

MONTHLY

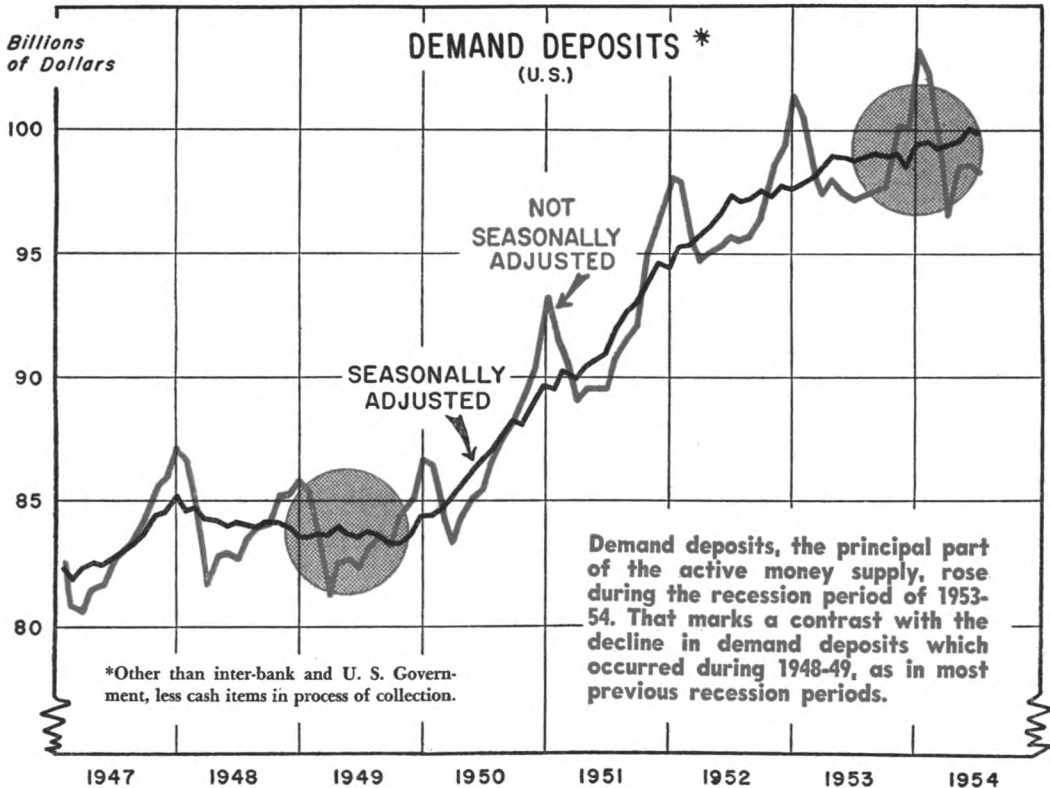
# Business Review

FEDERAL RESERVE BANK of CLEVELAND

September 1954

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# Towards a More Stable Money Supply

**A**N UPWARD trend of the money supply from mid-1953 to mid-1954, as contrasted with its usual downward movement during a recession, suggests that the money supply may have become more "recession-proof".<sup>1</sup> The increase in the money supply during this period, even though small, has been a stabilizing element in the economy.

Part of the explanation of the above development is to be found in a combination of three structural factors: (1) a change in the debt structure of the country, particularly as a result of World War II; (2) resultant cyclical shifts in the composition of bank assets as between public and private debt; and (3) a long-run change in the composition of bank loans. The combined impact of these factors has tended to create a setting which has enhanced the effectiveness of monetary policy in maintaining relative monetary stability under the conditions of a mild business recession.

Attention is given below to the significance of such structural developments, rather than to monetary policy as such, or to the interaction of policy and structural change.

*Meaning of "Money Supply".* The most useful definition of the money supply depends on the type of problem being analyzed.<sup>2</sup> When a barometer of private spending potential is sought, "adjusted" demand deposits plus currency outside banks seems to be the most significant definition. Unless

otherwise noted, this is the meaning of "money supply" that will be used below.

"Adjusted" demand deposits exclude several items from total demand deposits: (1) inter-bank deposits, on the grounds that such funds are not immediately available for spending by the public; (2) deposits of the U. S. Government, on the assumption that the rate of Federal spending is not as dependent on existing cash balances as is the case with the general public; and (3) cash items in process of collection, in order to avoid double counting of deposits. The resultant amount—adjusted demand deposits—thus consists of checking accounts of individuals, business firms, and state and local governments, plus certified and officers' checks outstanding. Adjusted demand deposits plus currency outside banks is roughly synonymous with the "active, privately-held money supply", although the sum includes a small amount of demand deposits owned by state and local governments.

Demand deposits are the principal component of the money supply as here defined; they constitute about four-fifths of the total, with currency outside banks accounting for the balance.<sup>3</sup> The annual rate of turnover of demand deposits even at banks outside the major financial centers is as high as twenty times a year; the rate of turnover is much higher at financial centers. Available evidence indicates that time deposits, on the contrary, turn over about once a year on the average. Thus the behavior of the two types

<sup>1</sup> Mid-1953 to mid-1954 represents a highly tentative dating of the approximate terminal points of the most recent recession.

<sup>2</sup> One of the main questions involved in the definition of the money supply is whether or not time deposits should be included. In relating changes in total assets of the banking and monetary system to changes in total liabilities, all demand and time deposits would be included in liabilities, along with currency. Time deposits are part of the banking mechanism, and their volume is partly a cause and partly an effect of credit creation.

<sup>3</sup> It is estimated that 85-90% of all money payments are made by checks drawn on demand deposits. These factors, together with the others mentioned above, indicate the importance of credit-granting activities of commercial banks. Demand deposits, as the bulk of the effective money supply, fluctuate largely in keeping with expansion or contraction in the loans and investments of commercial banks.

of deposits is basically different, explaining the exclusion here of time deposits from the "active money supply".

### Changes in Factors Bearing On Money Supply

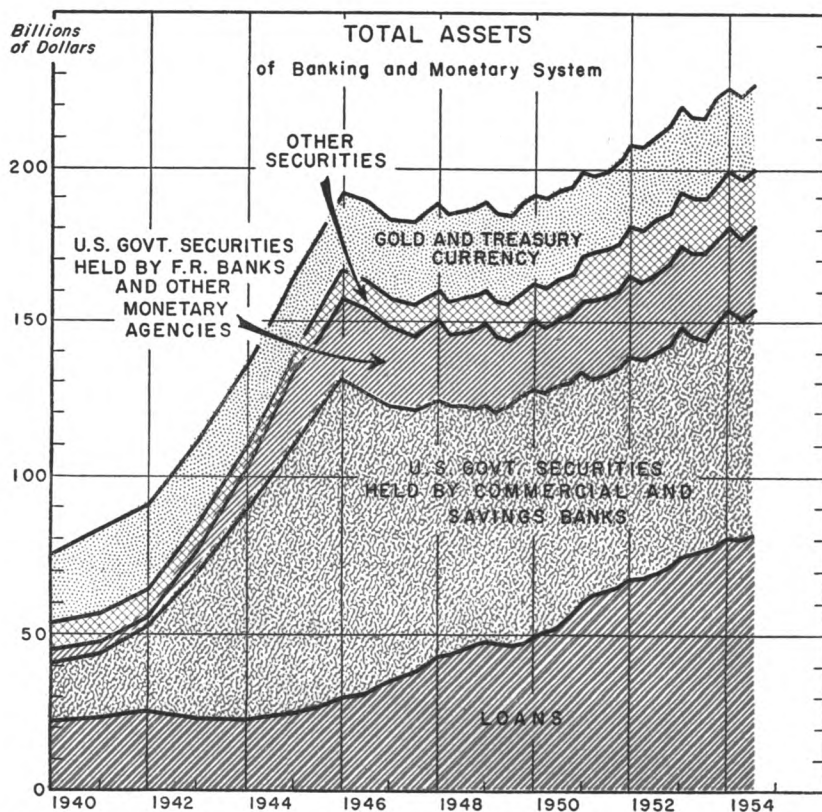
The first pair of charts depicts by means of shaded areas the consolidated assets and liabilities of banks and the monetary system, from 1940 to 1954.<sup>4</sup> The data portrayed bring together all the factors operating to produce changes in the money supply. Since total assets obviously must be equal to total liabilities, changes in any one component in a given period can be viewed as the result

of changes in all other components.<sup>5</sup> Adjusted demand deposits plus currency outside banks, as the active money supply, will be singled out here as the resultant of all other assets and liabilities.

The two charts indicate that the war-time expansion in the money supply was due almost entirely to an increase in bank holdings of U. S. Government securities. Conversely, during the expansion phases of the postwar period, the rise in the money supply resulted principally from the fact that loans more than doubled, although U. S. Government security holdings were declining.

Changes in the factors affecting the money supply from mid-1953 to mid-1954 can be

*In the consolidated assets of banks and the monetary system, rising loans have characterized the entire postwar period, including the '53-'54 recession; the postwar trend toward a decline in holdings of U. S. securities was reversed during '53-'54.*



described as follows: total assets rose by \$9.9 billion, but \$8.8 billion of this was absorbed by an increase in liabilities other than the active money supply. The residual increase in liabilities, \$1.1 billion, represents the increase in adjusted demand deposits plus currency outside banks.

The net increase in assets of banks and the monetary system from mid-1953 to mid-1954 was compounded of a \$4 billion rise in loans, a \$4.6 billion rise in holdings of U. S. Government securities, a \$1.7 billion rise in other securities, and a decline

<sup>4</sup> Data from "Consolidated Condition Statement of Banks and the Monetary System", as reported monthly in the *Federal Reserve Bulletin*. The statement includes all commercial and savings banks, Federal Reserve Banks, Postal Savings System, and Treasury currency funds. On the chart, amounts are plotted quarterly beginning with 1948. Data for 1939 to 1944 are available only at year end, and from 1945 to 1947 only semi-annually.

<sup>5</sup> See page 5.

of \$0.4 billion in gold and Treasury currency. The increase in liabilities, other than the active money supply, consisted of a \$5 billion rise in time deposits, a \$3 billion rise in U. S. Government balances and foreign deposits, and an increase of \$0.8 billion in capital and miscellaneous accounts. Thus, from mid-1953 to mid-1954, the growth of the active money supply resulted mainly from nearly equal increases in loans and U. S. Government securities that were reflected only in part by increases in liabilities other than adjusted demand deposits and currency—i.e., mainly by time and U. S. Government deposits.

## Historical Causes of Unstable Money Supply

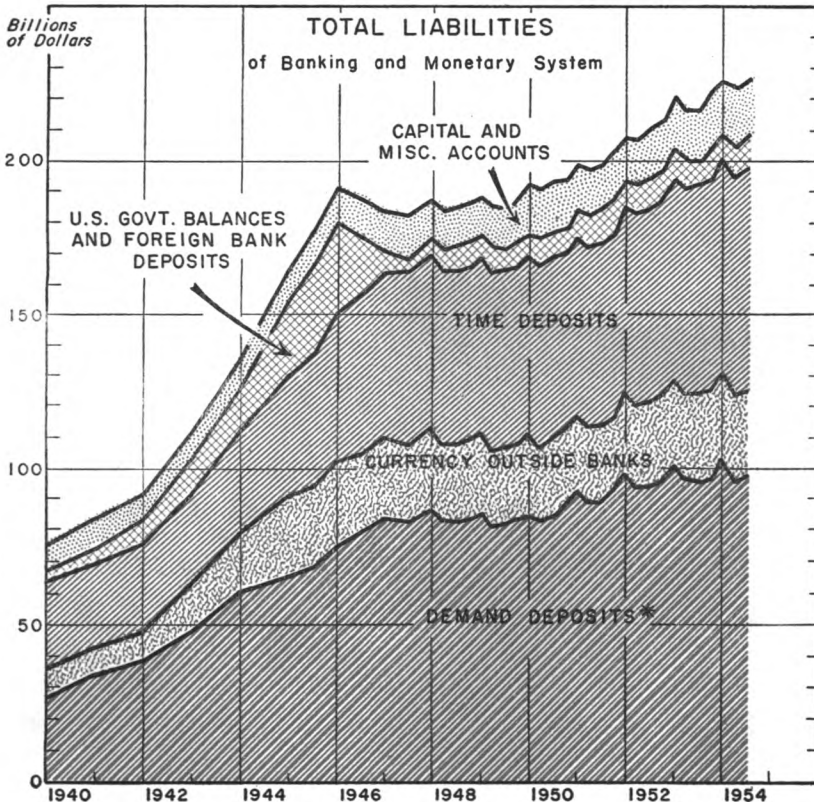
The traditional view that the money supply is “inherently unstable” was based on the following reasoning:

The extension of loans by commercial banks results in the creation of demand deposits, while a net reduction of loans brings about deposit contraction. The demand for loans will vary with the level of business conditions, and rising activity will bring forth new loans, thus expanding deposits. The increase in the money supply will result in larger expenditures, causing an upward spiral in business activity until some sort of crisis is reached. Then declining production and employment will be aggravated by a contraction of bank loans and deposits. As the money supply declines, expenditures will be reduced still further in a continuing downward spiral.

Such a line of thought has been at the center of the belief that the money supply is inherently unstable and fluctuates in a manner which permits and reinforces cyclical swings in economic activity. That view has been supported by considerable historical experience. As an extreme example, from mid-1929 to mid-1933, commercial bank loans declined by \$19.4 billion, or 54 percent. Although this decline was partially offset by

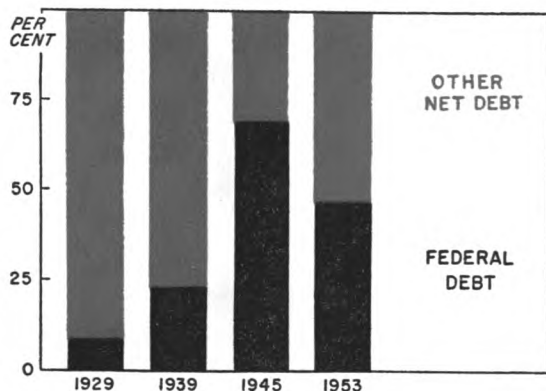
<sup>5</sup> All the asset items can be viewed as factors, an increase in which produces an increase in adjusted demand deposits plus currency outside banks. Similarly, all liability items except adjusted demand deposits and currency outside banks can be viewed as factors, an increase in which produces a decrease in the active money supply. Thus, between any two dates, adjusted demand deposits plus currency outside banks will vary inversely with changes in other liabilities and will vary directly with changes in assets. All factors producing a change in the money supply can thereby be identified.

*During the postwar period, the principal increases in liabilities have been in demand and time deposits; the latter continued to rise sharply during the '53-'54 recession.*

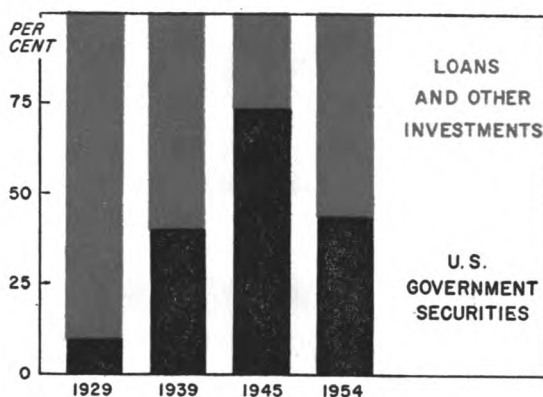


\*Other than interbank and U. S. Government, less cash items in process of collection.

### NET PUBLIC AND PRIVATE DEBT



### LOANS AND INVESTMENT OF COMMERCIAL BANKS



*The share of U. S. securities in the total loans and investments of commercial banks (right-hand chart) has closely reflected the changing proportion of Federal debt to total public and private debt (left-hand chart).*

an increase in bank holdings of U. S. Government securities, total loans and investments were reduced by \$19.1 billion, or 39 percent, and adjusted demand deposits contracted by 36 percent. Despite a sharp rise in currency outside banks, the active money supply declined by \$6.9 billion, or 26 percent. Such a shrinkage of the means of payment was both a product and an aggravating force in the major economic collapse of that period.

A different type of behavior of the money supply, however, has put in an appearance during recent years.

#### Factors Leading to a More Stable Money Supply

Since the 1930s, several factors have emerged whose combined effect has been to make the volume of bank deposits less dependent on bank loans and to make bank loans less subject to cyclical shrinkage. The resulting shifts in the nature and composition of bank assets have introduced a stabilizing force into bank assets and deposits. These factors will now be outlined.

1. *Change in Debt Structure of the Nation.* Partly as a result of the deficit financing of the 1930s, but mainly as a result of World War II, the composition of the debt structure in this country underwent drastic changes. Such changes are portrayed for selected dates in an accompanying chart, shown in the left-hand column. The Federal debt represented only 8.5 percent of total public and private debt in 1929, but ten years later it had risen to 22.9 percent of the total. By the end of World War II, the proportion of Federal to total debt had risen to an unprecedented 68.4 percent, the outcome of huge war-time deficits of the government.

In the postwar period there was relatively little change in the amount of the Federal debt, but private indebtedness, along with that of state and local governments, expanded sharply. Consequently, by the end of last year the Federal debt was down to an estimated 48 percent of total public and private debt. While substantially below the peak war-time percentage, the Federal debt still represents a large proportion of the total and will probably continue to do so.



## 2. *Changes in Bank Asset Composition.*

The above changes in the debt structure of the country have had a significant influence on the behavior of the money supply. The growth of the Federal debt has furnished an investment medium to commercial banks that helps to compensate for cyclical movement of loans. Since banks now hold a large amount of U. S. Government securities, the relative fluctuations in total loans and investments (other than during war periods) tend to be less than would be the case if loans constituted the bulk of banks' earning assets. Consequently, the part of the money supply represented by demand deposits tends to exhibit less cyclical fluctuation.

The volume of bank loans still varies directly with business conditions, particularly during periods of expansion. This is tempered, however, by the probability that the amount of Federal debt outstanding will move in an opposite direction to the business cycle, and that bank holdings of loans and U. S. Government securities will move in a mutually offsetting manner.

The composition of commercial bank assets as between U. S. Government securities on one hand, and loans and other securities on the other hand, has closely reflected changes in the total debt structure. This is illustrated for selected dates in the chart shown in the right-hand column. As a percent of total loans and investments, bank holdings of U.S. Government securities rose from 9.9 percent in 1929 to 39.8 percent in 1939, and to 73.4 percent in 1945. The postwar rise in loans, combined with a net reduction in holdings of U. S. securities, reduced the latter to 43.5 percent of total loans and investments of banks by mid-1954. Government securities are still a major asset of banks, however.

3. *Change in Types of Commercial Bank Loans.* Bank loans themselves seem to have become less subject than formerly to fluctuations in the economy, at least in the downward direction. As a result of long-term changes in types of loans that began in the 1920s, present loans include a large volume of real estate loans, term loans to business,

and consumer instalment loans whose contractual maturity is much longer than that of the traditional business loans made for working capital purposes. Even though working-capital loans are commonly renewed in prosperous times, technically such loans are short-term and callable at maturity—a feature which is often exercised by banks in a recession period. With the relative growth of other types of loans having a longer contractual maturity, the chance of a major contraction of loans in response to falling business activity is thereby reduced somewhat.

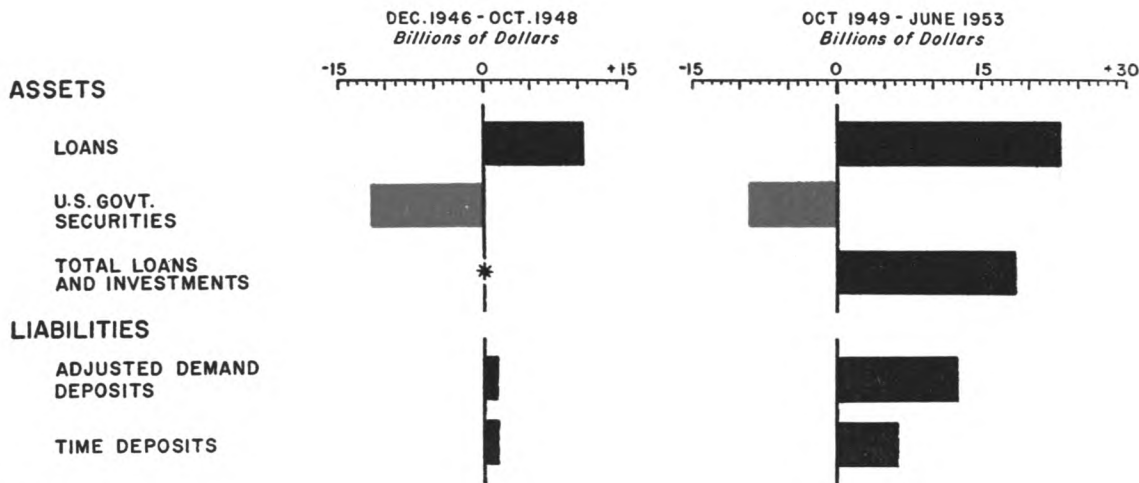
The above point is illustrated by the net change in commercial bank loans from mid-1953 to mid-1954, a period of recession, in which total loans nevertheless rose by \$2.2 billion. Although business and consumer loans declined, this decrease was more than offset by rises in real estate and agricultural loans, loans made for the purchase and carrying of securities, and other loans.

## **Cyclical Trends in Assets and Deposits**

Commercial banks hold virtually all the outstanding demand deposits, which constitute the bulk of the money supply. Demand deposits fluctuate largely, but not entirely, in keeping with changes in commercial bank loans and investments. The tendency for loans and U. S. Government security holdings of banks to move in a partially offsetting fashion, thus helping to produce a more stable money supply, can best be shown by comparing several periods of recession and expansion in the economy.

An accompanying chart illustrates the compensatory movements of bank loans and holdings of U. S. Government securities in two periods of postwar expansion. From December 1946 to October 1948, commercial bank loans rose by \$10.5 billion, and holdings of municipal and corporate securities increased by \$1.1 billion. These movements were almost completely offset, however, by a decline in bank holdings of U. S. Govern-

During the upward phases of the postwar period, the rapid expansion of loans at commercial banks was partially offset by a reduction in bank holdings of U. S. securities. As a result, the growth of commercial banks' deposits was more moderate than that of loans.



\*Only \$0.1 billion.

ment securities, amounting to \$11.5 billion. Even though the increase in total loans and investments was only \$0.1 billion, adjusted demand deposits rose by \$1.8 billion. Other factors having an effect on the money supply, not shown on the chart, were at work in this period, including a rise in cash assets and a decline in interbank deposits.

The second phase of rising economic activity shown on the chart covers the period from October 1949, to June 1953, which includes the Korean war interval. The expansion of loans, accelerated in part by the war, amounted to \$23.2 billion. At the same time holdings of municipal and corporate securities rose by \$4.2 billion. However, a decline of \$9.0 billion in U. S. Government securities held by banks offset one-third of the rise in loans and other investments. The increase of \$12.6 billion in adjusted demand deposits was only about one-half the amount of loan expansion. Thus, in both periods noted above, a substantial decline in bank holdings of U.S. Government securities helped to moderate the effects on the money supply of the rapid

loan expansion typical of rising economic activity.

Turning next to trends in the behavior of demand deposits during periods of economic downturn, the final chart shows the percentage change in loans, investments, and deposits of commercial banks during the past three recessions.<sup>6</sup> The changes are shown in percentage form, rather than in amounts, in order to focus on the trend in *relative* changes in demand deposits during the three periods.

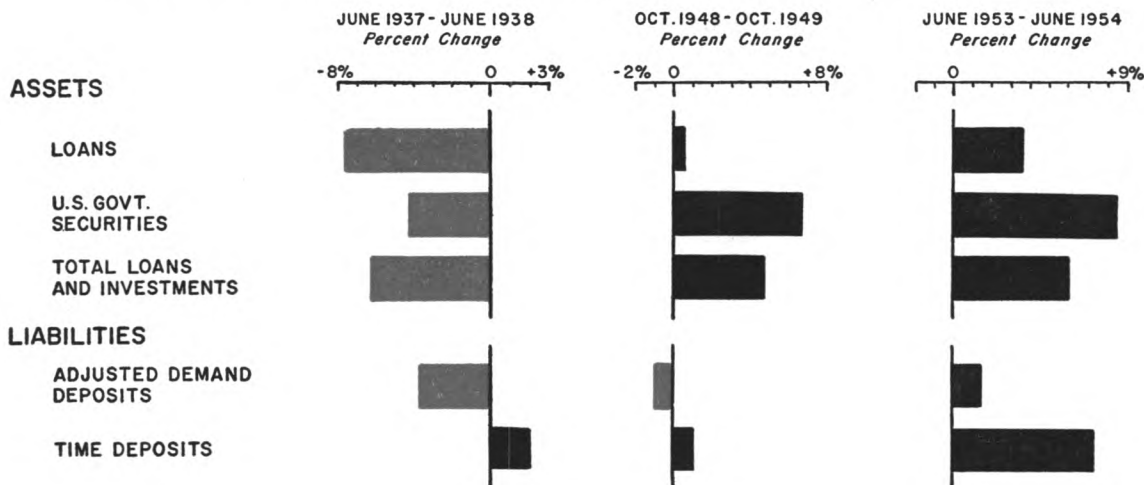
During the 1937-38 recession, loans declined by \$1.3 billion, or 7.5 percent—a reduction which was reinforced by a \$0.6 billion decline in bank holdings of U. S. Government securities. Largely as a result of these movements, adjusted demand deposits fell by

<sup>6</sup> The periods of economic contraction selected for comparison correspond closely, but not precisely, with the generally-accepted reference dates of peak and trough, which are as follows: Peak—May, 1937, trough—June, 1938; peak—November 1948, trough—October 1949. The dating of the 1953-54 recession is still not definite, but can be taken tentatively as mid-year to mid-year.

The reason for comparing changes in assets and liabilities during full-year periods, rather than the actual periods between peak and trough, is that substantial seasonal variations in the items might otherwise conceal or exaggerate basic trends, depending upon the time of the year.



**During the past three recessions, demand deposits at commercial banks have shown less susceptibility to decline; this has been due in considerable measure to increased bank holdings of Government securities during the recession periods.**



3.6 percent. In the 1948-49 downturn, however, loans increased by 0.5 percent, instead of showing a decline. Bank holdings of U. S. Government securities rose by \$4.3 billion, but this gain was more than offset by a reduction in cash assets of banks—the latter not shown on the chart. Consequently, adjusted demand deposits registered the usual decline in a recession, but by a slight amount—only 0.9 percent, much less than in 1937-38.

In the 1953-54 downturn, loans actually increased by 3.4 percent, and this was reinforced by a gain of 8.5 percent in U. S. securities held by banks. Much of the increase in assets was reflected in a 7.3 percent rise in time deposits. Nevertheless, adjusted demand deposits rose by 1.4 percent, to mark a potential new path in the behavior of the major part of the money supply in recession periods. In comparing the three recessions, therefore, there is a small but clearly discernible trend toward a money supply that is able to resist contraction in a period of economic downturn. (See the cover chart for a contrast in the dollar movement of demand deposits during the recessions of 1948-49 and 1953-54.)

Stability of the means of payment during

a recession tends to be an aid in maintaining expenditures, though it is far from a complete remedy. Adequate liquidity in the economy is a necessary but not a sufficient condition for the achievement and maintenance of high-level employment and production. Spending decisions of individuals and business firms are influenced by many other forces than the supply of money and liquid assets, and the cost and availability of credit, even though these factors are important.

Whether or not the money supply will remain "recession-proof" in the future cannot be known, but basic forces at work seem to point in that direction. If so, the behavior of the money supply will have changed from an unstabilizing factor to one that makes a contribution, however modest, toward greater economic stability. Such a conjecture, based on limited trends observed in the past three recessions, does not apply to the circumstances of a major depression. For the latter, there is insufficient recent experience for making a conjecture. Nevertheless, it can be hoped that the factors just outlined would at least moderate any downturn in the money supply, if such a period of drastic contraction of general business should occur.

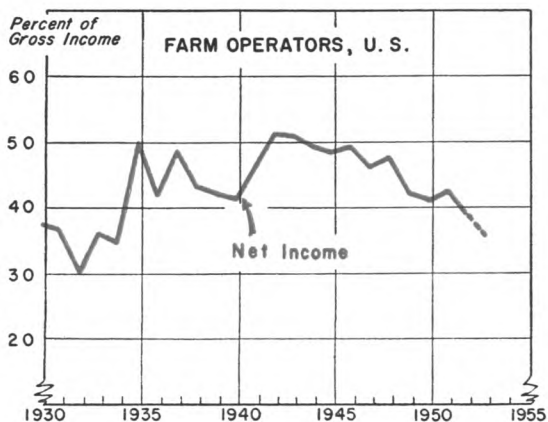
# Higher Expense Ratios in Agriculture

THE net farm income of the nation's farmers last year, as a proportion of gross income, was the lowest in nearly twenty years.<sup>1</sup> Not since 1934 have farmers retained as net income a smaller percentage of the gross. Or, putting it the other way, production expenses as a proportion of gross income have reached the highest point in about twenty years.

Prices received and prices paid have fluctuated widely over the years. Attention should be given to the physical change in input and output in combination with these price relationships to explain why net farm income relative to gross farm income in 1953 was the lowest in nearly two decades.

The net farm income as percent of gross income of farm operators in the nation has declined since 1942, offsetting the net advance of the previous ten years. The decline became more pronounced after 1946. (See accompanying chart.) In 1942 more than 50 percent of gross farm income remained as

*Net farm income last year, as a proportion of gross income, was the lowest in nearly twenty years.*



net farm income.<sup>2</sup> Because of the persistent rise of production expenses during subsequent years, only 35 percent of gross income remained as net in 1953.

A second chart brings out the same facts in terms of the rise in production expenses as a percentage of gross income. Thus, the expense ratio in the aggregate has risen during the past decade, and is currently about on a par with that of 1934, although it has not quite reached the previous high of 1932. The high of nearly twenty years ago, incidentally, was only slightly above that of 1921.

The fact that gross income to the nation's farm operators this past year was over four times what it was in 1934 tends to obscure the current low ratio of net to gross farm income. The relatively high net income of this past year, as compared with such a year as 1934, can be attributed to marketings which were approximately double and prices which were nearly three times as high as in 1934.

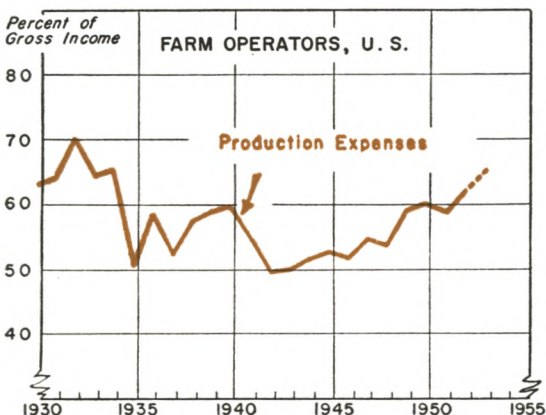
A trend similar to that observed nationally in the ratio of expenses to gross farm income is revealed by data assembled from several different types of farms.<sup>3</sup> All of the major types of farms in Ohio, for example, have experienced the ten-year long rise in the ratio of expenses to gross income illustrated in the preceding chart. The differences among the ratios for the three types of farms shown in the chart have been relatively narrow during the past three years.

<sup>1</sup> Net farm income refers to income from farming after production expenses. It corresponds broadly to the amount available to cover operator's compensation for labor, management and capital invested. Gross income includes all receipts from the sale of farm products, and an adjustment for net change in inventories.

<sup>2</sup> The price situation in 1942 was in some respects unusually favorable for farmers because of the effects of general price controls, coupled with less effective restraints on prices of farm products.

<sup>3</sup> Ohio Farm Account Summaries, 1935-1953, Agricultural Economics Department, Ohio State University, Columbus, Ohio.

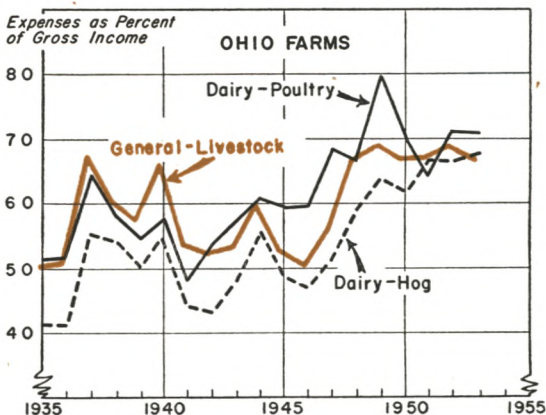
The expense ratio has risen during the past decade, and is currently about on a par with that of 1934.



In seeking an explanation as to why the ratio of net to gross farm income turned downward after the early 1940s, a period when output was expanding and average prices received were advancing, it seems appropriate to note the change in production expenses in contrast to the change which occurred in farm output. In the period since 1942, for example, total production expenses in dollars have increased by 128 percent, while the prices paid for items used in farm production rose only 88 percent; the expansion in farm output in the same period was 14 percent. Thus, on a "constant dollar" basis, it would appear that expenses rose about 20 percent while physical output was rising by 14 percent. If production expenses in dollars are related to the rise in physical volume of farm output, it is evident that there was a substantial increase in the expense per unit of farm output,—in fact, a greater increase than the rise in prices paid (see chart on page 12). Presumably the more rapid rate of increase in expense per unit can be attributed to an increase in physical input relative to physical output over the period since 1942.

It is common knowledge among those associated with agriculture that farm operators during the past decade have purchased much more of the goods and services required in farm production than their predecessors. Un-

On all three major types of farms in Ohio, the expense ratio has risen during the past ten years.



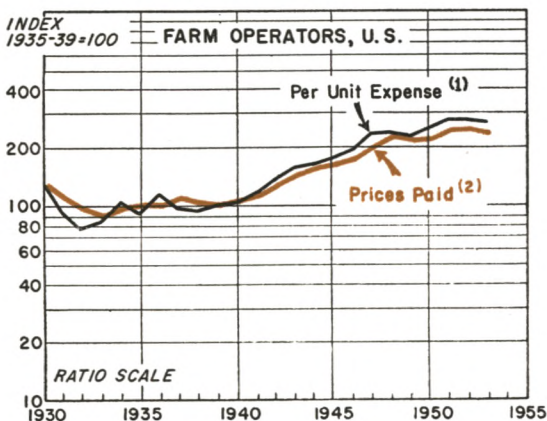
der the impetus of rising prices and income in the early 1940s, farmers generally adopted the findings of research more rapidly—some authorities say at an unprecedented rate—and added materially to their investment in mechanized equipment and other labor-saving devices to compensate for the exodus of farm workers attracted into war industries and those called in the armed forces. Each of these developments necessitated purchases of goods formerly produced on the farm, or services formerly performed by farm workers, and the combination unquestionably had a large influence on the quantity of purchased goods and services.

The decline in gross farm income from the postwar high of 1951 was accompanied by a slight contraction in the dollar total of production expenses in 1953. The contraction, however, was negligible in relation to the shrinkage in gross income. Unless production expenses can be adjusted to coincide more closely in time and amount with the present downward trend of gross income (which appears questionable in view of the greater quantity of purchased goods and services needed in agriculture) it is probable that the expense ratio will move even closer to the high of 1932. What then are the impacts on agriculture of an expense ratio comparable to that experienced in the early 1930s?

In considering some of the impacts of a



**Per unit expense of farm operators has risen more rapidly than average prices paid, suggesting a relative rise in physical input.**



- (1) Per unit expense means production expenses divided by farm output.  
 (2) Prices paid exclude items used in family living.

high expense ratio on agriculture it seems appropriate to think in terms of land, labor, capital and management—the four principal factors of the agricultural enterprise. The impact on one of these factors may well be reflected further to one or more of the other factors. The addition of power and equipment to save labor, for example, has often led subsequently to an enlargement of the farm business so as to permit distribution of the investment cost over a greater volume of output.

*Impact on Capital.* A marked substitution of capital in the form of power, machinery and equipment, for labor in recent years (and possibly to a lesser degree the substitution of capital in the form of soil amendments for land) was associated with the rise in the expense ratio previously described. The fact that the expense ratio in agriculture generally has risen over the past decade suggests that the increase in aggregate income was not in proportion to the greater dollar volume of capital goods being used.

Many farm operators found savings to be inadequate to meet operating capital requirements as it took more cash to meet production

expenses. They, therefore, resorted to the use of borrowed funds. Non-real-estate loans, as a consequence, rose steadily after the war and reached an all-time high in mid-summer of 1952. Farm mortgage debt has also risen steadily from the postwar low of 1946, and at \$7.7 billion on January 1, 1954, it was 7 percent above a year earlier and the highest in twenty years. Some further expansion through the first quarter of this year was indicated in recent reports of the principal lenders.

During the past two years the expansion in farm mortgage debt has been partially offset by a contraction in non-real-estate outstandings (exclusive of price support loans) but more recent data indicate that the rate of decline in short-term loans has become less pronounced than a year ago. The agricultural debt in the aggregate may, therefore, be approaching the relatively high dollar amounts of the early thirties.

In relation to net income the present debt is admittedly less burdensome than it was in the 1930s. Nevertheless, with a high ratio of expenses to gross income, the reserve to meet unexpected expenditures frequently proves inadequate. Earnings from the various phases of the farm business must prove to be almost precisely as planned, or the ability to meet loan repayment schedules is impaired. When repayment schedules prove difficult to meet, then defaults, refinancing or conversions of short-term credit to longer-term farm real-estate loans become more common. Refinancing and conversions have increased in recent months, but the number of cases generally is indicated by lenders to be of moderate proportions except in areas where prolonged drought or other local adversities have prevailed. Defaults so far have remained at unusually low levels.

On balance it can be said that a high expense ratio, while partly a consequence of greater capital use, is also a causal factor in increasing the operating capital requirements of agriculture. This in turn has led to a marked expansion in the use of borrowed funds. If the expense ratio continues to rise,

bringing continued contraction in net income, a further impairment of ability to service debts is probable. On the other hand, if net incomes can be maintained by improving gross income or by lowering production costs, the present relatively moderate debt burden may be resolved with less unfavorable influences on agriculture than occurred in some previous periods when the ratio of net to gross farm income was comparable to that of the present.

*Impact on Land.* In an effort to maintain income when the expense ratio is rising, farm operators tend to expand output by cultivating more land or cultivating the same area more intensively. The acreage of the 52 principal crops grown, for example, was the largest of record in 1932, a year preceded by a three-year rise in the expense ratio. The recent rise in the expense ratio, however, has not been accompanied by an appreciable change nationally in crop average. (The acreage of principal crops this year is about on a par with last year, despite a reduction of 20 million acres in crops under allotments.) While there has been no significant change in the total acreage of crops on a national basis in the recent period, the aggregate amount of fertilizer represent more intensive cultivation of the area used.

The impact of an upward trend in the expense ratio on the use of land and capital is illustrated by the experience of 35 Northeastern Ohio dairy-poultry farm operators in the period 1946 to 1953. The operators of those farms enhanced their gross income by 29 percent by milking a third more cows and cultivating a fourth more cropland during the past two years than in the first two years of that period. The net farm income, or the amount accruing to cover labor, management, and capital invested, rose less than 8 percent. The total capital invested increased slightly more than 50 percent. In brief, despite a high gross income, the operators of those farms actually received less compensation for labor and management on the average over the last two years than the first two years of the postwar period, even though

they milked a third more cows and cultivated a fourth more cropland with the same manpower. Such an outcome suggests that the "break-even points" for most farm enterprises were rising rapidly<sup>4</sup>, although the available data do not lend themselves directly to the "break-even point" type of formulation.

*Impact on Labor.* Farm wage rates rose during and following the war at a much greater rate than the prices of other goods and services used in farm production. The advance in wage rates, however, was insufficient to prevent large numbers of capable and experienced farm workers from being attracted into more lucrative off-farm employment. Farm operators as a consequence were forced to choose between depending upon the labor that could be obtained at prevailing rates or adding more power and equipment to compensate for the decline in number of workers. A majority chose the latter alternative, with the result that farm mechanization was precipitately speeded up. The total component of power and machinery on farms was recently estimated by the U. S. Department of Agriculture to be nearly 75 percent greater than in 1941.

This addition of power and equipment and the widespread adoption of technological improvements in agriculture (such as more liberal and better placement of fertilizers, soil and moisture conservation practices, hybrid seed, chemical weed control, antibiotics, production testing, and artificial insemination) permitted fewer workers to turn out a larger volume of output. The result was an increase in output per man-hour of more than 35 percent over the past ten years. An increase in output per man-hour of those proportions was a strong influence against a rise in the expense ratio. Nevertheless, the fact remains that the expense ratio has risen, suggesting that the advance in per unit cost outweighed

<sup>4</sup> I.e., they were rising from a starting point in the early postwar period which had reflected an unusually favorable situation.



the gains stemming from a higher output per man-hour.<sup>5</sup>

*Impact on Management.* Those in the position of managing a farm enterprise during a rise in the expense ratio have been required to think in terms of expanding gross farm income in order to maintain the net return. For some farm operators, this has meant horizontal expansion in the form of more acres, more cows, or larger flocks; for others

<sup>5</sup> This outcome may have been due partly to a proportionately greater advance in prices of substitutes for man-hours than occurred for prices of farm products; likewise the decline from postwar highs has not been as marked for the "substitutes" as it has been for farm products.

it has taken the form of vertical expansion, such as the production of a higher value product or preparing and possibly delivering the product directly to the ultimate consumer. In each instance, of course, the management skill must be adequate to meet the added responsibilities or else the potential expansion in gross income is not forthcoming.

Those farm managers who have been most successful in meeting the problem of an upward trend in the expense ratio have attained a high degree of efficiency in the use of all four factors in agricultural enterprises, namely land, labor, capital, and management.

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## SUMMARY OF NATIONAL BUSINESS CONDITIONS

By the Board of Governors of the Federal Reserve System

Business activity generally continued stable in July. Over-all measures of industrial production, employment, prices, and retail sales changed little. Construction activity rose further. Farm crop prospects deteriorated owing to unusually hot, dry weather. Credit availability generally remained easy.

### Industrial production

The Board's preliminary seasonally adjusted index of industrial production held steady in July at the May-June level of 124 per cent of the 1947-49 average. Plantwide shutdowns for vacations and other purposes, which have become widespread in the post-war period, resulted in about the usual seasonal drops in most industries.

Durable goods production in July rose slightly, reflecting mainly further strength in output of major household goods. Television set production showed much less than the usual seasonal decline in July, partly because important work stoppages were terminated. Output of furniture rose further. Following a high rate of output in the second quarter, auto production declined in July to a level well below the exceptionally high rates of last year. Steel output also fell by more than the seasonal amount in July; mill operations for the month were at 63 per cent of rated capacity. In early August steel output has been scheduled at around 64 per cent of capacity. Lumber production was lower in July as work stoppages continued.

Nondurable goods output in July was unchanged for the third month at 116 per cent of the 1947-49 average, as compared with a low of 112 last winter

and 121 a year ago. Substantial recovery in leather and rubber products industries in May and June was interrupted in July by an important work stoppage, while output of paper and chemical products apparently continued very strong. Activity at petroleum refineries was curtailed moderately further in July with inventories continuing at advanced levels, and there was also a reduction in crude oil production.

### Construction

Expenditures for new construction in July, seasonally adjusted, rose slightly further from the advanced level of earlier months, as most types of private construction showed small increases. Value of contracts for new construction was at a new high for July, with increases from June in both private and public awards. The number of new housing units included in appraisal requests to the VA continued unusually large in July and was more than twice the year-ago number.

### Employment

Seasonally adjusted employment in nonagricultural establishments declined slightly in July to 48 million, reflecting largely work stoppages in the lumber and rubber industries and a further reduction in metal-working employment. Employment was relatively stable in nonmanufacturing industries. Unemployment, at 3.3 million, continued at the May-June level.

### Agriculture

Hot, dry weather over much of the nation's agricultural area reduced crop prospects during July.

Total volume is now officially forecast at about 5 per cent below last year and about the same as in 1950, the most recent year in which production restrictions were also in effect on all major crops.

### Distribution

Retail sales were generally maintained in July after allowance for seasonal variation. Auto sales receded from the sharply advanced June level but sales of most other merchandise held steady or increased. At department stores the seasonally adjusted sales index rose to 115 per cent of the 1947-49 average, 3 per cent above June and 2 per cent above July a year ago. Department store stocks in June showed little change at a level 5 per cent below a year ago.

### Commodity prices

Wholesale prices generally continued to change little in July and early August. Prices of livestock and products declined somewhat further during July as marketings showed a more than seasonal expansion. Grain and soybean futures rose, reflecting adverse weather conditions, but weakened in early August as more favorable weather developed. Among industrial commodities, aluminum prices were raised and steel scrap advanced, but copper scrap declined slightly. Prices of some petroleum products strengthened in early August following earlier decreases. Lumber prices, despite the continued work stoppage, declined somewhat from the advanced levels of early July.

A slight rise in the consumer price index in June reflected chiefly seasonal increases in fresh fruits and vegetables. All groups other than foods were unchanged or down slightly. Fresh fruits and vegetables rose somewhat further to mid-July, but meat prices have declined since then.

### Bank credit and reserves

Bank holdings of U. S. Government securities increased substantially in early August reflecting primarily bank purchases of part of the 3.7 billion dollars of tax-anticipation certificates sold by the Treasury. Agricultural loans at commercial banks declined sharply as a result of the redemption of Commodity Credit Corporation paper.

Excess reserves of member banks averaged about 900 million dollars in late July and the first part of August with borrowing at the Federal Reserve generally less than 100 million. About 900 million dollars of reserves were made available to banks through reductions in reserve requirement percentages, of which only part was absorbed by reduction in Federal Reserve holdings of U. S. Government securities, increases in Treasury deposits at the Reserve Banks, currency outflows, and increases in member bank deposits. Reserve positions tightened at banks in the money centers in the second week of August, however, reflecting largely shifts of funds due to Treasury operations.

### Security markets

Yields on most Government securities advanced moderately from mid-July to mid-August. In early August holders of the 7.5 billion dollars of certificates maturing in August and September were offered in exchange a 1-year 1 $\frac{1}{8}$  per cent certificate or a 6-year and 3-month 2 $\frac{1}{8}$  per cent bond. Exchange into bonds totaled 3.8 billion dollars, and cash redemptions were less than 3 per cent.

Yields on high-grade municipal bonds continued to decline during late July and early August, while corporate bond yields were steady. Common stock prices increased further in the latter part of July, but declined somewhat early in August.

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## Announcement

The Fidelity Trust Company, Pittsburgh, Pennsylvania, upon opening for business August 7, 1954, became a member of the Federal Reserve System. Fidelity Trust Company is the bank resulting from the merger of The Colonial Trust Company and Fidelity Trust Company, both of Pittsburgh, Pennsylvania.

The merged bank has a capital structure of more than \$27,500,000, comprising common capital of \$4,187,500, surplus of \$19,812,500, and undivided profits of \$3,590,730.23.

C. A. McClintock is chairman of the board of directors and John A. Byerly is president of the new bank.

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