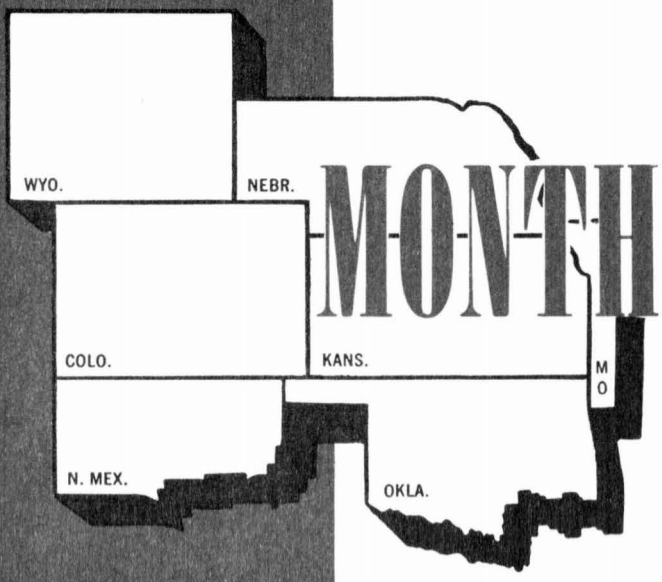
January-February 1967



MONTHLY REVIEW

FEDERAL RESERVE BANK
OF KANSAS CITY

Subscriptions to the MONTHLY REVIEW *are available to the public without charge. Additional copies of any issue may be obtained from the Research Department, Federal Reserve Bank of Kansas City, Federal Reserve Station, Kansas City, Missouri 64198.*

The Budget, Fiscal Action, and Short-Run Economic Change: Part 1

By Glenn H. Miller, Jr.

THE FUNDAMENTAL purpose of any budget document is the presentation of plans for future action. It examines proposed policies, especially their financial aspects, and includes available data that are appropriate for their evaluation. In the United States, the Federal budget that serves these functions is an executive budget, often referred to simply as "the President's budget." A major purpose of the President's budget has been succinctly described by the Director of the Bureau of the Budget as follows:

> . . . it must present to the Congress and the public the proposed overall plan and program for the Government for the coming year, including recommendations concerning both existing and proposed new Federal activities. As a program statement, it also contains the most complete reporting available on stewardship of the past fiscal year and the revised outlook for the current fiscal year.[1]

At the same time, the U. S. governmental system of coordinate powers places in Congress the power to raise revenues and appropriate funds. Thus, the total influence of the fiscal aspects of Government programs is to be found not from the budget document alone but in the results of the Administration's proposals both as modified by the legislative process and, later, as executed by the various departments and agencies.

The formulation and execution of Federal Government policy necessarily have economic aspects, and another major purpose of the budget stated by Schultze is to "present the basic information necessary to evaluate the impact of the Government's program and finances on the overall national economy." The economic aspects of Federal programs may be classified as follows:

1. The efficiency with which resources are drawn from the private sector and used by the Government.
2. The effects of changes in Government receipts and expenditures on the economic stability of the private sector.
3. The impact of Federal fiscal programs on the distribution of private incomes.
4. The role of Government receipts and expenditures in the economic growth of the Nation.
5. The influences of budget components on the allocation of resources within the private sector.[2]

[1] Statement of Charles L. Schultze, then Assistant Director, Bureau of the Budget, in U. S., Congress, **The Federal Budget as an Economic Document,** Hearings before the Subcommittee on Economic Statistics of the Joint Economic Committee, 88th Cong., 1st Sess., 1963, p. 150.

[2] U. S., Congress, Subcommittee on Economic Statistics of the Joint Economic Committee, **The Federal Budget as an Economic Document,** 87th Cong., 2d Sess., 1962, p. 95.

This article will be focused on the second item in the list—the effects of changes in Federal receipts and expenditures on economic activity in the short run.

Attention has been paid to the effects of changes in Federal receipts and expenditures on over-all economic activity since the acceptance of aggregative income analysis as a means for understanding and explaining the behavior of the economy. Only a skeletal description of that analysis in relation to Federal fiscal actions is necessary here, since the fundamental framework of national income analysis is now widely understood and readily accessible. Stripped to its essentials, the analysis shows that total output, employment, and prices are determined by aggregate spending in the economy. Aggregate spending is the total of all spending by consumers, business, and government. Whether intended or not, Government operations affect aggregate spending and therefore output, employment, and prices. Government spending contributes directly to aggregate demand while taxation reduces private spending. Thus a reduction in taxes or an increase in spending tends to raise the level of economic activity (and/or prices, depending on the current rate of resource use) while decreased spending or higher taxes tend to have the opposite effect. Furthermore, Government may consciously undertake fiscal action with the goal of influencing economic activity. Thus in periods of actual or incipient recession, fiscal policy may call for tax cuts and/or spending increases (an expansionary policy), while higher taxes and/or reduced expenditures may be the goal at times when inflation threatens (a restrictive policy). Although the fundamentals of a stabilizing fiscal policy thus may be outlined briefly and straightforwardly, many conceptual as well as practical problems are bound to arise in any specific situation.

Once it is recognized that fiscal action influences economic activity, it becomes important to know something of the magnitude of the effect. The analyst, therefore, must look at some specific measure of the amount of Government expenditures and receipts. Summary information on the fiscal impact of Government operations may be organized in several different ways, depending on the purposes for which it is to be used and on the concepts underlying the various presentations. In practice, the three major forms of presentation are: (1) the administrative, or conventional, budget; (2) the consolidated cash budget, or statement of Federal receipts from and payments to the public; and (3) Federal receipts and expenditures in the national income and product accounts, sometimes abbreviated as the NIPA budget. Thus the analyst interested in the fiscal impact of Government operations on economic activity in the short run faces a choice between these alternative presentations.

TYPES OF FEDERAL BUDGETS

The existence of three major types of Federal budgets, and the important differences between them, now is recognized widely. However, a brief description of the budgets and their differences will be included here, with emphasis on those differences that are especially significant for short-run economic analysis.

The Administrative Budget

This form of the budget, which is only one of many possible sets of totals of receipts and expenditures, is introduced first, not because it is the most important but because it is still the most familiar. Sometimes it is referred to as the conventional budget, or even simply as "*the* budget." Primarily an instrument of management and control, the administrative budget is the means by which the President quantifies his program and transmits it to Congress. It serves as the device through which Congress and the President impose fis-

cal discipline on governmental spending units, and provides data useful to the Government for housekeeping purposes.

"The administrative budget covers receipts and expenditures of funds owned by the Federal Government . . . ."[3] That is, it is concerned almost wholly with expenditures for which Congress makes regular appropriations and with the associated revenues required.

> For many years, the administrative budget served as the principal financial plan for conducting the affairs of Government. It represents a focal point for management and decisionmaking with respect to Government activities which are financed by the Government's own funds. As long as almost all Federal financial transactions were carried out with federally owned funds, the administrative budget provided adequate coverage.[4]

However, since the 1930's the Federal Government has undertaken certain programs involving receipts and expenditures of funds which are not federally owned. Most of these programs generally may be described as trust programs, for which disbursements are made from funds collected for special purposes and held in trust for specific beneficiaries or uses. The receipts and expenditures for these programs (such as the social insurance and highway programs) have grown greatly in the last 30 years, and a measure of Federal fiscal action which excludes them can no longer be considered complete. This exclusion of certain Federal receipts and expenditures from the administrative budget is most responsible for its rejection as an adequate measure of Federal fiscal action in an analysis of over-all economic activity.

Other signal features of the administrative budget are its cash basis treatment of receipts and expenditures, and certain other accounting conventions. Receipts are recorded upon collection and expenditures are noted when payment actually is made (i.e., when checks are issued), except that interest on the public debt is shown on an accrual basis. Only the net expenditures of wholly owned Government enterprises, such as the Post Office, appear in the administrative budget. Actions of Government-sponsored enterprises, such as the Federal Home Loan Banks, do not enter into the administrative budget, except for their interest payments to the Government or the Government's purchase of their securities. Some intragovernmental receipts and expenditures are included in the administrative budget to give a more proper picture of the financial operations of individual agencies.

The Consolidated Cash Budget

The growing importance of the trust funds made it apparent that the administrative budget was no longer an adequate measure of Federal fiscal action and its impact on the economy. A more comprehensive presentation—the consolidated cash budget—was developed to provide a measure of all Federal cash payments to, and receipts from, the public. By presenting more fully the flow of total cash transactions (excluding borrowing) between the Federal Government and the public, the consolidated cash budget gives a measure of the total impact of Federal fiscal action on the economy superior to that available from the administrative budget. The cash budget also reflects the Government's financial position better than the administrative budget and may be used to determine Government financing and net borrowing requirements.

Broadly speaking, the consolidated cash budget totals of receipts and expenditures involve the addition of some items to the administrative budget totals, and the elimination of certain items for which continued inclusion would be conceptually inconsistent. The cash budget is more comprehensive than the ad-

---

[3] U. S., **The Budget of the United States Government: 1967** (Washington: U. S. Government Printing Office, 1966), p. 378.
[4] **Ibid.,** p. 376.

ministrative budget, because the former includes receipts and expenditures of the trust funds as well as funds wholly owned by the Government. Transactions between budget accounts and trust funds are excluded, because the cash budget is meant to measure the flow of cash between the public and the Federal Government. Cash flows resulting from the activities of Government-sponsored enterprises, excluded from the administrative budget, are contained in the cash budget, and interest payments, treated on an accrual basis in the administrative budget, are put on a cash basis. Activities of agencies that are entered on a net expenditure basis in the administrative budget continue to be so recorded in the cash budget. Although the elimination of many intragovernmental transactions from the cash budget means that certain activities are recorded at lower levels than in the administrative budget, inclusion of trust fund and other transactions omitted from the administrative budget makes total receipts and expenditures considerably larger in the consolidated cash budget.

In outline form, the derivation of the consolidated cash budget from the administrative budget is accomplished as follows:

1. To the administrative budget figures, add the receipts and expenditures of the trust funds and of Government-sponsored enterprises.

2. Eliminate intragovernmental transactions that involve no exchange of cash with the public. (Seigniorage also is deducted because it is not a cash receipt from the public.)

3. Adjust transactions of a few accounts from a noncash to a cash basis.

   A. Record interest charges on a cash rather than an accrual basis.

   B. Adjust to cash basis for Government expenditures made by issue of bonds or notes.

   C. Adjust for the amount of checks outstanding, since expenditures are recorded in the administrative budget on a "checks issued" basis and the concept of a cash budget requires expenditure data on a "checks cashed" basis, in order to measure Federal payments to the public.

The deficit or surplus of the cash budget is indicative of the impact of Federal fiscal action both on the asset position of the public and on the Government's cash position and its potential debt operations. For example, a cash budget deficit means that the public is acquiring Government securities or cash, as the Government either borrows from the public or runs down its cash balance in order to pay its bills. A cash budget surplus, on the other hand, means decumulation by the public of money and/or Government securities and a reduction in Government debt and/or an increase in the Government's cash balance. In either case, Federal Government debt operations are significantly influenced by the flows of cash reported in the consolidated cash budget.

The Federal Budget on National Income and Product Account

The national income accounts budget is intended to measure the direct contribution of Federal fiscal action to the current flow of total income and output in the Nation. The national income accounts system of the Department of Commerce measures the current output of goods and services in the economy by type of expenditure—consumption, investment, net exports, and government. As far as the Federal Government is concerned, data on its activities are consolidated into a national income and product account for the Federal sector. This, in turn, is used with the accounts for the other spending sectors to produce statistical aggregates such as the gross national product. Constructed to fit into the U. S. Department of Commerce's framework of national income accounts for the entire economy, the Federal budget on national in-

come and product account is generally regarded as a specialized instrument well suited to the purposes of economic analysis.

Federal receipts on a national income basis are generally classified into four summary categories:

1. Personal tax and nontax receipts, primarily individual income tax receipts;
2. Corporate profits tax accruals;
3. Indirect business tax and nontax accruals, primarily from excise taxes and customs duties; and
4. Contributions for social insurance, primarily the employment taxes.

Five categories are used in classifying Federal expenditures on a national income accounts basis, categories which are consistent with the total framework of accounts.

1. Purchases of goods and services account for more than half of total Federal NIPA spending, and represent the value of current output purchased by the Federal Government. As such, it is—along with consumption, investment, net exports, and state and local government spending—a major component of gross national product. Included in this category are compensation of Federal employees, new construction, and other purchases, such as equipment and supplies for national defense and other Federal programs.

2. Federal transfer payments make up about one fourth of total Federal NIPA expenditures. Most are domestic transfer payments to persons, primarily social insurance beneficiaries or recipients of unemployment compensation. Receivers of transfer payments provide no current output or service in return; therefore, transfer payments are not counted in the gross national product. They affect general economic activity, however, since they do enter the stream of disposable personal income upon which consumption spending depends.

3. Grants-in-aid to state and local governments are similar to transfer payments in that their influence on economic activity is felt when spent by the grantees.

4. Net interest paid also adds to personal income but not directly to gross national product, since it is not considered as a payment for current output.

5. Subsidies less current surplus of Government enterprises is a consolidation of Federal subsidy payments to business and the current surplus or deficit of Government enterprises.

The NIPA budget—a statement of Federal receipts and expenditures constructed to be consistent with the national income accounts—necessarily differs in several ways from the consolidated cash budget. Receipts and expenditures of the District of Columbia are not part of the NIPA budget, since the District is placed in the state and local sector of the national income accounts. Certain receipts included in the cash budget are netted against expenditures in the national income budget. Contributions of employer and employees to Federal employees' retirement funds, excluded from the cash budget because there is no cash flow to the public, are included in the NIPA budget, since they are part of the compensation of Government employees for services currently rendered. (The surplus or deficit is unaffected either by inclusion of these intragovernmental transactions or by the netting procedure, since total receipts and total expenditures are changed by the same amount.)

Purely financial transactions, such as Federal loans and loan repayments, and purchases of existing assets, are excluded from the national income budget. These transactions do not directly affect the current flow of income and output, and their inclusion would be inconsistent with the structure of the national income accounts which, of course, also excludes such transactions in the private sector.

Differences in the timing of receipts and expenditures comprise an important distinc-

tion between the consolidated cash budget and the national income accounts budget. The cash budget counts receipts, including business tax receipts, when collected while the NIPA budget records some taxes—most importantly, the corporate income tax—when the tax liability is incurred.[5] Expenditures are recorded in the cash budget at the time payment is made but purchases of goods and services are dated in the national income budget at the time delivery is made. Cash payment may precede delivery, lag slightly (as in the case of wages paid to Federal employees), or lag significantly (as in the case of much defense equipment). Finally, interest on savings bonds and Treasury bills, which is treated on a payment basis in the cash budget, is treated on an accrual basis in the NIPA budget, on the assumption that the true economic impact on those to whom it is due occurs when the interest accrues.

The major differences between the three types of Federal budget transactions may be summarized as in the following table.

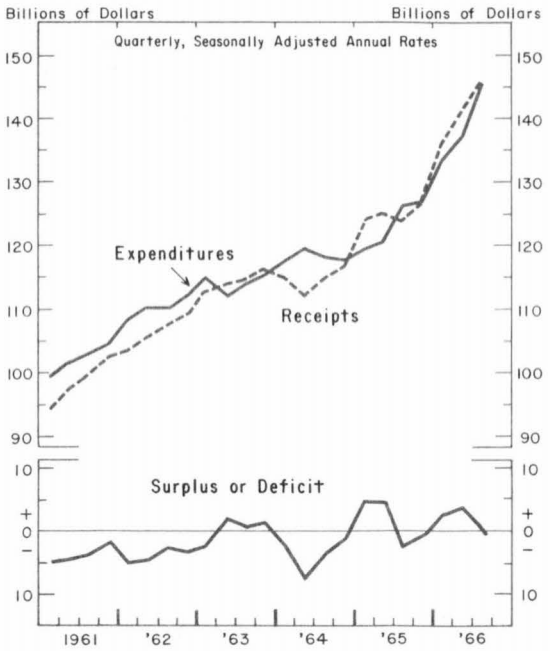
Item	TYPE OF BUDGET		
	Administrative	Cash	NIPA
Timing of receipts	Collection	Collection	Accrual
Timing of expenditures	Payment	Payment	Delivery
Credit transactions	Included	Included	Excluded
Trust fund transactions	Excluded	Included	Included

THE CASH BUDGET AND THE NIPA BUDGET, 1961-1966

The administrative budget now seldom is used in analyses of the impact of Federal fiscal action on over-all economic activity. It has been superseded largely by the consolidated cash budget primarily because of the latter's greater comprehensiveness, due to the inclusion of trust account transactions, and because of its conceptual emphasis on cash flows between the Federal Government and the private sector of the economy. However, the cash budget does compete with the Federal budget on national income and product account for the attention of economists. The fundamental points of difference between them concern the timing of impact, because of the NIPA budget's use of accrual methods; and the treatment of financial transactions, because of its conformance with national income accounting concepts.

These differences between the cash and the NIPA budgets sometimes lead to different conclusions concerning the timing, extent, and even direction of influence of the impact of fiscal action on economic activity, depending on which measure is being used. Such questions have been examined before by econ-

Chart 1
RECEIPTS, EXPENDITURES, AND SURPLUS OR DEFICIT, NIPA BUDGET, 1961-1966

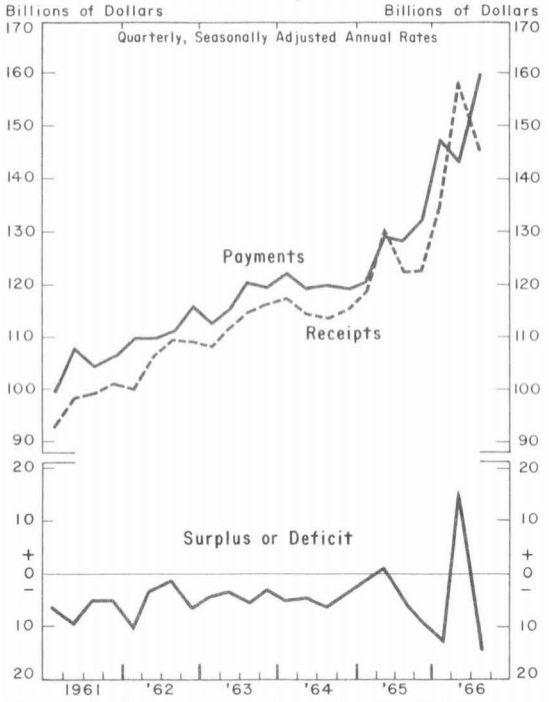


SOURCE: U. S. Department of Commerce, **Survey of Current Business.**

[5] " . . . on the ground that the main economic impact of these taxes is more closely associated with the accrual of liabilities than with actual cash collections." **The Budget of the United States Government: 1967,** p. 378.

Chart 2

RECEIPTS, PAYMENTS, AND SURPLUS OR DEFICIT, CONSOLIDATED CASH BUDGET, 1961-1966



SOURCE: U. S. Treasury Department, **Treasury Bulletin.**

omists,[6] and will be returned to in Part II of this article—which will appear in the next issue of the *Monthly Review*. First, however, statistics on Federal receipts, expenditures, and surpluses or deficits during the current expansion period for each of the two measures will be presented graphically so that their behavior may be compared.

Since annual data generally are not sufficient for short-run economic analysis, data will be given for shorter time periods. The charts in this section all present quarterly data at seasonally adjusted annual rates. Data from the NIPA budget are found in this form in the U. S. Department of Commerce's *Survey of Current Business*. Cash budget data in the form of seasonally adjusted quarterly totals were taken from the *Treasury Bulletin* and converted to the quarterly seasonally adjusted annual rate basis at the Federal Reserve Bank of Kansas City.

Charts 1 and 2 may be compared to observe the differences in Federal receipts, expenditures, and surpluses or deficits during the expansion period from the first quarter of 1961 through the third quarter of 1966. The overall movement of receipts and expenditures for the entire period is generally similar by either of the two measures. The NIPA receipts and expenditures curves appear to rise somewhat more smoothly than do the cash series. Federal cash payments to the public are generally larger than NIPA budget expenditures throughout the period, while the two measures of receipts display similarity in magnitude with differences occurring primarily in timing.

Differences in the financial results of Federal fiscal action, according to the measures used, are shown more clearly in a comparison of the quarterly deficits or surpluses on a cash budget and on a national income budget basis. From Chart 3, it may be observed that, at a seasonally adjusted annual rate, the NIPA budget shows a surplus in 7 of the 23 quarters included, while only in 2 quarters did the cash budget reach a surplus. Furthermore, in 19 of the 23 quarters included, the cash budget was in deficit while the NIPA budget was in surplus; or the cash budget surplus was smaller, when both were in surplus; or the cash budget deficit was larger, when both were in deficit.

A comparison of quarterly deficits or surpluses according to the two measures was part of an earlier *Monthly Review* article, which covered the period 1956 through 1960.[7] That time period included two recessions,

[6] See, for example, "Federal Receipts and Expenditures —Alternative Measures," **Monthly Review,** Federal Reserve Bank of Kansas City, August 1961, pp. 3-9.

[7] **Ibid.,** pp. 6-8.

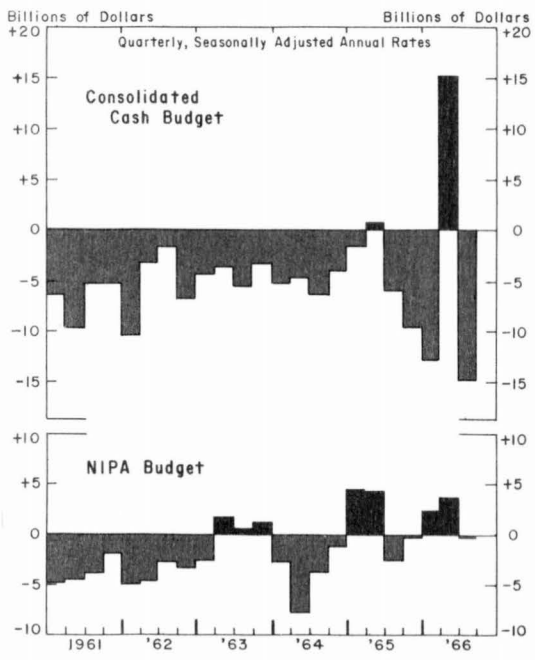
making the following observations possible in the article.

> As far as timing is concerned, the turns in the surpluses or deficits shown by the Commerce series have been closely in accord with standard prescriptions for fiscal stabilization policies, and analysts relying heavily on the National Income series have given the budget rather high marks for the timing of swings toward surplus or deficit during recent business fluctuations.
>
> . . . analysts who use cash budget figures take a much dimmer view of the budget's stabilizing role than do those who rely on the Commerce series.

Timing of swings in budget totals in relation to cyclical fluctuations is not an apt subject here, since only an expansion period is covered by the data charted in this article. However, questions of the timing of the impact of Federal fiscal action will be treated in Part II.

Chart 3

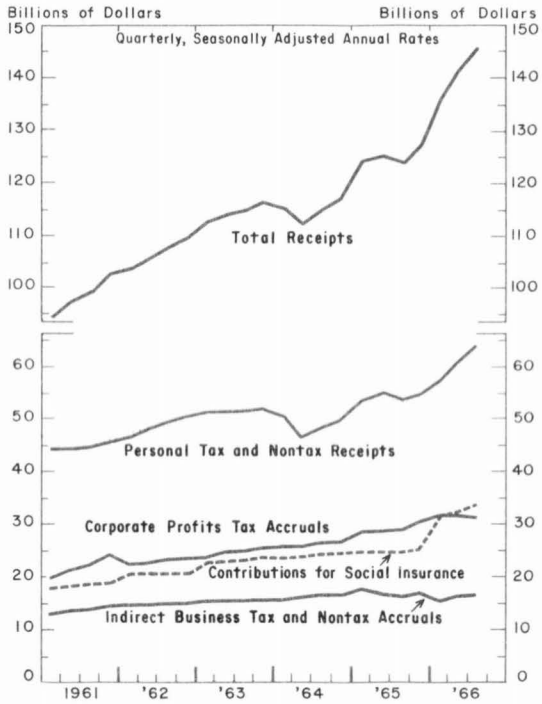
FEDERAL SURPLUS AND DEFICIT, 1961-1966



SOURCE: U. S. Treasury Department, **Treasury Bulletin,** and U. S. Department of Commerce, **Survey of Current Business.**

Chart 4

FEDERAL GOVERNMENT RECEIPTS, NIPA BUDGET, 1961-1966

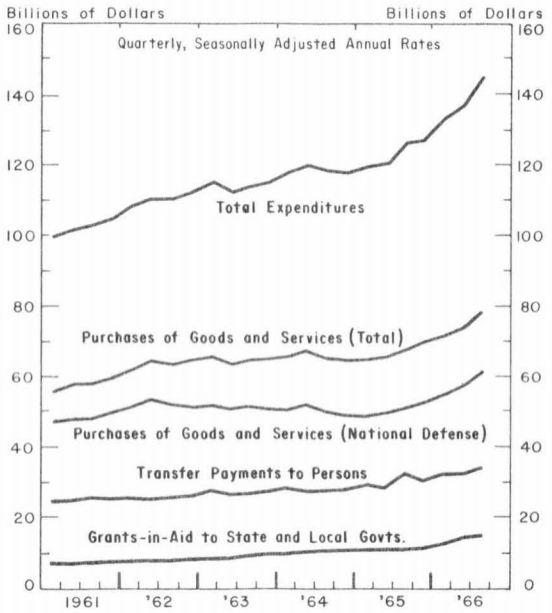


SOURCE: U. S. Department of Commerce, **Survey of Current Business.**

Although cash budget data for total receipts, total expenditures, and surpluses and deficits are published on a monthly seasonally adjusted annual rate basis and as seasonally adjusted quarterly totals (from which quarterly seasonally adjusted annual rates may be constructed), seasonally adjusted data are not published showing receipts by source or expenditures by any spending classification. Here the NIPA budget data are superior, in that receipts by source and expenditures by spending categories consistent with the national income accounts are published quarterly on a seasonally adjusted annual rate basis, permitting comparison with other seasonally adjusted series on private economic

Chart 5

FEDERAL GOVERNMENT EXPENDITURES, NIPA BUDGET, 1961-1966



SOURCE: U. S. Department of Commerce, **Survey of Current Business.**

activity. In Chart 4, the four receipt categories are presented for the period under consideration here while Chart 5 includes the major expenditure classes for the same span of time. The importance of the income taxes —both personal and corporate—in total Federal receipts is evident, as is the significance of the purchase of goods and services—especially for national defense—within total Federal expenditures. Again, countercyclical swings are not evident since no recession period is involved.

SUMMARY

Part I of this article is meant to provide an introduction and the necessary background for Part II, which will be more analytical in character. Part I has emphasized the purposes of budgeting and the importance of the economic impact of Federal fiscal action, and has discussed in some detail the alternative measures of Federal receipts and expenditures. In so doing, an attempt has been made to stress those features that are important in short-run economic analysis. Finally, the results of the operations of the Federal Government during the period 1961 to 1966, as measured by the cash budget and the NIPA budget, have been charted and briefly described. Part II will examine questions of the magnitude and timing of the impact of Federal fiscal action on general economic activity.

Financial Intermediaries and The Postwar Home Mortgage Market

By J. A. Cacy

ONE OF THE major postwar financial developments has been the dramatic growth in the volume of home mortgage debt (debt on owner-occupied residential properties). During the past 20 years, this debt increased almost tenfold, and by mid-1966 was $220 billion.[1] Aside from the absolute growth, home mortgage debt increased as a proportion of private long-term debt from around one third at the end of World War II to about two fifths at present. For the postwar period as a whole, moreover, debt on owner-occupied dwelling units grew more rapidly than debt on rental properties, although this has not been the case in recent years. At the end of 1965, home mortgage debt was an estimated seven times the debt outstanding on rental properties, compared with four and one half times in 1946. As is well known, a large portion of home mortgage debt extensions during the postwar period were made by four types of financial institutions—savings and loan associations, commercial banks, mutual savings banks, and life insurance companies.

In the following pages, attention is directed to postwar (through 1965) movements in home mortgage market shares held by the four major lenders, the changing position of home mortgages in their portfolios, and the growth rates of their total assets. First, a summary of postwar market share movements is presented. Since changes in market shares reflect portfolio adjustments and growth rates, the second section traces the portfolio policies of the different lenders and their asset growth. Third, the manner in which portfolio adjustments and growth rates affected market shares is described in some detail. Fourth, the influence of certain features of the prevailing institutional and legal structure on the behavior of market shares, portfolio policies, and growth rates of the major mortgage lenders is discussed. Finally, some brief comments concerning future developments are offered.[2]

MARKET SHARE MOVEMENTS

The volume of home mortgages held by the four intermediaries grew more rapidly during the postwar period than home mortgage debt

[1] Current estimates of mortgage debt on owner-occupied properties as such are not available. In this paper, we use the figures for debt on one- to four-family dwelling units as a proxy for debt on owner-occupied properties or home mortgage debt. One- to four-family dwelling units consist primarily of one-family, owner-occupied units.

[2] It should be pointed out that this paper is not directly concerned with the very interesting mortgage market developments of the past year or so, but should provide some useful background material for a consideration of these events.

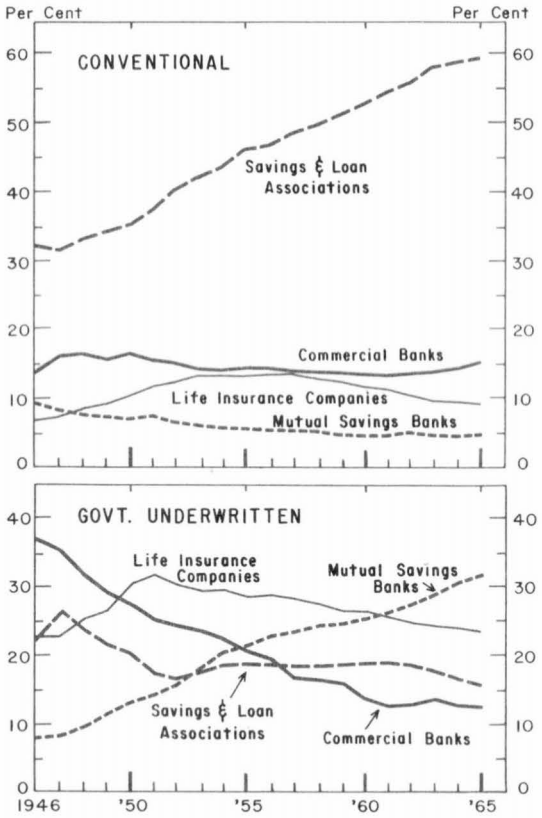
outstanding, even though their combined assets grew much less rapidly. In consequence, their combined share of total home mortgage debt outstanding increased—from 69 per cent at the end of 1946 to 87 per cent at the end of 1965. In this connection, developments in the conventionally financed sector of the market differed from those in the Government-underwritten sector.

In the conventional market, the relative importance of noninstitutional investors declined steadily throughout the postwar period and the combined importance of the major institutional lenders steadily increased. While supplying over nine tenths of the total increase in conventional debt outstanding, the major lenders increased their market share from 62 per cent at the end of 1946 to 88 per cent at the end of 1965. This enhancement of an already dominant position was most pronounced during the first postwar decade. Since around 1955, the importance of the four lenders not only has increased less rapidly; but, unlike the earlier period, the gain in their combined share has been due almost entirely to an increase in the share of one type of institution—the savings and loan association.

The major lenders also dominated the Government-underwritten sector of the postwar home mortgage market. They provided slightly over four fifths of the postwar increase in Government-underwritten debt. Note, however, that this is less than the nine tenths figure for the conventional sector. In further contrast with developments in the conventional market, the share of the Government-underwritten market held by the leading lenders declined—from 90 per cent at the end of 1946 to 83 per cent at the end of 1965. For the period as a whole, this is largely a reflection of an increase in the share held by the Federal National Mortgage Association. FNMA's share grew rapidly from 1946 through 1950, but has fluctuated between 5 per cent and 10 per cent since that time. The relative

Chart 1

MARKET SHARES: HOME MORTGAGE DEBT HELD AS A PER CENT OF TOTAL OUTSTANDING



SOURCE: Board of Governors of the Federal Reserve System, Federal Home Loan Bank Board, Department of Housing and Urban Development, and Institute of Life Insurance.

participation of holders other than FNMA and the major lenders declined sharply during the immediate postwar years, but has been trending upward since 1950, especially during the 1960's. At the end of 1965, these lenders held 11 per cent of the total, compared with 2 per cent in 1950 and 10 per cent in 1946.

Postwar movements in conventional and Government-underwritten home mortgage market shares varied among the major lenders, and during the earlier and later years of the period. As shown in Chart 1, savings and loan

associations and life insurance companies greatly increased their conventional market shares during the first postwar decade. After sharp increases in 1947 and 1948, the share held by commercial banks declined through 1955, but remained slightly above the 1946 level. In the 1955-65 period, life insurance companies effected a moderate reduction in their relative participation, while the position of commercial banks was slightly stronger in 1965 than 10 years earlier, and the share held by savings and loans continued upward. The relative importance of mutual savings banks in the conventional market declined throughout the postwar period, although less rapidly in recent years.

As was just implied, savings and loan associations throughout the postwar period steadily strengthened their position in the conventional home mortgage market. At the end of 1946, these institutions held about two and one third times the volume held by commercial banks, the second most important type of lender. By the end of 1965, this measure of market dominance had increased to about four times. Share differentials in the conventional market are considerably greater between savings and loans and any other major lender than among the other three lenders, although the position of commercial banks relative to that of life insurance companies and mutual savings banks has been steadily enhanced during the past decade. At the end of 1965, commercial banks held one and one half times the amount held by life insurance companies and three times the amount held by mutual savings banks.

In the Government-underwritten home mortgage market, mutual savings banks were the only major lenders to increase their market share significantly during the postwar period. (See Chart 1.) It will be remembered that these institutions were the only lenders to reduce their relative participation in the conventional market. Life insurance companies held a slightly higher percentage of the total Government-underwritten debt at the end of 1965 than at the end of 1946, while savings and loan associations and commercial banks held considerably smaller shares. From 1946 to 1951, the share of life insurance companies increased rapidly, and that of savings and loans declined rapidly. Since 1951, life insurance companies have experienced a steady reduction in their share, while the relative participation of savings and loans in the Government-underwritten sector remained about the same. The share of savings banks increased steadily throughout the period, while that of commercial banks declined steadily.

No single type of lender dominates the Government-underwritten sector as savings and loan associations do the conventional. At the end of 1965, mutual savings banks, the most important lender in the Government-underwritten sector, held only around one and one third times the amount held by life insurance companies, two times the amount held by savings and loans, and two and one half the amount held by commercial banks. In contrast to the conventional sector, postwar share rankings changed considerably in the Government-underwritten sector. Most dramatically, savings banks grew from least important to most important lender and the opposite is true for commercial banks. Savings and loans and life insurance companies held about the same market share at the end of 1946, but for most of the period and at the end of 1965, life insurance companies have been the more important of the two lenders.

GROWTH RATES AND PORTFOLIO ADJUSTMENTS

A lender's market share is related to his size and the composition of his portfolio. In fact, the share of the market held by a lender is equal to the product of (1) the ratio of home mortgages held by him to his total assets and (2) the ratio of his total assets to the volume

Table 1

GROWTH RATES OF MAJOR HOME MORTGAGE LENDERS AND HOME MORTGAGE DEBT

	Percentage Increase in Assets and Mortgage Debt		
	1946 to 1965	1946 to 1955	1955 to 1965
Assets			
Commercial banks	153.1	41.5	78.9
Savings & loan associations	1,168.8	269.1	243.7
Mutual savings banks	211.3	67.2	86.2
Life insurance companies	229.7	87.7	75.7
Home mortgage debt			
Total	827.0	283.1	142.0
Conventional	728.7	191.1	184.7
Government-underwritten	1,100.4	539.1	87.8

SOURCE: See Chart 1, p. 13.

of home mortgage debt outstanding. This division of the market share into two parts enables us to consider the effects of a lender's growth and portfolio policies on his share. Suppose, for example, that a lender's total assets increase over time at the same percentage rate as home mortgage debt outstanding. In this case, the lender can maintain his market share by holding unaltered the percentage division of his portfolio between home mortgages and other assets. If the lender fails to grow as rapidly as the total market, however, he can maintain his market share only by adjusting his portfolio in favor of home mortgages.

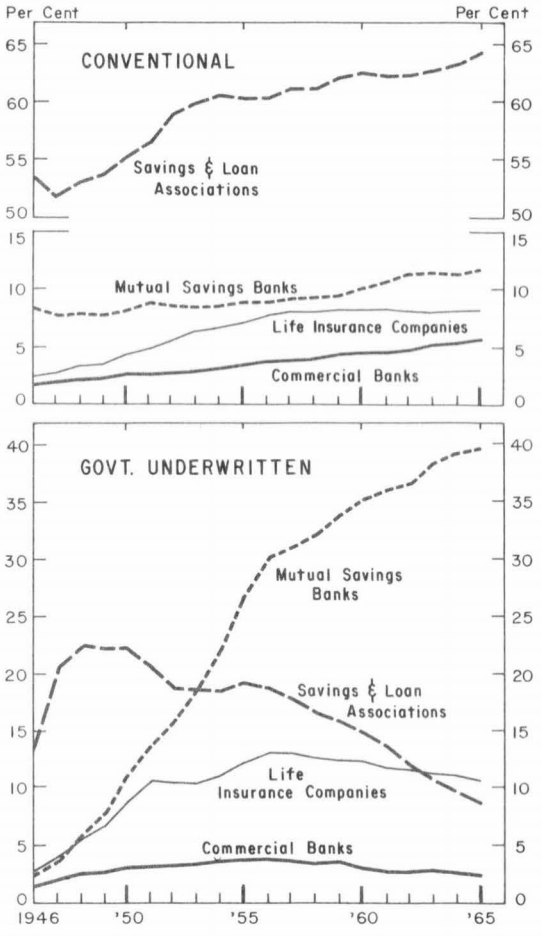
The postwar growth record of the four major home mortgage lenders and of home mortgage debt is presented in Table 1. Savings and loan associations grew considerably more rapidly than the other three lenders during the period and were the only institutions whose growth outpaced that of home mortgage debt. Life insurance companies and mutual savings banks both grew around one fourth as rapidly as home mortgage debt, while commercial banks grew the least. Some difference can be seen between the first and second postwar decades. Due to the phenomenal increase in the Government-underwritten sector, the growth of home mortgage debt outpaced even the rapid increase in the assets of savings and loans during the first postwar decade. During the 1955-65 period, however, Government-underwritten debt grew much less rapidly, and since conventionally financed debt increased at about the same rate as earlier, the percentage growth in total home mortgage debt was reduced. Savings and loans also grew somewhat less rapidly during the second period, although their growth was more rapid than that of home mortgage debt. The growth record of savings banks and especially of commercial banks was better during the 1955-65 period than in the previous decade, while life insurance companies grew less rapidly during the recent period. Total home mortgage debt increased more rapidly than the assets of these three lenders in both decades.

The increase in the importance of the leading lenders in the home mortgage market, even though their combined assets grew considerably more slowly than the volume of debt, implies that the relative importance of home mortgages in their combined portfolios increased. At the end of 1946, home mortgages held by these institutions accounted for around 7 per cent of their combined assets. By the end of 1965, this proportion exceeded 25 per cent. Again, there are differences between the conventional and Government-underwritten sectors, among types of lenders, and between the first and second postwar decades.

Conventional home mortgages increased in relative importance in the portfolios of each of the four lenders during the postwar period, especially during the earlier years. (See Chart 2.) For the entire period, portfolio adjustments were most pronounced for commercial banks and life insurance companies in the sense that the percentage increase in the ratio of mortgages to total assets was larger for these lenders. In recent years, life insurance companies have not noticeably increased the per cent of their assets allocated to conventional mortgages, and the upward trend has moderated for commercial banks and savings

Chart 2

PORTFOLIO COMPOSITION: HOME MORTGAGES HELD AS A PER CENT OF TOTAL ASSETS



SOURCE: See Chart 1, p. 13.

and loan associations. On the other hand, mutual savings banks have accelerated the rate of portfolio adjustments toward conventional mortgages. Savings and loans, of course, hold a considerably larger proportion of their total assets holdings in the form of conventional mortgages than do the other three lenders. At the end of 1965, these loans accounted for 64 per cent of the assets of savings and loans, compared with 12 per cent for savings banks, 8 per cent for life insurance companies, and 6 per cent for commercial banks.

The changing position occupied by Government-underwritten home mortgages in portfolios of the various lenders is portrayed in Chart 2. For the first postwar decade as a whole, these assets increased in relative importance in the portfolios of each of the major lenders. Since 1956, however, Government-underwritten mortgages have declined in relative importance for all except mutual savings banks. While conventional mortgages are much more important in the portfolios of savings and loans than for the other three lenders, savings banks hold a considerably larger proportion of their total assets in the form of Government-underwritten mortgages than do the others. At the end of 1965, these mortgages accounted for 40 per cent of the assets of savings banks, compared with 11 per cent for life insurance companies, 9 per cent for savings and loan associations, and 2 per cent for commercial banks.

MARKET SHARES REFLECT PORTFOLIO POLICIES AND GROWTH RATES

Attention now is directed to the manner in which postwar market share movements reflected the portfolio policies and growth rates of the different lenders. It can be seen from Table 2 that growth in assets relative to the growth of the market as well as portfolio adjustments operated toward increasing the share of the conventional market held by savings and loan associations during both postwar decades. That is, during both periods, the total assets of these lenders grew in percentage terms more than conventional debt, and they adjusted their portfolios in favor of conventional mortgages. The rate of change in portfolio adjustments was considerably slower during the 1955-65 period than in the earlier decade; but, due to rapid asset growth, the rate at which savings and loans extended their market position was not reduced. In contrast

Table 2

MARKET SHARES OF MAJOR HOME MORTGAGE LENDERS

	Market Share (mortgages held as a per cent of mortgage debt outstanding)			Portfolio Composition (mortgages held as a per cent of total assets)			Lender's Size Relative to Market (ratio of total assets to mortgage debt outstanding)		
	1946	1955	1965	1946	1955	1965	1946	1955	1965
Conventional:									
Commercial banks	13.7	14.4	15.1	1.6	3.3	5.6	8.8	4.3	2.7
Savings and loan	32.2	46.1	59.2	53.4	60.4	64.2	.6	.8	.9
Mutual savings banks	9.2	5.6	4.9	8.3	8.8	11.8	1.1	.6	.4
Life insurance	7.0	13.2	9.2	2.5	7.2	8.1	2.8	1.8	1.1
Government-underwritten:									
Commercial banks	37.0	20.5	12.5	1.5	3.8	2.4	24.6	5.4	5.2
Savings and loan	22.9	18.7	15.7	13.6	19.3	8.9	1.7	1.0	1.8
Mutual savings banks	7.9	21.4	31.7	2.6	26.7	39.8	3.1	.8	.8
Life insurance	22.4	28.7	23.3	2.8	12.4	10.7	7.9	2.3	2.2
Total:									
Commercial banks	19.9	17.1	14.2	3.1	7.1	8.0	6.5	2.4	1.8
Savings and loan	29.7	34.0	44.3	67.1	79.7	73.1	.4	.4	.6
Mutual savings banks	8.8	12.6	14.1	10.9	35.5	51.6	.8	.4	.3
Life insurance	11.1	20.0	14.0	5.3	19.5	18.8	2.1	1.0	.7

SOURCE: See Chart 1, p. 13.

to developments in the conventional sector, portfolio adjustments by savings and loans and their growth rate had opposite directional effects on their share of the Government-underwritten market during both postwar decades. In the earlier period, favorable portfolio adjustments were more than offset by the rapid growth of the market. From 1955 to 1965, savings and loans sharply reduced the proportion of their assets allocated to Government-underwritten mortgages, and this more than offset the rapid growth of their assets relative to the market. Thus, their share declined during both periods. Unlike the immediate postwar period, the decline in the relative importance of Government-underwritten mortgages in portfolios of savings and loans during the 1955-65 period more than offset the increase in the importance of conventional mortgages so that the proportion of assets allocated to total home mortgages declined. In recent years, especially in the 1960's, savings and loan associations have allocated an increasing proportion of their assets to mortgages on multi-family properties.

The increase in the relative participation of commercial banks in the conventional market during both postwar decades occurred even though their assets grew much less rapidly than the market. They enhanced their position by undertaking substantial portfolio adjustments in favor of conventional mortgages. The 1946-55 reduction in the commercial banks' share of the Government-underwritten market reflects the rapid growth of this debt in relation to the growth of commercial banks, while the 1955-65 decline reflects the decreased relative importance of Government-underwritten mortgages in their portfolios. Unlike savings and loan associations, commercial banks had a larger percentage of their assets allocated to total home mortgages at the end of 1965 than 10 years earlier, although the rate of portfolio adjustments in favor of home mortgages was considerably greater during the first postwar period. While savings and loans have been active in the multi-family mortgage market in recent years, commercial banks have increased their commercial mortgage lending.

The substantial decline in the conventional market share of mutual savings banks during the 1946-55 period reflects the slow growth rate of these lenders relative to that of conventional mortgage debt, since the relative importance of conventional mortgages in their portfolios remained almost constant. During the second postwar decade, the growth record of savings banks improved, and they increased moderately the proportion of assets allocated to conventional mortgages. Consequently, their market share declined less than during the earlier period. The dramatic portfolio adjustments by mutual savings banks in favor of Government-underwritten home mortgages during the immediate postwar decade resulted in a threefold increase in their market share despite the fact that Government-underwritten debt grew about four times as rapidly as the assets of these banks. During the 1955-65 period, they continued to allocate an increasing proportion of their assets to Government-underwritten mortgages. The increase in their

market share since 1955 reflects these adjustments, as their assets have grown in percentage terms about as much as Government-underwritten debt outstanding. Savings banks increased the importance of both conventional and Government-underwritten mortgages in their portfolios in both postwar decades. Consequently, their holdings of home mortgages in relation to their total assets increased substantially. In recent years, mutual savings banks, like savings and loan associations, have adjusted their portfolios in favor of multi-family mortgages, and like commercial banks, have increased the per cent of their assets allocated to commercial mortgages.

During the 1946-55 period, life insurance companies made portfolio adjustments in favor of conventional home mortgages of sufficient magnitude to more than offset the slow rate of growth of their assets. They thereby increased their relative participation in that market. During the second postwar decade, the rate of increase in the importance of conventional mortgages in the portfolios of life insurance companies was greatly reduced. Since they continued to grow less rapidly than the market, their share declined. Portfolio adjustments made by life insurance companies in Government-underwritten mortgages during the first postwar decade were similar to adjustments in conventional mortgages. Market share movements also were similar. During the second postwar decade, life insurance companies reduced the proportion of their assets allocated to Government-underwritten mortgages. This reduced their market share since their growth approximately equaled the growth of the Government-underwritten market. The decline, during the 1955-65 period, in the importance of Government-underwritten home mortgages in life insurance company portfolios offset the small increase in the importance of conventional mortgages so that home mortgages accounted for a smaller percentage of the assets of these lenders at the end of 1965 than 10 years earlier. Throughout the past decade, life insurance companies have adjusted their portfolios in favor of commercial mortgages, and, in recent years, have allocated a larger percentage of their assets to multi-family mortgages.

IMPACT OF INSTITUTIONAL AND LEGAL STRUCTURE

Portfolio policies and growth rates of financial intermediaries are determined, in general, by the attempts of the intermediaries to maintain some desired balance between the return on their investments and the risks to which they are exposed; the demand on the part of consumers, businesses, and governments for various types of credit; the saving propensities of the community; and the actions of monetary authorities in augmenting or diminishing the flow of savings. The postwar market share movements, portfolio adjustments, and growth rates of the different home mortgage market participants also were influenced by certain features of the institutional and legal structure in which the lenders operate. Perhaps of primary importance were geographic restrictions on conventional home mortgage lending and legal limitations on the ability of some lenders to compete for savings. In the following pages, the impact of these two factors is discussed. The discussion is not complete; rather it is intended as an identification of what appears to be some of the more obvious ways that certain public policies have influenced the behavior of market participants over the past decade or so.

Although there are many exceptions to geographic restrictions and they have been liberalized in recent years, a large portion of the conventional mortgage holdings of individual savings and loan associations, state-chartered commercial banks, and mutual savings banks must necessarily be collateralized by properties located within a specified geographic area. In general, the area is determined by the loca-

tion of the lender's home and branch offices. Since mutual savings banks are not geographically distributed throughout the Nation, they are prevented, with some exceptions, from competing for conventional home loans in many areas. Aside from those depository intermediaries which have taken advantage of the recent liberalizations, life insurance companies, which are not subject to geographic restrictions, are the only major national conventional lenders.

As noted above, the pattern of movements in market shares and portfolio adjustments has been similar for savings and loan associations and commercial banks during the past decade in that both types of institutions have adjusted their portfolios in favor of conventional mortgages, and increased their conventional market shares. These developments were influenced by geographic restrictions. Due in part to such restrictions, it appears that, in many areas of the Nation, a trend has been developing during the past decade or so toward a situation in which locally based savings and loan associations and commercial banks constitute the major competition in local conventional home mortgage markets. This is true even though some savings and loan associations have been permitted to engage in limited nationwide conventional lending and some mutual savings banks have been given increased flexibility in their conventional lending activity. Life insurance companies were, of course, not unimportant conventional lenders, and they did restructure their home mortgage portfolios in favor of conventional loans. Nevertheless, they became increasingly less important conventional market participants because they adjusted their portfolios away from home mortgages and they grew considerably less rapidly than the market.

Geographic restrictions also influenced developments in the Government-underwritten sector. In view of the slow growth of this sector in recent years, one would expect these mortgages to decline in relative importance in the portfolios of some lenders, and this occurred for savings and loan associations, commercial banks, and life insurance companies. On the other hand, one would not necessarily expect portfolio adjustments to be extensive enough to produce the decline in the relative participation of each of these lenders in the Government-underwritten market. Of course, it may be that their policies had a moderating effect on the growth of Government-underwritten home mortgage debt. It is true that conventional lending terms were liberalized during the 1955-65 period, and this would tend to make conventional financing more attractive to borrowers. It should be remembered, however, that the terms of Government-underwritten loans were liberalized also. Moreover, any potential effect of some lenders' preferences for conventional mortgages on the growth rate of Government- underwritten debt was minimized and probably offset by the behavior of mutual savings banks. Due in part to geographic restrictions on their conventional lending, mutual savings banks competed very actively in the Government-underwritten sector. Their competition was effective. The other lenders, especially savings and loan associations and commercial banks, responded to this competition and to the strength of demand in the conventional sector by reducing their participation in the Government-underwritten market and increasing their participation in the conventional market. Thus the role played by mutual savings banks explains in part the reduced relative participation of savings and loan associations, commercial banks, and life insurance companies in the Government-underwritten market. At the same time, mutual savings banks provided a source of credit for those borrowers who desired Government-underwritten financing.

The postwar pattern of market shares also was influenced by differences in the competitive position of the different lenders in the

market for the community's savings. This is seen most clearly with regard to savings and loan associations and commercial banks. We have noted that the pattern of movements in market shares and portfolio adjustments was similar for the two lenders. There are, however, some differences. While both lenders increased their relative participation in the conventional market and reduced their relative participation in the Government-underwritten market, share movements were considerably more pronounced for savings and loan associations than for commercial banks. Also, commercial banks have adjusted their portfolios in favor of conventional mortgages to a greater degree in recent years than have savings and loans, and adjustments away from Government - underwritten mortgages have been less pronounced for commercial banks. The differences, however, in the rate of change in the market shares of the two lenders reflect primarily the more rapid rate of growth of the assets of savings and loan associations. This in turn reflects in part the more favorable competitive position that savings and loans have had in the savings market. Furthermore, savings and loan associations have been aggressive in taking advantage of their position. Due in part to an altered competitive position, the growth record of commercial banks equaled that of savings and loan associations in 1964 and 1965. It is interesting that, during this period, the home mortgage market share increased more rapidly for commercial banks than for savings and loans.

FUTURE DEVELOPMENTS

As in the past, many factors will affect the future pattern of market share movements, portfolio adjustments, and growth rates of the different home mortgage lenders. Important among the determining forces will be the strength of the demand for owner-occupied housing relative to the demand for other types of housing and for other goods and services financed by credit extensions. Also, the existing institutional and legal structure and changes therein will continue to exert an important influence.

Further substantial increases in the volume of home mortgage debt no doubt will occur but the rate of growth is likely to be less rapid than during the past two decades. On the other hand, there is no reason to suppose that the growth rate of financial intermediaries will be reduced, notwithstanding the experiences of the past year or so. Thus, although the major lenders may continue to increase their combined share of the home mortgage market, it is likely that the relative position occupied by these assets in their combined portfolios will be enlarged at a less rapid rate.

Mortgages on rental properties will continue to offer attractive alternatives to home mortgages in the future portfolios of financial intermediaries. Reflecting the growing demand for rental housing, the ratio of multi-family mortgages to total residential mortgage debt held by the four major lenders has been increasing in recent years; and this is likely to continue. As was noted, multi-family mortgages have become increasingly important in the portfolios of savings and loan associations, life insurance companies, and mutual savings banks. Due in part to regulatory limitations, commercial banks have remained unimportant in this area. It may be that the increased demand for mortgages on rental housing will be met by savings and loan associations, mutual savings banks, and life insurance companies, and an increasing percentage of the demand for home mortgages will be met by commercial banks.

Developments in the home mortgage market will be influenced by any changes in public policy affecting the competitive position of the various participants in the savings market. If restrictions on competition are relaxed, it is reasonable to assume that commercial banks will attract an even larger portion of the com-

munity's savings than during the past 20 years. As a result, these banks would probably respond by increasing their relative participation in the home mortgage market, especially if other lenders are attracted increasingly to multi-family mortgages.

Further liberalization of geographic restrictions on conventional lending also would affect the future behavior of mortgage lenders. Perhaps the most significant liberalization would be an enhancement of the flexibility of mutual savings banks with regard to conventional lending. One of the questions raised by this liberalization is its effect on the Government-underwritten sector of the home mortgage market. We have seen how geographic restrictions have operated to help provide a source of funds for this market. One might speculate as to what would have developed in the Government-underwritten sector if mutual savings banks had been permitted nationwide conventional lending. Would the growth rate of Government-underwritten debt have been even less during the past decade? Or, would the same volume of debt be distributed more evenly among the lenders? If the answer to the first question is affirmative, the future of the Government-underwritten mortgage may be jeopardized by granting authority to mutual savings banks to undertake nationwide conventional lending. It may be mentioned with regard to the FHA mortgage, that some observers feel that a thorough reevaluation of the program is in order. If modifications are not undertaken, the appeal of the program to both lenders and borrowers will probably continue to decline. In this case, mutual savings banks will have added incentive to seek alternative investment outlets and to contend for the liberalization or elimination of geographic restrictions on their conventional lending. This likely would result in an increase in their relative importance in the conventional home mortgage market. It is not illogical to expect such a development to be accompanied by an increase in the participation of the other lenders in the Government-underwritten market.

In conclusion, developments can reasonably be visualized that would produce a more uniform distribution of both conventional and Government-underwritten home mortgage debt among the various lenders, and, for each lender, a greater degree of portfolio diversification with regard to different types of mortgage holdings.

Farm Lending by Commercial Banks In the Tenth Federal Reserve District

By Raymond J. Doll
Richard D. Rees
Gene L. Swackhamer

As of midyear 1966, commercial banks in the Tenth Federal Reserve District were extending $1.9 billion of farm credit to 254,000 farm borrowers. This estimate, along with much other information pertaining to commercial bank financing of agriculture in the Tenth District, was revealed by the Federal Reserve System's Agricultural Loan Survey of June 30, 1966.

This article is based on data provided by a stratified random sample of 181 District insured commercial banks. Each of these banks reported detailed information on a sample of its farm loans, along with items of information for the bank as a whole. It is a tribute to these bankers that they responded 100 per cent to this substantial request for information. The sample banks were stratified by size, as measured by dollar volume of farm loans outstanding. All banks with $3 million or more of farm loans were included, 15 per cent of those banks with from $2,000,000 to $2,999,999, and smaller proportions for seven additional groups. At least one bank was picked at random for each state in the three groups with the smallest volume of farm loans. Each of the banks selected reported on all borrowers with $100,000 or more of debt outstanding and on from 20 to 50 additional borrowers within a designated alphabetical segment. Banks with a large volume of farm loans reported on an alphabetical segment that represented approximately 5 per cent of all borrowers, while banks with a relatively small volume of farm loans reported on an alphabetical segment that represented about 50 per cent of all borrowers. Banks from all seven Tenth District states were included—varying in number from 51 in Nebraska to only 9 in the Tenth District part of New Mexico.

The objective of the sample design was to obtain the minimum number of reports necessary to achieve an acceptable degree of validity in subsequent analysis; thereby keeping respondents' burdens as small as possible. The data then were expanded to the total of farm loans reported by all banks in the Report of Condition, which was obtained at the same time. The following parts of this article will provide a brief descriptive summary of the major findings of the survey. Additional analytical studies of a more definitive nature will be made as more tabulations are made and as time and resources permit.

CHARACTERISTICS

There has been considerable discussion recently about sharply increasing capital requirements in the agricultural industry be-

cause of increasing investment and cash production expenses. Farm income has failed to keep pace with the growing capital requirements. Consequently, the use of farm credit has grown more rapidly than capital requirements. These developments have had an impact on farm loans made by commercial banks. Therefore, a more detailed evaluation of the characteristics of farm financing by commercial banks is appropriate. Insofar as data permit, comparisons are made with the situation that prevailed a decade ago when the last study of farm loans at commercial banks was made.

By Borrower

It is interesting to note that a fifth of the borrowers—those with outstanding bank debt of more than $10,000—were holding about 70 per cent of the total dollar volume of bank farm debt. On the other hand, nearly two fifths of the borrowers—in those groups having outstanding debt of less than $2,000—held only 4 per cent of the total debt. The largest group of borrowers had outstanding farm debt of from $2,000 to $4,999. The largest dollar volume of debt was held by the group with outstanding debt of $25,000-$99,999. Since many banks in the Tenth District do not have capital structures large enough to finance farmers with a large volume of outstanding debt because of loan limits, it has been necessary for these banks to use participations or other schemes for providing a large proportion of the dollar volume of farm credit. This problem will be discussed in more detail in a subsequent section.

Table 1

TOTAL OUTSTANDING BANK DEBT PER BORROWER

(June 30, 1966)

Size Per Borrower	Amount Outstanding (In thousands)	Number		Average Effective Interest Rate
		Borrowers	Notes	
Less than $500	$ 8,111	32,902	36,700	10.1
$500-$999	19,628	28,386	36,448	8.4
$1,000-$1,999	52,223	37,657	53,260	7.7
$2,000-$4,999	190,862	59,722	102,125	7.3
$5,000-$9,999	311,561	44,015	103,460	6.9
$10,000-$24,999	558,986	36,680	97,175	6.8
$25,000-$99,999	579,062	13,697	48,173	6.4
$100,000 or more	192,644	799	2,730	6.2
Total	$1,913,076	253,857	480,071	6.7

NOTE: Details may not add to totals due to independent rounding.

An average of 1.9 notes were held per borrower. As would be expected, most borrowers with a small dollar volume of debt outstanding had only 1 note. The average number of notes per borrower tended to increase with size of debt and averaged 3.4 for borrowers with $25,000 or more of debt outstanding.

Interest rates charged by the banks averaged 6.7 per cent, which compares with an average rate of 6.1 per cent a decade earlier. Although average rates charged decreased consistently with increasing size of debt per borrower, the reader should be cautioned that factors other than size are likely to be responsible for part of the rate variation. For example, as will be shown later, feeder livestock loans are almost nine times larger than loans made for purchasing autos and other consumer durables. Feeder livestock loans generally are well secured and made to farmers with relatively high net worths. Other factors, such as these, also are frequently intercorrelated with size.

Major Purpose

The major purposes for which bank credit is used by Tenth District farmers are: to purchase feeder livestock, to purchase other livestock, and for current operating expenses and family living. Almost three fourths of the total dollar volume of credit was used for these purposes. Although more farmers borrowed to purchase machinery than to buy feeder livestock or other livestock, the average size of note for machinery purchase was substantially smaller, so the dollar volume of credit used for this purpose was relatively less important.

The average amount of outstanding bank credit held by farmers for all purposes was 176 per cent greater than a decade earlier. The rate of increase was substantially above

Table 2

MAJOR PURPOSE FOR WHICH BANK CREDIT WAS USED

Major Purpose	Amount Outstanding			Number of Notes			Average Size of Note			Average Effective Interest Rate	
	1956	1966	Percentage Change	1956	1966	Percentage Change	1956	1966	Percentage Change	1956	1966
	(In thousands)										
Current operating expense and family living	$214,958	$ 451,196	110	206,692	196,451	−5	$1,040	$2,297	121	6.4	6.8
Purchase:											
Feeder livestock	175,058	542,708	210	32,054	58,687	83	5,461	9,247	69	5.4	6.4
Other livestock	90,730	385,815	325	36,274	69,806	92	2,501	5,527	121	6.1	6.6
Machinery, trucks, equipment	76,181	211,913	178	57,917	78,521	36	1,315	2,699	105	7.4	7.3
Farm real estate	64,333	154,773	140	13,034	19,456	49	4,936	7,955	61	5.1	6.5
Auto or other consumer durables	10,375	28,409	174	16,382	22,700	38	633	1,251	98	8.8	8.9
Consolidate or pay other debts	41,754	66,273	59	16,020	12,790	−20	2,606	5,182	99	6.2	7.2
Improve land and buildings	14,973	44,033	194	8,323	10,250	23	1,799	4,296	139	6.3	6.8
Miscellaneous	5,871	27,954	376	3,668	11,408	211	1,600	2,450	53	5.6	6.7
Total	$694,233	$1,913,076	176	390,368	480,071	23	$1,778	$3,985	124	6.1	6.7

NOTE: Details may not add to totals due to independent rounding.

average for loans used for the following purposes: miscellaneous, purchasing other livestock, purchasing feeder livestock, and improving land and buildings. The rate of increase was much below average when the loans were used for consolidating or paying other debts, paying current operating and family living expenses, and purchasing farm real estate. Average size of note increased about 2¼ times during the decade, with large increases being shown for all categories.

There was considerable variability in interest rates and in the change in rates by purpose in both 1956 and 1966. Rates were highest in both years for purchasing autos or other consumer durables; however, the rates for these loans were practically unchanged in 1966 from 1956 levels. Rates were lowest in 1966 on loans made for purchasing feeder livestock, but the increase during the decade was a full percentage point—from 5.4 per cent in 1956 to 6.4 per cent in 1966. The second lowest rate in 1966 was for purchasing farm real estate, despite the fact that this rate increased 1.4 percentage points during the decade—from 5.1 per cent in 1956 to 6.5 per cent in 1966. Rates charged on loans for purchasing farm machinery also were virtually unchanged in 1966, as compared with 1956. Generally, rates that were lowest in 1956 showed the largest increases during the decade, but continued to remain relatively low in 1966. Variability in rates charged by purpose declined substantially from 1956 to 1966.

Maturity

FARM LOANS outstanding in the Tenth District at mid-1966 were predominantly short-term loans. About 60 per cent of the dollar volume of loans outstanding had a maturity of 1-7 months and an additional 25 per cent of the dollar volume had a maturity of 8-13 months. These relatively short maturities probably can be explained largely by the purpose for which the loans were made, as discussed in the previous section. Feeder livestock and operating expense loans—which accounted for over half of the dollar volume of loans—because of their nature usually are short-term loans. Loans for purchase of other livestock usually are written for a somewhat longer period of time. This probably explains the relatively large increase in importance of loans with 8-13 month maturities from 1956 to 1966, since,

Table 3
BANK LOANS BY MATURITY
(Outstanding June 30)

Maturity	Amount Outstanding 1966	Percentage Distribution 1966	Percentage Distribution 1956	Number of Notes 1966	Average Size of Note 1966	Average Maturity in Days 1966	Average Effective Interest Rate 1966	Average Effective Interest Rate 1956
	(In thousands)							
Demand	$ 87,327	5	4	19,501	$4,478	....	6.7	6.2
1-7 months	1,125,578	59	65	278,245	4,045	165	6.5	6.0
8-13 months	478,668	25	18	112,222	4,265	332	7.0	6.4
14-66 months	138,277	7	10	60,219	2,296	957	7.3	6.8
Over 66 months	83,226	4	3	9,885	8,419	5,185	6.2	4.7
Total	$1,913,076	100	100	480,071	$3,985	508	6.7	6.1

NOTE: Details may not add to totals due to independent rounding.

as was shown previously, the dollar volume of "other livestock" loans increased sharply during the decade.

Interest rates increased approximately one half of a percentage point for all maturity groupings, except for the "over 5 years" group. The rates for this grouping, 70 per cent of which were real-estate loans, increased 1.5 percentage points—from 4.7 per cent in 1956 to 6.2 per cent in 1966.

Security

THE USE OF security increased in relative importance during the past decade in the extension of farm credit, as evidenced by the decline since 1956 in the unsecured proportion of total dollar volume. As the average size of loans and total demand for credit increase, it is logical to expect fewer unsecured loans to be extended. Furthermore, secured loans frequently command a lower rate of interest; however, it is customary for the institution to treat each customer on his individual merits. A favorable financial statement and personal knowledge of the customer frequently are substituted for formal security.

The most common security for loans reported in the survey were the chattel mortgage and the closely associated security agreement and financial statement, chattel deed of trust, or conditional sales contract. These types of security were the basis for more than two thirds of the total dollar volume outstanding in 1966—an increase of 208 per cent for the decade. The average size of loans secured in these ways increased 113 per cent since 1956.

Table 4
BANK LOANS TO FARMERS BY SECURITY
(Outstanding June 30)

Type of Security	Amount Outstanding 1956	Amount Outstanding 1966	Amount Outstanding Percentage Change	Number of Notes 1956	Number of Notes 1966	Number of Notes Percentage Change	Average Size of Note 1956	Average Size of Note 1966	Average Size of Note Percentage Change
	(In thousands)								
Unsecured	$155,033	$ 375,864	142	149,999	145,063	−3	$1,034	$2,591	150
Secured	539,201	1,537,211	185	240,869	335,008	39	2,238	4,588	105
Endorsed or co-maker	17,742	43,990	148	15,952	15,058	−6	1,112	2,921	163
Chattel mortgage, security agreement and financial statement, chattel deed of trust, or conditional sales contract	425,795	1,313,373	208	200,804	291,118	45	2,120	4,511	113
Real-estate mortgage	74,287	142,729	92	16,903	21,512	27	4,395	6,635	51
Government guaranteed or insured	6,247	14,636	134	2,254	1,807	−20	2,771	8,100	192
Other	15,130	22,483	48	4,462	5,513	24	3,391	4,078	20
Total	$694,233	$1,913,076	176	390,368	480,071	23	$1,778	$3,985	124

NOTE: Details may not add to totals due to independent rounding.

Notes secured by real-estate mortgages increased 27 per cent in number and 92 per cent in dollar volume from 1956 to 1966. The number of endorsed or co-maker notes decreased 6 per cent, while the average size of such notes increased 163 per cent. Government guaranteed or insured loans also increased 134 per cent in dollar volume, but decreased 20 per cent in number of notes. As a result, Government guaranteed notes increased sharply in average size since 1956—from $2,771 to $8,100.

As a whole, secured notes increased 185 per cent in dollar volume and 39 per cent in number. The average size of secured notes increased 105 per cent and of unsecured notes 150 per cent since 1956. Although the dollar volume of unsecured loans increased 142 per cent over the past 10 years, their relative importance decreased from 22.3 per cent in 1956 to 19.6 per cent in 1966.

Net Worth

Variation in net worth of borrowers was large in both 1956 and 1966. Borrowers in the $25,000 to $99,999 net worth group had the largest dollar volume of outstanding debt for any group. This group had a total outstanding debt of $761 million in 1966—an increase of 206 per cent. In this group, the number of borrowers increased 91 per cent, while the average size of borrower debt increased 61 per cent.

An interesting feature revealed in Table 5 is the trend in farm debt by net worth groupings from 1956 to 1966. The smaller net worth groupings show a decrease in percentage change in amount outstanding and number of borrowers for the 10-year period, while the larger groupings show relatively large increases. The changes were persistently from negative to positive with each successively larger net worth grouping. These trends in amount outstanding and number of borrowers by net worth grouping largely reflect the influence of the changing structure of agriculture during the decade on the size of farm. The average debt per borrower increased at a decreasing rate as the net worth size increased, with an increase of almost 2½ times for the net worth group of under $3,000 and only about a fourth for the group $100,000 and over.

When combined, the two largest net worth groups accounted for about 75 per cent of the loan volume and 48 per cent of the borrowers in 1966, compared with 61 and 26 per cent, respectively, in 1956. Conversely, the three smallest net worth groups, together, accounted for only 20 per cent of the dollar volume and about 39 per cent of the borrowers in 1966—a decrease from 39 per cent and 71 per cent, respectively, in 1956.

Age

Farmers 45 years of age and over had the largest volume of outstanding bank debt. Their borrowings increased 156 per cent since 1956 and accounted for more than one half of the total amount at mid-1966.

Table 5

BANK LOANS TO FARMERS BY NET WORTH

(Outstanding June 30)

Net Worth of Borrower	Amount Outstanding			Number of Borrowers			Average Amount Per Borrower		
	1956	1966	Percentage Change	1956	1966	Percentage Change	1956	1966	Percentage Change
	(In thousands)								
Under $3,000	$ 20,660	$ 16,328	−21	25,812	8,476	−67	$ 800	$ 1,926	141
$3,000-$9,999	103,476	103,535	....	70,193	33,804	−52	1,474	3,063	108
$10,000-$24,999	145,606	260,212	79	64,712	57,687	−11	2,250	4,511	100
$25,000-$99,999	248,328	761,151	206	49,995	95,380	91	4,967	7,980	61
$100,000 and over	172,314	684,141	297	8,529	27,153	218	20,203	25,196	25
Not reported	3,849	87,710	2,179	6,149	31,357	410	626	2,797	347
Total	$694,233	$1,913,076	176	225,390	253,857	13	$ 3,080	$ 7,536	145

NOTE: Details may not add to totals due to independent rounding.

Table 6

BANK LOANS TO FARMERS BY AGE

(Outstanding June 30)

Age of Borrower	Amount Outstanding			Number of Borrowers			Average Amount Per Borrower		
	1956	1966	Percentage Change	1956	1966	Percentage Change	1956	1966	Percentage Change
	(In thousands)								
Under 35	$ 95,174	$ 238,538	151	44,426	42,791	−4	$ 2,142	$ 5,574	160
35-44	181,875	446,391	145	63,489	62,062	−2	2,865	7,193	151
45 and over	391,557	1,004,521	156	111,120	139,212	25	3,524	7,216	105
Corporation farming	21,776	84,560	288	206	898	336	105,710	94,165	−11
Not reported	3,849	139,066	3,513	6,149	8,893	45	626	15,638	2,398
Total	$694,233	$1,913,076	176	225,390	253,857	13	$ 3,080	$ 7,536	145

NOTE: Details may not add to totals due to independent rounding.

The number of borrowers of this age increased 25 per cent and their average borrowings 105 per cent during the decade.

The youngest farm borrowers—those under 35 years of age—increased their aggregate bank debt by 151 per cent. The average debt per borrower increased by a greater amount —160 per cent—since the actual number of borrowers in this group decreased over the past 10 years. It should be noted that the average age in this group was only 29 years, so these borrowers have not had many years to prove their managerial ability nor to build up a substantial net worth.

Corporations experienced the greatest percentage change in outstanding volume of loans and number of borrowers of any age group—increases of 288 per cent and 336 per cent, respectively. The average amount outstanding decreased 11 per cent during the 10-year period, since the number of borrowers increased by a greater per cent than did the amount outstanding. These percentage changes are not particularly significant because of the relatively small amounts involved.

Partnership farms were included in the "not reported" category and primarily accounted for the huge increase in dollar volume outstanding in this group—75 per cent of the $139 million of bank debt outstanding in the "not reported" category in 1966. Partnerships, by nature, tend to be relatively large-scale operations and, in 1966, had an average debt of $31,200 per partnership. This compares with an average debt per corporation farm of $94,165 and $6,922 per single-proprietorship farm.

BANK DIFFICULTY IN FINANCING FARM CUSTOMERS

A somewhat surprising result of the survey was that 85 per cent of all agricultural loans were made by banks that indicated they experienced no difficulty in financing their farm customers. Only 10 per cent of total agricultural loans were made by banks indicating they experienced greater difficulty in financing agriculture, as compared with past years. The remaining banks reported experiencing little difficulty, or the same amount of difficulty, as in past years. Part of the explanation for the apparent ease in financing agriculture may be found in the fact that gross farm income had been growing relatively rapidly for about a year and a half prior to the survey.

For those banks reporting greater difficulty in financing farm customers, two possible explanations appear relevant. Either these banks could not attract sufficient deposits for making loans or farm loan demand substantially exceeded the banks' resource capabilities. A comparative analysis of the interest rates banks were paying for regular savings and other time deposits did not reveal any significant differences between banks reporting greater and no difficulty in financing farm customers. Of those banks reporting greater financing difficulty, however, more than half

Table 7

TOTAL OUTSTANDING AMOUNT OF PARTICIPATION LOANS ORIGINATED BY RESPONDENT BANK

(June 30, 1966)

Amount Held by Reporting Bank	Size of Capital and Surplus						
	Under $200	$200 to $299	$300 to $499	$500 to $999	$1,000 to $1,999	$2,000 and Over	Total
	(In thousands)						
None	$ 2,236	$	$	$	$ 5,981	$	$ 8,217
Under $5,000	....	....	....	....	....	....	....
$5,000-$24,999	2,726	114	....	4,922	....	....	7,762
$25,000-$99,999	6,095	20,956	....	....	1,320	....	28,371
$100,000-$499,999	40,165	34,743	36,888	6,032	20,434	250	138,511
$500,000-$999,999	....	....	13,050	12,358	1,265	4,166	30,839
$1,000,000 or more	....	....	....	....	5,871	22,161	28,032
Total	$51,222	$55,813	$49,938	$23,312	$34,871	$26,577	$241,731

were paying less than 3.5 per cent on regular savings. Fifty-three per cent of the "no difficulty" banks were paying the maximum 4 per cent on regular savings.

Several comparisons suggest that the farm loan demand experienced by banks reporting greater financing difficulty was substantial. They had 174 per cent more acceptable farm loans per bank that they could not grant from their own resources—because the requests exceeded their legal limit—than did banks reporting no financing difficulty.

Of more importance than loan numbers was the size of the loans exceeding loan limits. Banks reporting greater financing difficulty averaged $245,494 in acceptable loans exceeding their legal limits during the past year, compared with $53,376 for those banks reporting no financing difficulties. Also, these banks had twice as many outstanding participation loans as the "no difficulty" banks, averaging $170,937 per bank more in total outstanding participation loans. Obviously, there was some variability in how banks defined "difficulty" since even the "no difficulty" group of banks had loan requests larger than their legal limits.

Of 1,905 District banks, 1,119 were reported to be working with outside financing sources during the past year. As expected, a large majority of these banks—88 per cent—worked with correspondents. Nineteen per cent obtained outside funds from insurance companies, and only 7 per cent obtained funds from agricultural credit corporations.

Of the 12 per cent reporting that they did not work with correspondent banks, about three fifths obtained funds from insurance companies. None reported receiving funds from agricultural credit corporations. Seven hundred and twenty-four banks did not work with outside financing services, and an estimated 62 banks did not report on their outside financing.

District banks reported a total of $131 million in acceptable farm loans that they were unable to grant from their own resources in the past year because the requests exceeded their legal loan limit. The group of banks which reported that they had worked with outside financing sources during the past year estimated that they obtained funds in the following proportions: correspondents, 71 per cent; insurance companies, 16 per cent; agricultural credit corporations, 10 per cent; and other sources, 3 per cent. For the 1,119 banks which worked with outside sources of financing during the past year, the amount of loans they were unable to grant from their own resources, due to maximum legal limits, was 6.4

Table 8

TOTAL OUTSTANDING AMOUNT OF PARTICIPATION LOANS ORIGINATED BY RESPONDENT BANKS

(June 30, 1966)

Major Purpose of Loan	Maturity of Notes in Months				Total
	Demand	Under 8	8 - 13	Over 13	
	(In thousands)				
Feeder livestock	$3,965	$ 89,040	$21,826	$	$114,830
Other livestock	....	79,914	8,944	390	89,248
Other current expenses	....	19,541	30	....	19,571
Equipment	....	1,098	....	1,632	2,730
Debt consolidation	....	2,966	....	....	2,966
Farm real estate	....	6,255	269	120	6,644
Land and building improvement	....	....	613	4,922	5,534
Miscellaneous	....	208	....	....	208
Total	$3,965	$199,023	$31,681	$7,063	$241,731

per cent of their total outstanding loan volume.

PARTICIPATION LOANS

Although participation loans accounted for less than 1 per cent of total agricultural loans outstanding, they accounted for 13 per cent of the dollar amount of all agricultural loans. The average participation loan amount outstanding was $80,687, compared with an average outstanding amount for all agricultural loans of $3,985. Of nearly $242 million in participation loans originated by respondent banks, other banks, including correspondents, held outstanding balances of $155 million.

In order to examine the circumstances surrounding participation loans, both characteristics of the originating banks and purposes of the loans were evaluated. Sixty-five per cent of the total outstanding amount of participation loans was originated by banks of less than $500,000 capital and surplus (Table 7). Banks of $500,000 to $1 million capital and surplus accounted for 10 per cent; banks of $1 to $2 million, for 14 per cent; and those with $2 million and over, for 11 per cent.

As expected, most participation loans were for the purchase of feeder and other livestock (Table 8)—accounting for 85 per cent of the outstanding volume. Nearly $20 million in participation loans were to finance other current operating expenses. The average outstanding amount per borrower of participation loans originated by respondent banks was $87,740. The average outstanding amount of participations per borrower at other banks in loans originated at the respondent bank was $56,230. In other words, correspondents and other banks held nearly 65 per cent of the outstanding amount of participation loans.

Lines of Credit

Tenth District banks reported extending lines of credit to 17 per cent of all agricultural borrowers. These borrowers, in turn, accounted for $572 million—or 30 per cent—of the District's $1.9 billion in outstanding agricultural loans. District borrowers were using slightly more than one half of the maximum available credit under existing lines. The average line of credit provided for $25,312 in loans.

There was substantial difference in net worth and debt between line of credit borrowers and others. The average net worth of borrowers using a line of credit was about $75,000, compared with $50,000 for the "no line of credit" borrower. The average total debt of all line of credit borrowers was about $35,000, compared with $20,000 for borrowers without lines of credit. Average bank debt per line of credit borrower is about $13,600, compared with $6,300 for borrowers without lines of credit. Only 30 per cent of the outstanding amount of participation loans was made under a line of credit, although almost all of these loans were $100,000 or larger.

Special Publications

The following booklets are currently available from the Federal Reserve Bank of Kansas City:

Foreign Trade and American Agriculture. This booklet provides a historical perspective of international agricultural trade, reviews the current status of this trade, and discusses the agricultural implications of current international trade negotiations.

Farm Debt as Related to Economic Class of Farm. An analysis of the Nation's debt as it relates to economic class of farm—a measure of farm size. Based on the 1960 Sample Survey of Agriculture, the booklet takes a look at variability of farm debt among economic classes of farms as well as the characteristics associated with debt variability among farms in particular classes.

A Study of Scale Economies in Banking. Through a statistical analysis of cost and earnings data for member banks in the Tenth Federal Reserve District, this 60-page study attempts to shed light on the question of how the size of bank influences bank costs and earnings. The booklet is based in part on a series of articles published in the *Monthly Review* during 1961 and 1962.

Essays on Commercial Banking. A collection of nine essays previously published in the *Monthly Review* dealing with various aspects of commercial banking, including management of cash reserves, investment policies, deposit instability, and factors affecting earnings.

The Wheat Adjustment Problem—Potential Economic Impacts. Discusses the wheat problem in the United States, as well as the world wheat situation, with particular emphasis on supply and demand adjustment prospects for the future.

Water Resources . . . Development and Use. A 68-page booklet dealing with problems associated with water resources, including demand and supply of water, national benefits from water resources development projects, water allocation and its relation to the achievement of regional goals, and water quality.

Financing Agriculture Through Commercial Banks. A 48-page pamphlet reporting the results of a special study of methods and procedures used by commercial banks in financing agriculture.

Any of these publications may be obtained by writing to the Research Department, Federal Reserve Bank of Kansas City, Federal Reserve Station, Kansas City, Missouri 64198.


FEDERAL RESERVE BANK OF KANSAS CITY
10-J
INCORPORATED MAY 18, 1914