no assurance that it would afford either the degree or kind of stability in the long-period trend which would be desirable. Though it might be better than an unregulated gold standard in this respect it would not be nearly good enough. International co-operation in the stabilisation of the value of gold would be a much preferable means of achieving the same end and one probably easier of accomplishment. Finally, but perhaps most important, it goes without

¹ *Official Papers*, by Alfred Marshall (1926), pp. 14-15 (Answers to Questions of Royal Commission on Industry and Trade, 1886); pp. 28-30, 166-7 (Evidence before Gold and Silver Commission, 1887, 1888); *Money, Credit and Commerce* (1923), pp. 65-6.

saying that bimetallism, whatever its effects on the secular trend of prices, would do nothing in itself to remedy the much greater evils of the shorter period oscillations of activity known as business cycles. Ruling out bimetallism does not, however, mean that, if the world returns to gold, a subordinate place might not with advantage be found for a strictly limited amount of silver in central bank reserves. (Cf. Chapter V. above.)

FISHER'S COMPENSATED DOLLAR.—Professor Fisher's celebrated "compensated dollar" proposal is so well known that we can limit ourselves to a few brief comments and criticisms. Its essence is that the monetary unit should cease to be represented by a constant weight of gold with a variable purchasing power and should be given instead a variable gold content with a stable purchasing power. As in Keynes' proposals, outlined below, the coinage of gold would be discontinued, but the currency would be redeemable in gold bullion. The official buying and selling prices of gold would be varied by percentage changes corresponding exactly with changes in the general level of prices, a spread between the two rates being established sufficient to prevent speculation. The proposal differs from Keynes' in allowing the central bank less discretion in the criteria and methods it would employ in its pursuit of price stability: action would be taken automatically upon any upward or downward movement in the commodity index.

The plan as thus formulated is subject to the same defects as all proposals which advocate the use of the commodity index as the guide for stabilisation purposes, without reference to other factors.¹ These defects are dis-

¹ The plan discussed is the one originally formulated in *Stabilising the Dollar*. It should be added, however, that Professor Fisher has consistently shown himself far more faithful to the principle underlying his proposals than tenacious of their purely mechanical details. In his subsequent writings he has been very

cussed elsewhere. (See Chapter XII. below.) Similarly, like all more or less autonomous standards, it would sacrifice permanent exchange stability in the cause of internal price stability, though, as in Keynes' proposal, short-period fluctuations would be eliminated, parities being automatically shifted only as the buying and selling prices of gold were varied, but the specie points being retained. International adoption of the scheme would remove this defect, but would almost certainly be found impossible to secure. The sacrifice of external stability might not, however, be a fatal objection, if internal economic stability could thereby be attained. But doubts arise that this objective could be achieved through the method of automatic adjustment by reference to the *past* movements of a single index number. The proposal in this form is too rigid. Control to be effective must attempt to *anticipate* price movements rather than to counteract them after they have occurred, inasmuch as the process tends to be cumulative. Such a scheme might successfully eliminate secular trends in the value of gold but would not necessarily be efficacious in smoothing out cyclical fluctuations, for there is no mechanical relation between the credit superstructure and the gold base. Gold plays not an active but a limiting part in the expansion and contraction of the total media of payments, wide variations of credit being possible of occurrence within these limits irrespective of any alteration in gold reserves. Furthermore, the velocity of circulation of money may also change greatly without any variation whatsoever in bank reserves; and it is much more difficult to control the velocity than the volume of

ready to modify the latter in the light of constructive criticism provided no sacrifice of fundamentals in the pursuit of monetary stability was involved. (See especially his testimony before various Congressional Committees and his latest book, *Stable Money, A History of the Movement*, 1934), The cause of stabilisation is heavily in Professor Fisher's debt.

bank credit. At best the adjustment would work slowly. In the short run the most powerful and direct influence exerted upon the internal price level by changing the gold content of the currency unit would come, not through its increasing or decreasing the money value of the gold reserves, but through its effects upon the foreign exchanges. Exporters and importers would be affected until the domestic prices of their goods had risen or fallen in proportion. The response in prices of other goods would be much longer delayed.

Two other difficulties may be noted, the danger of speculation and of political influences. If a strong protracted upward or downward movement of the commodity price level were expected, the small difference between the government's buying and selling price for gold might not be sufficient to prevent large speculative transactions in gold and foreign exchange and sharp fluctuations in foreign balances which could frustrate the effects upon reserves and prices which the variation of the gold content of the currency was intended to exert. It is also not unlikely that political pressure would be brought to bear upon the monetary authorities charged with the administration of the plan, especially by those producers the price of whose goods were falling when the general level of prices, as reflected in the index, was rising and consequently calling for corrective action designed to force it down.

But even under the traditional gold standard monetary policy was by no means wholly free from political influences. These difficulties are dealt with at greater length below, in the next section. The plan, however, contains highly valuable features especially in view of its pioneer character; and if modified in certain respects, the difficulties could doubtless be removed without loss of its essential advantage, that it confers freedom to aim at internally

stable prices without completely sacrificing the benefits of participation in an international system, since the gold standard would not be altogether abandoned though greatly modified. As Mr. Keynes' recent proposals for monetary reform have basically much in common with the above plan while being free from some of the drawbacks noted, we shall briefly consider them next.

KEYNES' PROPOSALS.—Mr. Keynes, once not so long ago an outright advocate of a managed paper currency¹ who described the gold standard as a "barbarous relic", has recently outlined the conditions under which a reformed and modified managed international gold standard might be restored,² though in a form so brief as to make the critical evaluation of his positive suggestions somewhat difficult. The leading features of Mr. Keynes' monetary proposals, as advanced in his *Monetary Reform*, were, it will be recalled, as follows: the primary objective of monetary policy should be stability of internal prices, at the sacrifice if necessary of exchange stability; the means to this end would be the regulation by the central bank, aided by the treasury, of the volume of credit, and the complete severance of the volume of currency from the gold reserves. These elements remain more or less intact in his later proposals. Two characteristics should, however, be noted: First, though the *aim* of monetary policy would be to keep commodity prices stable within certain specified limits, thus resembling Professor Fisher's suggested monetary reforms, yet unlike the latter the criteria for judging the situation and for action would, besides actual price movements, consist of "the state of employment, the volume of production, the effective demand for credit as felt by the banks, the rate of interest on invest-

¹ *Monetary Reform*, 1923.

² *The Means to Prosperity*, pp. 25-37. Cf. *A Treatise on Money*, *passim*.

ments of various types, the volume of new issues, the flow of cash into circulation, the statistics of foreign trade and the level of the exchanges". Secondly, gold would not lose all importance, but would be held to meet sudden emergencies and "as a means of rapidly correcting the influence of a temporarily adverse balance of international payments and thus maintaining day-to-day stability of the sterling-dollar exchange". To effect this latter purpose the central bank would change its buying and selling price for gold from time to time just as to-day it regulates its discount rate: excessive short-term fluctuations of exchange rates would be eliminated, though relatively permanent movements resulting from altered relations between the domestic and world price levels would be permitted.

This brief résumé of Mr. Keynes' earlier proposals shows the lines along which a managed paper currency might well be regulated. It is a short step from them to his later suggestions for a modified gold standard with movable parities. In his *Treatise on Money* Mr. Keynes had shown rather more cordiality than previously to gold and its claims to provide in some form the basis of an international system.¹ In his latest proposals each country would adopt a *de facto* parity between gold and its national currency, "with buying and selling points for gold separa-

¹ "Subject to certain safeguards and compromises for securing a reasonable measure of domestic autonomy, the ideal currency of the immediate future should probably conform to an international standard. If this be granted, then there are great and obvious advantages in retaining gold as our international standard, provided . . . that we can retain the metal as a constitutional monarch, wholly subject to the will of a cabinet of Central Banks who would hold the sovereign power. For by these means we shall—though at some expense, measured by the annual cost of mining monetary gold—give confidence to the timid and perhaps accelerate the adoption of scientific methods by several decades. The ultimate problem before us is, therefore, the evolution of a means of managing the value of gold itself through the agency of some kind of supernational institution" (J. M. Keynes, *A Treatise on Money*, vol. ii. p. 388).

ted by not more than 5 per cent. . . . The *de facto* parity should be alterable, if necessary, from time to time, if circumstances were to require. . . . An unchangeable parity would be unwise until we know much more about the future course of international prices . . . and it would, moreover, be desirable to maintain permanently some power of gradual adjustment between national and international conditions.”¹

If it is felt that the nations of the world have not yet reached a sufficiently advanced stage of wisdom, experience and spirit of co-operation to manage collectively a full international gold standard with fixed parities which yet kept stable the value of gold itself, then this plan of Mr. Keynes probably suggests the broad lines along which the best compromise might be made in securing simultaneously many of the advantages of both an international and an independent currency standard without the benefits of either being wholly sacrificed. *Some* sacrifice would naturally be unavoidable. Thus fluctuations of 5 per cent in the exchange rates, though they would be unlikely to injure foreign trade greatly, especially if strong forward exchange markets were developed, and would be small in comparison with fluctuations under recent conditions, would unquestionably impede the process of long-term foreign investment. That such a result in itself would be unfortunate cannot be denied. The structure of British industry is geared to a large volume of foreign lending. The same is true of America, and, in greater or smaller measure, of most other countries. The world's industrial development has hitherto rested on the expectation of a large amount of international investment, and any *substantial* permanent contraction of its volume, together with its repercussions upon the volume of international trade, must needs involve

¹ *The Means to Prosperity*, pp. 32-3.

difficult and painful readjustment during the period of transition in the productive structure and economic life generally of the nation.

A gold standard with movable parities would affect the international movement of short-term liquid funds, as well as international investment. It might permit the continuance of the nuisance of sudden migrations of foreign balances which has wrought so much damage in recent years. Each prospective alteration of the parity would be likely to provoke speculative operations on the part of foreign exchange dealers and to produce transferences of liquid capital held by foreigners. The political difficulty noted above in discussing Professor Fisher's proposals would also be present in some measure. In both cases international as well as domestic political problems might easily arise. Since downward revision of the parity of its currency unit would strengthen a country's export position, it would be tantamount to the present-day exchange depreciation of off-gold currencies, and as such might provoke resentment and reprisals from other countries, even were the adjustment made merely to correspond to changes in the real terms of trade.

To take these disadvantages into account is not to conclude that a gold standard with movable parities is inferior to a semi-automatic gold standard with fixed parities. Since the grave defects of the latter cannot be ignored in making a relative appraisal, the question is one of weighing their respective merits and shortcomings. The above considerations do indicate, however, that the most desirable system, *if it can be secured*, is probably a reformed, fully international gold standard, so managed by central banks in co-operation as to preserve relative stability in the value of gold. In pursuing this end various devices could be employed. One would be agreement between central banks

for concerted variations of reserve requirements as occasion demanded. A second possibility would be simultaneous alterations of the gold contents of the more important gold currencies from time to time in order to correct world gold shortage or superabundance. A third proposal is international agreement between the great powers—Britain, the United States, France, Germany, Japan—for the adoption of gold standards with movable parities, under which any one of these countries would in fact change its parity only with the consent of the other parties. It must, however, be admitted that the prospects of securing international agreement in the near future on any of these proposals appear, in light of the London fiasco of 1933, discouragingly bleak at the moment. A semi-autonomous gold standard with movable parities may still be, *faute de mieux*, the best choice.

THE LIMITS OF MONETARY CONTROL.—A policy of monetary control, however wisely conducted, cannot be sufficient in itself to ensure reasonable economic stability unless the behaviour of non-monetary factors is also spontaneously appropriate or can be so controlled as to be conducive to this end. In summarising the conclusions thus far reached, attention need only be drawn to the following important considerations:

First, the narrow limits within which a policy of control of the price level through central banking action can be put into effect under a freely automatic international gold standard.

Secondly, the necessity, even under free paper standards, of employing supplementary measures to ensure that the policy of low or high interest rates and security purchases or sales by the central bank, for the purpose of increasing or contracting member-bank reserves, has the desired effect on the volume of credit and the level of

prices. Since these measures affect the potential supply of money, but do not directly influence the actual demand for it and its use in industry and trade, they will often need to be reinforced, especially in periods of serious depression, by variations in the volume of purchasing power actually put into circulation. This can best be done through a flexible system of public capital outlays.

Even thus reinforced, however, a policy of central bank control may not in itself prove powerful enough to produce a moving economic stability unless the right balance is preserved between various classes of prices and incomes, and especially between the relative rates of saving and investment. For the purpose of securing this proper internal relation between different prices and incomes specific industrial controls may well be required in addition to general monetary measures: devices for regulating prices and supplies in particular markets and relative to one another; for keeping wages and profits in correct relation; for maintaining equality between net foreign lending and the net foreign balance, and so forth.

As emphasised above, the pursuit of price stability does not mean that the objective should be a rigidly constant price level moving along neither a moderately upward nor downward trend; or that an attempt should be made to eliminate all cyclical movement whatsoever; or certainly that banking policy should be regulated solely with an eye to the wholesale commodity price index and be blind to all other criteria. The violent security inflation and capital overexpansion which occurred in the United States between 1925 to 1929 under remarkably steady commodity prices should be a sufficient lesson in this respect.¹ The

¹ The problem of the relative merits and defects of various types of movements in the price level under different conditions receives discussion in Chapter XI. below.

belief that price stabilisation can in itself be identified with a dynamic economic stability is a naïve fallacy, though it is difficult to see how the latter objective can be attained unless the former is first assured. The entire economic system cannot be controlled by operating a single lever, through the monetary mechanism alone, but control of that lever is indispensable in the pursuit of balanced economic advance. Under a monetary policy the aim of which was stability of prices, the closest and most careful attention would have to be given to the movements and interactions of a large variety of other factors, monetary and non-monetary alike. Relative price stability is not an objective to be sought as an end in itself, but as a means towards the preservation of a moving equilibrium in the cost-price structure.

THE BANK FOR INTERNATIONAL SETTLEMENTS AND STABILISATION OF THE VALUE OF GOLD.—Though the world is not yet ready for the establishment of a genuine world central banks' bank—an ideal which could hardly be realisable till there comes into being something approaching a world state or world-wide federation of states—yet much might be done to stabilise the value of gold, if governments and central banks could be persuaded to show the necessary degree of co-operation, by means of an enlargement of the powers and functions of the Bank for International Settlements.

Article 24 of its statutes permits the International Bank to earmark gold transferable on their order for the account of central banks, and to open accounts for effecting international transactions in gold; in other words, it is authorised to organise a clearing system for gold transactions between central banks. This would necessitate on the part of the participating banks the deposit of a portion of their gold with the International Bank. One effect of the

establishment of such an international gold settlement fund (which would not involve the physical transference of the gold to Basle, the latter being simply placed as deposits at the disposal of the International Bank) would be to eliminate the cost of the international transportation of gold, orders for its purchase and sale being concentrated at the International Bank. But would such a step have any effect in economising the use of gold or facilitating the control of its value? Clearly in itself it would not, but the organisation of an international clearing system would have a bearing on the whole gold problem. It might supply the germ from which could ultimately be developed a truly international plan for the achievement of these ends, especially if the International Bank were to hold gold on its own account, and also held reserves of central banks and granted the latter credits. As the International Bank is not limited by the necessity of maintaining a traditional reserve ratio, the monetary demand for gold could be easily regulated to prevent serious variations in its value. In these circumstances the International Bank could operate a managed international gold standard with a view to maintaining stability of world prices, the value of gold itself being regulated in exactly the same manner as would a paper currency if gold were entirely eliminated. But in the present state of opinion the likelihood of the world's governments and central banks being willing to entrust the International Bank with such powers is extremely remote. Even the prospects of overcoming prejudices, conservatism and national self interest sufficiently to secure the more modest measure of international agreement necessary to remedy the more conspicuous defects of the gold standard, as exposed in its recent breakdown, are none too bright.

FUTURE RELATIONS OF THE POUND AND THE DOLLAR.—
Since her abandonment of gold, Britain's currency manipu-

lation has shown remarkable, one might even say excessive, self-restraint. "Controlled *inflation*" would be a misnomer for our policy. Both direct paper money inflation and increased public expenditures have been severely avoided. Our fiscal and monetary authorities have apparently been satisfied with their success in having avoided deflation and with the monetary growth based on the influx of gold and increase of foreign exchange holdings. In contrast to American policy, whose avowed object is to raise domestic prices, British policy seemingly aims to maintain domestic prices at approximately the 1914 level,¹ despite the fact that the cost and debt structure has not been deflated here to anything like the extent it has in the United States. British managed currency has virtually been a gold standard with shifting exchange parities. The more important principles of the gold standard have been retained in practice—free movement of gold, internal and external, unimpeded international movements of short-term capital, strong reserves, liquidity of the banks as regards investments, and a balanced budget: all the characteristics of a sound, conservatively operated gold standard. The main rules of the gold standard which have been abrogated are the redemption of gold at a fixed rate, gold being bought at the varying market price, and the severance of the discount rate from foreign exchange influences, exchange manipulation being instead exercised through an Equalisation Fund.

¹ As an informed American commentator has remarked, one of the lessons learnt by the American delegation at the London Economic Conference in 1932 was that "however politely the British might talk about raising the world price level, they did not intend to back up their talk with decisive action. They would keep money rates low and bank reserves plentiful but that was all. . . . They had no serious intention of taking effective steps to raise the world price level substantially" (L. D. Edie, *Dollars*, p. 269). This is amply borne out by our flat refusal to entertain proposals such as that contained in the second resolution of the American delegation for "a synchronised programme of governmental expenditure in the different countries along parallel lines".

Thus far this policy of refusing the opportunity to put a positive policy of reflation into effect and of "sitting tight" has combined some of the advantages of being on gold with those of being off it, easy money internally and some export advantage externally. Part of the latter has been wiped out with America's departure from gold. How long British policy will be able to continue steering a middle course between the "French" gold-standard group and an America bent on "reflation" remains to be seen. Anything in the nature of permanent stabilisation of the exchange must, for some considerable time to come, remain wholly out of the question for Britain. The withdrawal of the great volume of foreign short-term balances in England and a large-scale outflow of gold in place of the present influx would necessitate either a gold embargo or allowing the exchange to depreciate, or both. Furthermore, it will be quite impossible to tell what the sterling-dollar rate ought to be till the results of America's domestic price-raising experiment begin to show more clearly. We are faced with a period of inevitable uncertainty about ultimate relative price levels.

Fundamentally the pound is at present in a weak economic position *vis-à-vis* the dollar. Its recent apparent strength is deceptive. The British wage structure has not been deflated nearly as much as the American. Even allowing for such advances as the N.R.A. has brought about, wages in America have fallen further from their pre-depression level, as a result of their violent deflation in 1932, than have British wage rates. Relatively to national income, the British debt and tax burden is heavier than the American. British income from overseas investment has been sharply curtailed and her foreign markets restricted by trade barriers and the growth of nationalistic sentiment. America's loss from private foreign

investment, again relatively to national income, has probably been smaller than Britain's. Furthermore, although a creditor country, the former continues to enjoy a favourable balance of trade. The effect of the decline of American tourist expenditures abroad on the balance of payments must also be taken into account.

This intrinsic weakness of the pound has been concealed by short-term capital imports—the repatriation of British capital in 1932, the attraction of sterling-bloc balances, the flight from the dollar and from gold-bloc currencies whose ability to stay on gold looked doubtful. The reverse movement of capital which may be expected at some time in the future as confidence abroad revives and balances are repatriated will bring the real test of sterling's strength. Till that time, and till the American price-raising experiment is further advanced, all hope of achieving anything beyond very tentative exchange stabilisation must remain pure delusion.

The present uncertainty regarding America's ultimate monetary objectives must also preclude any speedy restoration of the international gold standard. The recent American monetary legislation (Gold Reserve Act of 1934, approved January 30, 1934), under which the dollar was revalued, can hardly be regarded as constituting a return to the full gold standard. Since the measure permits the government to vary the gold content of the dollar as it deems advisable, within a 20 per cent margin, and since, moreover, the ban on internal gold hoarding and doubts regarding the freedom of gold exports continues, the monetary standard of the United States, though now based loosely on gold, remains, potentially at least, a relatively autonomous one. Nothing further has been indicated as to the ultimate aim in monetary policy beyond reiteration by the President that he sought a dollar of

unchanging "purchasing power and debt-paying power". The Act fixes an upper and a lower limit of revaluation, 60 and 50 per cent of the old gold content, but between these limits the dollar may be revalued any number of times. Perhaps it might in its present form best be described as a gold-fish dollar—one which is to be permitted to move about between clearly defined but comfortable bounds.

An indispensable condition of genuine and sustained recovery is a return of business confidence in future prospects and the willingness to assume long-term risks. This applies particularly to the capital goods industries, whose revival is of pivotal importance for sound recovery. Monetary uncertainty admittedly weakens business confidence and retards economic improvement. This does not mean, however, as is so often implied, that the full gold standard had better be resumed forthwith. Provided that excessive short-period exchange fluctuations are prevented by means of exchange equalisation funds, and attempts at deliberate exchange depreciation externally and extremist courses of monetary action internally are avoided, the risks of engaging in foreign trade and long-term domestic investment need not be excessive. Long-term foreign investment would admittedly still involve large hazards, but its volume in any case is unlikely to be great during the period of reconstruction of the world's monetary system. In America, where the lack of business confidence is so marked, and the demand for immediate cessation of monetary experimentation and a full return to gold so strong, the lack of confidence is perhaps due less to the Roosevelt Administration's monetary measures than to the manner in which they have been put into effect, and especially the reasons advanced in their defence, the theories on which they were reputedly based and the

confusion of thought which those theories appeared to reveal.¹

Provisional exchange stabilisation at an early date would assist in promoting business confidence. A quite informal, somewhat flexible understanding with America might go far towards effecting this end. The world need not wait till prices have risen to the full extent desirable for the restoration of internal equilibrium before undertaking exchange stabilisation in any form. In most countries a vast basis for credit expansion exists to-day. If the business community needed still further assurance before making long-term commitments, governments could announce the intention of returning ultimately to a reformed international gold standard, whenever the conditions required for its successful operation had been fulfilled, and meanwhile of avoiding measures which cause needless international disturbance, such as recourse to competitive exchange depreciation. Explicit acknowledgment of permanent stabilisation, *under proper safeguards*, as an ultimate objective, would be a constructive influence towards re-establishment of an international monetary system, stimulating business confidence: but the actual step of returning to a full gold standard could not safely be taken while the conditions were still operative which would make its continued maintenance impossible. The

¹ "The Roosevelt Administration unnecessarily undermined confidence at the very time when they needed it most, by an unfortunate method of presenting the gold policy to the public. A strong case along more or less orthodox lines could have been made for reducing the gold content of the dollar, and a case presented in such terms would have made possible substantially the same mechanical operations without, however, disturbing public confidence. It was the rationalisation of the operations which disturbed confidence. The rationalisation was in terms of extremist theories of the commodity dollar type, theories which struck the financial world as somewhat fanatical and belonging to the lunatic fringe of monetary thought. This was a mistake, but a mistake which can be corrected in due course" (L. D. Edie, *Dollars*, Yale University Press, 1934, pp. 169-70). It was the policy characterised by Mr. Keynes as an attempt "to grow fat by letting out one's belt" and as "more like a gold standard on the booze" than the managed currency of his dreams (open letter to President Roosevelt, December 1933).

uncertainties in the pathway of stabilisation need not be exaggerated, for some degree of uncertainty will always be present, but sufficient time would at least have to be allowed to elapse for us to see whether the exchange parities adopted tentatively were appropriate to the permanent elements of the situation. A period of years may be required before the true rate can be determined, a series of approximations being tried out in the interim while all possible measures are taken to steady the exchanges. Premature adoption of fixed parities would probably mean another breakdown of gold as a monetary standard and quite likely destroy all hope of its further use as such in any form.

BRITISH-AMERICAN CO-OPERATION AND MONETARY STABILISATION.—It thus is not possible at the moment of writing to lay down, dogmatically and regardless of the concrete circumstances of the situation as it develops, and which cannot yet be safely predicted, the lines which British monetary policy should follow in the future. It is too early yet to see all the factors in clear perspective and assess their relative importance. Much will depend not only on the course of economic events but also upon the monetary aims and policies of other countries, and the willingness they manifest to co-operate with us and each other. In gathering together the threads of our argument, the alternatives can, however, be briefly presented.

A hasty and premature return to the full international gold-standard system should be avoided. The technical problems alone which would first have to be solved are so complex and difficult that should a restoration of a full gold standard with fixed invariable parities be effected eventually, it would of necessity have to follow a fairly long preliminary period of experimental *de facto* stabilisation. Past experience has almost invariably shown this to be a

necessity. In the meanwhile, provisional exchange stabilisation at an early date between the world's leading currencies, and especially the dollar and sterling, would be most desirable for the restoration of confidence and the facilitation of international trade. But no permanent stabilisation could obviously be undertaken so long as the dollar continues to remain seriously undervalued externally or while the conditions under which the gold standard broke down are still largely operative.

Granting the satisfactory solution of technical problems, a return to the full gold standard should be contemplated only when there are good prospects that it can be so reconstructed that its future behaviour will be an improvement on its past performance. The pre-requisite conditions have been pointed out above (Chapter VIII.). If a sufficient degree of international co-operation can be secured between central banks to ensure these conditions, chief among which is that the gold standard will be so managed in the future as to secure a reasonable stability of world prices, then adoption of this much modified and improved gold standard would be advisable. It would involve some sacrifice of national monetary and economic autonomy, some subordination of internal requirements to international needs, but were these demands not too exacting, it would be worth the price and represent the best possible compromise at the present stage of the world's development. Most of the benefits of both the gold standard, fixity of exchanges, and of a free standard, liberty to pursue a policy of internal stabilisation, would be secured at the same time. With the growth of experience in working such a managed gold standard, and with the exercise of an increasing degree of international control over the value of gold, the latter might well eventually fade pretty much out of the picture, or remain merely as a historical relic. The

world would then enjoy a truly international paper standard, but it could not hope to do so till, by manifesting a truly international spirit, it had shown itself deserving of such a standard.

Such an internationally managed gold standard would clearly be far preferable to a number of independent paper systems. In view of the difficulties, however, of attaining this end, a transitional system might be possible through the co-operative action of Great Britain and the United States, without waiting for the rest of the world. Powerful circles in both countries are to-day receptive to the idea of monetary stabilisation in principle.¹ Both countries again have had valuable experience prior to the depression in partial experiments in stabilisation within the limits permitted by the gold standard. Agreement between the two on broad lines of general monetary policy would not necessarily entail co-operation in the detailed measures of credit regulation, but would merely involve concerted action to arrest a threatened rise in the world price level by credit contraction and to avert a fall through credit expansion.

¹ President Roosevelt's words in his celebrated message of July 3, 1933, to the World Economic Conference will be recalled: "The sound internal economic system of a nation is a greater factor in its well-being than the price of its currency in changing terms of the currencies of other nations. . . . So, too, old fetishes of so-called international bankers are being replaced by efforts to plan national currencies with the objective of giving to those currencies a continuing purchasing power which does not vary in terms of the commodities and needs of modern civilisation. Let me be frank in saying that the United States seeks the kind of dollar which a generation ahead will have the same purchasing power and debt-paying power as the dollar value we hope to attain in the near future."

Amongst those in Great Britain who lay stress on the fundamental importance of internal monetary stability, despite many differences in the details of their views in other respects, might be mentioned the names of Sir Josiah Stamp and Sir Basil Blackett, both Directors of the Bank of England and distinguished public servants of great financial experience; Mr. R. G. Hawtrey of the Treasury; Sir Reginald Mant and Sir Henry Strakosch, both members of the Council of India and also members of the League of Nations' Gold Delegation; Mr. R. H. Brand, Sir Arthur Salter and Mr. J. M. Keynes. Indeed the movement has gathered great strength and commands wide support alike among government officials, bankers, industrialists and academic economists.

A firm and harmonious understanding between Great Britain and the United States so to control gold as to maintain its value stable would amount to something not far removed from stabilisation of the world's gold price level, and would also ensure stability of exchanges not merely between the dollar and sterling, but over virtually half the world, since it would include the countries with currencies linked respectively to these units. New York, Washington and London working together could thus do much to put a managed international gold standard into actual operation over a very large part of the globe.

The establishment of a satisfactory international monetary system over this dollar-sterling area, with the double objective of internal-price and exchange stability, is not, however, dependent upon a return to the full gold standard at an invariable rate. If a restoration of the gold standard along the lines sketched above proves impossible of attainment, Great Britain would still be in a strong position, by reason of her leadership of the sterling bloc, to take the initiative in organising and operating an autonomous currency system divorced from gold or attached to it only in some flexible manner. The United States is also in a peculiarly fortunate position to adopt a similar course, owing to the vastly greater importance of her internal over her external trade. Both Britain's and America's foreign investments are admittedly very large, but even under a restored full gold standard the flow of capital to foreign countries is hardly likely to be as large as in pre-depression days, after the painful experiences of the last few years. These experiences should also have convinced us of the naïvety of the belief that *all* unregulated foreign investment is good in itself. Nor, as pointed out above, must it be assumed that foreign investment would cease entirely under a semi-independent currency.

Thus if Britain or the United States adopted a managed currency of this sort, she need not be doomed to find herself financially isolated. If agreement with the other could be reached that she too would put into force the policy of regulating her currency to keep its internal purchasing power relatively stable, variations in the exchange rates between these two powers, together with their financial satellites, could be restricted for the most part within a fairly narrow range without great difficulty through the operation of exchange equalisation funds and other devices. The means would have been found for reconciling internal price stability with the interests of international trade, without much surrender of national freedom to the demands of an internationally managed system. Gold, though abandoned as a currency base, could still, however, as indicated above, play a useful part in tiding over temporary movements in the balance of payments. As to relations with those countries which might still remain linked to gold at a fixed invariable rate, if buying and selling prices for gold were fixed and maintained unaltered for considerable periods of time, excessive short-period fluctuations of the exchanges would be eliminated. The currencies of the countries which participated in this system would not be linked to one another at a definite, permanently unchangeable rate of exchange; relatively stable exchanges would be rather the natural consequence of the maintenance by each of stability in its own domestic price level.

If such a scheme admittedly falls somewhat short of perfection in failing to provide a world-wide monetary standard giving both price stability and complete permanent exchange fixity, at least it represents a first long step in that direction and offers a programme which in present circumstances has better prospects of realisation.

It is one, moreover, which Britain can give the world a lead in putting into effect. Were agreement reached with the United States to accept this policy and to collaborate in giving it practical application, the other countries which could be counted on also to adhere to it either gladly or by force of circumstance would include on the one side the "sterling area", on the other the Latin-American countries which have close financial relations with the United States. The former group covers first the British Empire (despite some divergence of monetary interests between its constituent portions) with the exception of Canada, which, however, would present no difficulties since she occupies a middle position between the dollar and the pound; second, Scandinavia and Finland in Europe; and lastly, important parts of South America, conspicuously the Argentine. The countries which would remain outside this group would include those in fact on the gold standard to-day, France, Belgium, Switzerland and Holland; those on gold only in name, "the insolvency gold standard" countries such as Germany, Austria and most of central and south-eastern Europe; Russia, which has an independent system peculiar to her own economic order; and China with her silver standard. Under such a system the objectives of monetary policy would be twofold. *Externally* the objective would be to secure as much agreement as possible with other nations for the relative stabilisation of exchanges as far as this was compatible with internal monetary aims. *Internally* the aim of monetary policy, once a normal state of economic activity and full employment had been restored, would be relative internal stabilisation, the preservation, in so far as the monetary mechanism can contribute to this end, of a moving equilibrium in the cost-price structure. The precise meaning to be given to the term stabilisation would

depend upon the behaviour relative to each other of the various economic factors. The examination of this problem, of the kind of movement in the price level which is most desirable, is undertaken in the concluding chapters of this study.

CHAPTER X

MONETARY POLICY AND PUBLIC WORKS¹

FLEXIBLE PUBLIC WORKS AS A STABILISING INFLUENCE.—In recent years proposals for utilising public works as an agency of economic stabilisation in an unstable economic system have been receiving much attention. In essence the suggestion is that public works should be planned and budgeted sufficiently far in advance to allow them to be conducted on a flexible schedule, operations being timed to fluctuate inversely with general cyclical movements of business, that is, retarded in periods of prosperity and speeded in times of industrial stagnation. In the past public works have usually tended to be undertaken in large volume in good times both because of increased popular demand and because governments have the necessary revenue or are more willing to borrow. Conversely, depressions have usually found public authorities with a heavy load of debt and impaired borrowing powers. Thus the expansion of public construction in prosperity has increased the pressure on the market for materials and the

¹ Certain material in this chapter has been drawn from an extensive report recently made by the author to the U.S. National Planning Board in the capacity of research economist of the Federal Emergency Administration of Public Works, Washington. For a detailed discussion of the problems touched upon here, the reader is referred to this study, very shortly to be published under the title *Public Works in Prosperity and Depression, United States, 1919-33, and their Utilisation as an Agency of Economic Stabilisation*, especially chapters 1, 2, 13 and 14. For a brief discussion see my article "Public Works" in *Encyclopædia of the Social Sciences*. The factual data in this chapter relate mainly to American experience, both because for the United States alone are reliable *comprehensive* statistics available and because of that country's recent large-scale experiments in utilising stimulated public construction to induce economic recovery.

labour supply and consequently encouraged inflationary tendencies; while its contraction in periods of depression has reinforced the reduction of private spending by a curtailment of public expenditures. It is argued that an elastic system of controlled public works would correct both these evils by giving when needed a general stimulus or check to economic activity as a whole.

CAPITAL INVESTMENT AND INDUSTRIAL FLUCTUATION.—

A breakdown in economic activity occurs when private industry ceases making new capital investments, or makes them at a greatly decelerated rate. The heart of the problem of business fluctuation has long been recognised to lie in this rise and fall of investment in new capital goods, both producers' goods and durable consumers' goods. While it is probably true that some check can be effectively placed upon excessive activity in capital goods industries on the upswing by the exercise of monetary weapons alone, yet in themselves they would appear from recent experience to be powerless to restore the community's purchasing power once the reaction from excessive capital investment has occurred. Plentifully available funds may help in preparing the way for new investment, but they will not induce it so long as the prospective rate of profit upon it is likely to be a minus quantity: in other words, till the process of readjustment through depreciation, obsolescence, the introduction of new inventions and the development of new products has been effected.

A programme of flexible controlled public works may in its broader aspects be properly viewed as one special application of a fiscal policy which attempted to smooth fluctuations of activity by alternately accumulating balances in periods of prosperity and disbursing them during years of depression. In many important respects, though not in all, the basic problems raised would be similar in schemes

for building up and subsequently expending unemployment insurance funds, industrial reserves, consumer reserve funds, and the like. The effect in all cases would be a tendency to check net profits in periods of prosperity and therefore to moderate the upward swing. During depressions, on the other hand, their expenditure would tend to help maintain the general level of consumption. In the case of public works reserves the effect upon the maintenance of activity in capital goods industries would be even more important: this is not equally true of unemployment and consumer reserve funds.

In the light of these circumstances it is evident that the aim of a flexible public works policy should during depressions be, first, to promote the maintenance of durable goods production at a level higher than it would otherwise be pending new "normal" demand for them; and second, to stimulate new demand for durable goods. This it would do by increasing production in certain groups of durable goods industries and by furthering demand for other durable goods by these groups. Expanded public works would also help to maintain consumption. During periods of prosperity the opposite policy would naturally be the appropriate course of action to pursue.

It follows that accelerated emergency public construction should as far as possible take the form of capital investment which, while increasing the national stock of durable goods, does not compete with private industry. Nor would the aggregate volume of public works undertaken over the period of years, good and bad together, which embrace a complete cycle, be any larger than otherwise. The objective would merely be a better time-distribution. The effect of public works in directly financing consumption should not be overstressed. Since, during

depressions, it is in the capital goods industries that the fall in production and employment is greatest, increased activity on their part will indirectly but inevitably increase consumption. The direct financing of additional consumption, however, is likely to have only distant, problematic and delayed effects on the production of capital goods. The main function of expanded public works is thus to induce a secondary current of private orders and to stimulate private enterprise. Public construction expenditures during depressions should therefore describe a curve which passes through a maximum and thereafter declines when private expenditures begin to increase. Any adequate system of controlled public works must, however, obviously be based upon careful, comprehensive long-range planning of public improvement projects, and would involve both their deliberate retardation during prosperity and their acceleration in periods of unemployment. Though the volume of work which can be conducted on an elastic basis is clearly not sufficient to eliminate all cyclical fluctuation in the absence of the regularisation of private construction and industry in general, it might well form an important element in a general programme for the stabilisation of employment.

HISTORY OF PROPOSALS AND OF MEASURES TAKEN.— Though repeated recourse has for centuries been had to the expedient of providing employment for the jobless on emergency relief works, the idea of making public construction serve as a balance wheel of industry is relatively new. As early as 1902, however, the French government officially endorsed the policy of reserving important public works for coming periods of unemployment. In England the minority report of the Poor Law Commission of 1909 suggested that the government could “do a great deal to regularise the aggregate demand for labour as

between one year and another by a more deliberate arrangement of its orders for work of a capital nature". Many European governments, Prussia, Great Britain, Sweden, Norway, Finland and others, followed France in partially adopting or in considering the principle of regulated public works, but none attempted to apply the policy on a comprehensive scale till the federal government of the United States established machinery for that purpose in 1931. Examples during the last fifteen years of the postponement of some construction for periods of slackened business activity are found in many countries, France, Germany, Italy, Norway, Sweden and others; and conversely there are few countries which have not put works in hand earlier than they would normally have been undertaken in order to afford unemployment relief in bad times, especially during the post-war and the recent slumps. Frequently, however, as in the case of the German productive unemployment relief schemes, these attempts have been more in the nature of pure relief works than controlled public works as defined above. In the United States repeated efforts were made since the war to pass federal legislation providing for public works as a remedy for unemployment. But, though the principle received official endorsement in 1923 from the President's Conference on Unemployment, all these attempts proved fruitless till the Wagner bill was passed in February 1931. The creation of a permanent Federal Employment Stabilisation Board for the advance planning of federal construction programmes and their acceleration in periods of business depression under this act was the first genuine instance where the theory of controlled public works was put into actual large-scale operation. Under President Hoover urgent appeals were made after the recession in 1929 to local subdivisions (as also to public utilities and

private business) to expand their construction outlays in order to ensure the continuance of prosperity, but without success, total expenditures instead falling off sharply. This failure to speed public works during the depression was due both to local governments finding themselves unprepared with carefully formulated plans to accelerate construction at short notice and to their increased financial burdens. Coupled with adverse credit conditions which made impossible the flotation of large security issues, these circumstances forced them to cut construction expenditures to the bone. The federal government, however, did succeed in speeding projects already planned, and also increased its road building grants to the states. In July 1932 Congress appropriated \$300 million for federal public works and authorised loans from the Reconstruction Finance Corporation up to the aggregate sum of \$1 500 million to states, counties, cities, and in some cases private corporations, for "self-liquidating" construction.¹ These sums were dwarfed, however, when the Roosevelt administration took office and made the allocation of huge outlays for public works one of the major planks in its recovery programme. In May 1933, under the provisions of the Industrial Recovery Act, the President was empowered to make emergency expenditures mainly on public works up to a total of \$3300 million, and to that end the Federal Emergency Administration of Public Works was established.

SCOPE AND EFFECTIVENESS OF PUBLIC WORKS CONTROL.—
The success of a policy of controlled public works must be conditioned largely by the relative volume which can

¹ This represented the first important instance in the United States of the utilisation of the credit of the central government to aid local borrowing for public works, a device which through the agency of the Public Works Loans Board had been employed in England since 1817 and had supplied most of the funds for housing and similar projects undertaken by the smaller municipalities.

be readily advanced or postponed. This in turn depends very considerably, despite almost infinitely varied local conditions, upon the thoroughness with which advance plans, both physical and financial, have been prepared, but perhaps 50 per cent could be so re-allocated.¹ The long-range planning and budgeting of public works is, however, an essential prerequisite if a great variety of unavoidable administrative, technical and financial difficulties of a very time-consuming character are to be successfully surmounted.

The criticism is sometimes raised that the greatest possible increase in public works would not be sufficiently large to offset variations in private building, much less of industry in general, as between years of prosperity and depression. The following figures throw some light on the problem.

Aggregate annual expenditures for all public construction purposes throughout the United States increased steadily between 1919 and 1929 from probably around \$1½ billion to \$3½ billion. Estimates for years since 1923 are as follows: ²

(In millions)			
1923	.	\$2123	1929 . \$3555
1924	.	2652	1930 . 3632
1925	.	2812	1931 . 3067
1926	.	2974	1932 . 2004
1927	.	3706	1933 . 1300 (preliminary)
1928	.	3631	

These figures of public construction represent on the average about 30 per cent of the total volume of all construction, both public and private, during these years, and

¹ See *Public Works in Prosperity and Depression*, chaps. 13 and 14.

² For details see *Public Works in Prosperity and Depression*, chap. 3. The word billion is used in the American sense to mean a thousand million.

the proportion has been steadily increasing.¹ Total federal expenditures (included in the above figures) for new construction, repairs and alterations for fiscal years ending June 30, exclusive of floating equipment and aircraft, have been as follows since 1933:²

(In millions)							
1923	.	.	\$190	1929	.	.	\$307
1924	.	.	224	1930	.	.	339
1925	.	.	270	1931	.	.	490
1926	.	.	248	1932	.	.	556
1927	.	.	249	1933	.	.	553
1928	.	.	268				

Total construction expenditures, public and private, declined from \$13,000 million in 1928 to \$4000 million in 1932. But had local authorities, state, county and city, expanded their construction expenditures as greatly as did the federal government during the depression, the dollar value of construction would have remained almost constant while its physical volume, allowing for the decrease in construction costs in the interval, would not unlikely have increased. Granting that this would be expecting too much, the effectiveness of the device depends less upon the amount of the increase or decrease than upon its correct timing. An expansion or contraction of public works at the appropriate moment, whenever that might happen to occur, a question considered below, can have an influence upon business in general out of all proportion to its magnitude. Many incidental benefits would also accrue. Government agencies would gain greatly by plan-

¹ In comparison with public works expenditures strictly defined, as above, the estimated construction and maintenance expenditures of railroads and public utilities (electric power, telephone and electric railroad companies) grew from \$2657 million in 1923 to \$3265 million in 1929, declining thereafter to \$1332 million in 1932 and \$902 million in 1933.

² U.S. Federal Employment Stabilisation Board.

ning and undertaking their public improvements in orderly sequence instead of haphazardly. Building costs usually are lower in periods of depression: between 1928 and 1932 they fell in the United States in the ratio of 100 to 70 or 75. Finally, borrowing at reasonable rates is also usually easier provided that—an important proviso—the credit of the government unit in question has not been weakened by excessive borrowing in times of prosperity. Even if under the most favourable conditions a flexible public works policy could not eliminate all cyclical fluctuation, were this desirable, it still might succeed in mitigating their violence.

THE PROBLEM OF TIMING.—The correct timing of controlled public works is a somewhat vexed question and one of major importance. The assumption usually made that they should be rapidly expanded as early as possible in a depression is open to question unless carefully qualified. As pointed out above, some process of readjustment is both inevitable and desirable once an unhealthy inflationary situation has been allowed to develop. During the later stages of a boom particularly the economic machine is frequently running at reduced efficiency, owing to growing carelessness on the part of labour and management, rising costs, the increasing accumulation of a surplus of goods which the market cannot absorb at current prices, unrestrained speculation in commodities and securities, and various other such factors. Unless public works have previously been sufficiently retarded to prevent capital overexpansion and the development of serious maladjustments, the right time to launch an expanded programme is probably not in the early stages of the depression but only after the strictly unavoidable amount of liquidation has been effected. At such times as the latter, however, a stimulus may be needed to arrest a continued contraction

of business brought about by the cumulative momentum of the downward process. Since during depressions the volume of capital expenditures being made is not sufficient to balance the volume of monetary "saving", expanded public works programmes would go some way towards offsetting the decline in private construction outlays. As business recovers and private enterprise resumes capital outlays in normal volume, and activity and prices increase, public works programmes would naturally have to be correspondingly contracted. The danger that enlarged public works expenditures during depressions might perhaps actually discourage private construction outlays by creating alarm should be remote if they represent part of a well-considered long-term policy.

It is not possible to decide in advance and *a priori* when the point at which public works programmes could best be speeded is likely to be reached. The decision must in practice necessarily be difficult to make and involves the danger of an incorrect reading of the current situation. The success of any action taken will in some degree be contingent upon the insight with which current data are interpreted and future tendencies forecast. The corresponding difficulty is of course equally great of knowing when, and to what extent, to retard public works on the upswing. The greater, however, the degree of stabilisation effected either by private industry through control over its own operations or through a flexible system of public works, the easier of solution will be the problem of correct timing.

The case against public works in depression collapses when it is asked at what other phase of the business cycle they could better be put in hand. The reasoning of those who oppose large expenditures at the trough of the cycle proves too much, inasmuch as it amounts to a case against *all* public works as such. Granting that governments must

always be responsible for a certain volume of public construction—and this volume has in recent times been growing steadily both absolutely and relatively to private construction with the state's progressively enlarged economic activities—the onus rests upon the critics of public works in depressions of demonstrating not merely that there are certain dangers in their execution at such times, but of showing whether they could be better undertaken at some other period. It has been shown above that the best time is probably not in the early stages of the downswing. It is clearly absurd to argue that they should be undertaken during the boom phase of the cycle. If public works programmes undertaken in depression tend to raise building costs and the cost of borrowing to the detriment of private enterprises, they are certainly not less likely to have injurious effect during the boom period, for their probable effects then would be further to intensify the inflation. Public construction is less likely to have the effect of raising costs at the bottom of a depression, since private outlays have then fallen to a minimum. In the light of these considerations the conclusion is inescapable that public works should as far as possible be concentrated in periods of depression. The danger of incorrect timing, conceded in part above, cannot be evaded by a policy of inaction; it is inherent in the nature of government expenditures as such, and not only on public works.

PRIMARY AND SECONDARY EFFECTS OF PUBLIC WORKS EXPENDITURES.—Increased public expenditures for capital development give employment not only to the men directly engaged on the projects on which the money is spent, but also to those producing and transporting the construction materials required. This employment, direct and indirect, may be designated the "primary" employment created by the gross amount of the initial new

expenditure.¹ But the increased purchasing power resulting from the additional aggregate incomes received by those thus engaged will in turn be expressed in increased demand for other goods which will further increase employment: and so on, in a series of waves. The employment created by these repercussions may be termed the "secondary" employment created by the initial additional expenditure on public works.

If the process continued indefinitely, it would be sufficient to put one man to work on road-building to keep the whole population employed providing for his "secondary" needs.² But although the process is cumulative, its effects do not multiply indefinitely. At each stage, because of various leakages, whose magnitude will depend upon the phase of the business cycle, a certain proportion of the increased income will not eventuate in increased employment.³ Some of the added income will be saved, some will merely be a substitute for previous expenditure by private charity, some will be used to pay off old debts. These are deflationary tendencies which are likely to occur if increased expenditure is concentrated in a period of depression. Some of the increased income might also be spent on imports, or raise prices and thus diminish consumption, unless producers spent their increased profits. During a

¹ For the United States it has been estimated that perhaps 800,000 were employed directly on all public construction during the years 1927 to 1930 and possibly twice that number given indirect employment. (See *Public Works in Prosperity and Depression*, chap. 13.)

² R. F. Kahn, "The Relation of Home Investment to Unemployment" in the *Economic Journal*, vol. xli., June 1931. The analysis of leakages which follows was first developed by Mr. Kahn in this article. See also J. M. Keynes, *The Means to Prosperity* (London, 1933). Cf. Mark Mitnitzky, "Economic Effects of Changes in Consumers' Demand", in *Social Research*, vol. i, No. 2 (New York, May 1934).

³ The assumption must of course be made that the original expenditure represents a net addition to the aggregate volume of purchasing power and does not merely replace previous expenditure, for otherwise no cumulative effect could ordinarily be expected.

depression there probably would be less leakage on the score of higher prices, because there would be a great deal of unused productive capacity, so that industry could take its increased gains by a larger turnover at the same price.

The net effect of a given volume of expenditure can therefore be calculated, assuming the proportion of these leakages, the assumptions varying with the circumstances. Thus there may be no secondary employment if there is little or no margin of unemployed resources, for the additional purchasing power is then likely to be reflected in higher prices and increased imports. If the increased income took the place of a "dole" paid for by borrowing, there would be scarcely any repercussions at all. On the other hand, if the dole were paid for by taxes, the reduction in the dole would presumably lead to an increase in the taxpayers' purchasing power.

The problem, then, is to discover the total employment, primary and secondary together, created by a given amount of additional "loan-expenditure"; and to ascertain what Keynes calls the multiplier relating the total employment to the primary employment. He uses as an example the primary expenditure of £100, which he divides into two parts:¹ (1) Money which does not become additional income, consisting of cost of imported materials, cost of goods not newly produced but merely transferred, cost of productive resources of men and plant not additionally employed but merely taken from other jobs, and cost of wages substituted for income derived from a dole paid for by borrowing; (2) money which does become additional income. This may be either spent or saved.

To obtain the multiplier two magnitudes have to be estimated: the proportion of a typical expenditure becoming someone's income and the proportion of this income

¹ J. M. Keynes, *The Means to Prosperity*, pp. 8-12.

which is spent. These two proportions multiplied together give us the ratio of the first repercussion to the primary effect, since they give us the ratio of the second flow of expenditure to the initial flow of expenditure. To sum up the whole series of repercussions, we can assume that the second repercussion will bear the same ratio to the first repercussion as the first bore to the primary effect.

In conditions of serious depression, such as exist to-day, Keynes suggests as a reasonable figure the deduction of 30 per cent of expenditure which for one reason or another does not increase incomes, leaving 70 per cent accruing to one person or another in current income. Of this 70 per cent additional income, he further assumes that perhaps 70 per cent will be spent and 30 per cent saved. On these assumptions the first repercussion will be 49 per cent (7×7) of the primary effect, or approximately one-half; the second repercussion will be one-half of the first repercussion, *i.e.*, one-quarter of the primary effect, and so on. Thus the multiplier is 2 (the sum of the series $1 + \frac{1}{2} + \frac{1}{4} + \text{etc.}$). Since seven-eighths of the total effects would come from the primary expenditure and the first two repercussions, the time-lags involved would not be very serious.

If the increased demand led to increased prices, the rise in prices would gradually diminish the proportion which becomes new income, surplus resources becoming depleted and a large proportion of the new expenditure merely being diverted from other jobs. Higher prices would also mean higher profits, and since more of the increased income would become profits rather than wages more of it would probably be saved. The multiplier as a result would diminish, but that would be indicative of the success of the remedy.

It is chiefly in estimating the proportion of expenditure which becomes additional income that we have to be

cautious. Keynes thinks that under circumstances such as the present not less than 60 per cent of additional expenditure would become additional income, and that not less than 75 per cent of this would be spent. The American multiplier would be likely to be greater than the British, above rather than less than 2, both because of the greater self-sufficiency of the American economic system and hence the smaller the deductions to be made in respect of imports, and also because of the absence hitherto of any system of unemployment relief paid for by borrowing.¹

EXPANDED PUBLIC WORKS UNDER GOLD AND PAPER STANDARDS.—The stimulation of business during depressions through the expansion of public works is in the last analysis an inflationary, or counter-deflationary measure, and their contraction the converse in periods of upswing. Under the semi-automatic international gold standard such a policy, it has already been shown, could have been pursued by any one country only within narrow limits, short of concerted international action, by reason of the threat its adoption by a country in isolation must have

¹ The analysis conducted above of the effects of increased expenditure on employment can also be expressed in terms of its effects upon the community's aggregate money income. New funds put into active circulation through enlarged government expenditures are likely to increase the total income of the community by more than their own amount, assuming the effects are not offset by a contraction of private activity. A hundred pounds or dollars injected into the market not only become net income to that amount to all those engaged in the various processes of production between the original producer and the ultimate consumer, but if spent by the recipients set in train a new circuit of production and become income for a second chain of producers. If we call the number of times money passes through the production sequence before again becoming income in any given period of time its *income velocity* (in contradistinction from its *transaction velocity*), then new expenditures will raise the national income by the amount initially injected multiplied by its income velocity. In boom years the latter appears to have been about 3 per annum in Great Britain and the United States. Obviously during depressions it is likely to be markedly less, because, as shown above, new spendable funds are not wholly employed in making new purchases, or are utilised more slowly, part being held idle at each stage in cash or deposits. But even if the income velocity of money in depressions is not more than one and a half or two, the injection of a given quantity of money would still increase the community's money income by perhaps twice its own amount.

constituted to that country's continued adherence to the gold base, because of foreign drains of liquid funds and a flight of domestic capital.¹ A policy of controlled public works, unless adopted internationally, is therefore at bottom inconsistent with the underlying principles of a freely automatic international standard based on gold, though not necessarily with a modified gold standard operated under central-bank co-operation. On the other hand, under systems of irredeemable paper or otherwise "controlled" currencies, why should stimulated construction be necessary to effect credit expansion, and could not this end be pursued directly? The policy, however, of flooding the banks with cheap money by means of a low rediscount rate supported by security purchases on a large scale may not have the desired effect of creating bank deposits and increased consumer-buying and producer-borrowing, or the process may be long delayed. There is no guarantee that sound borrowers will come forward automatically. In such circumstances the case for active governmental intervention is strengthened. Past experi-

¹ Recent American experience affords a pointed illustration. For this was precisely the difficulty experienced throughout the depression, till her abandonment of gold, by the United States, where the agitation for vigorous expansion of construction programmes was widespread and insistent. After the recession choice clearly lay between an attempt at upward readjustment of prices through enlarged public expenditures at the cost of increasing deficits and the risk of injury to the bond market, government credit and the gold base, and efforts to effect downward readjustment of the cost-price structure to a lower level along traditional lines of governmental retrenchment and business liquidation and reorganisation. American policy at first vacillated between these two opposed courses, but after Britain's departure from gold the Hoover administration unequivocally opposed the use of federal credit for greatly expanded public works expenditures. The Roosevelt administration appears at first to have hoped that it could embark upon such a programme within the framework of the limits set by adherence to the gold base, but speedily came to the conclusion that a choice between incompatible ends had to be made and that departure from gold and a budget in reality if not ostensibly unbalanced were the necessary price to be paid in pursuit of an expansionist policy. (The development of public opinion and official policy towards stimulated public works during the depression in the United States is traced in detail in chap. 1 and Appendix A of *Public Works in Prosperity and Depression*.)

ence has repeatedly shown that making borrowing easier will not necessarily in a severe depression of itself encourage business activity. That depends upon whether business men consider they can increase production profitably, and that, in turn, depends largely upon the probable future volume of demand and the trend of prices. Ultimately it is a question of profits, actual or prospective. The experience of recent months—conspicuously of the United States in 1933, after she left gold—has been to the effect that deliberate measures which increase purchasing power, both of producers and consumers, may be necessary even under a free paper standard if the rise in prices and the stimulation of activity is to be based on something more substantial than an ephemeral speculative movement likely to collapse again at any moment.

SOME OBJECTIONS EXAMINED.—The objection has sometimes been advanced that capital raised by public authorities for construction work in times of depression represents merely a diversion of resources from private industry to public enterprise, especially by heightening the cost of borrowing, and therefore cannot create any addition to the sum total of employment. It is further argued that the demand for construction materials and building labour resulting from increased public expenditures will, by raising building costs or preventing their falling, increase the difficulties of private enterprise in the construction field. The second argument ignores the idle productive capacity and unemployed labour available during a depression; the first rests upon the fallacious assumption of a rigidly limited and inflexible volume of credit. Since there is usually during depression periods a surplus of idle funds seeking secure investment at attractive returns which private business is unable or unwilling to utilise in face of uncertainty, declining prices and excess productive

capacity, its use by public bodies need involve no transfer, inasmuch as this capital would otherwise not have been employed at all. Expansion itself provides the resources which make expansion possible: the funds needed to finance increased public construction outlays will come partly from the reduced expenditures which will be required for direct relief and partly by creating bank credits or preventing their continued contraction. And indeed the experience of governments has in general been that they could raise money in the capital market without increasing the difficulties of private enterprise. It should be emphasised, however, that a public works programme undertaken in conjunction with an appropriate central bank policy can prove successful, especially under a semi-automatic international metallic monetary standard, only if public credit is secure, the capital market strong and the demand for government bonds elastic. Otherwise there is danger that any reflation effected through credit creation and expanded public expenditures may be offset by a decline in private activity resulting from general lack of confidence, financial uneasiness and consequent increased cost of raising capital. In the United States, where the experiment of expanding public construction on a vast scale is being tried, these have been factors of major importance, as have also altogether excessive building costs. In Great Britain, however, where the conditions were much more favourable and no similar difficulties existed, no such attempt was made, the proposal being unequivocally rejected last year by the government at the World Economic Conference.

The further objection to public works expansion in depression, that the additional debt contracted involves a future increased burden of taxation, rests on a confusion of thought. Business recovery is likely to bring increased tax

receipts without the imposition of additional taxation. It is precisely the contraction of incomes consequent upon a decline in business activity which is responsible for the increase during depressions of the real burden of fixed indebtedness. Not quite equally unfounded is the argument that public works expenditures financed by borrowing do injury in depressions by "unbalancing" the budget. For though the answer is valid that the budget can only be brought into an enduring balance if the national income is increased, and that this can come about only through a restoration of business activity, still the danger exists in the short run that if a badly unbalanced budget lessens business confidence, it may reduce private activity by a greater amount than public activity is increased by expanded expenditures. It remains true, however, that we cannot all grow prosperous if everyone, including the government, spends progressively less and less. That way lies universal impoverishment.

With regard to the charge of inevitable waste, no excessive waste need occur if projects have been planned ahead, but such as did would be insignificant in comparison with the economic wastage of idle and deteriorating manpower and capital equipment. Besides, since the unemployed have to be supported in any event out of public or private funds, the real net direct cost of public works, apart from their indirect stimulating effects, is much less than it seems, while in addition the community receives something in return for its expenditures. Thus the apparent magnitude of the cost is deceptive. For, first, there must be deducted from the gross cost both the saving in unemployment relief and the increased tax receipts which will in time flow into the treasury as a result of the increased incomes (including profits) of the recipients. Secondly, public outlays on capital developments bring the com-

munity a twofold socially beneficial return, which relief expenditures do not: they augment its physical assets and they preserve the industrial skill and the morale of those given employment. Thirdly, as shown above, there are in addition their equally important indirect effects in creating "secondary" employment and in aiding recovery by starting the ball rolling again.

Finally, it is often asserted that a sufficient volume of genuinely needed public works cannot be found in depression periods to give substantial employment. This objection would of course fall to the ground if construction programmes were to be planned ahead and retarded in periods of prosperity. But even though this was not the case during the present depression, still the statement was wholly unjustified as regards both Great Britain and the United States. In the latter, especially, billions of dollars' worth of authorised and sometimes already initiated projects were suspended through the wholesale elimination of all possible construction items from numerous local budgets because of the shortage of funds, though this was not true of the federal government. Road- and bridge-building, in particular, is an example of construction work suitable for this purpose both because it can be put in hand rapidly and entails expenditures which are bound to be made sooner or later. Schemes for slum clearance and the erection of decent workers' dwellings suffer in many instances from the defect that hitherto comprehensive and detailed plans have not existed, but they offer almost boundless opportunities in the future for construction work of the highest social utility.

THE PROVISION OF RESERVES.—For the adequate financing of public works in periods of depression arrangements must previously be made for the rapid provision of funds when needed. The actual form the reserve should

take is a matter of some dispute, and the particular methods suitable are not necessarily the same in all cases. One proposal is that reserve funds should be accumulated and invested in "gilt-edged" securities or deposited in a bank; another is that they should be held in the form of bank-notes so that the circulation would be alternately contracted and expanded. But whether or not actual funds are accumulated in advance, it is imperative that adequate reserves of borrowing power be preserved. For public construction must be undertaken during periods of depression either mainly out of loans or from previously accumulated reserves, the debts in the former case being amortised at an accelerated rate during years of prosperity out of budget surpluses. Again, money which would normally go in reduction of public debt could in depressions be used for public works. It should be noted at the outset, however, that theoretically it makes no difference whether the financing of controlled public works is effected by means of funds accumulated in periods of prosperity and expended during depressions, or by means of loans raised during depressions and subsequently redeemed during prosperity. For in both cases, unless counteracting measures are taken, the effect is likely to be to reduce the rate of interest in times of prosperity and thus stimulate private capital investment, and to raise it during the depression period and make the resumption of private activity more difficult. None of the measures mentioned above, it should moreover be noted, is capable of coping effectively with unemployment of a more or less permanent character resulting not from cyclical fluctuations but from deeper-seated forces involving basic economic readjustments such as Great Britain and Germany experienced during the post-war decade.

One of the greatest problems of a flexible public works

policy is the danger that additional funds disbursed during depressions may produce a contraction of the flow of funds disbursed by private business. If the prosperity reserve previously accumulated has been invested in government securities, the liquidation of these securities during a depression for the purpose of securing the funds required for the expanded construction programme might weaken the bond market and retard private capital investment. It is important, therefore, to ensure that the additional funds injected into the market by public agencies should not be offset by a contraction thereby induced in private activity. It is equally important that they should represent new and additional money derived from expanded bank credit and not be merely a diversion of resources, as pointed out above.

The relative efficacy of various possible methods of administration of public works reserves is therefore a question of prime importance. Such reserves may be viewed as either a substitute for or supplement to central bank control of credit, and care would have to be taken to avoid possible conflict between the two. Choice lies between the following possible methods of operating the funds. They could be placed in deposits with the central bank. They could be placed in deposits either with "commercial" banks or "savings" banks.¹ They could be invested in commercial paper or short-term obligations of the national government purchased in the open market. They could be invested in long-term government securities purchased and sold in the open market, or purchased from and sold to the central bank, or purchased from and sold to the national treasury. Lastly, they might be kept either wholly or partly in money hoards.

¹ In English terminology, either in current accounts or deposit accounts; in American terminology, either in demand deposits or time deposits. The difference in the effects, as between these two methods, would not of course necessarily be the same, especially in degree, for the two countries.

It would make very considerable difference which of these methods was adopted. Space does not permit a discussion here of their probable respective consequences, nor of their relative merits and defects.¹ Choice between the methods, and other possible variations of them, must in practice be determined by a complex of factors too numerous to discuss here. The consideration of prime importance, in attempting to maintain a steady total flow of purchasing power, is the need for expanding public outlays as private outlays begin to contract. The substitution of investments (in the assets owned by the public works reserve funds) for loans by the banks as private activity slowed down would prevent the total volume of bank credit from declining. Coupled with the reverse process in periods of expanding private activity, a more even flow of funds as between good and bad times would be effected. During the latter the banks would offset the decline in loans to business by increased investment; when activity revived they would be relieved of some of their investments and would be in a position again to place more funds in loans. A flexible public works policy thus operated could do much to maintain total purchasing power during periods of declining private business activity by providing the channels through which credit might be pumped into the system. Subject to the important qualifications noted above, it is a fallacy to assume that a deflationary process involving a *general* contraction of the purchasing power flowing into the system from both public and private sources is needed to effect a

¹ Such a discussion can be found in *Public Works in Prosperity and Depression*, chap. 14. See also Professor Alvin Hansen's paper on "The Flow of Purchasing Power", Special Report No. VIII. in *Economic Reconstruction*, Report of the Columbia University Commission (New York, 1934). Though Professor Hansen's analysis relates to Consumer Reserves, it applies at many points equally well, in slightly modified form, to public works reserves.

new balance. On the contrary, maintenance of purchasing power as a whole should facilitate the readjustment of factors which is the essential need in such circumstances. But the central banking system cannot successfully bear the entire burden of preventing violent fluctuations of purchasing power: the assistance of a policy of controlled public expenditures is indispensable.

PUBLIC WORKS AND THE CONTROL OF ECONOMIC ACTIVITY.—The greater the degree of international co-operation in the execution of an elastic public works policy, the more successful it is likely to prove. In the past it has been found extremely difficult to secure such agreement on concerted policies between central banks and treasuries, even in periods of acute stress, as was instanced by the failure of such proposals to receive general assent at the World Economic Conference held in London in the summer of 1933. The extension, likewise, of the concept of the stabilising influence of controlled public works to the similar utilisation of other governmental expenditures will render all the easier the smoothing off of cyclical variation in business activity. In both cases the purposes of the policy would clearly be considerably furthered by greater centralisation of control over public works planning in place of the present confusion created by the multiplicity of authorities usually responsible for construction work.

One's evaluation of a policy of flexible public works as an agency of economic stabilisation depends in the last analysis upon the theory one holds of the fundamental nature of the business cycle and the effectiveness of "artificial" correctives of it under a system of free private competitive enterprise. All students of the problem are agreed on the importance of securing a proper relationship between costs and receipts. Those, however, who incline

towards advocacy of deliberate control or guidance of industrial and financial processes, though even only at strategic points, such as the monetary mechanism, will tend to approve a policy of flexible public outlays. Those, on the other hand, who regard business depressions as being due to the development of structural maladjustments impossible to remedy through monetary action and governmental intervention and necessitating for recovery the drastic reduction of costs and writing down of past liabilities are likely to condemn increased public expenditures out of borrowing. Though in practice the viewpoints of economists are not susceptible to such sharp and rigid classification, their individual attitudes to an elastic public construction policy must ultimately be determined by the degree of faith they repose in the possibilities of the conscious guidance of economic activity through centralised planning and monetary management as opposed to the reputedly automatic readjustments of a freely competitive *laissez-faire* order.

CHAPTER XI

PRICE STABILISATION AND ECONOMIC STABILISATION

THE MEANING OF PRICE STABILISATION.—The analysis of America's pre-depression experience in Chapter VI. above has shown that stability of the wholesale commodity price index can, in certain circumstances, be a misleading guide in the pursuit of balanced economic development. It is this index, however, which most advocates of monetary stabilisation have in mind as being the right criterion for credit policy when they plead for monetary stability. In this study we have thus far refused to identify monetary stability with a stationary price level, and have exposed the dangers of aiming at such an objective *per se* to the exclusion of other considerations. Assuming that we can make prices behave in the way we wish, what sort of price stability do we want, and what are the consequences and conditions of various forms of price stabilisation?

It should be remarked at the outset that the importance of differences in the details of alternative methods of aiming at monetary stabilisation should not be overemphasised. Provided we are fully aware, in attempting to achieve monetary stability along certain lines, what that course of action implies regarding the conditions necessary for success, in a word so long as we keep the *total* picture constantly in mind, then various forms of stabilisation all have something to recommend them, and the pursuit of almost any one would be preferable to no attempt at

stability at all. The choice between methods will therefore be largely determined by the relative ease with which the respective conditions required for success in each case can be fulfilled in actual practice. Thus though a slowly falling or rising price level might or might not ideally be superior to a stationary one, either would clearly be preferable to the violent instability from which we have suffered in the recent past. Nor is it necessary to demonstrate that the type of stabilisation which we finally decide upon is free from all imperfections. All that need be shown is that it is likely to produce better results than the methods of monetary regulation hitherto practised and is the best feasible in the circumstances.

The questions we have to answer are three in number: What sort of long-term movement in the price level would be the most desirable, and under what conditions? within what limits are short-period fluctuations in this price level to be permitted? and which would be the best index number or numbers and other criteria to employ for stabilisation purposes? The second of these problems may be conveniently considered first.

THE NECESSITY FOR A MARGIN OF TOLERANCE.—It need hardly be said that any policy of monetary stabilisation must allow for a margin of tolerance in the movements of the price level. Every small general change in prices should not require corrective action by the central-banking authority. Neither do the criteria for action nor the instruments at the disposal of central banks for putting their decisions into effect possess such precision that fluctuations of less than a certain percentage in the selected price index can be regarded as significant. Furthermore, however prices were moving, the central monetary authority could never for a moment be indifferent to the behaviour of a multiplicity of other economic factors, monetary and

non-monetary alike. On the contrary it would have to give unremitting attention to them in determining its credit policies. In these circumstances it is manifestly impossible to lay down in advance the exact limits of the margin of tolerance within which the price level would be permitted to fluctuate without occasioning concern. Quite possibly variations of five points or conceivably more in either direction about a relatively stable level might be regarded with equanimity provided that the maintenance of internal and external equilibrium were not endangered. It is this last consideration, on which more is said below, which must be the dominating and determining factor.

THE CASE FOR A STATIONARY PRICE LEVEL.—The case in favour of a stationary price level rests on a twofold foundation. First it is claimed that it best ensures justice not only as between debtor and creditor (since the *real* value of debts measured in goods would remain unchanged, which it does not do under a rising or falling price level) but also as between the recipients of fluid and inflexible incomes. Regarded from the side of producers, a constant price level would, it is argued, best render justice to entrepreneurs inasmuch as all business risks resulting from fluctuations in the *general* level of prices would be eliminated. The other ground on which the argument rests is more technical. It runs to the effect that a constant price level prevents both “forced saving” and the unintended wastage of voluntary saving. A “stable price level would enable the banking system to do its job by converting into real capital goods just so much and no more saving than is entrusted to it by the public. If the price level is allowed to rise, forced saving is inflicted on the public for the benefit of the industrialists. If it is allowed to fall, saving which the public intended to make will go to waste in the form of lower prices. A fall in prices will be a sign

that the banks are not expanding fast enough, so that those who wished to exercise thrift by leaving their money unused are not in fact being called on to do so, but thanks to the fall in prices are consuming just as much as ever.”¹ The validity of these arguments can be better evaluated in connection with our criticisms of the case for a slowly falling price level, which will be considered presently.

THE CASE FOR A SLOWLY RISING PRICE LEVEL.—The case for a gradually rising price level rests chiefly upon the continuous incentive to enterprise which it gives the business man in the shape of large actual and prospective profits. Naturally such a course could hardly be openly avowed as a permanent policy. If it were, it would be likely to defeat itself by reason of employees and creditors making demands which would destroy all its benefits to entrepreneurs, for these benefits result precisely from the spread between costs and selling prices which constitute profits. If, however, this course were pursued with moderation and sufficiently surreptitiously not to evoke corresponding demands from the other factors of production, it would amount to giving a bounty to entrepreneurs at the expense of wage-earners and creditors. Such a deliberate policy of filching from wages and savings might be justified on the grounds that the entrepreneurs occupy the driver’s seat in the car of industry and that their prosperity spells all-round prosperity.

Yet this policy would also amount to giving a subsidy to the mediocre and incompetent who have no claim to it on social grounds. Individuals lacking in any outstanding qualities of initiative, leadership or energy would be enabled to survive and succeed in the competitive struggle merely by virtue of the assistance they were receiving

¹ *The International Gold Problem*, p. 20. Cf. below, p. 239.

from rising prices. Pressure upon those in control of the direction of industrial activity, and responsible for economic progress, would be lacking to induce them to exercise their abilities to the utmost in order to save themselves from being eliminated.

But the proposal has graver defects. It rests upon two very questionable assumptions. The first is that enterprise needs an extra fillip of incentive to function effectively, and (or) that sufficient savings are not being entrusted to business men to supply them with adequate resources for the full exercise of their initiative, *i.e.* that "forced savings" would be in the community's interests. Neither pre- nor post-war experience affords any reason for believing that this twofold assumption is justified to-day or likely to be in the near future. The second assumption is that waxing profits will not encourage overexpansion, especially in capital development, nor produce speculative excesses which end in disaster. In view of America's experiences leading to the depression, the validity of this assumption need not be further examined. A steadily, even if gently, rising price level in a progressive economic society would be justifiable only if wages and other costs were to rise *more* rapidly than prices, so that profits were kept in check. But this would be the very opposite of the avowed object of the proposal.

THE CASE FOR A SLOWLY FALLING PRICE LEVEL.—In its effects on business enterprise, the reverse of a rising price level is true of a steadily falling one, that it would exercise a healthy influence by eliminating from business leadership all who lacked unusual vigour, capacity and initiative. The competitive struggle would be intensified and only those really economically the fittest would be allowed to survive. Again, as regards the question of justice between creditors and debtors, it can be argued that this would be

best promoted in an economically advancing community by a falling price level since *all* sections of the community should perhaps in fairness share in the fruits of progress, including the creditor, whose capital contributed to it, and the recipients of relatively fixed incomes. These latter classes would unquestionably benefit most from a slowly declining price level in view of the rigidity or stickiness of their incomes. The issue need not be debated at length. Two other aspects of the problem are more important and demand closer examination.

One of these relates to that maintenance of equilibrium between savings and investment which we saw should be the ultimate goal of monetary policy, and as a means to which any form of price stabilisation derives its justification. In this connection Mr. Robertson has clearly supplied the answer to the argument quoted above for a constant price level. "It is true that if prices fall, the real value of balances rises, but that is a mere automatic reflection of the increase in productivity. It does not mean that attempts to save have increased. If you then inflate credit to keep prices stable you are inflicting enforced saving, not transforming voluntary saving into industrial capital. There is all the difference in the world from this point of view between an increase of credit in proportion to population, and an increase in proportion to production."¹

This argument is unassailable on grounds of "pure" theory. Whether or not a price level which fell in proportion to unit cost reductions would be the most equitable one to debtors and creditors, unquestionably it would best serve to equate savings and investment and to preserve the right economic balance in the internal price structure, if we could ignore the psychological forces and institutional frictions which are likely to be operative in practice.

¹ *Op. cit.* p. 21.

For, assuming no deterrent effects were exercised on business enterprise, a price level which fell in exact proportion to the rate of advance in industrial efficiency would require no reduction in *money* wages, though it would preclude the possibility of any rise in them. Wage-earners would benefit from economic progress by enjoying incomes which were growing progressively in purchasing power as a result of falling prices, despite their nominal wages remaining the same. Nor would extra pressure be put upon the entrepreneur, and he would have no rational grounds for discouragement and the curtailment of activity. Since, *ex hypothesi*, his *unit* costs of production would fall in exact correspondence to the fall in prices, there would be no encroachment on his profits.¹

In the light of post-war American experience with a relatively stationary price level, the case for falling prices in an economically progressive society must be strong not only on theoretical but also on practical grounds. For, as we have seen, a stable price level, and *a fortiori* a rising one, in a progressive state demands as an essential concomitant, if disastrous maladjustment and subsequent reaction are to be avoided, a correspondingly rapid rise in the real earnings of the cost factors. And the unresponsiveness of wages under these circumstances in the past has been notorious in actual practice.

Though the theoretical case for a steadily falling price level is thus watertight, there are considerable practical difficulties it ignores in assuming that competition may be trusted to bring prices down *all along the line* sufficiently

¹ A fall in prices due to increased productivity would, however, cause a current loss to the holders of stocks of the commodities affected, because these stocks would also fall in price. But as the purchase of fresh stocks at the new low prices would involve no further prospective loss, nothing would be gained from postponing new purchases and demand would not, therefore, be likely to contract as a result and cause depression.

to reflect cost reductions. The supreme monetary authority cannot be expected to know in advance, or even at the time, by how much prices should be falling each month or year to prevent relative inflation, since the current rate of advance in economic efficiency cannot be known till after it has taken place. Even if a rate of economic progress averaging 3 per cent per annum has been found to hold good of the past, which may be questioned, it would obviously not apply regularly and steadily all the time nor necessarily be true of the future. Under conditions of both pure and—what is perhaps distinct though often confused with it—perfect competition, the central monetary and banking authority would not, it is true, need to know beforehand or at the time what the pace of economic advance happened to be. Provided its aim were monetary neutrality, or more specifically in these circumstances a more or less constant volume of the total effective means of payment, competition could be relied upon to produce in the price level the exactly correct fall, one precisely proportionate to the reduction in real costs. But of course that is the way that competition, and to an increasing extent, notoriously does *not* work to-day. We are not justified in this day and age in assuming conditions even remotely approximating pure and perfect competition.

THE CONCEPT OF "NEUTRAL" MONEY.—For these reasons this notion of neutral money, which has been becoming increasingly popular in Europe and has begun to make headway in America as against the older idea of stable money, requires some examination. Advocates of price stabilisation have tended in the past to underrate the importance of non-monetary changes in the price level, and have often spoken in terms which have implied a belief that the entire economic system could be controlled by manipulation of the monetary mechanism. It is natural,

therefore, that to others the desideratum has in contrast appeared to be a currency system under which money would be an entirely passive factor, one which rendered it "neutral" relative to goods.¹

In practice such a monetary policy would amount to a price level which fell in exact correspondence with unit-cost reductions due to increased economic efficiency and thus passed on the increased product of industry to consumers in the form of an enhanced purchasing power of their incomes. The *modus operandi* of this policy would be the maintenance, on the part of the banks, of the total supply of money and credit, not indeed at an absolutely constant and unchanging volume, for changes in the "circuit velocity" of money, and perhaps also in population, would have to be allowed for, but at an amount which with these allowances would be approximately unvarying. No variations in the money supply would be effected in response to changes in the supply of goods. Increase or decrease in the latter would be allowed to result in a fall or rise in the general average price level.²

¹ See F. A. Hayek, *Prices and Production* (London, 1931) and *Monetary Theory and the Trade Cycle* (London, 1933). Cf. J. W. Angell in *Stabilisation of Employment*, chap. xiii., "Monetary Prerequisites for Employment Stabilisation".

² Under an absolutely constant money supply, with no allowance made for changes in circuit velocity, prices would fall *more than in proportion* to increases in productivity. For they would fall not only because physical output had increased, but also, and in addition, because the proportion of the total effective money supply going to consumers was declining. Increased efficiency is a result of increased accumulation of capital. The latter, however, tends to increase the complexity of the structure of productive processes, namely, the number of stages, the proportion of resources and the length of time involved in the production of *intermediate* products. Since more of the money supply will be circulating *within* the general *productive* system, the consumers' share must of necessity, if the total money supply is kept constant, be both a smaller proportion and a smaller absolute sum than before the increase in efficiency occurred. The result must be a purely deflationary pressure on prices in excess of the fall due to increased output, thus causing unemployment and necessitating a reduction of money wages. (For a brief and skilful examination of the problem, see the paper on "Money and Prices" by E. F. M. Durbin in *What Everybody Wants to Know about Money*, edited by G. D. H. Cole, London, 1933.) A constant money supply corrected to allow for changes in the structure of production, which would virtually amount

Now the term "total effective supply of money" means the aggregate quantity of the media of payments times their velocity of circulation. Any change occurring in either quantity or velocity would have to be corrected by a corresponding countervailing alteration in the other. But how can either of these magnitudes, the total of the different kinds of means of payment, or their velocities of circulation, be measured with accuracy? This circumstance alone would under present conditions render most difficult of practical application a neutral money policy, for errors of estimation would be likely to have serious practical consequences in producing an inflationary or deflationary movement.

But the proposal has other serious defects. So long as productivity remained unchanged it would of course make no difference whether the money value of commodities (*i.e.* the price level) or the money value of the factors of production (*i.e.* the total money supply) were held constant. But in the modern dynamic world productivity does not long remain unchanged. It is subject both to short-period fluctuations, often due to fortuitous circumstances, and to a long-run upward movement resulting from economic advance. As regards the latter, the advantages, subject to the fulfilment of certain prerequisite conditions, are probably, for reasons explained in succeeding sections, largely on the side of price stabilisation as against income stabilisation. As regards the former, however, the temporary variations, there is much to be said in favour of a relatively constant money supply. Consider the case

to stabilisation of the general level of money incomes, would be much superior to a rigidly unvarying money supply, and would be free from these particular defects of the latter, but it remains subject to the other disadvantages noted in the text. Though I have loosely used the term "neutral money" to cover both proposals, I have throughout kept in mind the more adequate variant, namely, the proposal to keep consumers' incomes constant.

where for some reason, such as a severe shortage of crops, total output for the time being sharply declines.¹ Prices of farm products fluctuate from year to year much more severely than does the average of all commodities. Under a constant price level policy credit contraction would have to be enforced to the point of bringing about a reduction in consumers' expenditures proportional to the reduction in total output. For otherwise the general average price index would rise. The advance in farm prices would necessitate a restriction of the money supply to bring about a compensating lowering of the prices of other products. Manufactured goods, because of their greater elasticity of demand, would probably be worst affected. In such conditions of falling output, whatever the causes, a constant price level policy will tend to cause business depression. Under a constant money supply or a policy of stable money incomes, on the other hand, this difficulty would not arise. For assuming unit elasticity of demand for the products in short supply, total money expenditures upon them, and hence on the aggregate of all other products, will remain unchanged. The scarcity of the former would merely result in a rise in their prices and thus be reflected in a lowered purchasing power of the monetary unit. Nor would the situation be essentially different if elasticity of demand for the affected products were greater than unity, though the necessary readjustments might provoke some disturbance. In these circumstances monetary neutrality would have the advantage over price constancy.

Under modern conditions the case of a continuously contracting output need not be considered, because increasing productivity is on the whole the normal state of affairs. Where a fairly steady increase is a more or less permanent

¹ Cf. R. G. Hawtrey, *The Art of Central Banking* (London, 1932), pp. 322-4 ("Money and Index Numbers".)

condition, stable money is argued below to be preferable to neutral money. Under the former policy the commodities affected, by improvements in methods of production, would fall in price relative to those unaffected, and these other prices would then be allowed to rise in order to keep the average price index constant. But if the increase in output and the consequent fall in prices were only temporary—the result, for example, of a bumper crop—the rise in the prices of other products required for the purpose of keeping the general index unchanged would be undesirable, because this rise would also, *ex hypothesi*, be temporary and the subsequent fall might very likely cause depression and unemployment. In short, fluctuations of farm prices resulting from year to year variations in crops would, under an inflexibly constant price level, produce variations in the volume of credit available to industry, thus introducing into it a highly disturbing element. In such cases, where the increased or reduced output was likely to be temporary, and particularly when it was due to crop variations, the sensible course would clearly be to allow this factor to make its weight felt in the general price index employed: namely, to let prices fall or rise slightly for the time being in order to avoid giving a purely temporary and disturbing stimulus or check to the production of other goods.

Here we have a good illustration of the fact that no single price index can afford the sole guide in monetary policy, that non-monetary factors can never be ignored, and that a margin of tolerance in the application of any policy of monetary stabilisation is essential. Price stability can never be regarded as an absolute inflexible principle in the realisation of which the monetary unit would become as fixed and undeviating a measure of value as the yardstick is a measure of length.

LABOUR AND FALLING PRICES UNDER NEUTRAL MONEY.— Under a price level which declines in proportion to the increase in economic efficiency, average money wages must remain stationary, the reward of labour coming in the form of lowered commodity prices. Wage increases could be expected by individuals only with advancing years as deaths and retirements occurred. Such a condition would be much less acceptable to labour on both psychological and practical grounds than a constant price level accompanied by rising wages. Steadily rising *money* wages, though they would really be worth no more than stationary wages coupled with a declining cost of living, would in practice offer a greater incentive to labour. The wages of workmen more efficient than the average could be advanced rapidly, those of the rest more slowly, or not at all, while the need for a reduction of wages would be avoided to the utmost. Indeed the danger of this policy is rather the converse one that the wage level as a whole might not be pushed up sufficiently rapidly to keep pace with increasing efficiency and thus compensate fully for cost reductions.¹ In that eventuality it would indeed be better to have a slowly falling price level so that overexpansion induced by excessive profits might be avoided. With stable wages, however, the advancement of efficient workers would be slower and more difficult, and might involve the exertion of a downward pressure upon the wages of the less

¹ A rise in money costs is an absolute *sine qua non* of this policy if violent mal-adjustments are to be prevented. An attempt to secure a stationary price level by means of steadily expanding credits to *producers* by the banks could only result in cumulative inflation through overstimulation of capital construction relative to the demand for consumption goods. Subsequent crisis would be inevitable. Money wages rising fast enough to offset increased productivity would, however, keep profits normal and costs and prices in equilibrium under constant prices. The deliberate infusion of additional producers' credits would not be required to maintain prices at a constant level: more money would merely be needed to finance a larger aggregate wages bill and more goods would be changing hands at no lower prices than before.

efficient workers, thus blunting the edge of hope and initiative. The difficulties of achieving *any* form of price stabilisation are likely in all conscience to be great enough to warrant the avoidance of all avoidable difficulties, even at the risk of falling somewhat short of perfection. A stationary price level with rising wages has the great advantage that it is likely to appear to the great mass of workers a more equitable and desirable objective than a declining price level with stationary wages. The benefits of rising wages are likely, because they are more perceptible, to be more appreciated than falling prices. In the case of labour practical psychological considerations outweigh the theoretical arguments outlined above in favour of a falling price level.

Furthermore, if money earnings of labour are to remain constant, it is absolutely essential that the persistent pressure of trade unions for higher wages must be resisted, for if successful such demands would prevent the general price level falling in line with increasing efficiency, or alternatively would necessitate an actual reduction in money wages in other industries. Strong trade unions could secure an increase in money wages only at the expense of the money wages of other workers. It is easy to see that social friction would be intensified and serious discontent on the part of labour be provoked. For Great Britain the importance of this consideration needs no stressing. In the United States it is true that in the past labour unions have been less powerful than in most other advanced countries, but it would be unsafe to underestimate the probable importance of this factor in the future.

But not only would money wages as a whole have to remain constant with falling prices, but, for this to be accomplished, piece rates would have to fall upon the introduction of each technical improvement not merely in

some degree, as they have tended to do in the past, but by a sufficient amount to leave the money earnings of piece workers absolutely unchanged, which has hitherto emphatically not been the case. Such a policy would be likely to encounter strenuous opposition from workers, and stiffen their natural resistance to technical innovations, since no inducements could be offered them for their willing co-operation in agreeing to the change except in the form of a reduction in the price of an article which they may perhaps consume only in negligible quantities.

MONOPOLY PRODUCTS AND FALLING PRICES.—Under the present order, the distribution of the product of industry is not such as to promote economic stability. Where costs reductions are effected by an industry controlled by price agreements or enjoying a large degree of monopoly, they go directly in profits to entrepreneurs, workers usually participating only as a result of strife. In highly competitive industries, on the other hand, the gain is reaped by the workers only indirectly to the extent to which they benefit by price reductions. Increased profits in the former case are likely to lead to increased demand for producers' goods, increased demand for securities, speculative activity with increased demand for speculative loans, increased corporate surpluses and reserves, which in turn engender further capital investment, speculative activity and credit expansion, all ending in subsequent general reaction.

The argument for a declining price level presupposes competitive conditions free from artificial monopoly or quasi-monopoly support of particular prices. A neutral money supply requires the immediate lowering of prices as cost reductions are effected. Now the results of such a money policy are not difficult to foresee if certain monopoly prices, of both goods and services, are not reduced in line

with lowered unit costs. As a monetary institution the central bank can influence only the *total* money supply, and through it the *general* level of prices. In these circumstances the decline enforced in the general average level of prices must necessitate a compensatingly greater than average fall in non-monopoly-controlled prices. Since *ex hypothesi* no cost reductions were being effected in these latter lines of production, they would be subjected to unjustifiable profit deflation. Thus a violent diversion of national resources might be produced as a result of abnormal profits in certain fields attracting capital in those directions, with their consequent overdevelopment. If, on the other hand, this overexpansion did not for some reason occur, the result would be increased unemployment in the industry effecting cost reductions. The labour displaced by the substitution of machinery could not be reabsorbed through larger output, since with the prices of the finished product remaining the same the volume of sales could not be expected to increase. But in the other industries which were not progressing in efficiency, either unemployment would also increase because the prices of their products would be falling despite the fact that no cost reductions were being effected to warrant such a fall, or else money wages would have to be lowered. Unless frictions can be assumed away, and a condition of complete flexibility and perfect competition free from all monopoly elements be postulated, equilibrium in the internal price structure will not be promoted by a constant money supply and a price level which falls on the *average* in exact correspondence with the *average* degree of cost reductions. All that this can ensure is that the failure of monopoly-controlled prices to fall sufficiently will be offset by a proportionately severe fall in the prices of other commodities, irrespective of the conditions of their costs of production. The speedy adjust-

ment of costs and prices to each other and the preservation of equilibrium within the internal cost-price structure would not be secured. But not only are the conclusions drawn from hypothetical conditions of complete flexibility worthless for practical application just because all our difficulties arise precisely from the existence of economic frictions and rigidities, but the whole controversy of the relative merits of different price levels becomes supererogatory. Under a completely flexible economic system it would not matter greatly whether the central bank pursued a policy of providing a constant or an expanding money supply nor how the price level behaved, because the appropriate responses would be evoked all along the line and the proper adjustments would be made promptly, in exactly the right proportions and without friction.

FALLING PRICES AND UNEQUAL RATES OF TECHNICAL ADVANCE.¹—It is worth while examining at a little greater length the probable effects that a price level falling in proportion to average cost reductions would have on industries which were either not progressing in efficiency or were advancing more slowly than the average. Even ignoring frictional difficulties, monopoly-controlled prices, and the pressure of labour for higher money wages, undesirable consequences might still arise unless one further assumption is justified—namely, that the elasticity of demand for the goods produced at lower costs is unity. For if it were greater than unity, which is likely to be the case, then it follows that the total money spent on these goods will not be the same and represent the same proportion of the national income as before, but will account for a *larger* proportion. Other industries which were not effecting cost reductions could then hope to enjoy only a

¹ The argument of this section owes much to Professor Alvin H. Hansen's *Economic Stabilisation in an Unbalanced World*, pp. 284-91.

correspondingly smaller proportion of the nation's total monetary expenditures and would be forced to lower prices until total output could be curtailed, just as they would if demand were shifting to other products for different reasons. Under a constant price level, on the other hand, increased demand for the lower-priced goods produced at reduced costs would not necessitate a reduction in the prices of other goods: more money than before the technical improvements had been made would be spent on the former, yet no less than hitherto need be spent on the latter, because the total supply of the means of payment would be increasing in proportion to output. Thus a fall in prices, even though it were one resulting from increased productivity due to improved technical processes, can still have a depressing effect on business activity as a whole because advance in efficiency is not equally rapid in all directions. The same observations apply to the different producing units within individual industries. Cost reductions effected by the introduction of technical innovations by some firms occasion distress to those others which are not benefiting in the same way. The industry as a whole suffers dislocation and depression just because all its components are not advancing in step.

Yet under a neutral money policy which necessitates a price level falling in proportion to cost reductions, how is that fall in prices to be brought about? The assumption is that they will be reduced automatically as technical innovations occur, as a result of "competition". But competition will only bring down prices by *enforcing* reduction through economic pressure. The first effect of cost reductions is not a voluntary lowering of prices, but an increased volume of goods offered at approximately the same prices, or only slightly lower prices, in the hope of increased profits being secured. But with a constant supply of money

more goods can only be sold at reduced unit prices. It requires the pressure of an oversupply of goods with its accompaniment of unemployment and depression to push down prices. In other words, when technical improvements are being introduced business men will reduce prices only when they are forced to do so, the economic pressure necessary taking the familiar form of business stagnation. We are not at liberty to assume that competition operates *in vacuo*.

INTERNATIONAL ASPECTS OF FALLING PRICES.—If the nations of the world return at some time in the future to an international monetary system with relatively fixed foreign exchange parities and integrated price levels, the international aspects of falling prices will also have to be considered. For not only will a falling price level cause maladjustments within single industries as a result of the unequal rates of technical progress of their constituent firms, and for the national economy as a whole because of unequal rates of progress as between its different industries, but the same sorts of difficulties are likely to be created internationally as between different countries.

The world's economic system is composed of a number of national economic systems with dissimilar rates of technical development, some advancing rapidly, others moving forward more slowly, others again stagnating, a few perhaps even retrogressing. Nor do the relative rates of progress of different countries remain unchanged in time, for each progresses industrially now rapidly, now slowly. The world rate of increase in productivity is merely a statistical average concealing marked individual differences and divergences. Moreover, the degree of adaptability which different countries possess to changing price levels also varies considerably by reason of varying degrees of flexibility in their economic structures, some

being able to effect the necessary adjustment to changing price levels relatively speedily, others encountering the most stubborn resistances to such changes in rigid wages or artificially supported semi-monopoly prices and so forth. As shown above, the internal economic needs of England would probably best have been served between 1925 and 1929 by a slowly rising price level, because of an externally overvalued pound, the rigidity of wages in her highly unionised industries, her relatively slow pace of technical development, and other factors. On the other hand, a sharply falling price level would have been best for the United States in view of the rapid technical strides she was making and the failure of wages to rise sufficiently to prevent profit inflation and capital overexpansion. The case of France, which returned to the gold standard with an externally undervalued franc, was again quite different; and so on. The needs of individual countries are markedly divergent and are quite likely growing more so.

To some extent these difficulties are inherent in any international standard which establishes a world level of prices and demands approximate international equalisation of costs. The conflict between internal monetary needs and the external pull exercised by the requirements of an international monetary system is part of the price paid for the benefits conferred by the latter. But these difficulties are likely to be much aggravated by a slowly declining price level. Countries making rapid technical progress could adjust themselves without great difficulty, subject to the qualifications noted above, to a level of prices falling in proportion to cost reductions, but it would inflict great hardship and depression on those whose pace of industrial development was slower. On the other hand, a relatively constant price level would require that wages should be raised in correspondence with and proportion

to the rate at which costs were falling in the case of each individual country—rapidly in those making rapid technical progress, more slowly in those whose advance was slower, not at all in those which were stagnating industrially. Of course an essential condition for the success of such a policy of price stabilisation under an international system will be wage levels which respond promptly and move upward in the correct degree in each case. For the inevitable consequence of their failure to do so will be for industry to expand at a pace which cannot be permanently maintained, but which must end in collapse from inflationary overexpansion. Thus on international grounds a constant price level with increased productivity in each country being passed on to wage-earners in increased money earnings in the appropriate degree would clearly be the most desirable end at which to aim.

NEUTRAL VERSUS STABLE MONEY.—In the issue of stable *versus* neutral money no dogmatic preference can be expressed irrespective of the varying concrete circumstances of place and time, especially the probable behaviour of non-monetary factors and above all the responsiveness of wages to changes in costs. Clearly, then, as between the relative merits of these two alternative courses there is room for difference of opinion, for one's preference must of necessity be largely a matter of judgment based upon a weighing of imponderables. The preference expressed above for a relatively stationary price level on grounds of its practical and psychological advantages under the very imperfectly competitive conditions of to-day was conditional upon the progressive increase in national income which may be expected in an advancing economy being steadily distributed in rising wages and salaries. This raises the problem of how the rewards of the productive factors which do not receive them automatically through

increased profits are to be increased under a stationary price policy. The latter should make it possible to calculate unit cost reductions more accurately, given fuller statistical data and proper accounting methods, and the principle might even be recognised, and machinery set up to facilitate this end, that as unit costs decrease average money wages are to be proportionately increased. It would, however, be disingenuous to deny that the practical application of this principle would be beset by considerable difficulties. For what is required under a constant price level in a progressive society are wages which rise *all along the line* in proportion to the *average* fall in costs of production, thus leaving large differential gains to those industries or concerns which are advancing more rapidly than the average and putting pressure upon those advancing more slowly. Otherwise, plainly, neither is the best utilisation made of national resources, human and natural, nor are maladjustments prevented. Both policies—price stabilisation and income stabilisation—thus bristle with difficulties. But in countries such as Great Britain, where labour is strongly organised and much might consequently be expected from the spontaneous upward movement of wages, the former, price stabilisation, would perhaps appear to have fewer disadvantages on balance. In the United States, on the other hand, with its as yet relatively weak labour organisation, the choice is more dubious. If in that country the hope were not justified of securing sufficiently responsive wages steadily to compensate for average cost reductions, then a slowly declining price level would be the preferable alternative in order that the danger of a repetition of the 1925–29 experience of inflated profits and capital overexpansion might be avoided. Quite possibly, the most satisfactory solution for both countries may be found in practice to be one which

represents something of a compromise, in varying degrees, between the opposed policies of prices which fall, on the one hand, and wages which rise, on the other, in full proportion to unit cost reductions: namely, a price level which falls somewhat as efficiency increases, but not to the full extent of the increase in productivity, the balance of the fruits of economic progress going to workers in rising wages.

In no event, however, could economic activity be regulated through monetary control alone. Unremitting attention would have to be paid continuously not only to prices but to the movement of production, employment, wage rates and disbursements, business earnings, security yields, new security issues, credit,¹ foreign trade, foreign investment, and so forth. Thus, whatever the *aim* of monetary policy, whether to keep commodity prices relatively stationary or slowly declining, the criteria for assessment and for action would be manifold, and the purposes and test of success of the policy would be the preservation of a proper balance between the various elements in the internal cost-price structure.

¹ The connotation of the term credit is ambiguous. In this study it has generally been used in its widest and conventional sense, to indicate postponement of payment, the meaning usually being clear enough from the context. Where used, however, as a synonym for deposit currency, the most important means of payment to-day, it should of course be understood to include only demand deposits, and to exclude time deposits, bills of exchange, loans, investments, and such other types of "credit", which, though convertible into means of payment, do not, until so converted, constitute purchasing power. For an excellent discussion of the point see L. Currie, *The Supply and Control of Money in the United States*, 1934, chaps. ii. and v.

CHAPTER XII

CRITERIA FOR A POLICY OF MONETARY STABILISATION

THE CHOICE OF INDEXES FOR STABILISATION PURPOSES.—What index number or numbers would be chosen from amongst the many available as the chief guide for action in pursuing a policy of monetary stabilisation? The relevant indexes may be classified in various ways, according as to whether they are national or international; relate to price levels or money incomes; are selective or comprehensive. In practice there are innumerable particular price levels and almost as many index numbers. Granting that stability of the general level of prices should be the objective of monetary policy in principle, that abstraction needs to be given concrete reality by selecting specific criteria. The discussion may, however, be narrowed down to a comparative appraisal of the following:

- I. Indexes of commodity prices
 - (a) National: *e.g.* British Board of Trade wholesale index, U.S. Bureau of Labor Statistics index of wholesale prices, etc.
 - (b) International: Index including commodities entering into international trade weighted proportionately.
- II. Indexes of the cost of living: price level of income goods weighted in the proportions in which they are consumed.

- III. Indexes of the price level of productive power: stabilisation of money incomes.
- IV. Indexes of general business activity which take into account real estate and security values and the cost of personal services, as well as commodity prices.

This list is far from being exhaustive, and many subdivisions, combinations and refinements are possible.

INDEXES OF THE PRICE LEVEL OF PRODUCTIVE POWER.—The third basis of stabilisation mentioned above, the stabilisation of money incomes, need not be further discussed, since its merits and defects have already been fully considered in connection with the examination of the case for a price level which falls in proportion to cost reductions. We have seen that its chief virtues are the questionable one of allowing the creditor to share in the fruits of economic progress equally with the more active classes of the community; and the less debatable merit of preventing the capital overexpansion which is likely to occur in a progressive economic system under stationary prices if wages fail to rise adequately.¹ The defects of such a policy, however, have been shown probably to outweigh its virtues.

COST OF LIVING INDEXES.—The difficulty of attempting to stabilise the price level of consumer goods weighted in the proportions they are consumed, and *a fortiori* to stabilise a really comprehensive cost of living index, lies partly in the difficulty of securing reliably comparable statistics of retail prices, and partly in that of constructing an index which would be representative of the budgets of all classes of consumers instead of being based on wage-earners'

¹ A variant of the proposal to keep the total volume of the means of payment constant (subject to allowance for changes in circuit velocity) is to permit it to be adjusted to the growth of population. For otherwise money incomes could not remain stationary but would have to decline. These and other refinements do not, however, affect the arguments advanced above in criticism of the general nature of proposals for a declining price level.

budgets alone. Furthermore, if it is difficult enough to find a wholesale commodity price index which is reasonably applicable internationally, it is utterly hopeless to seek a cost of living index which would suit all countries in the light of international differences in traditional modes of living and expenditure, differences in the cost of services, and so forth. The magnitude of the technical obstacles alone must rule out this proposal from practical consideration at the present stage both of our information and of world economic development.

But the proposal also suffers from defects on other than practical grounds. Because retail prices measure "the" purchasing power of money in a much truer sense than do wholesale, their utilisation for purposes of stabilising the value of money might at first blush appear at least logical in theory even if not yet feasible in practice. Consumers, however, spend their money not only on consumption goods and services, but also, through the purchase of securities, on capital goods. Thus the inclusion of the price of the latter in the stabilisation index employed would be necessary. In omitting such prices the retail index would be defective for this purpose. But the advocacy of the retail index in the consumers' supposed interests rests on a confusion of thought. Since wholesale prices are ultimately governed by retail prices, the wholesale index will do just as well from this point of view. And though it is true, for reasons given below, that the trend of retail prices is likely to be slowly upward if the level of wholesale prices is kept constant, the advocacy of the latter policy is contingent upon a steady rise in wages and salaries.

The retail index has the further defect of lack of cycle sensitivity. Prices at wholesale show earlier and more marked fluctuations than do retail prices. Moreover, it is wholesale, not retail, prices, which are of primary import-

ance for industrial activity, because it is with them that the producer is concerned. Besides, the latter is much more sensitive to price changes than is the consumer. Even small price movements may exert a strong influence on the profitability of his activity and hence his volume of output, whereas the ultimate consumer may hardly feel them at all.

INDEXES OF GENERAL BUSINESS ACTIVITY.—Would the difficulty that a speculative boom is hard to prevent when relative (*i.e.*, profit) inflation is occurring under a stable commodity price level, as a result of increasing productivity, be removed if the index chosen as a basis for stabilisation purposes reflected in the right proportions all aspects of economic activity, including wages and security and real estate speculation? Would such an index ideally be a true measure of fluctuations in the "value of money" since it represented all buying and selling transactions?

Ignoring practical difficulties in its construction and assuming that it were sufficiently comprehensive and representative, an index of this sort might appear at first sight to possess the great virtue of simplifying and clarifying the purposes of central-bank policy, on the grounds that the vagaries of the stock market could, subject to certain qualifications, be safely ignored without fear that they might disrupt the processes of production in general, since *all* monetary transactions would be reflected in the chief index utilised in determining policies. The deeply-rooted, but perniciously fallacious, belief that all must be well if the central banking authorities can effectively prescribe the use to which credit is put by member banks, would at least be recognised as a confusion of thought. Much harm has been done in the past by the vain attempt to draw a distinction between legitimate, *i.e.*, self-liquidat-

ing commercial credit, and illegitimate, *i.e.*, speculative security credit. For the implication of this doctrine, which is rooted in the puritanical notion that the profitable buying and selling of goods and labour is meritorious but the profitable buying and selling of securities inherently sinful, is that the supply of credit cannot be excessive provided it is of the self-liquidating variety and is granted to meet the "legitimate" needs of industry and trade. The persistence of this belief is all the more surprising in light of the fact that the 1919-20 boom was primarily one of commodity speculation financed by commercial loans, and that in 1928-29 the Federal Reserve system failed utterly in its attempts to discriminate between credit for commercial and speculative purposes.

The problem is one of controlling the volume of the total means of payment available for all purposes; discrimination between these purposes as a general principle is neither necessary nor desirable. If excessive credit granted for commercial purposes creates abnormal profits, a stock market boom is bound to follow despite all attempts to restrain speculative security loans. Conversely, if the total volume of credit is so controlled that excessive profits, actual or prospective, do not emerge, there will be no good reason for a speculative fever on the stock markets to develop, and if it did it would soon die of attrition, since it is only in their later stages that such booms feed upon themselves. Furthermore, if too much credit were nevertheless, despite strictly normal earnings, to be "diverted" to security speculation, and the supply available for commercial purposes were correspondingly "restricted", the pressure put upon the "legitimate" needs of industry and trade would speedily prick the incipient bubble of financial inflation and bring the demand for speculative credit back to the normal proportions justified by underlying business

conditions.¹ In fine, if the total volume of the means of payment were so regulated that our hypothetical index of *general* business activity continued unchanged, might not stock market movements for the most part be left to take care of themselves?

It has been argued above that the prices of capital goods ought to be included in the stabilisation index employed, because consumers' expenditures are in part made on investments. But as Mr. Hawtrey has shown, this does not mean that the index should include the prices of stocks and shares in the investment market. "Securities are not really objects of expenditure at all. The true objects of expenditure are the capital goods over which the securities confer rights. The investment market is an intermediary between the outlay of investors on the one side and the production of capital goods on the other. When an investor buys securities he pays their price to the seller. But the money is not by that transaction spent; it is simply passed on to await investment in the hands of the new owner. It may pass repeatedly from hand to hand and still be in the same condition. But as soon as it is applied to the purchase of a new capital issue it really is spent on the creation of fixed capital. . . . It is essential to include in some form the prices of capital goods in the price index. But if we try to do this by including the prices of stocks and shares, we introduce a quantity of irrelevant matter, which would be even more difficult to disentangle than the non-monetary causes affecting commodity prices."² Furthermore, the inclusion of security prices and real estate values in the index would be un-

¹ Of course a stock-market boom does *not* keep money from industry. On the contrary, a rise in security prices makes it easier both to secure bank loans and to float new issues.

² R. G. Hawtrey, *The Art of Central Banking*, pp. 326, 328 (chap. v., "Money and Index Numbers").

desirable because of their great instability in their short-period movements, often under the pressure of speculative forces. In the long-run, on the other hand, their movements merely reflect the current and prospective profitability of industry.

Wages should also be excluded from the index. They tend to rise relatively to wholesale commodity prices under economic progress as a result of increasing productivity of labour. If an index inclusive of wages were to be held constant, the commodity price level would tend, failing counteracting forces, to fall. It might become necessary in these conditions for the central monetary authorities to put into effect a restrictionist credit policy for the purpose of exercising sufficient downward pressure on wages to prevent their rising.

Thus the objections to such an index are only partly the difficulties, at present insuperable, involved in its construction. Nothing approaching it which could be used in actual practice exists to-day or is it likely to for some time to come. Carl Snyder's general price index, consisting of wholesale prices, retail prices, wages and rents, points in the right direction (for a general index) and is a good beginning, but it is of course not sufficiently diversified and inclusive, though it is much more representative than the wholesale index. Dr. Snyder does not himself suggest that his index should be used for stabilisation purposes. In an ideal index of this sort the question of weighting the component parts of the index would alone present great difficulties.¹

¹ Dr. Carl Snyder's index of the general price level combines the wholesale index, wages, the cost of living and rent, with respective weights of 2, $3\frac{1}{2}$, $3\frac{1}{2}$ and 1 (*Business Cycles and Business Measurements*, chap. vi.). This provides a rough approximation to a consumption index, but it was constructed rather to measure the volume of cash transactions. As such it suffers from serious omissions. Dr. Snyder's subsequently published revised index (*Review of Economic Statistics*, February 1928) much better answers this latter purpose by also taking into account security prices and real estate values.

But such an index also has other serious disadvantages for stabilisation purposes. Being a composite of various elements whose fluctuations are very dissimilar, it would not be sufficiently sensitive to cyclical movements, though it might be utilisable for the stabilisation of the secular trend of prices. Wholesale prices move earlier than retail, wages show a notorious time-lag in responding to cyclical changes, rents are exceedingly sticky—to mention only the four components of Snyder's earlier index. An index of this kind tends to smother differences by offsetting them against each other, and thus obscures their individual cyclical movements. In consequence its value would be low for business-cycle control. The movements of the wholesale commodity price index are, in contrast, both markedly cyclical and anticipatory of the movements of other indexes. Wholesale prices move both early enough and sharply enough to afford a guide for credit control. A general index could quite well remain unchanged while wholesale prices were sharply rising or falling and generating a speculative boom or business depression. Finally, from the point of view of an international standard a general index would be quite out of the question. So many or its component elements being of purely domestic relevance it would, if adopted internationally, have little significance for any individual country. Here again the wholesale index possesses a distinct advantage. Thus from the viewpoint of both the domestic regulation of credit and the requirements of an international standard a general index would be inferior, practical difficulties in its construction quite apart, to the wholesale index.

THE WHOLESALE COMMODITY PRICE INDEX.—There is no reason to expect that the movements of the wholesale index and a reliable consumption index should be similar, either over short periods or in the long-run. On the con-

trary, there are good *a priori* grounds, which statistical verification justifies, for expecting them rather to diverge. The wholesale index measures not the purchasing power of money but the fluctuations of a "secondary" price level. An accurate index of goods at retail and of services would be a truer measure of the value of the consuming public's money incomes, but the cyclical movements of the wholesale index both anticipate the movements of retail prices and differ from them in amplitude. As regards long-period movements, on the other hand, the wholesale index's omission or underweighting of expenditures on personal services produces a widening gap between the two series, both because the cost of commodities in terms of services tends to fall in a progressive society and also because a larger proportion of national income tends with increasing wealth to be spent on services. Furthermore, complex manufactured goods, which also tend to fall in price relatively to services, are also inadequately weighted. Keynes has pointed out that whereas the wholesale index rose in the United States from 100 in 1913 to 151 in 1926, Snyder's (earlier) index, which may be used as a rough approximation to a consumption index for want of a better, rose from 100 to 186 over this same period: and the same conditions are found to hold good for Great Britain.¹ Stabilisation of either index would thus mean a considerable rise or fall of the other over a period of years. In the same way Professor Edie has shown that if the wholesale index had been stabilised, the general index would have risen 47 per cent between 1875 and 1896 and fallen 4 per cent between 1896 and 1914; conversely if the general index had been stabilised over the same periods, the whole-

¹ *A Treatise on Money*, vol. i. pp. 60-62. For a full discussion of the meaning of the term "the purchasing power of money", a comparison of index numbers and the "plurality of secondary price levels", see *ibid.* chaps. v. *et seq.*

sale index would have fallen 32 per cent in the first period and risen 4 per cent in the second.¹ Stabilisation of any one of these indexes would have allowed a cumulatively large differential to develop between it and the others. Fortunately we do not need to stabilise them all: in a progressive society, such an objective would be as undesirable as impossible to pursue.

The assumption most often made by advocates of monetary stabilisation is that it is the wholesale commodity price level which should be stabilised. But we have seen how deceptive a guide for monetary policy this index can be in itself in a progressive society. It is worth repeating that were it selected as the chief criterion for stabilisation purposes unceasing attention would have to be given to the behaviour of other economic factors. To use the wholesale price index as the sole measure of the value of money is altogether too crude and simple a method. The movements of this index would have to be one of many factors taken into consideration. The main difference between the wholesale and the cost of living indexes is that while the former represents production, the latter also includes marketing costs. This difference explains the tendency of the cost of living index to rise above the wholesale index in a progressive society. Under the latter per caput real wages increase relatively to wholesale prices but labour economies in the distributive trades are not as easily effected as in manufacturing. Thus the margin by which retail exceed wholesale prices is widened.

THE WHOLESALE INDEX: INTERNATIONAL ADVANTAGES.—From the international point of view the advantages of the wholesale commodity index are so overwhelming that in practice the choice must be narrowed to some variant of it. No other basis for stabilisation will serve the purposes of

¹ L. D. Edie, *Money, Bank Credit and Prices*, pp. 460-64.

an international standard. Policies of stabilisation of total money earnings, or per caput money incomes, or the cost of living, or the aggregate value of monetary transactions, must all be discarded for the reason that none of them is capable of international application, all of them too much reflecting local conditions which show great variations both from country to country and over a period of years. They are all by nature local standards.¹

Unfortunately the wholesale indexes at present available are also all constructed on national rather than international lines. The only truly international index would be one of the wholesale prices of the chief commodities which enter largely and steadily into international trade weighted in proportion to their relative importance. Such commodities, however, are relatively few in number, being mainly foodstuffs and raw materials. If the index were made more comprehensive the technical difficulties of its construction would be magnified. There is continuous variation in the commodities entering into international trade. Correct weighting would be a serious problem, as also the selection of commodities for inclusion. But unless a counsel of perfection is sought, the difficulties in the way of constructing a tolerably satisfactory index along these lines should not be insuperable. Otherwise one or other of the national indexes of the few countries exercising a dominant influence on world prices could be employed, or a combination of them. To quote the Gold Delegation: "Were an international index to be employed, it would

¹ "An index of wholesale prices measures those fluctuations of the purchasing power of money which, when there is a reasonable degree of freedom of trade, are common to all countries and have a direct international influence. . . . The only index which measures the price-fluctuations of the commodities which enter into international trade is an index of commodity prices at wholesale. Secondly, the construction of an index of wholesale prices involves less serious technical difficulties than that of any other form of price-index" (*Report of the Gold Delegation*, p. 28, para. 96).

have to be composed of an adequate list of crude products—such, for instance, as that used by the League of Nations for its index of production—and weighted in accordance with the approximate relative importance of each commodity in international trade. . . . Such an index would, of course, measure accurately the purchasing power of no single currency . . . but it would in practice reflect adequately the general tendencies both of the trend and of cyclical movements in prices. . . . Were national indices to be employed as tests of international policy, they should be confined to the two or three most important capital markets.”¹

Keynes has suggested that the index might include, say, sixty of the standardised foods and raw materials of international importance weighted in accordance with the money value of their world output, as for example the sixty-two commodities of the Production Index of the League of Nations with the addition of freight rates.² Three merits are advanced in behalf of the adoption of such a standard for stabilisation purposes. First, though the cost-of-living index would rise because of the tendency of commodity prices to fall relatively to wages in a progressive economy, yet the level of money incomes should rise more rapidly than the cost of living. This would be a recommendation because it conforms with the spontaneous tendency of wages to move upwards. Secondly, it is argued that the burden of past borrowing should be gradually lightened with the passage of time and command progressively less human effort. “Progress should loosen the grip of the dead hand . . . it should not be allowed to grasp the fruits of improvements made long after the live body which once directed it has passed away.” The long-period

¹ *Report of the Gold Delegation*, p. 49, paras. 189-91.

² *A Treatise on Money*, vol. ii. pp. 391-4.

divergence between the wholesale and other standards would thus be beneficial. And thirdly, the wholesale index possesses the great merit of reconciling fairly well the objectives of long-period and short-period stability. Because of its sensitivity, the wholesale index early reveals the development of disequilibrium when taken in conjunction with other indicative factors and facilitates the maintenance of a proper balance between saving and investment.¹

A refinement on the usual wholesale commodity index, which is a composite of many series, some showing pronounced others only slight cyclical movements, has been suggested by Professor Alvin Hansen. He argues that the stabilisation of the prices of *noncyclical* commodities would be theoretically preferable to the stabilisation of the wholesale price index of all commodities on the grounds that the beneficial fluctuations of cycle-sensitive commodities would still be permitted within moderate limits while inflationary booms would be prevented.² If the practical difficulties in the way of the construction and adoption, both nationally and internationally, of such an index for stabilisation purposes could be overcome, there appear to be reasons for believing that in many ways it would be an improvement on the ordinary wholesale index. The technical difficulties, however, of the construction along these lines of an index which would serve as an international standard would be very great.

But whatever index were selected for stabilisation purposes, it could never provide the sole guide for monetary policy. The aim of stabilisation is to keep plant and labour

¹ In the interests of securing prompt warning of changing conditions it is more important that the index should be sensitive than representative in the highest possible degree. From this point of view the American Bureau of Labor Statistics wholesale index is less useful than the less comprehensive British or Continental indexes or than Irving Fisher's American index. Just because it is so comprehensive, it includes too many insensitive prices.

² *Economic Stabilisation in an Unbalanced World*, pp. 308-13.

as a whole fully and *continuously* employed. The touchstone of policy must consequently be the steady maintenance of profits at a strictly normal level. Symptoms of incipient instability will manifest themselves in an unusual increase in unemployment on the one hand, and the emergence of abnormal profits on the other. The closest attention would have to be paid unceasingly to the movement of wages, the volume of employment and profits, the increase in the productivity of industry, and the other factors mentioned above.

PRICE STABILISATION AND THE PRESERVATION OF ECONOMIC EQUILIBRIUM.—In the last analysis the consideration of paramount importance is the maintenance within the internal cost-price structure of the right relationship between cost factors and selling prices. The ultimate aim of monetary policy must be the elimination of violent fluctuations which allow prices to rise too much above costs or costs to cut too deeply into profits. There is no especial virtue in any particular price level in itself and for its own sake. The best price level will be the one which best facilitates that mutual adjustment of costs and prices, promptly and with least friction, which is continuously necessary in a progressive economy, whether it be a slowly-rising or slowly-falling or stationary one.

The tasks of securing long-period stability in prices and of eliminating or mitigating short-period fluctuations are not necessarily identical nor equally attainable by the same machinery of control. The latter objective, however, which requires the maintenance of balance between saving and investment, is the more important of the two; and if it is found that this end can best be pursued under a price level which shows a slow and steady secular movement upwards or downwards rather than under one which remains stationary, well and good. The preference expressed

above for a relatively stationary though not absolutely constant and rigid price level was subject to the fulfilment of certain concomitant conditions essential for the prevention of disequilibrium. The belief that the equalisation of saving and investment would be easiest of achievement in the latter circumstances was thus tentative and qualified. We need not be obsessed with this type of price level for its own sake. Any sort of genuine stabilisation, even if it fell substantially short of an unattainable ideal of perfection, would be a vast improvement on the violent price chaos we have endured during the past decade and a half.

But is relative stability of the price level compatible with the maintenance of that equilibrium between saving and investment which should be our ultimate objective in monetary policy? Many authorities have argued persuasively that it is not.¹ These point out that all demonstrations that the two objectives are consistent rest on the assumption of a *stationary* or static state. Under the latter conditions a rate of interest which equated the demand for capital with the supply of savings would produce neither a rise nor fall in the price level but would leave it unaltered. In other words, if the money rate of interest were held at the level represented by the "natural" rate, the preservation of equilibrium between the supply of real savings and the production of capital goods on the one hand, and the maintenance of constancy in the price level on the other, would both be possible. Most of our difficulties flow, however, from the fact that we live in a *progressive, dynamic* economy. Under the latter the rate of interest which equates real saving and the volume of investment cannot also preserve price stability. A fall in the price level can be prevented in a progressive society only by expanding

¹ As, for instance, F. A. Hayek, *Monetary Theory and the Trade Cycle*, pp. 109-21. Cf. A. H. Hansen, *Economic Stabilisation*, pp. 291-3.

the volume of the total effective means of payment. And the only way in which this increase in the volume of money can be secured is through a money rate of interest which is deliberately held below the natural rate by the banks. In other words, the increase in the volume of money needed to keep prices stable in a progressive economy causes the production of capital goods and consumption goods respectively to diverge from their equilibrium position by producing a discrepancy between the money and natural rates of interest. Thus the rate of interest which would keep prices stable is different from the rate which would preserve equilibrium between real savings and the volume of investment. The pursuit of absolute price stability in an advancing economy must therefore, it is argued, defeat itself in the end by permitting maladjustment to develop through the disequilibrium between savings and investment.

Must we then conclude that to search for economic stability in price stabilisation is to pursue a will-o'-the-wisp? The answer is yes only if perfection is sought. Whatever monetary policy is adopted will create some difficulties in an economically advancing community, for that is the price of progress. But fortunately we need not, in admitting that perfection is unattainable, relapse into a counsel of despair. Between absolute stability and the complete instability of the past a habitable middle ground still remains which would be such a vast improvement over what we have hitherto known that we might well be satisfied with it this side of a monetary Utopia. Thus the objective of monetary policy should be, not the elimination of all fluctuation whatsoever in prices, but the reasonable stability of a price level which varied within moderate limits, permitting a mild, healthy, up-and-down movement but preventing violent and catastrophic alternations of

business activity between boom and depression. If such a policy were put into effect in conjunction with devices which evoked or produced the appropriate response in wage levels, no serious disequilibrium leading to maladjustments need develop between saving and investment, and the cyclical variations which business would experience would be extremely moderate and tolerable and on the whole beneficial. They would at all events be a relatively light price to pay for economic progress. The scope and amplitude of business cycles would be reduced to a point where they would be, if still perceptible, of slight social consequence. A large part of national economic life would be virtually stabilised; the remaining spheres of activity would be subject only to the mild undulating movement suited to their nature; regarded as a whole, reasonable constancy of prices both in the short and long run would be secured. Above all, the disastrous alternations which, if they continue in the future, threaten to bring the whole economic structure tumbling down about our ears in violent social upheaval would be a thing of the past.

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