BUSINESS CONDITIONS

A REVIEW BY THE FEDERAL RESERVE BANK OF CHICAGO

JANUARY, 1948

Short-Term Farm Loans

Requirements Vary With Net Worth of Borrower

A previous article has discussed the relationship between such characteristics of agriculture as acreage size of farm and type of farm and the size and interest rates of short-term loans to farmers as revealed in the agricultural loan survey conducted by the Federal Deposit Insurance Corporation and the Federal Reserve System. Credit use can also be considered from the standpoint of the size of the farm business unit as measured in value terms. Instead of dealing with total acreage in the farm in relation to the use of credit the problems could be studied, for example, in terms of the total value of assets used in the farm unit.

"SIZE" MEASUREMENT A PROBLEM

One advantage of analyzing credit in terms of total value of assets is that it avoids the ambiguities inherent in the use of total acreage as the only measure of size of the farm operation and hence of the potential need for credit. While it is true that, other things being equal, total acreage in the farm is a fairly reliable measure of the scale of operations, nevertheless ambiguities arise because other things are not equal, and hence acreage size of farm alone is an inadequate measure of credit requirements. This is evident when it is realized that two farms of identical size may be quite different as to the type of farming practiced on the two farms and as to the degree of intensity to which the farms are cultivated and operated.

Additional refinement in measuring credit requirements might thus be achieved by considering size in terms of total capital (other than real estate) employed in operating the farm. This would, of course, include such items as livestock, machinery and equipment, feed and seed stocks, and supplies, as well as other items of working capital. Assuming all such assets to be productively in use generally and approximately fitted to the farming being practiced, it would be obvious that farms having larger total assets would on the average have higher credit requirements than farms whose size was smaller as measured by total assets employed.

But even this measure of size is subject to serious limitations. In judging the terms, rates, conditions, and characteristics of farm loans it is necessary to go beyond the mere total value of assets as a measure of size. It was felt in drafting the agricultural loan survey that use of this measure of size would cover up rather than reveal certain characteristics of short-term farm loans. For example, a given farm borrower might have a relatively large total value of assets at his disposal and yet against these assets have very substantial amounts of liabilities (such as a mortgage or accounts payable) materially qualifying his credit capacity.

Since in the extension of credit the degree of exposure of the borrower should be taken into consideration, it was decided that in this survey the credit would be measured in relation to the net worth of the borrower. Therefore, the cooperating bankers indicated for each non-real estate loan reported in the survey into which one of five size classes of net worth the borrower should be classified. These net worth size classes were: under $2,000; from $2,000 up to $10,000; from $10,000 up to $25,000; from $25,000 up to $100,000; and $100,000 and over. Only one per cent of the loans were reported as net worth unknown to the bankers.

Ten per cent of the loans were to borrowers with net worth of less than $2,000. These loans averaged $355 with an average interest rate of 5.8 per cent. Approximately half (51 per cent) of the total number of loans were to borrowers with a net worth between $2,000 and $10,000. The average size of these loans was $478, with an average interest rate of 5.9 per cent. Another fourth of the loans (26.3 per cent) were to borrowers whose net worth ranged between $10,000 and $25,000. These loans averaged $673 in size and 5.8 per cent in interest rate. An additional 10 per cent of the loans, averaging $1,406 in size, were to borrowers of net worth between $25,000 and $100,000. Interest rates on these loans averaged 5.3 per cent. There were a few loans, less than one per cent of the total, to borrowers whose net worth exceeded $100,000. These loans averaged $5,264, and the average interest was 4.9 per cent.

It is thus shown that while the size of loan bears some relationship to the net worth of the borrower, it is by no means proportional to the presumed borrowing "capacity" of the borrower, and except for the net worth class under $2,000 equals only a small fraction of net worth.

Two things can be said about such relationships in current times. In the first place there probably has never been a period in the past several decades when so many farmers were able to finance their operations without credit as are able to do so today. Secondly, the relatively prosperous conditions which agriculture has enjoyed in recent years have vastly improved the net worth position of many farmers.

INTEREST RATE VARIATIONS BY NET WORTH

The differences shown in average interest rates are largely a reflection of the differences in average size of loan. These relationships were discussed in a previous article. But in spite of this general relationship the data indicate that for loans of a given size and on any one type of farm, interest rates do vary to some slight extent inversely with the reported net worth of the borrower. This would suggest that higher net worth is associated with lower risk in the minds of bankers. For example, on loans under $250 to general farms interest rates ranged from 6.8 per cent where net worth was under $2,000 to 5.9 per cent where the net

(Continued on Inside Back Cover)

1947 in Review — Some 1948 Prospects

Precarious Prosperity Still Persists

During 1947 virtually every recognized measure of business activity and employment in the Seventh Federal Reserve District established a new record peacetime level—particularly in dollar terms. The past year, moreover, was marked by a new upsurge of inflationary pressures which give strong indication of persisting well into 1948.

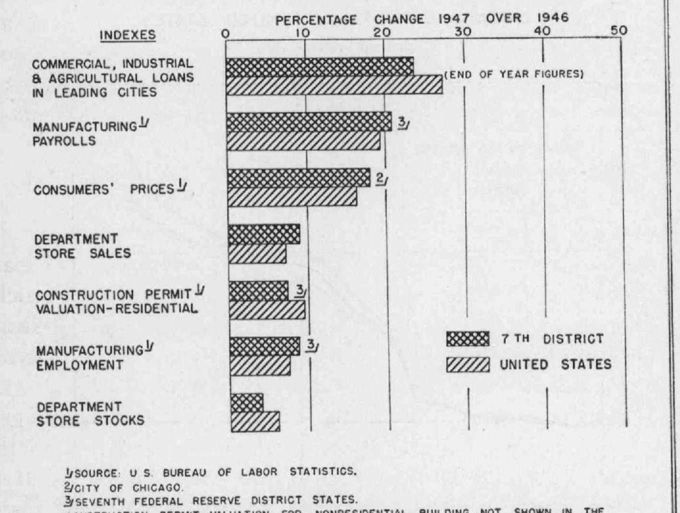
This District, as the nation generally, is now "caught" in an inflationary spiral from which there may well be no escape except through rather far-reaching readjustments. Although individual firms and industries are facing problems of shrinking sales and profits, a general business reaction does not seem likely in the months immediately ahead. Continuing shortages of goods and services to meet both heavy domestic and foreign demands, plus a strong determination by consumers, businesses, and Government to spend, promise *more* rather than *less* inflation for at least a while longer. Nevertheless, increasing numbers of individuals and business firms are experiencing financial stringencies and hence are becoming more and more vulnerable to any interruption or slowing down in income or production.

The most favorable aspect of the situation is the widespread caution being exercised throughout most of the business community. It is not at all clear, however, that this caution is strong enough to offset more than a portion of the economic problems which can be expected in the wake of the current inflation. The economic patterns which have emerged in recent months are becoming increasingly similar to those following the first world war.

CHART I

INCREASES IN KEY BUSINESS INDEXES

SEVENTH FEDERAL RESERVE DISTRICT AND UNITED STATES



1/ SOURCE: U. S. BUREAU OF LABOR STATISTICS.
2/ CITY OF CHICAGO.
3/ SEVENTH FEDERAL RESERVE DISTRICT STATES.
CONSTRUCTION PERMIT VALUATION FOR NONRESIDENTIAL BUILDING, NOT SHOWN IN THE CHART, DECREASED 8.5 PER CENT FOR THE NATION AND 26 PER CENT FOR THE SEVENTH FEDERAL RESERVE DISTRICT STATES.

BUSINESS TRENDS IN 1947

In retrospect 1947 probably will be remembered as the year in which war- and postwar-generated inflationary pressures broke many of their last bonds and sharply accelerated the already upward moving postwar wage-price-income spiral (see Chart 1). These developments have been contrary to general expectations at the outset of the year.

Looking ahead in the closing months of 1946, many, if not most, business observers viewed 1947 as very likely to be the long-heralded year of postwar recession and deflationary readjustment. A number of then current developments influenced this view: impending weaknesses in food and textile markets, leveling of over-all retail and wholesale price indexes, an apparent slowing of construction activity because of production bottlenecks and rising costs, some scattered increases in unemployment, an expected decline in inventories and exports, and a very evident pessimism among many business men.

Because durable producer and consumer goods for the most part were expected to remain in heavy demand relative to supply and because these manufacturing industries are almost twice as important to the Seventh Federal Reserve District as to the nation, it was commonly believed that the Seventh District economy, although by no means immune to any recession, would be less vulnerable than other regions of the country. As the leading grain and livestock producer, however, it was anticipated that the District would be sharply affected by any adverse movement in food prices. But, only about one-tenth of aggregate personal income in the District is to be accounted for on the farm.

The failure of inflationary forces to give ground during 1947 was basically the unexpected result of demand continuing to outrun supply for nondurable as well as durable goods. Of particular marginal significance here was the revived demand for food and textiles in the early months of 1947 consequent upon the poor crop outlook at home and abroad and second round wage increases among organized workers. The end of building controls in midyear stimulated lagging commercial construction and, together with greater working capital requirements resulting from rising prices, increased business demands for funds. These developments changed business expectations, and inflation psychology once again became dominant. Many consumers, moreover, became convinced that price declines were not imminent and revised their buying plans. Residential starts increased more than seasonally throughout the District as well as the nation from June to September and fell less than seasonally in the last quarter.

The Seventh District includes a sufficiently large proportion of the nation's population, industrial and farm production, and financial activities to serve in many respects as a barometer of business trends for the nation as a whole. This condition was particularly evident in 1947. The District, however, appears to have been somewhat more sensitive than the nation to inflationary forces during the year. This resulted from the previously mentioned above normal concentration of durable goods in the District and from the unexpected price strength of cereal grains and livestock which affected not only farmers but also certain important food manufacturing industries such as meat packing.

Consumer Incomes and Expenditures — Sustained employment was, of course, the principal factor in maintaining high levels of consumer expenditures in 1947. After a slight decline in the early part of 1947, employment again began to move upward and at the end of the year approximated seven million workers in the Seventh District states. As in the nation, unemployment remained at a very low level, and the demand for workers continued strong.

During 1947, disposable income (i.e., after taxes) of individuals in the nation was about 12 per cent above the 1946 level. An even greater corresponding increase appears to have occurred in the Seventh District. Cash farm incomes in the five District states last year exceeded the 1946 level by an estimated 25 per cent. This compared with a national gain of 19 per cent. Incomplete information on average weekly earnings indicates that manufacturing workers in the District and nation experienced 1947 income gains of less than 10 per cent from wages and salaries.

During the first round wage controversy in 1946, strikes were particularly severe among durable goods manufacturing industries, and especially in Seventh District factories. As a result, total nonagricultural income advanced less in the District in 1946 than in the nation. The reverse, however, was true in 1947, principally because the second round of wage negotiations was accompanied by relatively few strikes and the increases granted in the durable goods industries were substantial. The incomes of District nonagricultural workers, consequently, increased somewhat more rapidly during 1947 than in the country as a whole.

Because of the increase of an estimated 15 per cent in cost of living during 1947 over 1946 (see Chart 2), there was little or no expansion in the over-all level of *real* income in either the District or nation.[1] Many individuals, particularly in the District's urban areas, now have lower *real* incomes than a year ago.

In an effort to maintain customary living standards in the face of mounting prices, consumers generally spent greater percentages of their larger incomes in 1947 than in 1946, drew further on accumulated savings, and made increased use of credit facilities. As a result, consumer expenditures in the nation as a whole reached approximately 165 billion dollars, almost 15 per cent above the 1946 level. Judging from retail sales, which normally comprise at least two-thirds of all consumer expenditures, increases in expenditures also were greater in the District than in the nation during the year. Retail sales in Illinois and Michigan, which together account for over three-fifths of the District total, in the first eight months of 1947 were 22 and 24 per cent above their respective 1946 levels, while the corresponding national gain was slightly under 14 per cent. Similarly, Seventh District department store sales showed a greater 1946-47 increase, nine per cent, than those for the nation, seven per cent.

In spite of the upward over-all trend in consumer expenditures, however, there is considerable evidence that many individual goods and services are receiving increasing consumer buying resistance, and all purchases are being made with added attention to price and quality. Many low quality (or off-brand) items among types of goods still generally in strong demand disappeared from the markets during 1947. Some luxury goods and services, after slumping during the early part of the year, have revived somewhat since.

Inventories—Business executives were very much concerned about the size and balance of their inventories throughout 1947. This concern was particularly acute in the early months of the year among retailers and wholesalers anticipating and often experiencing price declines; accordingly, they reduced inventories through mark-downs of slow moving merchandise and shortened buying commitments appreciably. In many instances, stocks and orders were reduced to such an extent in the first quarter that later in the year a scramble for goods occurred to meet the heavy summer, fall, and Christmas trade. Many new price rises resulted. In spite of price rises in excess of 15 per cent during the year, the seasonally adjusted stock indexes of the District's and nation's department stores were only four and six per cent, respectively, above their year-ago levels at the end of October. In physical terms inventories fell in 1947, except possibly during the immediate pre-Christmas period.

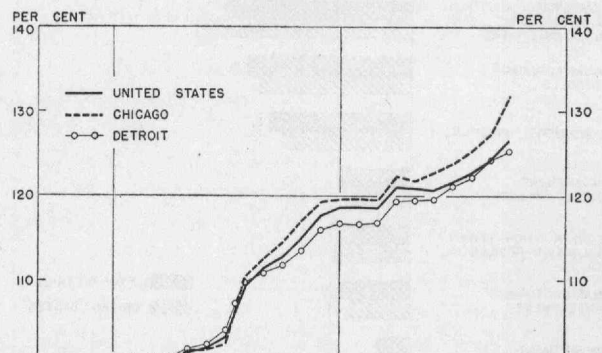
Manufacturers' inventories in the nation increased somewhat more, about 15 per cent, between December 1946 and the end of September 1947. Although part of this increase, particularly in durable goods, resulted from the continued need of filling pipe lines, a much larger part resulted from

CHART 2

CHANGES IN COST OF LIVING[1] SINCE V-J DAY

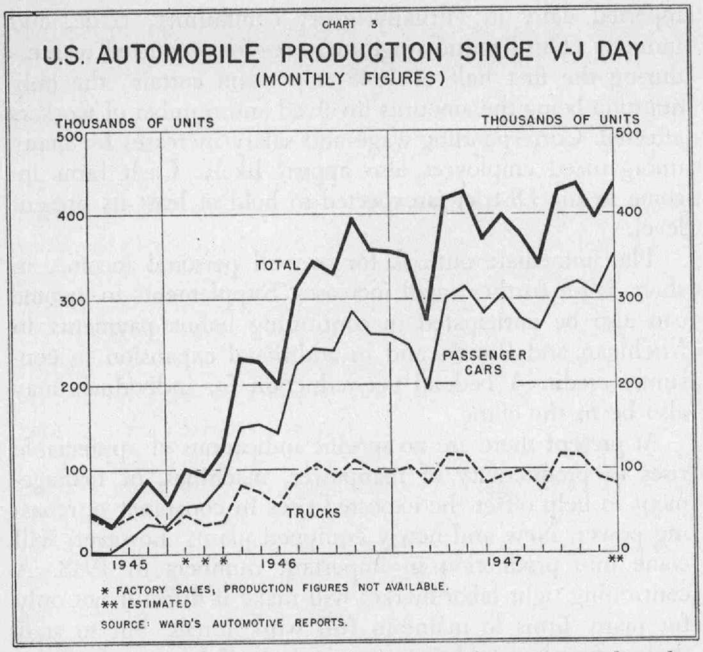
CHICAGO, DETROIT, AND UNITED STATES

(AUGUST 1945 = 100)



[1] CONSUMERS' PRICE INDEX.
SOURCE: U.S. BUREAU OF LABOR STATISTICS.

[1]Between January and October 1947 cost of living increased seven per cent.



steadily advancing prices. In both manufacturing and trade, over-all inventories are currently much lower relative to sales than they were before the war, but inventories are still being watched very closely because price declines could bring staggering losses to many firms. Rising prices, on the other hand, pose difficult financial problems for businesses requiring substantial inventories for operations.

Producers' Expenditures for Plant and Equipment—Capital outlays of business exceeded 15 billion dollars throughout the nation in 1947, a gain of three billion dollars over the previous record year of 1946. All major industry divisions in the Seventh District made important contributions to this record, but utilities and railroads showed the principal rising tendencies at the close of the year, in contrast to manufacturing industries at the outset. Among District manufactures, automobiles, petroleum, metal fabricating, chemicals, heavy special purpose machinery, and paper were particularly active during the year in expanding plant and equipment either through erection or purchase from the War Assets Administration.

A number of factors encouraged large-scale producers' expenditures in 1947: (1) widespread need and desire among business firms to reduce labor costs by installing labor saving machinery, (2) decisions of competitors to expand or modernize plants or sales outlets—only financial limitations apparently are sufficient to prevent a capital expenditure deemed necessary to hold a given market position, (3) mandatory replacements and improvements as a result of deferred maintenance during the war, and (4) needed plant and equipment to produce and sell new products.

The elimination of Federal controls in midyear removed one of the obstacles which had hampered commercial building. Other obstacles, present throughout the year, included high costs, material and labor shortages, and financial limitations. The latter factor gained in importance as the year progressed. Continued depression of the security markets prevented many of the larger companies from carrying out plans for the flotation of new securities. In consequence, these companies as well as the much more numerous smaller companies without access to security channels increased their demands for bank funds. Faced with capital outlays, expanded beyond original expectations by rising costs, and heavier working capital needs also the result of higher prices, some businesses were unable to obtain necessary financing and were forced to curtail expansion programs.

Residential Construction—The number of new dwelling units and the permit valuation of residential construction exceeded their 1946 levels in both the Seventh District and nation in 1947. The District 1946-47 increase was somewhat smaller, seven per cent, than that of the nation, 9.5 per cent. Early in the year a slowing down in new starts obscured a record level of construction-in-place, causing some observers to speak of a "housing deadlock" ahead. The "deadlock theory" was based on high construction costs meeting rising buyer resistance in anticipation of lower building costs later in 1947. The failure of construction costs to recede and the removal of Federal controls brought a delayed rush to residential building in June. As already noted, the July-September gain was of record proportions, and the subsequent months' declines were less than seasonally expected. Construction costs, already well in excess of their 1920 highs, continued to rise, although at a lower rate than in 1946. Building costs in Seventh District cities not only have moved upwards with the national averages, but generally have remained somewhat above them. Midwestern climatic conditions require sturdier construction than in milder weather zones, and building labor and materials restrictions are more far-reaching, with resultant additions to construction costs.

Because of lower land cost, lower taxes, less congestion, availability of larger individual tracts, fewer labor restrictions, greater reliance on owner self-labor, and absence of zoning laws, building construction increases were frequently somewhat greater in the less well populated areas than in metropolitan centers. In Chicago, for example, permit valuation of residential building in the first eight months of 1947 was 10 per cent *below* that of the same months in 1946; in Milwaukee, the drop was 22 per cent, and in Des Moines, 33 per cent. Only Detroit and Indianapolis, among the largest District cities, showed gains, about 21 per cent.

Credit Developments—The close connection between credit extension and prices is generally recognized. During 1947, and particularly the closing months, consumers and business firms accelerated their use of credit, further accentuating upward pressures on prices. The greater need for credit was itself in part the result of higher prices—to carry working capital and meet capital outlays in the case of businesses and to maintain standards of living in the case of consumers.

With the security markets unfavorable to the flotation of new securities, the brunt of the demand for credit fell on banks, either directly or through intermediary financing institutions. Commercial and industrial loans of member banks in leading cities were 27 per cent higher at the end of 1947 than they were a year earlier. In the Seventh District the corresponding increase was 25 per cent. Detroit, with a rise of 11 per cent, was the only one of the five leading District cities which lagged behind the District and national averages. This may reflect (1) the method of financing which traditionally has been followed by the automobile industry of requiring payment for cars as they leave the factories and (2) borrowings in New York and other financial centers as well as Detroit. The automobile companies in essence shift the carrying of the finished inventory part of their working capital to distributors in various parts of the country. Distributors in turn depend on finance companies or banks located in their areas. (Trends in automobile production since V-J Day are shown in Chart 3.)

Regulation W expired on November 1, too late to have a major effect on the total volume of consumer instalment credit in 1947. At the time of expiration, the volume of all consumer credit outstanding had risen more than 30 per cent above the level of the previous year. The large-scale residential building program also resulted in a substantial rise in mortgage debt during the year, with mortgage funds becoming increasingly difficult to obtain.

Exports—The early months of 1947 were marked by a sharp rise in exports to an all-time high annual rate of 17 billion dollars in May, followed by a subsequent decline in the annual rate of approximately 15 per cent. Even after the decline, however, exports remained abnormally large by prewar standards. Export manufacturers are currently estimated to employ from three to four per cent of the national working population and a slightly greater percentage in the Seventh District, which produces a high proportion of the nation's exported goods. The decline in exports since May has had no appreciable effect in the Seventh District. This is because the major District export items—grain, automobiles, farm machinery, and other heavy mechanical equipment—continue in extremely heavy domestic demand. It is apparent that the domestic prices of certain District export products, notably grain and metal products, rose somewhat more during the year than if large supplies had not been directed overseas.

SHORT-RUN OUTLOOK

Current and impending inflationary pressures seem likely to "postpone" a general business downturn for some months longer, but as prices in the inflation-bound District and national economies soar to new heights, there is increasing danger of such an occurrence. Prices and, therefore, all dollar measures of business appear now too high to be sustained indefinitely. Consequently, the key question regarding business prospects is not so much *whether* a wage-cost-price-profit reaction lies ahead, but rather *to what extent* and *when* such a reaction will occur.

The probable severity of an economic readjustment to follow this inflation is increasing as prices continue to mount. The likelihood of a "smooth" transition to more "normal" peacetime levels of costs and prices diminishes each day. Because of the vast array of mixed economic trends at present, it is difficult to foresee with any real precision when the downturn will come.

In the Seventh Federal Reserve District new price advances and announcements of more of the same are being reported daily in virtually every community, trade, and industry. Third round wage increases for organized workers during the first half of 1948 now seem certain, the only question being the amounts involved and number of workers affected. Corresponding wage and salary increases for many unorganized employees also appear likely. Cash farm income in the District is expected to hold at least its present level.

The immediate outlook for over-all personal income, in short, is for further small increases. Supplements to income can also be anticipated in continuing bonus payments in Michigan and Illinois and in additional expansion in consumer credit. A Federal tax reduction for individuals may also be in the offing.

At present there are no specific indications of appreciable rises in productivity of manpower, machines, or management to help offset the expected rises in consumer purchasing power. New and newly equipped plants, however, will come into production in important numbers in 1948. A continuing tight labor market will make it difficult not only for many firms to maintain full work forces, but to staff these new plant additions, particularly if housing facilities are not expanded.

Construction activity in general seems very likely to remain high in 1948, and particularly during the first half of the year, if only on the basis of existing contract awards. Industrial construction, however, promises to continue to decline slowly as postwar projects are completed. Residential building is likely to be confronted with serious bottlenecks in the spring as the record number of dwelling "starts" late in 1947 reach progress stages where critical shortages exist.

The real danger in the current situation is that rising prices are straining individual and business financial resources to the point where increases in private debt are becoming more and more essential to maintenance of present levels of business activity and employment. The precise time when prospective borrowers will no longer feel able to ask for additional funds, or lenders be willing or able to advance such funds, cannot be foretold, but obviously this is a matter which will bear watching.

Other signs of weakness are apparent. Many individual firms are catching up with their so-called backlogs of demand. Introduction of postwar products and resurgence of competitive sales polices are affecting certain lines and weakening the positions of firms not thoroughly rooted in their industries. Inventory readjustments can be expected to continue. Narrowing per unit profit margins increase the vulnerability of business firms to even slight sales declines. Export volume in 1948 will probably be less than in 1947.

These and other signs of weakness, which together in force could bring a marked reaction in business, thus far have not been sufficiently widespread to offset the upsurge of inflationary pressures. The short-run outlook in the Seventh District is for continuing further record prosperity in dollar terms. Moreover, the pattern of District industry and agriculture provides some basis for anticipating relatively more favorable business conditions in the Seventh District than in the nation generally.

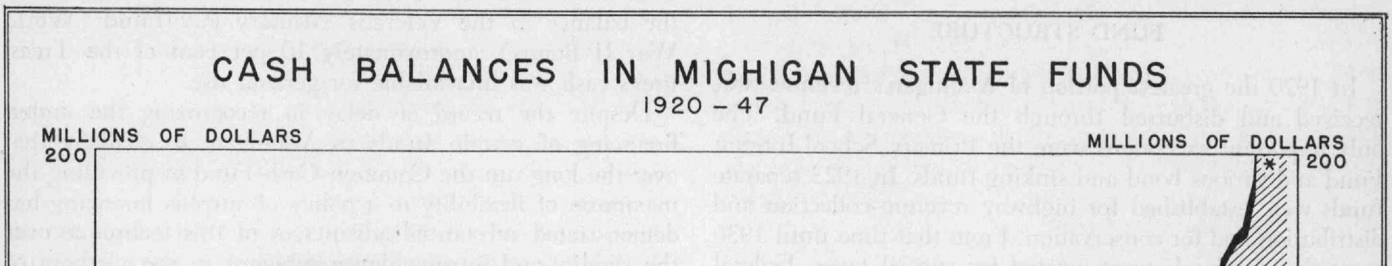
Michigan State Finance — I

Common Cash Fund Has Important Advantages

Michigan is outstanding among the state governments in the Seventh District in minimizing and simplifying certain short-run problems of financial management by the pooling of its cash resources. Virtually denied the power to borrow for temporary deficits by restrictive constitutional provisions, Michigan and other Midwestern states have had to maintain a close month-to-month or year-to-year correspondence in receipts and disbursements or to finance seasonal and cyclical disparities between income and outgo out of cash balances. In its financial procedure Michigan has made the most effective use of cash assets by combining the balances of nearly 40 operating, revolving, sinking, earmarked, agency, and trust funds into the Common Cash Fund.

This fund makes available the total resources of all funds to meet the legitimate needs of any one of them. Expenditures chargeable to a given fund are not limited to credits available to that fund in the common pool of cash resources; they are only limited by the total cash available, provided, of course, that such expenditures are in conformance to statutory authorizations. For example, funds from which daily payments are made may frequently overdraw their accounts, and the deficits may be made up from funds which are being accumulated for some periodic future requirement. This method of operation gives equal effect to all phases of the approved legislative plan of expenditure without establishing preferential claims to resources or incoming revenues for given functions. It assumes that, taking the appropriation period as a whole, each of the funds is in approximate balance even though at certain times in the biennium there may be large deficits or surpluses for particular funds. In such a system, the state's entire cash resources are utilized to level out seasonal shortages or idle balances for particular funds and thus to lessen the size of the cash balance required to meet the state's financial obligations with certainty and promptitude.

Fund segregation and earmarking of revenues are characteristic features of state and local finance. These policies stem in part from a desire to give an inviolate status to certain categories of resources or receipts so that associated expenditure programs may be carried on without being jeopardized by other claims to state expenditure. Bond funds, school aids, highway user tax revenues, and fish and



game license receipts are often segregated.

Segregation becomes an important issue whenever revenues are inadequate to cover all projected outlays. In a well-planned budget, items of approved expenditure would always be covered by existing cash and anticipated revenues. But state budgets are often not so carefully planned or executed; therefore, earmarking of the choicer revenues for particular functions is a practical expedient for giving certain functions the preferential status of financial solvency. This process may go so far as to strip a state's general funds from which the basic costs of general government are paid.

Earmarking also may represent the attempt of one legislature to bind its successors morally, if not constitutionally, to a given expenditure pattern. It may start a cycle of expenditure governed solely by a particular tax yield and not biennially or annually reappraised as an ordinary budget expenditure.

In some jurisdictions these and other similar considerations have made earmarking and segregation a serious hindrance to effective financial management. Many states in the 1930's had insolvent general funds, although the state as a whole because of segregation and earmarking had aggregate resources ample to carry the general fund through a period of financial stress. Under the pressure of necessity, these states eventually managed what Michigan did with ease. The general funds borrowed from funds that had substantial balances until such time as the states' revenues restored the major operating funds to solvency.

FUND STRUCTURE

In 1920 the greatest portion of Michigan's revenues was received and disbursed through the General Fund. The only important exceptions were the Primary School Interest Fund and various bond and sinking funds. In 1923 separate funds were established for highway revenue collection and distribution and for conservation. From that time until 1936 more that 60 funds were created for special taxes, Federal participation projects, and distribution accounts. There were also some 160 bank and trust company receivership funds.

In 1937 the tendency to complicate the fund structure was reversed, and by 1941 the number of funds included in the common cash depository was reduced to 28; most of those discontinued were blanketed into the General Fund, thus giving it a revenue base having to a marked degree the equalizing characteristics of the Common Cash Fund. Revolving funds are still maintained as separate accounts, but a 1941 statute requires annual settlement of surplus or deficit with the General or Highway Funds. Since 1941 new funds have been created for providing emergency aids to veterans, for veterans' bonus and bond redemption, and for aeronautical development.

At the present time the bulk of state revenues, with the exception of highway user revenue, the aviation gasoline tax, and hunting and fishing license fees, are credited to the General Fund which finances about 75 per cent of general state expenditures.

As appears from the accompanying table and chart, the General Fund in Michigan had recurring deficits in 1930 to 1934 and 1938 to 1940. Since these deficits are constructive balances prior to 1941 when the Fund was substantially enlarged, they understate the extent and frequency of overdrafts in the General Fund as constituted during the years 1920-41. For much of this period the Fund as then defined was in the red, and the discouraging aspect of this condition was that its long continuance did not bring legislative recognition of the need for adjustment in the Fund's resources and its obligations.

In the past decade there have been some tendencies in Michigan towards segregation. A constitutional amendment adopted in 1938 prohibited diversion of gasoline and weight taxes for other than highway purposes; but the amendment was construed not to preclude the temporary use of such funds for other functions. Highway revenues were important in maintaining the State's solvency during 1939 and 1940. Through administrative action the State Treasurer in 1939 placed the Soldiers' Bonus and Highway Improvements Bond Sinking Funds, the Bank and Trust Receivership Fund, the Unemployment Compensation Fund, and the P.W.A. Construction Fund in separate depositories; subsequently, the Postwar Reserve and the Veterans' Benefit Trust Funds have been added. As a result of the liquidation of sinking fund investments, cash outside of the common cash pool constituted approximately one-third of the Treasurer's cash balance at the end of fiscal years 1939-41. Following the payment of the soldiers' bonus and highway bonds, segregated funds were an insignificant portion of the Treasurer's balance. At the end of fiscal year 1947, due to the balance in the Veterans' Military Pay Fund (World War II Bonus), approximately 10 per cent of the Treasurer's cash was unavailable for general use.

Despite the record of delay in recognizing the underfinancing of certain funds in Michigan, it is likely that over the long run the Common Cash Fund in providing the maximum of flexibility to a policy of surplus financing has demonstrated substantial advantages of this technique over the rigidity and inconvenience inherent in the plethora of

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FOOTNOTES TO TABLE ON OPPOSITE PAGE

[1]Consists of all state funds with the exception of fees, earnings, and miscellaneous revenues of the University of Michigan and Michigan State College, and the State Bridge Commission; unemployment compensation payroll taxes and benefit payments; and imprest cash and unspent sums advanced to state institutions and agencies.

[2]Prior to 1941 includes the General Revenue and the following funds which were then maintained separately: Vocational Education, Vocational Rehabilitation, the School Emergency, and the several university interest funds; the sales tax (1933-35) and the several miscellaneous minor taxes; the State Land Office (1939-41); and all Federal funds with the exception of unemployment compensation administration, conservation, and highway grants which are credited to special funds.

[3]These are the following: Michigan War Loan (1920-38), Soldiers' Bonus (1922-47), Highway Improvement (1922-47), State Fair (1927-37), and Veterans' Military Pay (1947).

[4]Includes the several revolving funds, except the State Insurance Fund (1922-47), Unemployment Compensation Administration (1936-47), the several suspense accounts (1939-41), P.W.A. Construction (1939-43), and cash and investment of the Postwar Reserve (1943-47) and the Veterans' Benefit Trust Fund (1946-47).

[5]From 1924 to 1941 includes the following highway funds which were maintained separately: Auto Theft, Branch Office, Gasoline Tax, Motor Vehicle License, Highway Construction, Highway Administration, National Industrial Recovery (1934-39), and Reconstruction Finance Corporation Loan and Loan Repayment Fund (1933).

[6]Prior to 1946 consists of the Game and Fish Protection Fund; in 1946, and thereafter also includes the State Aeronautics Fund.

[7]Consists of Bank and Trust Receivership Fund, State Accident, State Insurance, Teachers' Retirement, Escheats, the state and municipal employees retirement funds, and miscellaneous minor agency funds.

*Less than $50,000.

N.A. Not available.

SOURCES: *Report of the Treasurer of the State of Michigan* (1920-47) and Office of the State Treasurer.

CASH BALANCES IN MICHIGAN STATE FUNDS, 1920-47

(In millions of dollars)

Date	FUNDS: Total (Common Cash)[1]	General Revenue[2]	Other Operating: Total	Other Operating: Bond and Sinking[3]	Other Operating: Revolving and Other[4]	Earmarked: Total	Earmarked: Highway[5]	Earmarked: Other[6]	Trust[7]
1920									
June 30	23.5	22.4	1.0	1.0	—	—	—	—	.1
1921									
June 30	19.8	18.3	1.4	1.4	—	—	—	—	.1
1922									
June 30	27.5	22.0	5.4	4.2	1.2	—	—	—	.1
1923									
June 30	31.0	21.9	3.4	3.0	.4	5.6	5.7	—.1	.1
1924									
June 30	30.8	23.9	2.3	1.9	.4	4.5	4.5	*	.1
1925									
June 30	23.5	19.2	1.9	1.9	*	2.3	2.2	.1	.1
1926									
June 30	25.4	19.6	2.1	2.2	—.1	3.6	3.3	.3	.1
Sept. 30	8.4	5.5	1.4	2.3	—.9	1.4	1.2	.2	.1
Dec. 31	4.2	3.3	.3	2.1	—1.8	.5	*	.5	.1
1927									
Mar. 31	17.8	10.6	3.2	4.0	—.8	3.9	3.4	.5	.1
June 30	24.8	18.8	1.8	2.9	—1.1	4.0	3.6	.4	.2
Sept. 30	6.7	5.5	1.4	2.0	—.6	—.3	—.6	.3	.1
Dec. 31	4.2	2.7	—1.0	.5	—1.5	2.5	2.0	.5	*
1928									
Mar. 31	24.0	15.0	2.6	3.4	—.8	6.3	5.8	.5	.1
June 30	33.3	25.9	.9	2.5	—1.6	6.3	5.9	.4	.2
Sept. 30	6.2	6.0	—.5	1.2	—1.7	.5	.1	.4	.2
Dec. 31	4.2	4.4	—1.8	.1	—1.9	1.3	.7	.6	.3
1929									
Mar. 31	20.2	13.4	2.0	4.0	—2.0	4.4	3.8	.6	.4
June 30	32.1	19.3	5.2	6.3	—1.1	7.2	6.8	.4	.4
Sept. 30	5.9	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Dec. 31	6.7	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1930									
Mar. 31	21.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
June 30	37.3	23.8	5.4	6.2	—.8	7.6	7.2	.4	.5
Sept. 30	3.8	—.3	2.9	4.1	—1.2	1.0	.8	.2	.2
Dec. 31	3.8	—1.9	.3	.6	—.3	5.2	4.8	.4	.2
1931									
Mar. 31	20.7	11.6	4.6	4.1	.5	4.2	3.8	.4	.3
June 30	34.6	20.2	5.2	5.4	—.2	8.2	8.0	.2	1.0
Sept. 30	7.4	—4.4	3.8	4.2	—.4	7.2	7.1	.1	.8
Dec. 31	8.6	—6.3	3.7	3.4	.3	7.8	7.3	.5	3.4
1932									
Mar. 31	24.5	7.7	8.0	7.6	.4	4.6	4.4	.2	4.2
June 30	33.7	16.1	6.3	6.7	—.4	6.7	6.5	.2	4.6
Sept. 30	7.8	—3.4	4.7	3.8	.9	3.5	3.3	.2	3.0
Dec. 31	7.1	—6.2	3.6	3.0	.6	6.9	6.3	.6	2.8
1933									
Mar. 31	6.2	—4.2	1.0	.7	.3	6.9	6.5	.4	2.5
June 30	20.0	1.8	.8	1.0	—.2	14.7	14.3	.4	2.7
Sept. 30	10.4	—12.2	1.6	1.6	*	18.3	17.9	.4	2.7
Dec. 31	9.0	—9.3	1.3	.9	.4	14.6	14.0	.6	2.4
1934									
Mar. 31	12.7	—7.5	1.2	2.1	—.9	16.2	15.6	.6	2.8
June 30	20.8	.3	3.0	3.4	—.4	14.2	14.0	.2	3.3
Sept. 30	14.2	—5.3	2.7	2.5	.2	14.0	13.7	.3	2.8
Dec. 31	12.1	—.5	—	—.1	.1	10.5	9.9	.6	2.1
1935									
Mar. 31	23.9	4.2	6.0	5.8	.2	11.4	11.0	.4	2.3
June 30	31.5	14.5	2.9	3.3	—.4	10.3	10.0	.3	3.8
Sept. 30	19.4	6.0	2.6	1.6	1.0	7.7	7.4	.3	3.1
Dec. 31	18.6	7.5	1.1	.5	.6	7.9	7.3	.6	2.1
1936									
Mar. 31	27.7	8.3	—.4	*	—.4	17.5	16.9	.6	2.3
June 30	31.0	17.6	.5	1.0	—.5	9.9	9.5	.4	3.0
Sept. 30	28.9	16.5	.6	.9	—.3	8.6	8.2	.4	3.2
Dec. 31	23.5	13.6	1.5	1.1	.4	5.9	5.0	.9	2.5
1937									
Mar. 31	27.7	11.1	.9	1.1	—.2	12.8	12.0	.8	2.9
June 30	36.5	20.8	.2	.7	—.5	12.6	12.0	.6	2.9
Sept. 30	30.0	19.1	1.4	1.1	.3	6.5	5.9	.6	3.0
Dec. 31	23.6	16.6	—1.0	—1.4	.4	5.2	4.2	1.0	2.8
1938									
Mar. 31	28.1	13.1	.9	.6	.3	11.0	10.1	.9	3.1
June 30	27.6	14.9	1.4	—.4	1.8	8.5	7.8	.7	2.8
Sept. 30	18.4	6.9	5.3	—.6	5.9	3.5	2.7	.8	2.7
Dec. 31	11.1	—2.1	11.1	1.0	10.1	—.6	—1.9	1.3	2.7
1939									
Mar. 31	18.0	—13.1	17.5	2.4	15.1	11.6	10.4	1.2	2.0
June 30	15.2	—5.0	8.7	2.7	6.0	8.6	7.6	1.0	2.9
Sept. 30	18.2	—4.3	10.1	2.1	8.0	9.5	8.5	1.0	2.9
Dec. 31	10.8	—9.1	10.3	2.8	7.5	7.1	5.5	1.6	2.5
1940									
Mar. 31	20.2	—13.2	14.8	4.6	10.2	16.0	14.5	1.5	2.6
June 30	23.3	—1.0	9.9	6.5	3.4	11.9	10.5	1.4	2.5
Sept. 30	25.9	4.0	10.4	7.1	3.3	8.8	7.5	1.3	2.7
Dec. 31	17.3	1.4	6.8	3.4	3.4	6.3	4.4	1.9	2.8
1941									
Mar. 31	61.2	2.0	38.4	32.3	6.1	17.6	15.8	1.8	3.2
June 30	70.0	14.9	39.9	32.7	7.2	11.5	9.9	1.6	3.7
Sept. 30	59.0	17.9	23.0	17.2	5.8	15.2	13.6	1.6	2.9
Dec. 31	50.2	31.2	3.2	1.9	1.3	12.6	10.3	2.3	3.2
1942									
Mar. 31	66.4	29.8	5.7	3.0	2.7	27.3	25.2	2.1	3.6
June 30	70.5	42.8	12.0	9.2	2.8	12.4	10.5	1.9	3.3
Sept. 30	67.3	40.5	9.0	3.7	5.3	14.4	12.5	1.9	3.4
Dec. 31	74.1	47.9	11.5	2.2	9.3	12.1	9.4	2.7	2.6
1943									
Mar. 31	83.1	34.0	22.8	2.4	20.4	23.6	21.2	2.4	2.7
June 30	79.0	39.3	25.2	2.3	22.9	11.5	9.4	2.1	3.0
Sept. 30	87.3	34.9	35.9	.8	35.1	13.4	11.3	2.1	3.1
Dec. 31	116.7	61.8	41.4	3.1	38.3	9.7	7.0	2.7	3.8
1944									
Mar. 31	112.5	51.5	33.2	1.5	31.7	24.7	22.2	2.5	3.1
June 30	103.8	56.1	35.6	.8	34.8	10.2	7.9	2.3	1.9
Sept. 30	115.2	53.7	50.9	3.1	47.8	8.5	6.2	2.3	2.1
Dec. 31	117.6	55.4	53.8	.5	53.3	6.2	3.6	2.6	2.2
1945									
Mar. 31	135.6	54.9	52.6	.4	52.2	24.9	22.6	2.3	3.2
June 30	133.7	63.4	54.9	.3	54.6	11.8	8.1	3.7	3.6
Sept. 30	138.7	67.5	53.6	.3	53.3	14.2	10.7	3.5	3.4
Dec. 31	141.7	75.8	50.0	.3	49.7	13.1	9.3	3.8	2.8
1946									
Mar. 31	165.7	79.3	52.8	.3	52.5	31.3	27.8	3.5	2.3
June 30	173.0	88.9	60.6	.3	60.3	20.7	17.5	3.2	2.8
Sept. 30	176.2	91.1	55.8	.3	55.5	26.6	23.2	3.4	2.7
Dec. 31	188.0	101.2	54.2	.3	53.9	29.6	25.8	3.8	3.0
1947									
Mar. 31	411.8	105.2	253.9	200.9	53.0	50.4	46.4	4.0	2.3
June 30	361.7	99.0	227.7	168.0	59.7	52.6	28.9	3.7	2.4
Sept. 30	355.5	97.4	225.9	170.4	55.5	29.9	26.4	3.5	2.3

Note: See opposite page for footnotes.

segregation and earmarking prevailing in other states.

COMPARATIVE BALANCES

Reference to the accompanying table and chart will indicate that Michigan balances during the years 1926-40 reached seasonal peaks at the close of the fiscal year and were at their lowest level in December. Some seasonal fluctuation is typical for most states and usually results from quarterly or annual tax payment dates and a similar timing of distributions of aid to local units. Michigan motor vehicle license revenues and receipts from the specific taxes (railroad and communications utility property taxes earmarked for distribution to schools) are received between March and June. The heaviest highway disbursements are during the summer months, and school distributions are generally made during September. In the years that Michigan relied on the general property tax, the bulk of such revenue was received in the third quarter of the fiscal year.

In states where segregation exists, revenues earmarked for specific functions may remain dormant for some time. In Michigan prior to 1941, deficits in the General Fund were made up largely from seasonal accumulations of specific taxes and highway user revenues. By drawing on these funds, Michigan was able to avoid serious financial embarrassment during lean years, even though the over-all cash balances during that time were extremely low.

For example, during the years 1927 through 1941 Michigan balances were frequently equivalent to only two weeks of state expenditures. The average of the quarterly balances in each of these years was from one to two months of the annual expenditure rate. In Iowa where the effects of segregation have been most conspicuous of the Seventh District states, fiscal year-end balances (quarterly data are not available) are from one-half to four times again those of Michigan.[1] In Illinois and Indiana working balances generally were three to four months of annual expenditures.

In spite of the advantages of the non-segregated fund structure, Michigan was forced during some of the depression years to postpone some of its obligations. During the 1930's the statutory sinking fund requirements frequently went unpaid. By the end of the fiscal year 1938, deficiencies of this character amounted to five million dollars. Interest payments on state debt were promptly met, but the State lost interest earnings which would have accrued had the sinking fund payments been promptly made and the funds invested. Michigan payrolls have also always been met, but in several instances payment of school aids and distribution of local shares of tax revenues were delayed for short periods of time.

TREASURER'S AND AVAILABLE CASH BALANCES

In Michigan differences between the Treasurer's cash balance and the "available cash balance" have occasioned some misunderstanding, particularly with respect to the size of deficits in the General and revolving funds.

Variations in the timing of the accounting of receipts and expenditures introduce most of the disparities. The Treasurer's cash balance does no more than indicate the total amount of deposits, short-term investment, and cash in his hands at a given time. This balance takes into account neither outstanding obligations nor anticipated receipts.

The "available cash balance," on the other hand, reflects modifications that anticipate impending transactions. It deducts, for example, the amount of state warrants issued but as yet unpresented to the Treasurer. Other items are considered that will presently reduce the cash balance; these are unliquidated liabilities incurred in the purchase of goods and services by the State and in the process of being certified or audited for payment. All such items are definite obligations against the State's cash resources, and for the most part they can be accurately ascertained.

The Treasurer's cash balance at any particular time overstates the cash resources of the treasury by the amount of these outstanding current liabilities. However, just as the cash balance fails to reflect the amount of outstanding liabilities, it also fails to evidence the pending receipt of taxes and government earnings. The "available cash balance" takes these receipts into limited account by ascertaining as far as practicable the cash in transit to the State Treasurer, and enlarging the balance by this amount. However, it is not feasible to include a sum covering taxes in the process of collection. Therefore, a substantial item of receipt is absent in the available cash estimate of the State's net resources. By virtue of this exclusion the Treasurer's cash balance is always in excess of that used by the Auditor General and is in a practical sense more realistic.

For making comparisons with other states the Treasurer's cash balance is more nearly consistent with practice elsewhere and therefore subject to less qualification. For month-to-month or year-to-year comparisons of Michigan figures, the differences in the two approaches are seldom significant. From a budgetary and management point of view the "available cash balance" and a related concept employed by the Auditor General, the "available surplus," are generally more useful than the Treasurer's cash balance. The former concept accounts for obligations that are certain to fall due shortly, and the latter quantifies the encumbrances on available cash that arise from statutory directions in current force and effect.

The "available surplus" concept is somewhat limited in usefulness for the same reason as the "available cash balance"; it takes none or a too limited account of the timing of expenditure and the offsetting influence of revenue receipts in the interim. It implicitly regards existing directions and provisions of the law as settled irrevocable policy. No alternative assumption is equally tenable if changes in legislative policy are recognized as possible and under certain conditions almost certain to occur.

Thus in periods of declining revenues and threatened depression previously adopted expenditure plans are often drastically altered. Under such conditions the "available surplus" may be a much less realistic characterization of the state's financial condition than the Treasurer's cash balance.

[1]The 1947 General Assembly in Iowa has greatly enlarged the General Fund; hence, in the future its structure will be roughly comparable to that of Wisconsin.

SHORT-TERM FARM LOANS

(*Continued from Inside Front Cover*)

worth was over $25,000. Similarly, on loans of $500 to $1,000 to livestock farms the interest rate ranged from a high of 6.0 per cent for borrowers whose net worth was under $2,000 to a low of 5.4 per cent for those with net worth above $25,000. Comparable relations hold for most loan size classes. Net worth estimates for truck farmers averaged a little under $10,000. As might be expected, the average for "part-time" farms was the lowest of all types of farm, averaging about $9,000. Even this is somewhat larger than many would expect this type of farm to average.

NET WORTH VARIATIONS BY TYPE OF FARM

Analysis of the reports indicates that the average net worth for all borrowers for whom net worth was reported was about $15,000. Highest average net worth by type of farm was for fruit farms with a figure of approximately $24,000. A similarly high average net worth for livestock farmers of above $21,000 was shown. But for dairy and poultry farms the average was around $12,000. Farmer borrowers whose major source of income was from field crops were estimated by the bankers to have an average net worth of about $18,000. On farms classified as "general" farms the average was $14,000.

It should be emphasized that these figures are *averages,* and it should be remembered that there are many farms with net worth either substantially above or below these averages. Reference is made to the figures shown above as to proportions of loans in each net worth size group where it is shown that over 60 per cent of all loans were to farms with net worth below $10,000. But more than half of the loans to livestock farms were to those whose net worth was estimated to be $10,000 and larger, and two-thirds of the fruit farm borrowers had a net worth above $10,000.

The different relative rank or position of the various types of farms as to net worth appears to reflect rather consistently the way in which the respective types of farm have fared during the past six or seven years. In general, fruit, livestock, and cash crop producers have been relatively more fortunately situated from the standpoint of costs and product prices, while dairy producers have been generally less fortunate on both counts.

The persisting relationship between size of loan and interest rate, previously referred to, is again underscored by the figures for the loans in the major net worth classification, $2,000 up to $10,000. For loans in this net worth class the range was from an average of $225 at 6.8 per cent for fruit farms and $444 at 6.1 per cent for general farms to $560 at 5.7 per cent for field crop farms and $664 at 5.6 per cent for livestock farms. In other words, approximate equality of the net worth of the borrower has little effect in modifying the relationship under which smaller loans cost the most, percentage-wise, and larger loans the least.

NET WORTH IN RELATION TO LOAN PURPOSE

Some differences in size of net worth were shown in relation to the reported purpose for which the loan was made. Those borrowing to repay debts had an estimated average net worth of about $12,000. Borrowers to meet production and living expenses had on the average a somewhat higher net worth, above $15,000. Those loans to finance purchase of livestock or machinery were to borrowers whose average net worth was reported at $13,000. However, where the loans were to buy or improve land or buildings, the average net worth of the borrowers was $25,000. For a substantial number of loans the purpose of the loan was reported as "unknown." The net worth reported for these borrowers averaged between $13,000 and $14,000.

Relationships between size of farm and net worth are of some interest. For farms under 10 acres in size the average net worth of the borrower was about $13,000. This reflects again the fact that many such tracts (and increasingly so) are not farms but essentially rural residences. Doubtless there are reflected also in this figure some of the small acreage, highly concentrated agricultural enterprises to be found in some city areas. For farms of 10 to 29 acres the net worth averages about $5,900. Turning on up the scale to 30-69 acre farms with net worth averaging $7,800, the net worth rises with size of farm reaching $16,000 for 140-259 acre farms, $31,500 for farms 260-499 acres in size, and $67,000 for farms over 500 acres.

Using rough measures for average size of farm within farm size classes and calculating a "net worth per acre" reveals the interesting fact that this ratio ranges from $300 per acre for 10-29 acre farms and $150 for 30-69 acres on down to under $100 per acre as an average for farms over 140 acres. This does not mean that "equities" are necessarily thinner on larger farms. It means chiefly that a significantly larger proportion of value and equity on any given farm is represented by buildings and improvements, and that as the farm size increases, such value is divided over more land.

NET WORTH RELATED TO LOAN SECURITY

In a previous article it was shown that the advancing of unsecured and unendorsed loans was a very common practice, accounting for half the total of loans in the survey. Analysis of security offered in relation to net worth of the borrower shows some of the basis for this practice. The average net worth of borrowers on unsecured and unendorsed notes was nearly $30,000. In the cases of notes endorsed but not otherwise secured the net worth averaged less than $9,000. A very high net worth average was shown for those borrowers whose loans were secured by crops in storage, amounting to approximately $24,000. Smallest net worth was, of course, shown for those loans secured by G.I. guarantee, where the average was estimated by the bankers at $3,600. The net worth of borrowers on machinery secured notes was about $8,600, while those borrowers whose notes were secured by a combination of crops, livestock, and machinery averaged a net worth of $9,400. Notes secured by livestock and by growing crops were indicated as coming from borrowers whose net worth was around $13,000.

SEVENTH FEDERAL

RESERVE DISTRICT