THE DISCOUNT POLICY OF THE FEDERAL RESERVE BANKS[1]

The federal reserve banks have now been in operation for a little more than six years, a period much too short, even if it had been of more normal character, for the reserve system to reach the full measure of its development. Modifications in business and banking practice and in public opinion are involved, changes in usage which are not made overnight. But the last six years have been far from normal. Throughout the entire period, the development of the reserve system has been influenced by the presence of unusual conditions and requirements. In some important respects, these abnormal conditions have hastened development—forcing a not altogether healthy growth—while in other directions development has been positively retarded. Experience with operation in normal times is required to provide a basis for definite conclusions regarding the regular activities of the reserve banks and the policies which should be adopted in their management. This experience will not be available until the reserve banks have extricated themselves from the position in which they have been placed by the war and have passed through all the stages of at least one peace-time business cycle.

Addressing an assemblage of economists, it seems appropriate that I should engage directly in an examination of fundamental monetary and banking principles as they are illustrated in the structure and working of the reserve system. I am the more inclined to adopt this method of approach because whatever may be the case in the operation of particular commercial banks, monetary and credit problems of a very general nature are matters of primary and immediate concern in the formulation of the policies of central banks.

In what may be styled its monetary as distinguished from its banking consequences, the effect of the establishment of the reserve system has been more immediate and is more clearly and completely manifest. These monetary changes are notable, not only on account of the rapidity of the changes themselves, but also on account of their extraordinary magnitude. In brief, the available supply of credit was more than doubled as a result of the establishment and operation of the reserve banks and this huge addition to the supply of credit was fully absorbed in the course of less than six years. Moreover, all future additions to the stock of gold in the country will provide the basis for at least twice as great an increment to the volume of credit as was possible in the later years of the national banking system.

Before 1914, in periods of active business and consequent intense

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demand for credit, the money in the vaults of the national banks, including the notes of other banks, was never less than one eighth of net deposit liabilities, and always more than a sixth of demand deposits exclusive of those due to other banks. For state banks and trust companies, working under lower legal reserve requirements, cash holdings appear to have been no more than one tenth of individual demand deposits. Taking both classes of banks together demand deposits of individuals and corporations seem never to have exceeded eight times the total amount of money held by the banks.

With the opening of the reserve banks in November, 1914, reserve requirements for member banks were modified and an even more radical change was made by the important measure amending many provisions of the Reserve act which became law in June, 1917. All cash reserve requirements for member banks were abrogated: balances at reserve banks of 7, 10, and 13 per cent of net deposit liabilities of country, reserve city, and central reserve city banks respectively, together with a 3 per cent balance for all banks against time deposits becoming the sole legal reserve requirement. It is convenient and sufficiently accurate to take a balance of 10 per cent of net deposits or 13 per cent of individual demand deposits as the average requirement for all of the banks. Of course, quite regardless of legal requirements, every bank must have some money on hand for counter payments, but the amount needed for this purpose has been found to be surprisingly small—about 3 per cent of net deposits or 4 per cent of individual demand deposits.

The cash regularly held by the national banks, even in periods of intense demand for credit, 13 per cent of net deposits, it will thus be seen, was sufficient to provide an adequate amount of till money and also the required balance at the reserve banks. It is evident, therefore, that the supply of credit has been enlarged by the full amount of the loans which have been made by the reserve banks, and by an amount greatly exceeding those loans since loans at reserve banks in part serve to increase reserve balances upon which member banks may in turn incur a tenfold liability.

From reserve deposits by member banks and payments on capital stock account, the reserve banks have received something like a billion and a half dollars, almost entirely in gold. These resources would have made possible a very considerable increase in the supply of credit. But the increase would have been comparatively small if the reserve banks, like the Bank of England, had been empowered to issue notes only under restrictions which make the notes virtually gold certificates.

Power to issue federal reserve notes as credit instruments has increased the supply of credit in two ways. In the first place, it has enabled the reserve banks to acquire large amounts of gold for banking

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use by substituting reserve notes for gold and gold certificates which were held by the banks for till money purposes or were in circulation outside the banks in the pockets of people. Between a half and three quarters of a billion of dollars appear to have been acquired by this process of substitution. It was a process which was much facilitated by the elimination of the legal cash reserve requirement for member banks, since only lawful money would meet that requirement, while reserve notes are entirely satisfactory for till money purposes.

Although the power to extend credit in the form of the federal reserve note has been of great importance as a means of acquiring gold, it has been of vastly greater importance as a means of retaining it. Every considerable increase in the volume of deposits subject to check is accompanied or speedily followed by increasing requirements for some kind of money that will pass readily from hand to hand. In the absence of additional issues of bank notes or of government paper money, this demand absorbs gold which would otherwise have been available for banking use. Between June, 1914, and June, 1919, for example, the estimated stock of money in the United States outside the Treasury and the banks, not including subsidiary silver, increased by more than $1,900 millions, from $1,600 to $3,500 millions, or by nearly 120 per cent. During the same years demand individual deposits increased $12,700, from $10,700 to $23,400 millions.

There appears, then, to have been an increase of one dollar in the money in use outside the banks for every six dollars of increase in that portion of the circulating medium which consists of deposits subject to check. I am by no means confident of the validity of this exact proportion, based, as it is, on the experience of a short and abnormal period, and on figures which in the case of money are in part estimates, and in the case of deposits involve uncertainties of classification. The estimated stock of money for 1914 is probably too high, and the increase to 1919 does not take account of some seepage of reserve notes to near-by foreign territory. On the other hand, the estimate of deposits is doubtless swollen by the inclusion of the entire amount of the unclassified deposits of the various banks. Finally, it may be observed that confidence in the substantial correctness of the ratio is strengthened by the close approximation to a six to one ratio between deposits and money outside the banks in both 1914 and 1919.

We are now in position to compare the power of the banks to expand credit under the federal reserve system with that under the national banking system. Before 1914, an increase of $1,000,000 in demand individual deposits would absorb nearly $300,000—one eighth of the increase in deposits as a reserve and one sixth for use outside the banks. In the later years of the national banking system, when the supply of

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bonds bearing the circulation privilege was exhausted, additional gold was the only means of meeting practically all of this requirement for more money with increasing deposits. Under the reserve system, a similar increase of $1,000,000 in deposits would involve a similar increase of one sixth in the money outside the banks, 4 per cent for till money purposes and a 13 per cent balance at reserve banks, a total of more than $330,000, about $30,000 more than in the preceding calculation. It is important to note that this requirement, though larger, can be entirely satisfied by means of credit extended by the reserve banks—credits which on the basis of a 45 per cent reserve at reserve banks require no more than half the amount of gold and other lawful money which was absorbed under the national banking system. Stated in another way, it may be said that an additional million dollars in gold now provides the basis for about $7,000,000 in credit, contrasted with less than $3,500,000 before 1914. Even with a 60 per cent ratio against notes and deposits at the reserve banks, credit can be expanded 50 per cent more than formerly. This increase in the power to extend credit is the most fundamental single change which has followed from the establishment of the federal reserve system.

The enormous increase in the supply of credit since 1914 is not, however, entirely due to the operations of the reserve banks. More than a billion dollars in gold was imported in 1915, 1916, and the first half of 1917, none of which would presumably have been acquired if there had been no war in those years. On the contrary, the expansion of credit under the reserve system, on the basis of our own stock of gold, would almost certainly under peace-time conditions have so influenced the balance of international payments as to have occasioned gold exports. An intense demand for American commodities, accompanied by abnormal credit expansion in Europe, both direct consequences of the war, not only removed the restraining influence of gold exports but also provided the basis for much credit in addition to the huge supply which became available through the economy of gold under the reserve system.

But the war did much more than shelter our stock of gold and increase its amount; it also occasioned the far more speedy utilization of our enlarged supply of credit than would have been possible under peace-time trade conditions. An extraordinary supply of credit was absorbed by an equally extraordinary demand. Within five years from the opening of the reserve banks in November, 1914, the volume of outstanding credit was more than doubled. Credit expansion on so colossal a scale could not have occurred during a similarly short period of peaceful business activity. The aggregate demand for credit would not be sufficiently great, to say nothing of the much smaller effective de-

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mand, that which meets the credit tests of the banks. During the war, the demand for credit was abnormally great and it was an effective demand because it was largely based, first upon the credit of the governments of Europe, and later upon that of the federal government.

After the armistice, the intense demand for credit continued, gradually shifting, however, from the government to the business community. The conditions which made possible the continuance of trade activity after the armistice were fundamentally similar to those which are present at the beginning of a period of prosperity, following a period of depression. Although trade had been feverishly active for more than three years, there was still a large supply of credit available at low rates. Moreover, and this is a matter of far greater significance, there was, unlike the situation after some years of prosperity in a peace-time business cycle, an evident widespread scarcity of goods. In these circumstances, an intense demand for credit to be used in the purchase of goods could not fail to develop, since it was reasonable to anticipate that no difficulty would be experienced in marketing them at an advance in price. Finally, toward the close of 1919 the available supply of credit was approaching a condition of complete utilization. A few months more of credit expansion at an undiminished rate would have left no supply of credit in reserve with which to meet an emergency. Even if an ample supply of additional credit had still been available at that time, the opinion may be ventured that another limit on continued credit expansion was not far away—the deterioration in the average quality of the loans of the banks. A period of readjustment and liquidation was inevitable. Liberal credits at low rates in 1920 would have deferred its advent somewhat, but with the certain consequence that the difficulty and losses incident to readjustment would have been materially enhanced.

After this unavoidably long introduction, I am finally ready to take up the subject proper of my paper, the discount policy of the federal reserve banks. At the outset, it is necessary to reach some conclusion as to the responsibility that rests upon the Reserve Board and the management of the reserve banks for the credit expansion of the last five years. For by far the greater part of that expansion responsibility clearly rests elsewhere. The volume of credit has been subject to conditions and influenced by policies which the management of the reserve system could not control. This is obviously the case as regards the large additional supply of credit which became available as a result of the gold imported before we entered the war. Up to that time, the loans of the reserve banks were of quite insignificant proportions.

After we entered the war, the loans of the reserve banks increased by leaps and bounds; but for the policy of war finance which occasioned

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these loans and the manifold greater loans of the commercial banks, the Reserve Board was not responsible. That it is possible to finance without inflation expenditures as great even as those incurred by the United States government during the recent war, I am firmly convinced. That we could not finance that war without credit inflation, I am equally certain. The primrose path of inflation had the backing of public opinion; the administrative machinery and perhaps the constitutional power for adequate taxation were lacking. A little less waste in expenditure, slightly heavier taxation and slightly higher interest rates on government bonds might have characterized our war finance program, with the desirable result that there would have been somewhat less of credit inflation. But I must not allow myself to digress further on this tempting subject. The important point in the present connection is that whatever the financial policy adopted by a government in time of war may be, it is the imperative duty of the management of a central bank to coöperate loyally in executing that policy. The Reserve Board and the officials of the reserve banks could offer advice and criticism; they could not decline to do their part in executing the policy of the Treasury.

Presumably there would have been no less use of credit in financing the war if the reserve system had not been established. In that event, the government would doubtless have met requirements for additional money for use outside the banks by issues of paper money which would surely have become inconvertible. The economy of gold under the reserve system permitted credit expansion on an unexampled scale without suspension of specie payments. It was none the less inflation.

One of the results of the extensive use of credit in financing the war was to place the banks of the country in a position of extreme dependence on the reserve banks. At the time of the armistice the reserve banks were lending member banks nearly $1,800,000,000 and in addition held nearly $400,000,000 of bills bought in the open market. As general liquidation of loans at the reserve banks, unless due to the receipt of new gold, involves much greater contraction of loans by member banks, it is probable that they must continue to rediscount heavily there for many years to come if not indefinitely. No progress whatever in reducing these obligations has been made during the two years since the armistice. On the contrary, borrowing at the reserve banks has increased by nearly 50 per cent, loans standing at $3,126,000,000 on November 5, 1920.

It is only for this after-the-war increase in the loans of the reserve banks and the more considerable increase in the loans of the other banks thus made possible that the management of the reserve banks can be held to be in some measure, but by no means primarily, responsible.

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Government financial policies were the controlling factor in the situation for at least a year after the armistice. The policy of borrowing at abnormally low rates was insistently maintained by the Treasury. It does not fall within the scope of this paper to discuss in detail the wisdom of this policy. Much can be said on both sides of the question. I content myself with observing that it was my opinion at the time, and the subsequent course of events has not altered the conclusion, that a distinctly higher range of rates on government certificates in the summer and autumn of 1919 would have been a wiser policy. But even if the Federal Reserve Board had been convinced that the after-the-war financial policy of the Treasury was unwise, as to which there is no evidence one way or the other, I do not think the board could have refused to coöperate in executing that policy, taking an independent course and making a sharp advance in discount rates. It is, however, reasonable to surmise that the policy of the Treasury after the armistice would have been subjected to more searching scrutiny if the Reserve Board were less heavily weighted with Treasury officials. When account is taken of the future frequent borrowing requirements of the government, the retention of two Treasury officials as ex-officio members of the Reserve Board seems most inexpedient. Borrowers on a large scale are not the most desirable of persons to be selected as directors of any bank. The Treasury as a borrower in times of peace should not be in position to exert a considerable, much less a controlling, direct influence on the discount policy of the reserve banks. Merely as a matter of simplification of administrative machinery, also, the functions of the Comptroller of the Currency should be transferred to the Reserve Board and the reserve banks. So much of diminution of direct Treasury influences as is involved in this proposal seems certainly desirable. Whether the Secretary of the Treasury should cease to be a member of the board is a question as to which a definite answer is less easily given. Upon the whole, I am inclined to think that the presence of the Secretary is desirable. The intimate understanding of the financial situation that a Secretary may gain as a member of the Reserve Board can hardly fail to be of advantage to him in the conduct of his office. The Secretary of the Treasury, as a member of the Board can also do much to defend the reserve system from unreasonable demands on the part of the public and above all from political onslaughts.

Returning once more to the course of credit under the reserve system, there remains for consideration the experience of the last twelve months, during which the reserve banks have been in position to exert complete control over the supply of credit and have also been able to take independent action. At the end of August, 1919, the gross debt of the

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government reached its maximum and though the Treasury continued to enter the market as a chronic borrower, its strongest ground for insisting upon the policy of liberal loans at low rates could be urged no longer. With evident reluctance Treasury control of the discount policy of the reserve banks was relaxed and seems to have been entirely relinquished with the last issue of 4 3/4 per cent certificates in January 1920.

Full responsibility for the credit situation was regained in circumstances which imposed a severe test upon the reserve system and upon its management. After nearly five years of unexampled business activity, accompanied by unprecedented credit expansion and advances in prices, the activity of trade was unabated, the demand for credit was if anything more intense and prices were still moving rapidly upward. Beneath the surface, there were indications that even though large supplies of additional credit were still to be had, a period of readjustment could not be long postponed. Liberal credit was no longer, as at the beginning of a period of activity, serving to stimulate production and direct industry into promising channels. It was rather tending to disorganize industry, subjecting it to an increasing extent to speculative influences, to wage disputes and numberless other strains. The average quality of the loans of the banks was becoming less satisfactory because of these conditions in industry as well as on account of extensive sales of goods in foreign markets on long credit terms. In short, the situation at the end of 1919 was one which by no possibility could be corrected by the application of additional supplies of credit. A check on further credit expansion followed by some contraction was the one sure remedy and that remedy would have been quite as much needed even though an abundant supply of additional credit had been still available. It is, however, by no means certain that the Reserve Board would have taken measures to restrain credit during the course of the winter and spring of this year if the power of the reserve banks to extend credit within the limits of legal reserve requirements had not been nearly exhausted. The successive advances in discount rates made during the first half of the year were not then entirely the expression of a voluntary policy. It was a policy which in large measure was enforced by the reserve position of the banks. It was necessary to check further credit expansion. Otherwise, the reserve banks in the course of a few months would have held no reserve above legal requirements as a basis for credit to be used in meeting an emergency. To go on expanding credit until the last available dollar was employed was indeed our former practice, and the initial stages of the transition to a period of readjustment were always marked by crisis and panic. It is one of the inestimable advantages of the reserve system that the

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brakes were applied before the supply of credit was entirely exhausted and before trade activity had culminated in a crisis. We are still in the midst of a period of necessary readjustment and liquidation, but the immense superiority of the reserve system as compared with our former means of meeting similar situations is already conspicuously evident.

Although the process of readjustment is not completed, experience already furnishes a basis for fairly definite conclusions regarding some important aspects of the policy of the reserve banks in handling the situation. The discount rate of the reserve banks is clearly an effective means of checking credit expansion, but it is also evident that advancing rates influence the situation rather slowly. Credit continued to expand for some months after rates were finally advanced in May to the present high level. When credit is expanding rapidly, there is at any moment a considerable supply of unused credit scattered among the thousands of banks of the country the use of which is not subject to control by the reserve banks. The continued increase in the amount of federal reserve notes for some months after credit expansion was checked is in accord with what was to have been anticipated. Increased requirements for currency accompany, but with some lag, the increase in credit in the form of deposits subject to check.

These conditions and tendencies prompt the suggestion that when rates are advanced in order to check credit expansion the practice of the Bank of England of advancing rates by increments of one per cent should be adopted. In making for the first time a test of the effects of advancing discount rates, it was perhaps natural and proper to move slowly. Experience during the last year indicates that advances of fractions of per cent are ineffective. It may be added that in this particular instance, it would have been of much advantage if somewhat greater progress in the process of readjustment had been made before the beginning of the crop moving season, a result which would have followed a less hesitant discount policy.

The process of gradual contraction and orderly industrial readjustment seems at first sight in every respect superior to the short and severe crisis and panic followed by depression with which we have had frequent experience in the past. I do not doubt that the balance of advantage is heavily in favor of the slower process. At the same time it should be recognized that the slower process is attended by its own peculiar difficulties. While the aggregate loss is doubtless reduced, the burden of loss is apparently distributed in a somewhat different but by no means certainly in a more equitable fashion among the various groups of producers. The slow process of liquidation does not succeed in bringing about a slow and uniform general decline in prices. In

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fact, price changes seem to be more irregular, or at least the irregularities are more prolonged than when periods of trade activity culminated in catastrophic disturbances. In this connection the query suggests itself whether farmers might not have incurred less loss if there had been a crisis in the early autumn that might have forced a more immediate reduction in prices of the goods they must buy.

The irregular distribution of the burdens of liquidation in some measure explains even though it does not give sufficient ground for complying with the widespread demands for assistance now being made by various classes of producers. Much of the occasion for special consideration will disappear when in the near future, as now seems probable, the decline in prices has completed the circle.

There is grave danger that the quack remedy of inflation through enforced accommodation from the reserve banks may be attempted. Such a remedy would be similar in all essentials to the grant of aid by the issue of paper money by the government, a form of assistance that was urged but successfully resisted after the Civil War. It is not too much to say that it is now to be determined whether the people of the United States possess sufficient intelligence and endurance to permit the successful operation of anything better than a straight-jacket credit system. We have established a system which is designed to prevent collapse and complete disorganization. This presupposes that reserve banks will regularly hold in reserve large potential credit power. If we insist upon using such power as a means of temporary relief and stimulation, ultimate disaster is the certain consequence. Past experience shows that it is dangerous for governments to issue paper money. There is a constant temptation to overissue when confronted by real or imaginary emergencies. The same danger arises in the case of the reserve system—that public opinion and perhaps legislative action will compel the employment of its resources in a vain endeavor to cure evils which are mainly due to credit already granted in excess.

The process of industrial readjustment at best is painful and its burdens are most unevenly distributed. It seems pertinent therefore to enquire whether something more cannot be accomplished through the reserve system than the mere modification and amelioration of conditions at the culmination of periods of business activity. Would it be possible so to operate the reserve system that conditions which compel widespread liquidation would not be developed, or at least would not be developed to so serious degree as in the past. This inquiry is rendered more significant by the serious danger that conditions which render subsequent liquidation unavoidable will develop more luxuriantly under the reserve system than was possible under the national banking system. Let us examine this point.

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The liquidation now under way will doubtless lead to a considerable reduction in the loans of the banks to the public and in rediscounts at the reserve banks. It is not unlikely that a reserve ratio as high as 70 per cent will be seen before the beginning of the next period of active business and intense demand for credit. Moderate if not low discount rates will doubtless prevail at the beginning of the period. A large supply of credit will be available; much more, as we have seen, than could be furnished if the reserve banks like the Bank of England could not issue credit notes. I mention this familiar fact once more because the pre-war discount policy of the Bank of England, with its changes in rates as the reserve increased or decreased, seems to give the sanction of successful experience to a policy for central banks that would allow credit to be extended freely at low rates whenever reserves are ample. Bank of England practice, however, loses significance and is positively misleading when it is applied to a banking system which loses no gold for purposes of domestic circulation as deposit credit expands. Again in pre-war times, comparatively slight influences, whether at home or abroad, were sufficient to subject the reserve of the Bank of England to depletion from gold exports. For these two reasons credit expansion in England could seldom be carried far without bringing the reserve of the bank down to a point at which an advance in the discount rate would become necessary. In this country, whatever may be the situation in the distant future, gold exports for many years to come are not likely to be the almost automatic consequence of moderate credit expansion. This restraint on excessive credit expansion in any single country was effective when all important commercial countries were on the gold standard. It is not now effective because most of the world is on an inconvertible basis. Consequently the volume of credit which may be created in the United States will be determined for many years to come almost wholly by domestic influences. In these circumstances, while the reserve system may be expected to prevent the outbreak of panic, its expansive power is so great that with the reserve ratio the determinant of discount policy it can be confidently predicted that far wider price fluctuations will mark the successive stages of the business cycle than were experienced under the national banking system.

It should also be noted that the discount rate of the reserve banks is a somewhat less immediately effective instrument of credit control than that of the Bank of England in pre-war days. A considerable portion of the loans of the British banks were of an international character which could readily be shifted to the money markets of other countries when London rates became relatively high. Owing to the present disordered financial situation of most countries, loans arising out of foreign trade and other international transactions no longer possess this

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quality so valuable from a banking standpoint. International loans have become no more transferable than domestic loans and, it may be added, with respect to payment at maturity without delay or renewals have become decidedly inferior to domestic loans.

The absence of branch banking in the United States also weakens the validity of comparisons between the discount rate of the Bank of England and those of the reserve banks. Credit is less fluid under our system of some thirty thousand banks. There are much wider variations in the lending rates of the various commercial banks; there is no such general market rate of discount as in England. Consequently, the Bank of England practice of a discount rate slightly above the market rate cannot have so pervasive an influence. Moreover, until the banks cease to be constant heavy borrowers at the reserve banks, a condition largely due as we have seen to the war, it will not be feasible as a regular policy to establish discount rates above the lending rates of member banks even of those in the large cities. When, however, it is the definite purpose of the management of the reserve banks to check credit expansion, it will probably be found necessary to establish discount rates which are considerably above the minimum rates at which some member banks are making some of their loans.

As a guide to discount policy, it must be admitted the reserve ratio has certain conspicuous advantages. It is definite and obvious. Public opinion may be expected to support the always unwelcome policy of credit restraint when that policy is enforced by a depleted reserve. It is unhappily very doubtful whether the public would have been reconciled to the advance in rates made last spring if the reserve banks had had, let us say, a reserve ratio of 55 per cent, and yet, all other things being the same, an advance in rates would have been no less desirable.

By parity of reasoning, it follows that reductions in discount rates need not wait upon the acquisition of a high reserve ratio. The present situation furnishes a convenient illustration. Credit expansion has already been definitely checked; there is no present danger that lower discount rates would stimulate a widespread demand for credit that would permit prices to move rapidly upward once more. The demand for credit is now largely for the purpose of holding goods for which purchasers cannot be found. It is no longer a sellers' market. In these circumstances, it is at least possible that a slight reduction in discount rates, by encouraging many to resume normal business dealings, might facilitate the process of liquidation, and so make possible a more speedy reduction in the total volume of loans than will be secured through the maintenance of the present schedule of rates.

There is no substitute for the reserve ratio which possesses its pe-

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culiar virtues of simplicity and definiteness. To an enlightened business public, however, it should be evident that so delicate and at the same time potent an instrument as credit cannot be wisely administered in a mechanical fashion in accord with simple definite rules.

Whether at any time it is desirable to impose restraint upon credit depends upon the uses to which credits are being put and upon the effects of these uses. The most definite indication that we possess of excessive credit is found in the decided upward movements of prices extending over a number of years. There is practically universal agreement that prices cannot be held at an absolutely fixed level. Most would agree that advancing prices at the beginning of a period of activity stimulate production in some measure. Few, however, would question that at some stage in every period of business activity rising prices facilitate ill-judged undertakings and fail to increase industrial output. No doubt there would be wide differences of opinion as to just when this stage is reached in any particular business cycle. Even so, it is submitted that the expert judgment of a responsible body like the Federal Reserve Board, enjoying the benefit of general public criticism, provides a far more satisfactory basis for a discount policy than the variations of a reserve ratio.

The proposal to base the discount rate largely on the observed effects of credit expansion is not designed to secure the stabilization of prices. Such a policy would not be concerned with permanent changes in prices associated with variations in the world's supply of gold. It would aim merely at lessening price fluctuations within particular business cycles, checking somewhat the upward movement, and thereby lessening the subsequent decline.

Nearly every economic and social question is complicated, and many are rendered insoluble by the alternations between activity and depression of the business cycle. To mention but a single instance, consider the extent to which efforts to enlist an interest in efficient production on the part of wage earners have been frustrated for many years to come by the present widespread unemployment, an inevitable sequel of the orgy or inflation of the last five years.

This proposal to administer the reserve system in such a way as to moderate the fluctuations of the business cycle, will of course be met with the objection that it is politically hazardous. It will be urged that any attempt to influence prices will be resented by large and influential classes who would believe, whether rightly or wrongly, that they were being subjected to needless loss or deprived of well earned gains. This difficulty, while unquestionably very serious, is less than would appear at first sight. We should not gauge the antagonism to restraint on credit exercised at an early stage in a period of expansion

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by the outcry which is heard when enforced contraction occurs after years of excessive credit, rising prices, and feverish trade activity. Restraint in the use of credit if imposed at an earlier stage in the cycle will not be accompanied by widespread liquidation, followed by years of depression. Here as elsewhere it is the wiser course to endeavor to remove causes, working with the confident expectation that that discount policy for the reserve banks which will yield the greatest permanent advantage will finally secure general public approval.

In the event that no control of credit based on the observed effects of credit expansion at different stages in the business cycle is attempted by the Federal Reserve Board or, if attempted, is given up because of lack of public support, another, but in my judgment less satisfactory, method of lessening the danger of excessive credit should be adopted. At some favorable moment, when the public is in a conservative mood, the legal reserve requirements against federal reserve notes, or against both notes and deposits should be raised. A reserve ratio of 50 per cent or even 60 per cent would permit much more additional credit expansion than was possible under the national banking system, and quite as much as could be advantageously employed. The economic development of the country might have been somewhat more rapid at times in the past had more capital been available, but credit is not capital; it is simply an agency for transferring capital. I venture to assert that at no time in the past has the economic development of the country been retarded because of an insufficient supply of credit, while very frequently development has been retarded as a consequence of credit furnished in excess.

The experience of six years has disclosed no serious defects in the structure or management of the federal reserve system, while the expansive credit power of the system, enormously greater than that under the national banking system, presents no serious danger for the future if suitable policies are adopted. Much more is clearly necessary than the adjustment of discount rates to variations in the reserve position of the reserve banks. A discount policy should be adopted which is designed to check the rapid expansion of credit in periods of trade activity. Such a policy is entirely practicable but it cannot be adopted in the absence of general confidence in the wisdom of the policies of the management of the reserve banks, and it requires readiness on the part of the public to support these policies even when the immediate consequences are painful. Satisfactory results from the working of the reserve system seem assured if the management is given the support of an intelligent public opinion.

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