

THE ARMY INDUSTRIAL COLLEGE
Washington, D. C.

Course 1938-1939

165

THE FEDERAL RESERVE SYSTEM

by

E. A. Goldenweiser
Director of Research and Statistics
Board of Governors of the Federal Reserve System

October 13, 1938

AIC 111(12/21/38)13 D

66

THE FEDERAL RESERVE SYSTEM

I have come here to speak to this class for a number of years and can never remember from one year to the next what I said. However, I assume that you are all different people and were not here last year, and therefore I do not need to be afraid of repeating myself.

I suppose that what you would like to know is something about the purposes and the organization of the Federal Reserve System, some of the policies and instruments of policy, and perhaps something about the present situation. I do not know how familiar you are with the set-up of the System and with the banking problem in general, so it is a little difficult for me to gauge just what I am to say. I may say some things that sound too elementary for you and, on the other hand, I may possibly mention some things which are familiar to me that may not be familiar to you and that may raise some questions in your minds. If I leave any obscure spots in what I say, I shall be glad to correct them, as far as I can, by answering questions.

The Federal Reserve System, as you perhaps know, was organized in 1913, at least the law establishing it was passed in December 1913, and in December of this year it will have been in existence for a quarter of a century. It is a relatively new institution, because most of the central banks of the world are very much older. I was amused at a little incident which occurred when I was in England this summer. I was having lunch at the Bank of England and Governor Norman picked up a piece of silver on the table and showed me that it was dated 1694. He said that every piece of silver in the building was dated 1694 because that was the year when the bank was established and that whenever they bought any silver they always tried to get some that was made in that year. That was rather an interesting bit of sentiment and also emphasizes the fact that there is a bank that has been in existence for considerably more than two centuries, whereas we have been in existence only twenty-five years.

The reasons for establishing the Federal Reserve System were very potent and very obvious. Before the establishment of the Federal Reserve System we had no mechanism for meeting unusual demands or strains. We had a national banking system, with national bank notes which were secured by Government obligations, and the amount of these notes could not expand or contract very conveniently because there was no mechanism

provided for flexibility. Consequently, when we had a business situation that was more or less booming and when at the same time seasonal demands were heavier because of crop movements and autumn trade, there would be a currency panic. Not every year, but on such years as were marked by unusual activity. The latest one before the Federal Reserve System was established was in 1907, when it assumed rather unusual proportions. The banks in New York had to close and currency was at a premium. The reason was that we had a banking system with a rigid amount of currency that could not meet unusual demands, and with a system of reserves which pyramided up to New York. Country banks were permitted to hold part of their reserves in banks in reserve cities, of which there were about fifty, and the banks in those cities in turn were permitted to hold half of their reserves at a central reserve city bank, and banks in New York City, together with banks in Chicago and St. Louis, had to hold their reserves in cash. But when the demand would develop, the country banks would draw the money from their city correspondents, and the correspondents in turn would draw it from their central reserve city correspondents, and the whole demand would converge on New York. There was no way of increasing the funds in New York beyond what was in the vaults, so that in busy years the situation would result in panic. Something had to be done to make our machinery more flexible, elastic, and responsive to the needs of the people.

A National Monetary Commission was appointed, of which Senator Aldrich was chairman, and it made a study and report recommending the establishment of a central bank. That commission was largely Republican, and, being considerably influenced by the banking point of view, set up a mechanism of a central bank largely dominated by bankers. When the Democrats came into power in 1913, they decided to reform the currency and the banking system, they wanted to modify the proposals of the National Monetary Commission by making the system more responsive to Government and public interests and less controlled by bankers, and also to have it more widely distributed over the country, rather than centered in one institution. The management was definitely changed by the Democratic Congress, but the technical details remained substantially the same.

The Federal Reserve System at the present time, and as it was established, is composed of 12 Federal Reserve banks in 12 leading cities, and it is supervised and directed in a general way in matters of national policy by the Board of Governors. Locally the Federal Reserve bank has as its

member banks all of the national banks in its district and some State banks. Being chartered by a Federal authority, national banks are subject naturally to the laws of Congress, and the requirement that they belong to the Federal Reserve System was in the original Federal Reserve Act. The banks that are chartered by States are not obliged to belong to the Federal Reserve System, but they have the privilege of joining if they are eligible under capital requirements, and if the nature of their business is such and their condition and management such that they make the Federal Reserve bank and the Board willing to accept them into membership. The fact is that approximately only 6,000 of the 15,000 banks in the country now belong to the System. These 6,000 banks, however, have something like two-thirds of the assets and liabilities of all banks. Thus the System has control over a substantial proportion of the banks, but not of the majority of them, and has control over a very considerable majority of the assets and liabilities of the banks.

To belong to the System, a member bank has to subscribe to the capital of the Reserve bank in its district 6 percent of the bank's own paid-up capital and surplus. Of that amount 3 percent has been called and 3 percent is subject to call but it has not been and is not likely to be called. The member banks, therefore, technically own the Federal Reserve banks. They are the stockholders. But that ownership is not the usual type of ownership. In the first place, it is a compulsory ownership, since the bank which belongs to the System is obliged to subscribe to the capital of the Reserve bank in its district. In the second place, the bank is obliged to subscribe a specific amount, 6 percent of its paid-up capital and surplus. It cannot at its option increase or decrease its investment in the System. In the third place, the bank cannot sell its Federal Reserve stock without forfeiting its national charter or, if it is a State bank, without leaving the System. In other words, it is not the usual type of investment. It is more in the nature of a compulsory contribution to the capital structure of the Federal Reserve System.

The member banks in a Federal Reserve district elect six of the nine directors of the Reserve bank in that district. The other three are appointed by the Board, so that you have Government participation in the management to the extent of three directors out of nine. The law provides that three of the six directors elected by the member banks must be bankers, and that three of them must not be bankers --

they must be engaged in industry, trade, or agriculture in that district. Of those three bankers and three non-bankers, one must represent the small banks, one the medium-sized banks, and one the large banks. Thus the method of election and the character of these directors is determined by law. The other third, including the chairman and the deputy chairman, is appointed by the Board, so that the central authority has a considerable say in the management of the Federal Reserve banks.

That, however, is not all of the influence that the Government has over the Federal Reserve banks. The Board has authority to remove for cause any officer or director of the Federal Reserve banks. It has authority to pass upon all of the salaries of all the employees and officers of these banks. The president of the bank and the first vice-president, who are the principal executive officers of each bank, are appointed by the directors for five-year periods and must be approved by the Board of Governors. You see that the participation of the Government in the management of the Federal Reserve banks is greater than would appear simply from the fact that the Board of Governors appoints three of the directors. In addition to that, all the important instruments of credit policy that are national in scope, which will be discussed later, are practically under the control of the Board of Governors.

The Federal Reserve banks' autonomy, subject to law and supervision, is merely in matters of their individual relationships with individual banks. They are in the position to decide whether or not an individual bank is conducting its business on such a basis as to justify making an advance. But when it comes to the rate that they are to charge for that advance, that rate has to be approved by the Board. The Board also has power to change reserve requirements. The Board, with some representatives of the banks, forms the Federal Open Market Committee, in which the Board constitutes the majority. That Committee has authority to decide upon open-market operations. I am using those words without explaining their meaning because I shall discuss them later.

All I want to say is that the Federal Reserve System is a combination of private ownership with practically complete public control. It is a combination of local directorates and local management, with very definite guidance from central authority. It is a different kind of an institution from those that most of the other countries of the world have. It is adapted to our large country, with its very different geographic conditions. It creates local pride and local

interest in the institutions by having local directors. It leaves matters of strictly local concern, for which the knowledge and familiarity of local conditions is desirable, to local management, and it reserves the right to determine policies that have an influence on the banking system as a whole and on the economic system of the country to the Board of Governors in Washington. It thus reserves the right to determine national policies to a Governmental body appointed by the President and confirmed by the Senate.

The policies that the Federal Reserve System pursues are primarily directed toward the regulation or the influencing of the amount and cost of money available to the public. By "money" in this connection I do not mean currency alone, but currency and bank deposits. As you know, the great mass of our payments is not made in currency. Probably more than nine-tenths of the volume of payments made in the course of a year are made by check on bank deposits. So control of the volume of deposits and of check movements is more important in the economic system than the control of currency, which in our set-up is only the small change of business. The bigger item, and the much more important one from the point of view of the country's economic activity, is checks.

The principal method by which the Federal Reserve System exercises control over the volume and cost of money is through its influence on the reserves of member banks. We have a system by which a bank is required to keep a certain percentage of its deposits as reserves, and under the present law those reserves must be held at the Federal Reserve bank as deposits of that member bank. The percentages as given in the law are: 3 percent against time deposits, and against net demand deposits, 7 percent in country banks, 10 percent in about sixty cities that are now known as reserve cities, and 13 percent in the two central reserve cities, New York and Chicago. These percentages, as stated, are indicated in the law, but also the Board of Governors has been given authority to increase them up to doubling them, but not to reduce them below the amount that is indicated in the law. As a matter of fact, with the very large inflow of gold which we have had, the Board in 1936 and 1937 used the authority of increasing reserve requirements, and by May 1937 they were doubled, so that they became 6 percent, 14 percent, 20 percent, and 26 percent, instead of the figures just given. Last spring when business was going very badly and there was no danger of inflation in sight and some psychological advantage in easing the situation, the requirements on demand

deposits were reduced by about one-eighth from that maximum, and on time deposits the requirement was reduced from 6 percent to 5 percent.

These reserve requirements are an item of great importance, because the banking system cannot expand beyond the level at which these reserves will be adequate to support its deposits. When a bank makes a loan, that action usually results in a deposit, because what happens, of course, when you borrow money at the bank is that the bank will give you credit on your account and will take your note and add it to its assets. The result of the transaction is that your note is added to the assets of the bank and your deposit is increased. Then you spend the proceeds of your loan, because you would not borrow if you did not need the money, and it goes into some other bank because somebody comes in and deposits it there. Then that bank collects it from the original bank. What happens is that deposits are created through loans or investments made by the banks, but the individual banks get their deposits usually not through loans and investments made by themselves but through loans and investments made by some other bank. The amount of these loans and investments is limited by reserve requirements. When the bank has as many loans and investments and as many deposits as can be supported by the amount of reserves that it has with the Federal Reserve bank, it can do no more - and, when this situation is general, the banking system can do no more - without borrowing from the Federal Reserve banks. Anything that the System does in increasing or decreasing the reserves of the banks has a direct influence on the amount of lending that the banks can do, and that is our principal influence on the situation. It means that nearly all the instruments of monetary management that are in the hands of the Federal Reserve System operate through their effect on the member bank reserves.

The first and the most obvious influence of control is lending to the banks when they are short of reserves. When the bank is short of reserves, it can take some paper and re-discount it with the Federal Reserve bank, or it can make a bill payable of its own secured by collateral. The Federal Reserve bank has authority to grant or refuse that accommodation. In doing that it is supposed to be guided by the behavior of the bank. If the bank is doing good sound banking business and is asking for accommodation because of the needs of its customers, the Federal Reserve bank is supposed to grant the extension of credit if the bank offers adequate collateral. If the bank is behaving in a way that is dangerous or destruc-

tive to its own existence and is having a bad effect on the economic system by fostering speculation, the Federal Reserve bank has authority to refuse the loan. That is what is known as direct action. The Federal Reserve System has certain power of direct action by granting or refusing accommodation to the member banks, and that accommodation is enormously important to them, because if they do not get the money, they cannot respond to their customers' demand for credit. As a matter of fact, the banks wishing to discount paper probably have already expanded credit and are short of reserves, which means that they have to comply with the System's requirements. That is the first influence.

The second influence which the Federal Reserve System can have is that it can fix the rate at which those loans to member banks are extended. It can make the discount rate high or low. If it feels that business is in need of more credit, it can make the rate very low, as, for example, at the present time when business is recovering and there is not any evidence of speculative activity. The discount rate of the New York bank is 1 percent and of other Reserve banks 1 1/2 percent.

Traditionally the discounts and discount rates were the principal elements in the policy of the Federal Reserve System. When the System was conceived, it was thought that most of its control would be through these channels, but we have had very unusual developments in the past fifteen or twenty years. Ever since the System was established, it has been in one way or another influenced by war. The World War broke out the year the System started in operation, 1914, and that affected the System. Then after the war all the world was off gold. There was world-wide inflation, and a large inflow of gold here. That changed the situation. Then we had the depression, which, in my opinion, also was to a considerable extent an aftermath of the war. That affected the situation. Later the threats of war in Europe resulted in an enormous inflow of gold to this country. We are now working under influences of threatened world war, with the consequence that the normal operation of the System, with the world on the gold standard and gold moving back and forth freely, does not exist. It has hardly ever existed since the establishment of the System. With this country being the richest and the safest, and with the World War having changed this country from a debtor nation to a creditor nation, the consequence is that there has always been a large inflow of gold. The banks have always had enough reserves through that gold so that they have not been borrowing much from the Federal Reserve banks, except immediately following

the war, during the period of very great expansion and speculative activity around 1928 and 1929, and at times in the recent depression. Therefore, the discount of paper and the discount rate have not been so important in the Federal Reserve System as they were originally intended to be.

Another way that the Federal Reserve System has of influencing the volume of member bank reserves is through purchases or sales of Government securities in the open market. When the Federal Reserve bank buys securities, it gives the seller a check on itself. That check, when deposited with the Federal Reserve bank by a member bank, becomes a part of the member bank's reserve. Thus when the Federal Reserve bank buys Government securities, it creates reserves. On the other hand, when the Federal Reserve System decides that conditions are too easy, and that some restraint would be desirable, it sells Government securities. When it sells them, it receives checks which are charged to the member banks in the end, and the amount of reserves of the member banks diminishes. Therefore, we have a way of increasing or decreasing the member bank reserves through open-market operations.

The more recent method which was devised, in view of the very large inflow of gold, and of the Government's silver policy, was made by Congress in deciding that the prevailing reserve requirements of 3 percent, 7 percent, 10 percent, and 13 percent were not sufficient, and that the Board should have authority to double them. When the Board increases reserve requirements, it in effect says to the bank. "You have a lot of reserves there, but you must keep a larger proportion of them against your deposits; you must keep them idle and intact, because otherwise there would be a danger of injurious credit expansion." Now the reserve requirements are about $1 \frac{3}{4}$ of what they were when the law was passed. Even with the high reserve requirements, however, we have an enormous amount of excess reserves because the inflow of gold to this country has been on a tremendous scale.

The accompanying chart shows the inflow of gold to this System since the beginning of its existence. In the first year, 1914, there was a small loss because the people abroad were taking more gold in anticipation of the war. Then during the years of the World War gold was coming to the United States. In the following two years this country lost a little, chiefly because the South American and Asiatic countries, which had built up balances here, took gold out. From 1921 until 1924 there was a very large inflow. Then it remained fairly constant,

with some fluctuations, until 1930. In that year and during a large part of 1931 there was a considerable increase. After England went off gold in September 1931, and everybody lost confidence and wanted gold home, until June 1932, the United States lost a billion dollars. Later, gold started coming in again. In January 1934 the gold in this country was revalued, and since that time this country has been getting gold almost continuously in a very strong stream, so that now, on the basis of the new value of gold and the amount that has been added, there is fourteen billion dollars of gold in this country. The chart is so fixed that changes in physical units are shown, since the change in value is taken care of by the scales. Thus the increase early in 1934 shown on the chart corresponds to a physical increase rather than to the increase due simply to the change in the valuation of the gold.

Where did the United States get this gold? Partly from the gold reserves of other countries, particularly France. The heavy gold losses by France in recent years are shown on the chart. Most of the other gold has come out of the ground. There is a current production of gold of more than a billion dollars a year. This chart shows why it is that we have such a great abundance of bank reserves. It is due to the tremendous amount of gold which has been coming here -- gold which has come partly because we pay out less to foreigners for goods and services than we receive from them, but chiefly because people throughout the world have felt that one of the few safe places left to keep their money was in the United States. So this country has had a tremendous inflow of capital, which results in the exchange situation that draws gold to this country.

We are in a very difficult situation, even with existing instruments of control, because of this tremendous inflow of gold. In spite of what the Reserve System could do in the way of reducing excess reserves, the banks have such a large volume that they could have a dangerous expansion of credit without having to resort to the System at all.

However, this second chart shows you that the danger, which may be potentially very great, is not a very acute one at this time because the banks have not expanded credit materially. The top line indicates the total loans and investments of the member banks. In 1929 and 1930 they were at the highest level on record. From then until 1933 they went down, this was the great deflation that we had. Since that time they have been rebuilt chiefly by the acquisition of

Government securities. Then in 1937 and the first half of 1938 they went down again. The amount of deposits, while larger than in 1929, is not increasing materially. Activity of the deposits is so low that this volume is doing a much smaller amount of work than it would be doing if business were active, so that there is no immediate danger of an inflationary situation. There is, however, the potential danger of its developing later, and the machinery of the Federal Reserve System is not at present adequate to meet this very extraordinary situation arising from the enormous inflow of gold.

Most of the points regarding the banking situation have been touched on rather briefly, and I should like for a while to speak about the economic conditions as they exist today in relation to this banking picture. The banking picture, to sum it up in a word or two, is one where there is an enormous amount of reserves at the disposal of the banks, and where there is very easy money in the sense of very low interest rates. There is, however, a very cautious attitude on the part of banks, the lenders, owing to their painful experiences of eight and ten years ago, and there is a cautious attitude on the part of borrowers because they have had the experience of finding themselves heavily in debt and unable to pay. These conditions result in no great amount of credit being outstanding in spite of its availability.

There is no immediate problem of inflation, in fact, people are all very anxious to see business and bank credit both become more active. In the more distant future when the activity takes hold, there might be the possibility of a runaway inflation, if machinery were not developed for controlling it. There was a little taste of that in 1937 when prices, for example, went up so fast that certain industries were in a very unfavorable situation, particularly building. In that industry the prices of labor and the prices of the materials went up so much that the rents and prices of finished houses were no longer sufficient to compensate people for producing them, and building activity immediately went down again.

This chart of the building industry, which is one of the major industries of the country, shows that in the 1920's there was a very large volume of building, between five and six hundred million dollars a month in the late 1920's, for building contracts in those thirty-seven States for which there is information. Then the depression came and building went to almost nothing. It is one of those activities that

can practically stop. People always consume food, and they soon wear out their clothes and have to buy more. But it is always possible to make houses and apartments, although they may not be entirely satisfactory, do for a long while without building new ones. Young people who get married may stay with their parents, other families may double up, such things happen in times of depression, with the consequence that building is an industry that can stop. When it does stop, the condition is a very serious one in the general business situation, because it not only affects the people that are actually employed in construction, but also the people who produce the materials that go into construction, and it affects the railroads which haul the materials for construction.

Building and automobile production are two of the most important industries of this country today. Our great depression was to a considerable extent a depression in building and in the production of machinery and equipment for factories, railroads, and utilities. During the recovery building had shown very little expansion prior to 1936, and even then it had not progressed nearly as far as recovery in many other lines. When we had a set-back in 1937, building became quite low again. Now it is going up, and that is probably the most hopeful part of our picture today. This helps to make one feel that unless something goes wrong again with the labor situation or with the price structure we may have a substantial, though not necessarily uninterrupted, rise in industrial activity for some months, and probably for much longer than that.

The accompanying chart sums up the production situation in a different way. It gives the total physical volume of manufacturing production divided into durable goods and non-durable goods. Durable goods include those things like steel and lumber that go into the construction of houses and other buildings, machinery, and equipment, and those things like automobiles that are not consumed by individuals immediately, but that are used for a long time. Industrial production, which includes mining as well as manufacturing, declined from 119 percent of the 1923-1925 average in 1929 to 64 percent in 1932. That decline was principally in durable goods, not much in nondurable goods. The amount of food and clothing produced does not fluctuate as widely as the amount of durable goods, partly because stocks of these goods disappear quickly, whereas houses and factories last a long time. You can postpone your building of a house. The building of a new factory, or the replenishing of the railroad's supply of cars, and their maintenance up to a certain point, can be postponed. Therefore,

when things go bad, it is the durable goods that go down, and the depression was largely a depression in durable goods, of which building is an important part. The recovery after the early part of 1933 was also largely in durable goods. Then, beginning last year, there was a decline that was tremendously precipitous, the sharpest there has been in the history of the country. This decline was general, but most marked in durable goods. The factors that cause declines are numerous, of which the one that I mentioned, the maladjustment in the price structure between wages and costs on the one hand and the price of finished products on the other, was the principal one in 1937. Large inventories were accumulated, and liquidation of these inventories was an important factor in the decline in activity. Now we have what looks like a reasonably hopeful recovery, although we are still on a pretty low level.

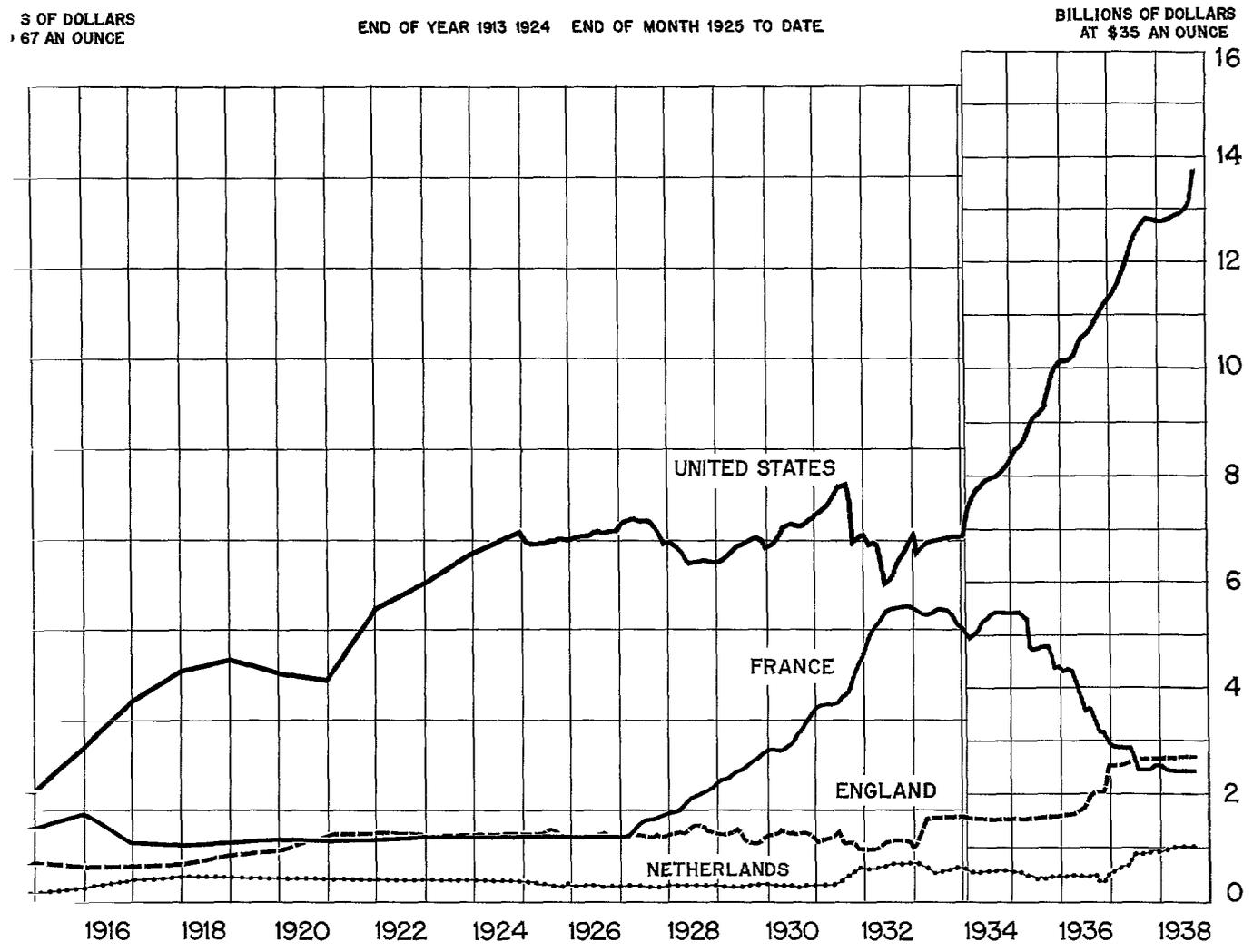
I have spent these few minutes on the discussion of the industrial and economic facts, not to appraise the present situation, but to indicate to you that the activity of the Federal Reserve System in connection with its control of the volume and cost of money is determined always with reference to the business situation and to the needs of the country. When activity needs stimulating, we try to do what we can to make money easy and abundant. Still, while we can make it easy for banks to lend, we cannot make them lend. There is always that last stage which is out of our control. We can create reserves by purchases of Government securities, but we cannot make people draw checks against the resulting deposits. There is a limitation on our powers. We are in a position to create a financial "climate", if I may be permitted to phrase it that way, that is favorable to the economic situation, and we can create a financial "climate" that is unfavorable and restraining. We are trying to the best of our ability to get the facts and to get a judgment on the things that would encourage business when it is slow and that would restrain it when it becomes too active. Within the limitations of our power, those are the things which we are guided, and those are the objects of our monetary policy. The Federal Reserve System, being managed by the Government on all important matters, is conducted with those in mind.

It might be repeated again that the private ownership of the Reserve banks by the member banks is a purely technical thing that is really more accurately described as a compulsory contribution to the capital rather than as ownership. The profit motive does not enter into the Federal Reserve System, because as far as the member banks are concerned, they can

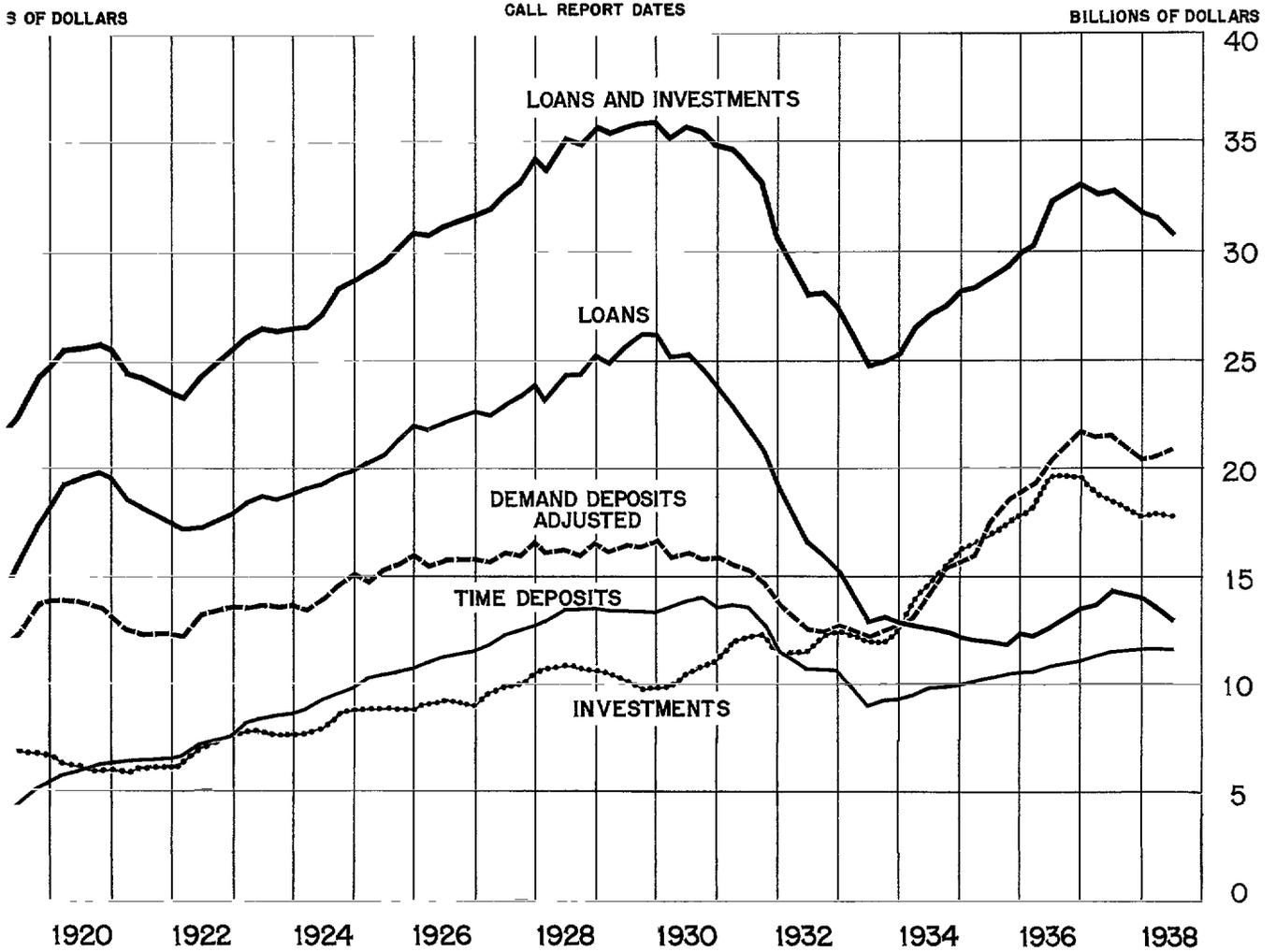
only get a fixed 6 percent. The Board of Governors is not concerned with those dividends. In its sales and its purchases of Government securities, in its determination of the discount rate, in its determination of the reserve requirements, it is guided solely by the economic conditions of the country as it sees them. The profit motive does not exist because the System is under the direction of Congress, and the policy of the System is to try to accommodate commerce and business in such a way as to encourage it when it needs encouragement and to restrain it when it needs restraining.

In a very brief and sketchy way I have outlined to you some of the high spots in the set-up of the functions and purposes of the Federal Reserve System and in the present economic situation.

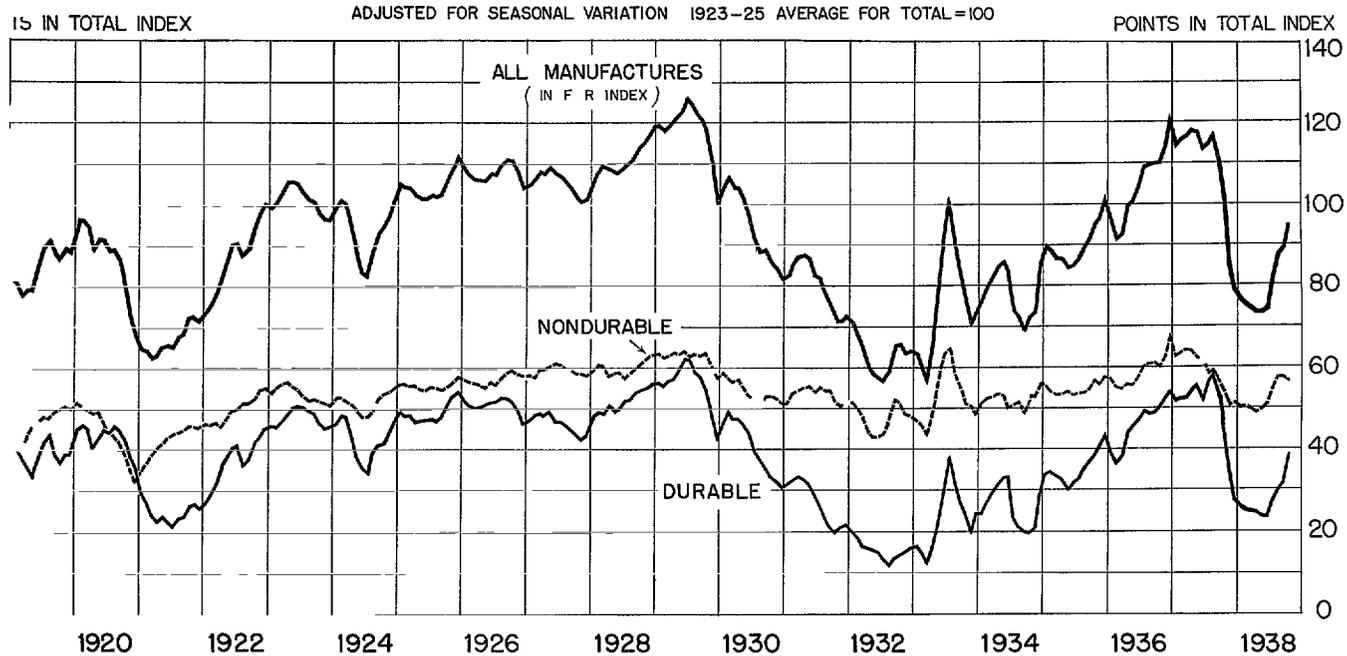
CENTRAL GOLD RESERVES



ALL MEMBER BANKS



INDEX OF MANUFACTURING PRODUCTION



CONSTRUCTION CONTRACTS AWARDED

