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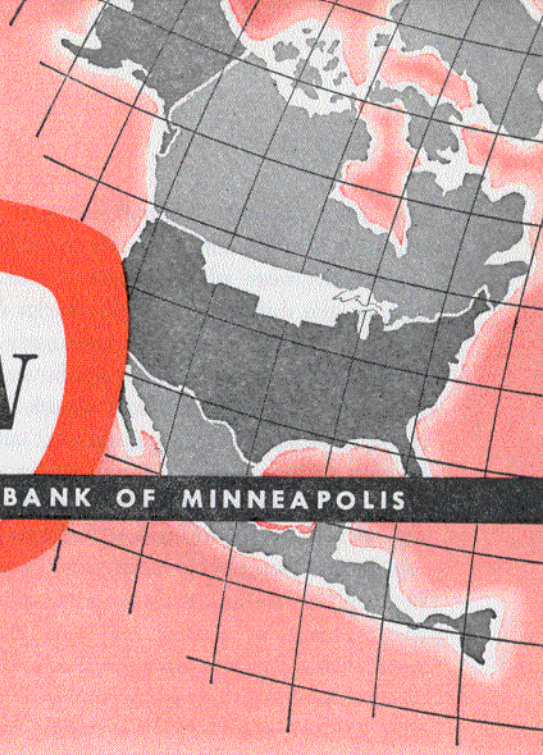


Monthly Review
OF THE FEDERAL RESERVE BANK OF MINNEAPOLIS

Moderate prosperity in district

District farm land values in recent months are seen to have leveled off and even declined in some areas by bankers and others who finance district farmers. However, the U. S. Department of Agriculture's survey of land values as of November 1959 continued to show an upward trend in most areas of the district except in North Dakota. Recent USDA statistics through March 1, 1960 will not be available until mid-1960.

Since district farm income, as a result of the 1959 drouth and lower farm product prices, has been running 10 to 13 percent below last year, it is logical that buyers should become more cautious about bidding land prices still higher. It is surprising to note, however, that in the period 1955 to November 1959, farm land value increases in Ninth district states ranged from about 22 percent in North Dakota to 40 percent in Minnesota in spite of the price-cost squeeze in agriculture during that time. Furthermore, land values in these states are now about triple what they were at the beginning of World War II. Farm mechanization and the economic advantages of increasing the size of the farm unit are often given as major causes in boosting farm land prices, particularly in recent years.

Aside from reduced farm incomes, most other important district economic indicators continue to signal moderate prosperity in the region. Dur-

In this issue:

A look at the liquidity concept plus three views of liquidity and debt in various sectors of the economy . . . page 6

ing January total nonagricultural employment was at a new high level for the month, department store sales were above January 1959, and bank debits (the dollar volume of checks written) just barely topped the figures of a year earlier. Furthermore, business sentiment is moderately optimistic for the months immediately ahead. For example, the outlook for iron ore mining next summer is seen as promising since ore stocks at the mills are expected to be on the low side and the demand for steel is expected to be strong. Construction activity, which is now near the seasonal low point, should pick up shortly and the prospects of a strong seasonal pickup in activity this spring are reported good. Even the manufacturers and distributors of farm machinery are anticipating favorable sales this spring in spite of the recent trend in farm incomes.

Altogether, the current economic situation and the immediate outlook for the district remains cautiously optimistic. What happens here, however, will be influenced materially by future national economic trends. It may be noted that in recent years a less optimistic view of the economy in January and February has been a recurring phenomena. Certainly the recent relatively stable trends in both the wholesale and consumer price indexes are a desirable development.

If the possibility of inflation has been lessened, the question arises as to the reasons for it. There are, of course, many factors which influence the economy but three relatively important ones in recent months seem to be (1) ample industrial capacity to increase the supply of goods, (2) an increase in foreign competition which tends to restrain domestic price advances, and (3) the vigorous use of public measures including monetary policy.

EMPLOYMENT RECOVERY SLOW

Total employment in the four full Ninth district states in January of this year was only a slight 0.5 percent higher than a year ago. During the past year district employment has followed the national upward trend but with a much smaller rate of increase. For the nation as a whole, total civilian employment in January stood at 64 million —a new record for the month and about one million or 1.6 percent above a year ago.

Employment trends differ significantly among major industries within the district. On farms the number employed continued to decline. The mining regions were hard hit by work stoppages in iron ore and copper and have not fully recovered. However, nonfarm employment in most areas of the district rose to a record level.

District agricultural employment has declined year after year since the beginning of World War II. The average number of monthly farm workers in 1959 was 3.7 percent less than in the previous year. In January of this year, it was down 5 percent from a year earlier. Total workers on the nation's farms in January also had declined by 5 percent in the same period.

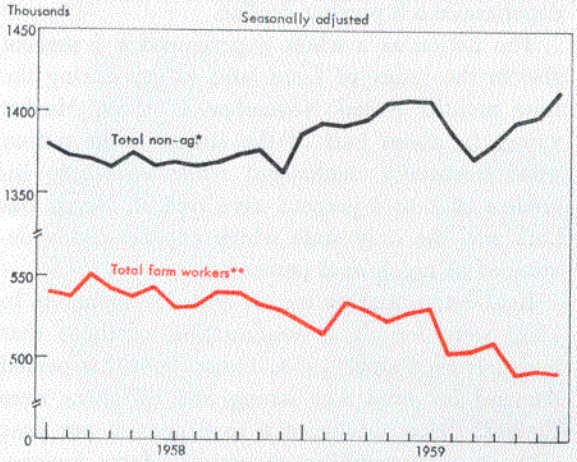
District nonfarm employment expanded sharply following the resumption of operations in steel and iron ore industries in November, and in January it stood at a record 1,361,000 for the month. In the nation, nonagricultural employment stood at 59.4 million, also a record for the month.

Manufacturing employment in this district, on a seasonally adjusted basis had not quite recovered in January to the level prevailing last July before the steel strike was called. The slower than anticipated recovery in manufacturing employment was probably due to a decline in the market for finished steel products rather than shortages of steel inventory.

When work was resumed in iron ore mining and shipping last November, most workers were recalled to their jobs. Of course, with the closing of the navigation season came the usual layoffs but winter employment has been somewhat higher than last year. For instance, in Minnesota metal mining was up 4 percent in December and 6.5 percent in January from a year ago.

The outlook for iron ore mining in 1960 is

Ninth district employment



*Four states wholly within district plus Upper Michigan.
**Four states wholly within district.

favorable. A high level of steel production throughout the winter has reduced stocks of ore at steel mills. Furthermore, steel production is expected to continue at a high level throughout the year, creating a large market for ores. This points to a relatively early opening of Great Lakes shipping if weather conditions are favorable and indicates that a high tonnage of ore may be shipped this year.

The copper mining strike in Butte, Montana was settled in February. However, even with a settlement of the labor-management dispute, employment is not expected to return to the pre-strike level. The Anaconda Company is expected to permanently close many underground mines and concentrate operations on the more economical open pit mines where automatic machinery can be used most effectively. With improved mining equipment, the company employed only half as many miners at Butte in 1958 as in 1956 and produced almost as much copper.

A strike settlement was reached in late February at the White Pines Copper Company in Upper Michigan. Employment should return to the former level now that work has resumed.

Despite the record level of district nonagricultural employment, the number of unemployed workers still remains quite high. The rise in employment during the current period of economic expansion has not been enough to absorb completely the growth in the labor force. For instance, the Minnesota Department of Employment Security has estimated that approximately 20,000 new jobs are needed annually to absorb the annual growth in this state. The expansion in employment has fallen short of this figure; the growth in nonagricultural employment between 1958 and 1959 was 14,400.

Initial claims filed for unemployment insurance in the four full district states during January were approximately equal to the number filed a year earlier. They were higher in the western half of the district and lower in the eastern half. For instance, they were down 13 percent in Minnesota and by almost 30 percent in the entire state of Michigan.

The western district states toward the end of 1959 had a large inventory of job seekers. In Montana, there were more than 20,000 job applicants in December. This was 3,000 more than a year earlier and 10,000 more than the average number of applicants in December for the period from 1950 to 1958. In North Dakota, the number of job seekers from October through December was approximately a third higher than in the comparable months of 1958. In South Dakota, the number was also relatively high; the South Dakota Employment Security Department reported the payment last December of 1,583 more benefit claims than a year earlier.

District states generally have high rates of insured unemployment during winter and they have very low rates during summer. This is caused by the greater seasonal factor in employment here than in the nation as a whole. However, rates of insured unemployment in some district states this winter are higher than in former periods of economic prosperity.

CATTLE IMPORTS DROP SHARPLY

Live cattle imports into the United States totaled 695,000 head in 1959; this was 39 percent below the record level imports of 1958. The sharp drop in cattle imports last year terminated a rise which began in 1957.

With the exception of periods of embargoes (explained by war and disease), imports of cattle rise and fall in response to changing price relationships between the U. S. and foreign markets. Cattle imports fell sharply in 1956 with the decline in U. S. cattle prices which caused the Winnipeg-Chicago price spread to narrow to less than $2.00 per hundredweight. Rising U. S. cattle prices in 1957 and 1958 widened the price spread to favorable levels. The spread between Winnipeg and Chicago averaged $5.09 during 1958, the year when the record 1.2 million head were imported.

Cattle imports dropped most sharply during the last half of 1959. The decline reflects a shift to rebuilding of Canadian cattle herds and a less advantageous price spread than was experienced in 1958.*

CHICAGO AND WINNIPEG PRICE SPREAD

	Good stocker and feeder steers		
	Winnipeg	Chicago	Spread
1955	$16.03	$19.28	$3.25
1956	16.31	18.07	1.76
1957	17.52	20.76	3.24
1958	20.52	25.61	5.09
1959	22.12	25.56	3.44

FARM LAND VALUES

Farm land values in Ninth district states continued to exhibit diverse movements during the four-month period ended November 1, 1959, according to a recent U. S. Department of Agriculture release. Land values in Minnesota advanced 2 percent while in Montana farm land values moved up 4 percent during the period. Values were reported unchanged in South Dakota between July and November, while North Dakota experienced a 2 percent decline.

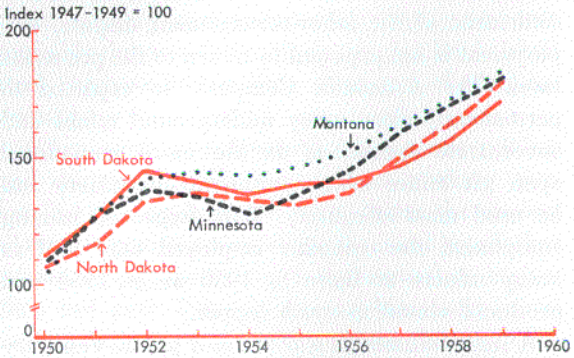
The nation as a whole experienced a 1 percent rise in the index of farm land values during the four months ended November 1, 1959. Market values in about half of the states in the nation were essentially unchanged while elsewhere increases of 2 to 4 percent were typical. North Dakota was the only state which experienced a decline of as much as 2 percent.

Real estate market trends and developments in 1959 were largely a continuation of those that had prevailed since 1954. Throughout this period demand for land was strong and offerings were limited. Prices advanced 6 to 8 percent per year without corresponding changes in farm income. In 1958 farm income rose sharply; this lent support to the land market through mid-1959.

Recent reports from scattered land market observers throughout the district indicate a general leveling or easing of land prices. The major factor noted was the sharp decline in farm income due to drouth in 1959. The current 6 to 6½ percent interest rate was also noted as a possible factor causing some decline in demand.

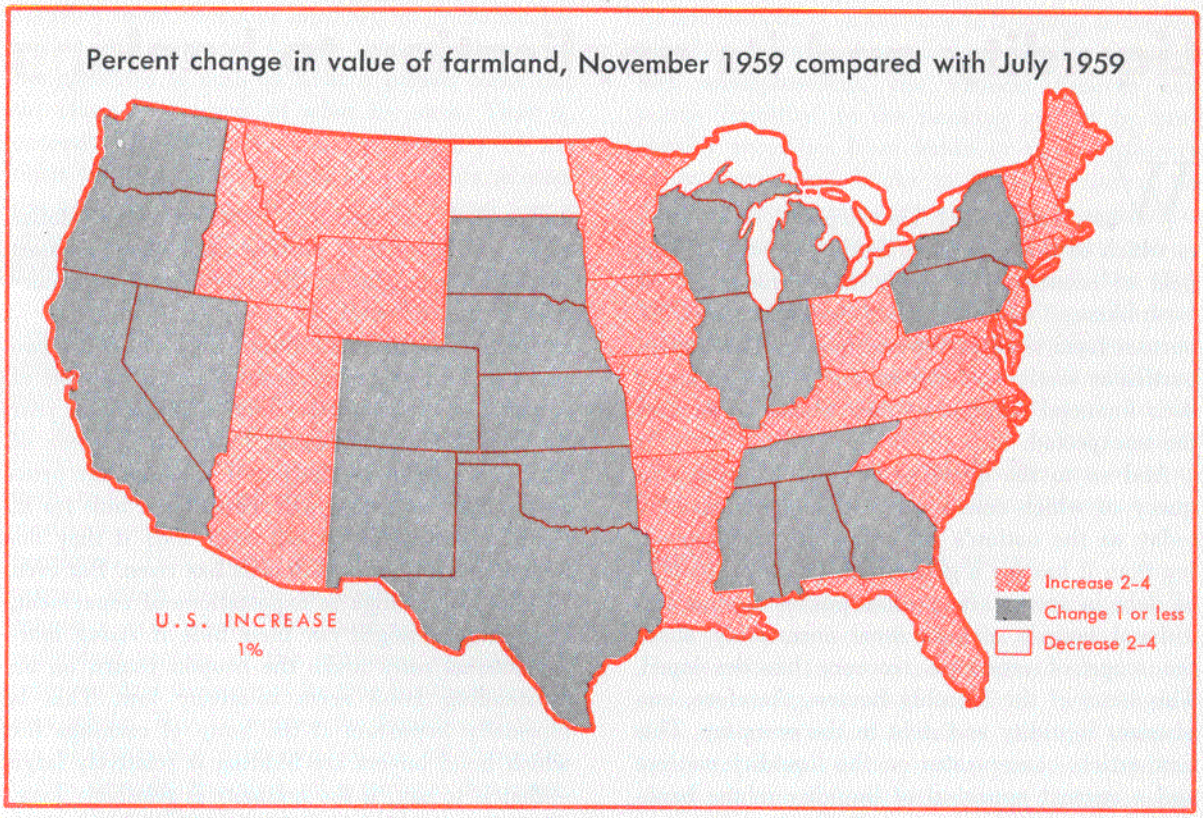
Respondents generally indicated a lessening of

Farm real estate value*



*All farmland with improvements as of March 1, 1959.

*For a more detailed discussion of cattle imports, see "Cattle Imports Set New Record," Monthly Review, Volume 14, Number 3, March 1959.



inquiries for farm land purchases and an increase in offerings. Offerings were mostly at prices experienced a few months ago and few transfers were reported.

DISTRICT BANKING DEVELOPMENTS

Loans of district member banks dropped $30 million in January this year in contrast to a $15 million loss in the like period a year earlier. In addition to this, a $75 million seasonal cutback in deposits at district member banks required them to liquidate $11 million in government securities and a like amount in other securities. City banks bore all but $2 million of the January deposit losses. Additional data about city banks since the January reporting date shows that these banks continued to lose deposits seasonally through February 17. These deposit losses, coupled with a $10 million gain in loans other than loans to banks, necessitated additional liquidation of securities.

In January reserve city banks in the district continued to borrow relatively more from their Federal Reserve bank than was the case in the nation as a whole. Country member banks here borrowed about as much relative to their required reserves as did country banks in the rest of the nation. Borrowing reserve balances from other commercial banks also ranked as an important net source of funds. On the average, district banks borrowed 13 percent of their required reserves from other commercial banks and from their Federal Reserve bank in January and almost 19 percent during the first three weeks in February.

Liquidity and its application to banking

What is liquidity? That depends, to be sure, to which of many possible fields you refer. In the field of economics, it might be characterized as 'cash likeness' or 'moneyness.' And it becomes important from time to time to look at liquidity in particular sections of our economy as a gauge of their financial soundness—their ability to weather the unexpected.

And so to the question of liquidity; the adequacy of which comes under thoughtful scrutiny today as the nation's cash supports more spending than it has for a generation, as the proportion of debt in sector after sector pushes against traditional bounds and as some uncertainty about the scope of economic recovery has developed. This issue of the Monthly Review, therefore, emphasizes liquidity and debt in the economy. This first article concentrates on the liquidity concept and a current appraisal of liquidity in the banking sector of the economy. Following this, two articles discuss the debt position of the farm and the nonfarm sectors of our economy.

Liquidity—a property of an asset

Everything of value has some degree of the liquidity property. Those things which are most cash-like are most liquid. Only cash itself commonly serves as a means of payment, a unit of account, and a standard for deferred payment. Cash includes both pocketbook and checkbook money. But assets other than cash can provide a nearly cash-like store of value. The measure of the liquidity of an asset is how cash-like it is in matching the store-of-value-function of cash itself. Those assets which are not expected to sell very much below their present value are most like cash. Cash in terms of itself obviously never depreciates in value. An asset that is bought today for a dollar and is likely to continue to be worth about a dollar is more like cash in storing value than an asset whose value might readily skyrocket many times over or fall to nothing.

Fluctuation of asset values may arise for two reasons. The prices of assets change because of *changes in expectations about earnings*. If a year of drouth causes potential buyers of a piece of land to cut their evaluation of the earnings prospects of the land, they will reduce their bids for it. Bond buyers similarly cut their bids if they decide that the chance of default has risen. But even without any change in expectations of repayment, bond buyers might cut their bids if *rising market interest rates* make the coupon return on an outstanding bond seem relatively low. This is especially important if the lump of earnings for which bond buyers are bidding is relatively large —that is to say, if the maturity is relatively long. Changes in market interest rates can't do much to the value of a bond that comes due tomorrow. But small changes in rates of interest can have significant effects on the value of long-term securities.

Changes in the value of assets, thus, can stem from changes in expectations of future earnings, changes in market rates of interest, or both. Since liquidity is synonymous with *low risk of selling at a loss*, those assets which demonstrate the least price variation are the most liquid. Thus, for the same risk of default, long-term securities are less liquid than short-term securities because of the wider range of their possible future values. And debts of borrowers that have uncertain prospects of repayment are less liquid than those that will very likely be repaid.

Liquidity is important because it affects the success people have or expect to have in satisfying their wants, individually or socially. In order to

appraise these effects of liquidity on economic behavior, it is necessary to take account not only of the closeness to cash of what a person owns but the closeness to cash of what he owes. That is, account must be taken for the liquidity of his debts from the standpoint of his creditors. Hence, the *net liquidity position* of an individual (or a group) is a balance of liquidity of assets and liabilities. No perfect balancing exists because net liquidity can sometimes be increased by diversification. Insurance companies, for example, chance large losses on individual customers but take almost no chance of over-all loss. Possible losses may be expected to be offset because of their many individual customers. But with the exception of such restructuring, increases in the liquidity of creditors reduce the net liquidity positions of borrowers. Thus, in so far as private debt is concerned, much liquidity is washed out for the economy as a whole. This need not be true for individual sectors of the economy as discussed later on. And it need not be true for the economy as a whole. This is because the liquidity of holders of the public debt requires no offsetting liquidity loss on the part of a private borrower. *Thus, the net liquidity position of the private economy depends in large part on the liquidity associated with the public debt. And the degree of liquidity associated with the public debt in turn depends on its amount and its maturity structure.* Public debt, in this context, would include all the debts of the Treasury and Federal Reserve not mutually held.

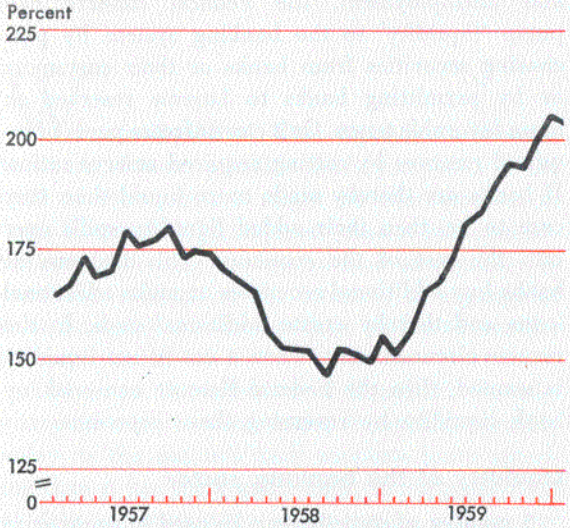
The importance of liquidity to an individual or the economy as a whole is simply this: Cash is needed to spend. But people can get by with less cash for spending if in place of some cash they hold assets whose prices don't change much. That is, they can economize on cash if they own relatively liquid assets. Since spending essentially flows out of pools of liquidity, *desired changes in total spending often can be obtained by way of Federal Reserve and Treasury addition to or deduction from the nation's net liquidity position.* As an example, if an increase in liquidity is desired to offset a wave of pessimism causing deflation and unemployment, the Federal Reserve can pump 'liquidity' to the banking system by purchasing securities from banks or their customers or by permitting banks to borrow reserves on more favorable terms. Or it can unfreeze pools of required reserves by cutting required reserve ratios. If banks are thereby made more liquid than they care to be, then their added liquidity spills over into the rest of the economy. This happens as banks buy additional securities or make additional loans and thereby create additional cash. In the reverse circumstances, when a cut in net liquidity is wanted, then the Federal Reserve can soak up bank liquidity by reversing these processes.

Liquidity of the banking sector

A number of statistics can be used to summarize the liquidity or lack of it in the banking system. These include ratios of such balance sheet items as loans and government securities, 'other' securities and government securities, required reserves and total reserves, borrowings and required reserves, and government securities of various maturities and total government securities. The following discussion explains why these statistics are useful in appraising the liquidity of banks and uses them for a current appraisal of bank liquidity.

Ratio of loans to government securities: Banks make loans to customers. As such, loans are not easily transferred from one bank to another or to other buyers. In the process a bank might lose a customer. But even if banks were willing to sell loans, they would in many cases have a difficult time disposing of them. Many of their customers would not be known to potential buyers. Also the kind of credit appraisal available to the lending bank would not likely be available to a potential buyer. But even if these marketing difficulties could be surmounted, loans would still be far less liquid than cash. Though it certainly has not been common in recent years, the possibility always exists that businesses or individuals may not be

Ratio of loans to government securities at all member banks

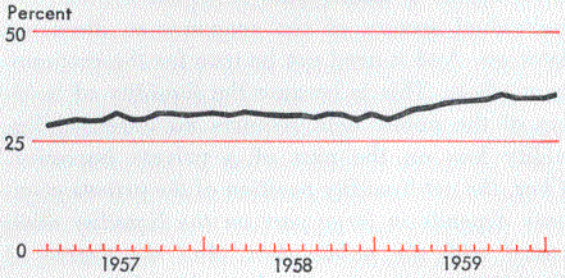


able to repay their loans. If all goes well, a loan will be paid, but according to the best guess of a loan officer, there might be a one-in-a-thousand chance that a particular loan applicant will have to default on a loan. Thus, a loan is less liquid than a U. S. Treasury promise to pay of equal maturity since there is essentially no chance of default on such a promise. Thus, loans are neither perfectly marketable nor perfectly riskless. For both reasons, they are not perfectly liquid. They don't store value as does cash. Nor do they store it as efficiently as matching maturities of government securities. Since loans are less liquid than government securities, an increase in loans relative to such securities ordinarily reflects declining bank liquidity.

In the past year total deposits declined slightly at member banks in the nation. But loans increased, thus forcing banks to liquidate government and other securities. The loan to government security ratio, as a result, rose to over 200 percent at the end of 1959—the highest level since the early 1930's and well above the approximately 150 percent figure that was recorded during the 1958 recession. The current level of the loan to government securities ratio is also above the 180 percent peak recorded during the 1957 boom.

Ratio of 'other' investments to government securities: Most 'other' securities owned by commercial banks are state and local government bonds. Since risk of default is greater in lending to these governmental units than in lending to the federal government and also since state and local government bonds are often less marketable, increases in the 'other' securities to government securities ratio reflects declining bank liquidity. At the end of January this ratio was 35 percent, up from 30 percent a year earlier and from the 31 percent peak recorded in 1957.

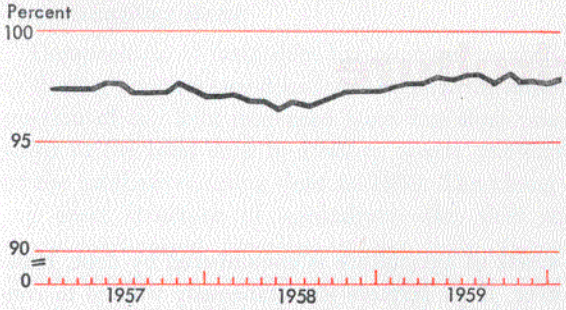
Ratio of 'other' securities to government securities at all member banks



Ratio of required reserves to total reserves: Cash reserves in excess of legal reserve requirements are the most liquid of all bank assets. Banks ordinarily keep excess reserves to a minimum because they can invest funds in highly liquid cash substitutes. For this reason the ratio of required reserves to total reserves doesn't change much over time. However, there is some tendency for the ratio to rise — an indicator of declining liquidity—during periods of strong credit demand and profitable uses for bank funds. Thus, the ratio increased from 96 percent in May 1958 to 98 percent recently.

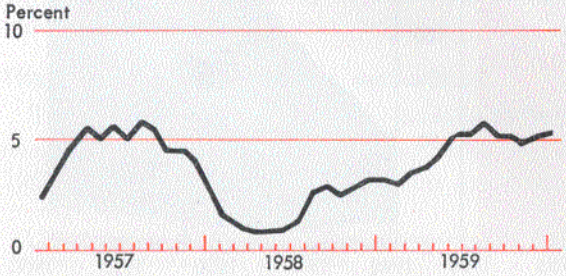
Ratio of borrowings to required reserves: When banks lose reserves to meet unexpected loan de-

Ratio of required reserves to total reserves at all member banks



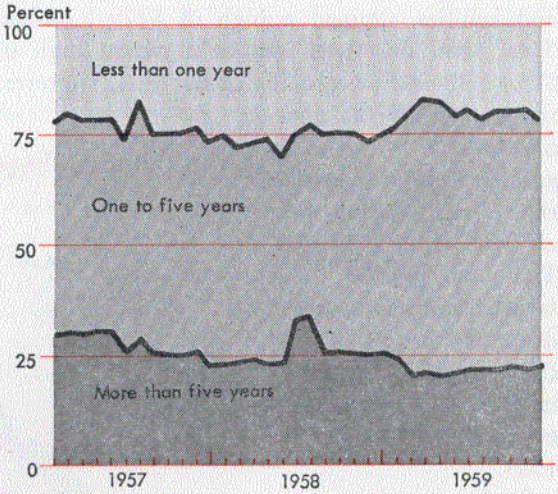
mands or deposit losses, then they may temporarily borrow reserves. As a result, they acquire cash reserves—the most liquid bank asset. But they also acquire short-term obligations which in themselves cut their net liquidity position. Many banks borrow or lend reserves to one another in the 'federal funds' market but the liquidity effect of these transactions is largely neutral because liquidity losses of borrowers for the most part match gains of lenders. Member banks may also borrow from the Federal Reserve banks. For a given level of required reserve balances, banks are less liquid if they borrow more reserves. In January member banks borrowed about 5 percent of their required reserves from their Federal Reserve banks. This compares with the record of 1957 but is well above that recorded a year ago.

Borrowings from the Federal Reserve as a percent of reserve requirements



Ratio of intermediate and long-term government securities to total government securities: Since increasing risks are associated with owning longer maturity debt, another indicator of the liquidity position of the banking sector of the economy is the ratio of various maturities of bank-held government securities to total government securities. In January of this year about the same fraction of government securities were to mature in more than one year as was true during the comparable period in 1957. The ratio was up considerably, however, from that existing in May 1958—a recession low. The chart below shows the changing composition of the maturity of bank-held government debt. Because of the relative decline in both the longest and shortest dated government securities there is uncertainty about the total liquidity impact on banks of the changing composition of the maturity of their government securities.

Maturity of bank-held federal debt



In summary, the banking sector apparently is less liquid than was the case a year ago. The statistics charted above support this conclusion. Whether the banking sector is liquid enough depends for the most part on the liquidity and spending patterns existing in the rest of the economy.

—William G. Dewald

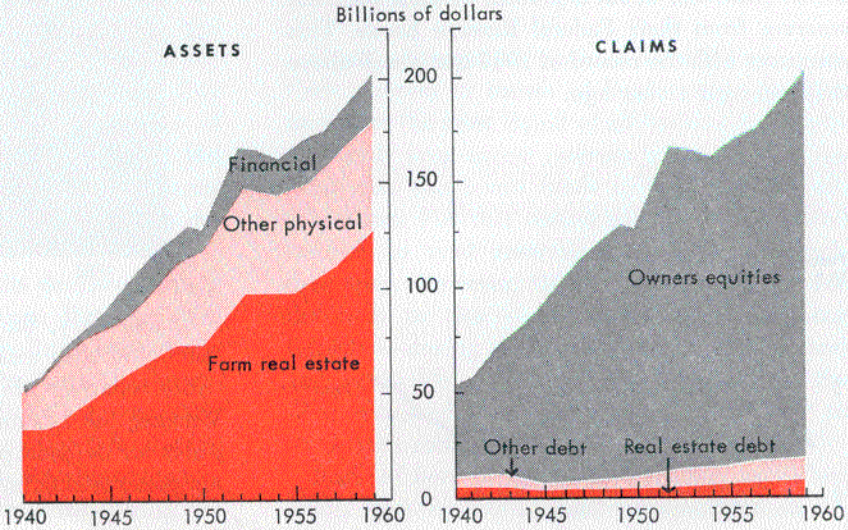
Debt position of agriculture

A 'balance sheet of agriculture' prepared by the U. S. Department of Agriculture presents the financial picture of the industry as though it were one large business organization. An analysis of the balance sheet indicates that this business of agriculture as a whole has been enjoying good financial health. The value of farm assets and the value of proprietor's equities in those assets have moved upward at a rapid rate with few exceptions during the years since 1940. Farm asset values reached a record $203.1 billion January 1, 1959 and equities attained a high of $179.8 billion. Total farm debt was also at a record high of $23.3 billion the beginning of last year. However, the growth rate in assets has been as great as or greater than the growth rate of debt during most of the last two decades. Thus, the ratio of total farm debt to total assets dropped from $1 of debt for every $5.3 of assets in 1940 to $1 of debt to every $8.7 of assets in 1959.

Looking at the present value of farm assets one might conclude that the agricultural industry is extremely liquid. And, this in one sense is correct; it is true that a very small portion of the total assets of agriculture is encumbered by debt. However, if all farmers simultaneously wanted to convert assets into cash the liquidity pictured by the balance sheet would quickly vanish since they would have no market to which to turn to 'cash-in' assets at current values.

Of course, liquidity positions of individual farmers may differ markedly from the situation pictured for the industry. At one pole, the most liquid end of the distribution, would be those debt-free farmers holding substantial cash or near-cash financial assets. At the other pole would be those farmers who had incurred heavy debt loads in exchange for high valued assets—debt loads

The balance sheet of agriculture



which were too heavy in relation to the earning capacities of those assets.

The changing debt

Composition of farm debt has changed markedly during the past two decades. The nonreal estate portion of the debt increased from less than one-third of the total debt in 1940 to nearly one-half of the total outstanding debt in 1959. The changing asset structure of agriculture—the shift to more mechanized farming—is the main factor which caused the nonreal estate debt to increase in importance relative to other debt. And it is generally felt that this trend is likely to continue.

The cost-price squeeze of long duration in agriculture has resulted in considerable 'shake-out' in the industry. Decreases in farm numbers have been going on at the rate of about 2 percent per year in recent years and, simultaneously, farm size has been increasing. During World War II there was a drive to replace the labor lost from agriculture with machines in an effort to increase the productive efficiency of the remaining labor, while during the decade of the 1950's excess labor developed as the mechanization drive continued.[1] In response to this mechanization drive, machinery and equipment assets increased 136 percent in constant dollars since 1940, while the average of all physical assets increased about 27 percent in real terms during the period.

The debt increase in recent years reflects on one hand added investment in productive resources; to this extent it indicates increasing productive efficiency of labor in agriculture. However, on the other hand a portion of the debt represents operating losses of farmers being squeezed out of the industry through the cost-price 'wringer.'

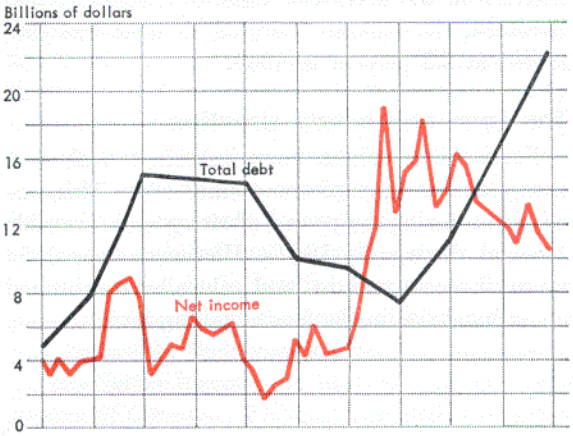
The impact of inflation on agriculture

The total value of physical farm assets increased nearly 277 percent in current dollar terms since 1940 while the increase in real terms amounted to 27 percent. Thus, inflation has added greatly to the dollar value of farm assets. While the rise in land and other asset values represents a valuable reserve for the farmer ready to retire, it does not enhance the position of the operating farmer. The operating farmer finds that inflation increases his operating costs while it has little effect on his income; agricultural product prices have not followed the pattern of costs because of the surplus supplies of agricultural commodities. Also, inflated asset values impair farm expansion.

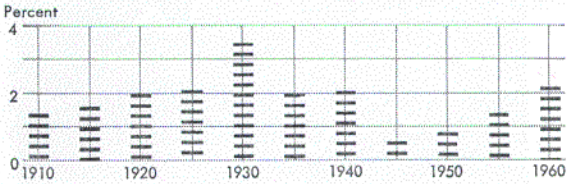
Changes in the debt-income picture

Rising costs, declining incomes and increasing debt worsened the debt-income ratio in agriculture during the 1950's. The favorable liquidity position of agriculture which developed during the 1940's

Total farm debt, net farm income



Ratio of total debt to net income*



*Debt is divided by income.

[1] See Report of the Governor's Study Commission on Agriculture, Minnesota 1958, pp. 67-68.

materially assisted the industry in the face of the adverse cost-price situation of the past several years. Without these financial reserves, financial difficulties would presently be much more widespread throughout the farming community.

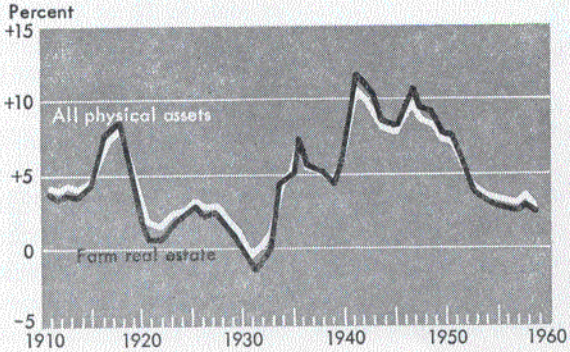
The current debt-income ratio at 2.2:1 is above the level of 1940 and significantly above the 0.8:1 ratio of 1950. The prospects for further declines in farm income and increases in production costs, coupled with need for further farm reorganization, is likely to cause the debt-income ratio to rise even more in the years ahead.

Lower incomes and rising debts have cut into the returns on farm capital in recent years. Net agricultural income after all expenses were paid (including a charge for the operator and family labor) amounted to an estimated 2.7 percent of the inventory value of physical assets of agriculture in 1959. With an allowance made for interest on the inventory value of machinery and livestock, the balance accruing to land was estimated at 2.5 percent in 1959.

The farm real estate situation

Farm land values have exhibited with few exceptions an upward trend since 1940. This was expected during the period of rising and favorable incomes during the 1940's. However, since 1954 up until recent months land values have exhibited a continual rise in the face of falling farm income.

Return on farm capital



This upward pressure on land prices recently appears to have abated. There have been four basic forces at work in the rising farm land market. Without regard for their order of importance they are: (1) the desire to hold land as an inflation hedge, (2) the demand for land for nonfarm uses, (3) the income earning potential of land, and (4) the demand for land for farm enlargement. Although the last two forces are not entirely unrelated, separation of them permits focus on the important structural change occurring in agriculture—the change in scale of operating units.

Farmers want to make the best possible use of their equipment investment and available labor, and to do this they are struggling to enlarge their units. Larger units generally result in lower unit operating costs. The cost advantages of larger units are so great that farmers are bidding prices for land which look high in relation to net incomes in agriculture as a whole. They are applying a large portion of the cost savings which will accrue to their entire unit because of increased scale into the price they bid for added land. This process of farm enlargement has enabled the remaining farmers to maintain per farm income quite well during the period while the aggregate net income to agriculture has been falling. Land purchases for farm enlargement have accounted for over 40 percent of total U. S. farm land transfers during the last two years. This is one strong force which has pushed up land values in the face of declining incomes; during the last decade it has likely been the most potent force in the land market.

Thus in over-all perspective, the debt position appears quite favorable for agriculture, yet the picture could change for the industry. Any substantial adverse change in demand for farm products could cause a sharp drop in the market values of farm assets. For example, a sharp decline in consumers' income or a significant retrenchment of government programs in agriculture could materially reduce the liquidity position of the industry.

—Arvid C. Knudtson

Debt positions of individuals, business

Newspapers and business periodicals in recent months have devoted much attention to the rapidly rising personal debt. The significance of this growth lies in the position of personal debt relative to personal income and liquidity. Restrictions on consumer goods during World War II resulted in a high degree of personal liquidity by the close of the war. Then, personal indebtedness rose sharply as individuals markedly increased their purchases of houses and durable goods. Since incomes rose at a much slower rate, liquidity positions declined.

Personal debt consists of several parts. Consumer credit includes both noninstalment credit (charge accounts, service credit and single payment loans) and instalment credit (automobile paper, other consumer goods paper, repair and modernization loans and personal loans). Not included under consumer credit is a relatively small amount of personal credit, referred to as 'financial,' and secured for the purchase or carrying of securities from commercial banks and stock brokers and borrowed on life insurance policies directly from life insurance companies. In addition to these short- and intermediate-term debts, there are the long-term debts consisting of mortgage credit outstanding on 1 to 4 family houses.

Total personal debt as defined above reached an all time high of $193 billion[1] at year-end 1959, a six-fold increase from the total of $33.7 billion outstanding at the end of 1945. Personal debt now equals 58 percent of the disposable income. These obligations are considered by many to constitute a tremendous burden on the American public. A careful examination of the nature of the debt may temper or modify this view materially.

[1] Preliminary.

Of the total consumer credit outstanding on December 31, 1959, $8.4 billion or one-fifth was for monthly charge accounts and service credit. This credit is presumably extended as a convenience to customers and, thereby, becomes a part of the regular monthly expenditures.

It does not always follow that an increase in instalment credit results in an added strain on the family budget. In years gone by, the money paid for ice was about as much as some monthly payments on mechanical refrigerators. Payments made toward a washing machine may be no more than the former cost of laundry service.

The rise in mortgage debt outstanding on 1 to 4 family houses is, in part, traced to a shift from tenancy to home ownership. From 1950 to 1956, the number of home owners in the nation rose by 6,560,543, while the number of tenants rose only by 487,099—less than one-half million.[2] Thus, monthly payments on mortgage loans in many cases do not represent a new burden on family incomes but a shift from the outlays made for rent.

Consumer debt is heavily concentrated among young families where the heads of households are just beginning their earning careers, and consequently future incomes are likely to rise. The 1959 *Survey of Consumer Finances* revealed that spending units headed by persons between 25 and 34 years of age are more likely to have instalment debt than either younger or older groups. Sixty-nine percent of these young families reported such debt early in 1959. In groups where heads of families were over 50, the proportion with debt decreased quite rapidly, to a low of 16 percent of the 65-and-over group.

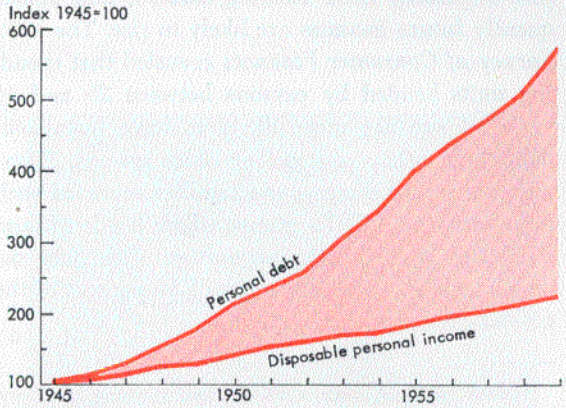
[2] Bureau of the Census, **1956 National Housing Inventory**, Vol. III, Part I, page 15.

To a considerable degree, the same families that owe consumer debt also owe mortgage debt. In the aggregate, however, mortgage debt is most frequently owed by households in the upper income brackets and in the middle age groups.

Personal debt is supported by disposable personal income. Since debt ordinarily becomes a problem only when obligations cannot be met, the magnitude of the personal debt has led to an appraisal of the repayment capacity of debtors. The ratio of debt to income has continued to increase by a significant amount as may be seen on the accompanying chart. In 1945, the amount of personal debt outstanding was 22 percent of disposable income; by 1959 it had risen to 58 percent. This marked trend, of course, is due partly to the unusually small amount of debt outstanding at the end of the war.

What is more significant, however, is the change in the relationship of debt to real personal income. Real income has risen materially and thus can support a larger debt. During the inflationary period following World War II, consumer prices rose by 62 percent but incomes rose by 123 percent. The rise in real income has given the American public more discretionary income which can be allocated to the repayment of newly incurred debt.

Growth in personal debt and income since 1945



Personal debt is estimated.

Thus, the rise in the ratio between debt and income is not as foreboding as it might appear.

When incomes decline, individuals may have to convert assets to meet debt obligations. From 1945 to 1958, liquid asset holdings of individuals rose annually. The principal types of liquid assets held by individuals in 1945—currency, demand and time deposits, savings and loan shares and U. S. government securities—aggregated $154.1 billion.[3] These holdings expanded steadily and by 1954 (the last year these data are available) totaled $210.3 billion. In 1945, personal indebtedness equaled 68 percent of these assets and in 1954, 81 percent. The flow-of-funds reveals a continued annual build-up in these liquid asset holdings since 1954.[4] In the consumer and nonprofit sector of the economy, the net increase in these holdings have ranged from $7.9 billion in 1955 to $16.1 billion in 1958.

Obviously, many individuals owing large amounts of debt hold a minimum of liquid assets. According to the *Survey of Consumer Finances*.[5] in early 1959 among the spending units with debts outstanding, 28 percent held no liquid assets and 25 percent had an amount of debt which exceeded their assets by 300 percent and over. When their incomes decline, they are forced to convert any credit and equity market instruments they may hold or even physical assets into cash to meet their obligations. When this situation arises in limited areas, it does not create serious repercussions. In the iron ore regions in the Ninth district, for example, the 1957-58 business recession and the 1959 steel strike cut off family incomes temporarily. When unemployed workers did not have sufficient incomes to meet their obligations, it was necessary for some to liquidate their assets where payments could not be deferred. They turned first to readily

[3] **Federal Reserve Bulletin,** July 1955.

[4] A flow-of-funds system of national accounts provides a picture of the flow of funds through the major sectors of the national economy. The accounts include transactions in currently produced goods and services as well as in the complex financial structure. **Federal Reserve Bulletin,** August 1959, page 1049.

[5] **Federal Reserve Bulletin,** July 1959, page 721.

salable ones such as bonds and then to the less salable. Since the decline in income was limited to relatively small regions, there was a market for the assets so liquidation was no problem. However, when there is a general decline in income throughout the economy forcing individuals to turn to the liquidation of assets to meet obligations, there is no ready market and prices of assets may drop disastrously.

It is impossible to locate a precise danger point in the rise of total personal debt for the entire consumer sector as a whole. Difficulties may be more readily discerned in the over-extension of specific individuals or families. The amount of personal credit extended, in the absence of direct or selective credit controls, is in a general sense policed by the borrower, the lender and the supervisory authorities of the various lending institutions.

Business debt

Total business debt, like personal debt, has risen markedly since World War II but at a more moderate rate. Total business debt outstanding, excluding farm debt was at a record high of $340.6 billion in 1958. The larger portion of this debt, 80 percent, was owed by corporations. Since business assets grew at a slower rate than debt during this period there has occurred some decline in the liquidity position of business firms.

Corporate debt rose from $99.5 billion at the end of 1945 to $294.2 billion at the end of 1958, an increase of 196 percent. The composition of the debt changed considerably during World War II and has not changed much since that time. Short-term debt, which is defined as having an original maturity of less than one year was smaller than long-term debt prior to the war but since then has exceeded long-term debt. Short-term debt consists of notes and accounts payable, advances and prepayments made by the U. S. government, federal income tax liabilities and miscellaneous liabilities. Obviously, the increase in the corporate income tax rates and a levying of an excess profit tax during World War II increased income tax liabilities for which a part of the short-term debt has accrued and this may largely account for the change in debt composition. Another contributing factor was the reliance of some corporations in the postwar era on commercial bank credit to avoid higher costs of financing in security markets. Firms in some industries also have relied heavily on retained earnings and depreciation allowances in lieu of long-term credit.

In 1958, short-term debt still exceeded long-term by $6.5 billion. However, the extensive capital expansion program has been financed, in part, by corporate bonds and from 1945 to 1958 the long-term debt rose faster than short-term, 218 percent compared to 178 percent.

The liquidity position of corporations can be measured with some validity by the ratio of current assets to current liabilities. From 1945 through 1950, current assets were over two times current liabilities. Since that time to 1958, the ratio has been less than 2 to 1 (1.82 to 1.97); this likely indicates some decline in liquidity.

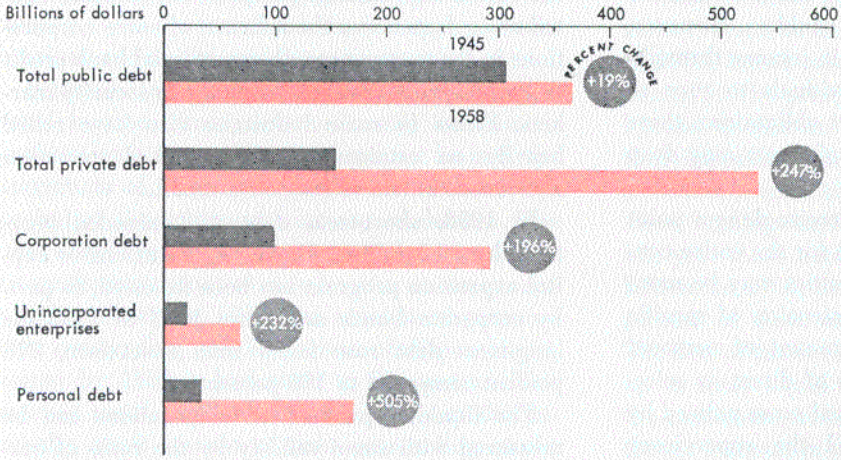
The most liquid of assets and, therefore, the most readily available for the repayment of debt are the holdings of currency, demand and time deposits, U. S. government securities and a small amount of savings and loan shares. Holdings of these principal types of liquid assets by corporations declined during the latter forties from an aggregate of $47.4 billion in 1945.[6] This total was not exceeded until 1950 and had reached only $51 billion by 1954 (the latest year these data are available). The gross corporate debt outstanding in 1945 was 210 percent of liquid assets and in 1954, 580 percent, a substantial increase. Although not entirely comparable, the flow of funds data provides information on the period since 1954. The net acquisition of financial assets in the corporate nonfinancial business sector of the economy from 1955 to 1958 inclusive was $31.2 billion[7] while the gross corporate debt grew by $77.9 billion

[6] Federal Reserve Bulletin, July 1955.

[7] Federal Reserve Bulletin, August 1959, page 105.

Growth in gross public and private debt from 1945 to 1958

(year-end figures)



Corporate debt is serviced out of profits and, because they are a 'residual' share of income, they fluctuate widely with general business conditions. Since income taxes are now such a large part of total liabilities, corporate profits after taxes may be nearer to the amount of income available for debt service. Net corporate debt, which eliminates the duplicating intercorporate obligations, may be more indicative than gross debt of corporate liability. In 1945, corporations owed $5.21 of gross debt for each dollar of profits realized in that year and $10.28 of net debt per dollar of net profits. By 1958, these figures had risen to $7.93 and $13.07 respectively. Despite the instability of profits, long-term corporate debt in relation to profits has remained remarkably stable since 1945.

Unincorporated business debt has risen at a faster rate than total corporate debt. Mortgage debt outstanding on multi-family and commercial properties from 1945 to 1958 rose by 246 percent and short-term commercial debt in the same period rose by 223 percent.

Holdings of the principal types of liquid assets by unincorporated businesses remained quite stable from 1945 to 1954 while debt outstanding expanded rapidly. At the end of the war, these liquid assets totaled $26.4 billion. In the following years they declined somewhat and in 1954 for the first time they again were over $26 billion. In contrast, the debt outstanding in 1945 was less than the total of these assets but by 1954 had risen to over 2½ times that amount. The flow of funds in the noncorporate nonfinancial business sector of the economy from 1955 to 1958 inclusive reveals a net acquisition of financial assets of $3.2 billion while the gross debt of unincorporated businesses rose by $13.2 billion.

Unincorporate debt is also serviced out of income realized by the proprietors. The Gross National Product series estimates this income under business and professional income and rental income. Whereas in 1945 debts of unincorporated businesses equaled about half their income, by 1958 debts had surpassed income. Even so, the debt to income ratio in 1958 was only slightly more than one to one.

The business debt outstanding at the end of World War II was unusually low in relation to liquid assets, profits and income. Although it has grown rapidly since then, it may not be of proportion to the other items in the balance sheet.

—Oscar F. Litterer