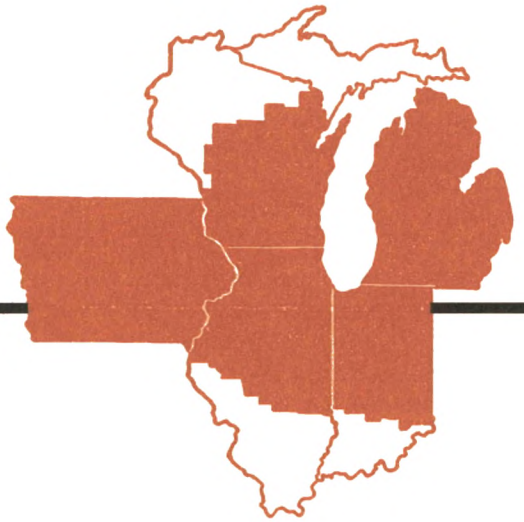
A review by the **Federal Reserve Bank of Chicago**

Business Conditions



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Contents

Trends in banking and finance

A policy of monetary and credit restraint has been in effect for some months. Demands for credit have continued strong, as indicated by the rise in interest rates and the further rapid growth of debt. As the policy of monetary and credit restraint has "pinched" here and there, there have been some outcries that the impact is inequitable. What has been the impact on various groups of banks and their customers?

One comprehensive indicator is the change in total loans and investments for all commercial banks in the United States. During the 12 months ended May 28, 1969, these increased 9.6 percent, and during the 6 months ended the same date—2 percent. Increases for the member banks of the Federal Reserve System were relatively smaller while the increases for nonmember banks were relatively larger, especially during the recent 6 months.

Total loans and investments	May 29, 1968 to May 28, 1969	November 27, 1968 to May 28, 1969
All commercial banks	9.6%	2.0%
Member banks	9.1	1.8
Nonmember banks	11.6	3.1

Restraint has been somewhat greater at the large banks in the major cities than at other banks. This is demonstrated in information from banks with $100 million or more of total deposits that report certain balance sheet information weekly to the Federal Reserve Banks. Even with a strong demand for loans, the large banks in New York and Chicago have been unable to increase their total loans and investments in the past 6 months, even though they have acquired large amounts of Eurodollars—and Federal funds along with lesser amounts of funds from varied other non-deposit sources. The major reason is the large run-off of time certificates of deposit (CDs). With the maximum permissible interest rates provided in Regulation Q well below the yields available on other money market instruments, many of the holders of large time deposits have not been renewing their CDs at maturity. Owners of large CDs are primarily customers of large banks and total time deposits, therefore, have declined much more at the large weekly reporting banks in New York and Chicago than at the smaller banks.

Total loans and investments	May 29, 1968 to May 28, 1969	November 27, 1968 to May 28, 1969
Weekly reporting banks	8.7%	1.3%
New York City	8.0	--0.5
Chicago	8.5	0.1
Other	8.9	1.9
Country member banks	9.0	3.0

While demand deposits have increased relatively more at the large banks in the large cities, especially in New York, this has not offset the relatively large declines of time deposits at these banks.

Changes in banks' holdings of U. S. Treasury securities provide another indication of the impact of monetary restraint, especially when viewed in relation to changes in loans and other investments. At the weekly reporting banks in New York and Chicago, U. S.

Treasury securities at the end of May had declined 29 and 24 percent, respectively, from the levels 6 months earlier. The declines at nonmember banks and country member banks were 6 percent and 8 percent, respectively, during the same period.

The changes in bank holdings of other securities, largely municipals and U. S. Government agency obligations, varied substantially but generally holdings continued to increase at the smaller banks, although at a reduced pace, and to level off or decline at the large banks in major cities. Other securities rose 9 percent at nonmember banks in the 6 months ending May 28, and 6 percent at country member banks. At weekly reporting banks they declined nearly 2 percent, with declines concentrated at the large banks in New York City.

Total loans, however, increased in all groups of banks in this period with the gains ranging from about 4.5 percent at nonmember banks and at large banks in New York and Chicago to 6 percent at large banks in other large cities. Loan growth at country member banks was about 5.5 percent.

Loans outstanding to most of the major classes of borrowers have increased. According to information from the weekly reporting banks, loans to purchase and carry securities was the only category that was smaller at the end of May than either 6 months or 12 months earlier. But the rate of increase had slowed for most categories, with loans to commercial and industrial establishments and loans to domestic banks the outstanding exceptions. The former reflects the strong demand for credit by business firms and the difficulty banks have had in curtailing loans to such borrowers. The latter reflects the large volume of loans of excess reserves (Federal funds) among banks that has built up as the banks generally have striven to utilize their funds as fully and continuously as possible.

	May 29, 1968 to May 28, 1969	November 27, 1968 to May 28, 1969
Total loans	12.6%	5.2%
Commercial and industrial	14.4	7.7
Consumer instalment	13.5	5.3
Real estate	9.8	4.0
To domestic banks	15.9	17.4
To other financial institutions	12.1	4.8
To securities dealers	2.5	—10.1
Other loans	12.6	4.2

In the Seventh District

Changes in loans outstanding at banks in the Seventh Federal Reserve District have been very similar to those for the United States. However, the increase in total loans has been somewhat smaller than for the nation, largely because of a smaller rise in loans to domestic banks and to con-

Loan-deposit ratios—Seventh District*

Member banks	May 29, 1968	Nov. 27, 1968	May 28, 1969
Seventh District	66.1%	62.9%	70.5%
Reserve city—Chicago	80.3	71.9	88.8
Country			
Weekly reporting	64.4	63.7	67.1
Other	55.5	55.1	58.3
Illinois, excluding Chicago	51.2	52.0	53.6
Indiana, excluding Indianapolis	54.3	54.4	56.9
Iowa, excluding Des Moines	55.8	53.6	56.1
Michigan, excluding Detroit	64.6	66.1	67.2
Wisconsin, excluding Milwaukee	57.7	59.4	62.2

*Gross loans and discounts divided by total deposits.

sumers. Real estate loans at the district's banks have increased somewhat more than at banks throughout the country.

In the states of the district (excluding those banks located in the major city in each state) changes during the past year have been broadly similar but with certain important differences. Loan growth in Iowa was relatively weak, while in Wisconsin it was relatively strong with increases in loans outstanding of 7 and 16 percent, respectively. For the 6-month period, loan growth at the banks in Wisconsin was exceeded by growth at the banks in Indiana, but seasonal influences may have affected interstate comparisons for this period. The relatively small increase in loans at Iowa banks does not appear to have been caused by greater stringency of funds at the banks there, since the increase in deposits (6.6 percent), while the smallest for any of the five states, was only moderately less than in Wisconsin (7.8 percent). Furthermore, the ratios of loans to deposits at these Iowa banks at the end of May 1969 was the lowest for any district state except Illinois and had increased less than one-half percentage point from the year-earlier level. Meanwhile, increases in loan-deposit ratios for the other district states ranged from 2.4 percentage points in Illinois to 4.5 in Wisconsin. The loan-deposit ratios for these groups of banks ranged from 56.1 percent in Iowa to 67.2 percent in Michigan.

Deposit growth was stronger at the Michigan banks (9.4 percent) than at banks in the other district states, especially during the 12-month period, possibly reflecting in part the relatively strong competitive position of Michigan banks, with their fairly well developed branch networks, in the market for time and savings deposits.

The run-off of U. S. Treasury securities was relatively greater at the Wisconsin banks, where the increase of loans was the greatest. Moreover, the net acquisition of other securities, while substantial in all district states in both the 12 and 6-month periods, was smallest at the Wisconsin banks.

This cursory review of changes in bank assets and deposits during the past year indicates loan demand generally has been strong, although apparently stronger for some types of borrowers than for others; that rates of increase in total bank credit and bank loans have been much smaller in recent months than earlier, and smaller at the large banks in

Changes in loans, investments, and deposits, member banks in Seventh Federal Reserve District*

	Illinois	Indiana	Iowa	Michigan	Wisconsin
May 29, 1968 to May 28, 1969			(percent change)		
Loans and investments	8.3%	7.5%	7.6%	9.6%	8.9%
Loans	12.8	12.0	7.2	13.8	16.1
U. S. Governments	−5.3	−8.6	2.3	−10.4	−12.4
Other securities	13.8	17.5	15.4	13.8	11.8
Demand deposits	4.2	4.2	4.8	5.7	5.0
Time deposits	10.7	9.1	8.4	11.1	9.4
Total deposits	7.8	6.8	6.6	9.4	7.8
November 27, 1968 to May 28, 1969					
Loans and investments	3.3%	4.6%	1.6%	3.2%	3.0%
Loans	5.3	7.9	3.4	4.9	6.2
U. S. Governments	−7.5	−7.6	−7.8	−7.5	−9.7
Other securities	11.2	11.1	7.9	6.7	6.8
Demand deposits	−1.7	0.4	−5.8	−1.3	−3.3
Time deposits	5.3	5.4	3.5	5.1	4.4
Total deposits	2.1	3.0	−1.2	3.1	1.4

*Excluding banks in largest cities—Chicago, Indianapolis, Des Moines, Detroit, and Milwaukee.

large cities than at other classes of banks even though the large banks have been able to acquire substantial amounts of funds from sources other than deposits; that banks have made their customary response to their environment in the recent period of monetary restraint and generally strong demand for credit, namely, by selling holdings of U. S. Treasury securities and permitting maturing issues to run-off, by liquidating or slowing their net acquisition of other securities, and increasing loans relative to deposits; and that the smaller banks in centers other than the major cities generally have had better availability of funds relative to demands for bank credit than have the large banks in large cities, as indicated by their continued net acquisition of securities, their large sales of Federal funds, and their relatively smaller increases in ratios of loans to deposits.

Customers view a bank merger — before and after surveys

Two of the three banks in Elkhart, Indiana, were merged at the end of 1966, leaving that community of about 45,000 people with two banks. Prior to the approval of the merger, the Federal Reserve Bank of Chicago conducted a survey of firms and households in the area to obtain their views on the quality and convenience of banking services and information on where they banked and the kinds of financial services they use.[1]

In September 1968, almost two years after the banks were merged, the community was surveyed again, using the same procedures and asking many of the same questions but emphasizing any changes in the quality of banking services or the types of services used. The major findings are summarized in this article.[2]

Elkhart is a dynamic manufacturing center in north central Indiana, 100 miles east of Chicago. It has grown rapidly in recent years, largely as a result of continued expansion in the manufacturing of mobile-homes. Since 1960, its growth in population and bank deposits have been faster than in nearby cities, or Indiana as a whole.

Although the number of local banks was reduced by the merger, the number of bank offices was not affected. All the offices of the merged banks were continued in operation. (Banks in Indiana are permitted to operate branches in the same county as their head office.) At the time of the survey, there were

[1] *Business Conditions*, May 1967.

[2] Reports of these surveys are available on request from the Research Department, Federal Reserve Bank of Chicago.

The survey questionnaires were mailed to 500 randomly selected households in the Elkhart area and to some 425 business firms stratified by size and industrial classification. In addition, questionnaires were sent to all households and businesses that had responded to the earlier survey in 1966.

Responses were returned from 149 randomly selected households and 175 randomly selected firms, plus 89 households and 168 businesses that had responded to the earlier survey. Except where specifically noted, this article reports responses from the randomly selected samples, which are believed to be representative of all households and businesses in the area.

10 bank offices in Elkhart. In addition, there were 11 other bank offices in Elkhart County, including five other banks, and there were an additional 33 offices of seven banks 15 miles to the west in the South Bend-Mishawaka metropolitan area.

Customers satisfied

The large majority of firms and households appeared well satisfied with banking services in Elkhart, both before and after the merger. Almost half the respondents considered services to be better in 1968 with only two banks than in 1966 when there were three banks. Less than 10 percent described services as being poorer.

Although generally satisfied with the quality of services, some households and businesses rated particular services less favorable in 1968 than in 1966. For example, 18 percent of the firms and 25 percent of the households rated loan services as adequate or poor, compared with 10 percent of each group in 1966. In view of the high ratings given bank services in 1966, however, this deterioration in satisfaction may to some extent be more apparent than real. By far the largest number of respondents in 1966 considered banking services excellent. For that reason, there was little opportunity to indicate any improvement in rating on particular services in 1968.

About a fourth of both the households and businesses thought more than two banks were needed to serve the community effectively. Most of the other three-fourths thought two was "just right."

More respondents thought there were too many banking offices than too few, but again, the overwhelming number thought the number of offices was just right.

The proportions of respondents using various bank services had not changed greatly. In 1968, as in 1966, demand deposits were by far the most frequently used service. Loans were the second most frequently used service for business firms, and time deposits were second for households.

Local banks used predominantly

Banking was done predominantly at the Elkhart banks both before and after the merger. Ninety-five percent of both the firms and households use Elkhart banks as their primary bank, and almost as large a proportion of those using more than one bank use an Elkhart bank as their second bank. Ninety percent use only Elkhart banks. These percentages were almost the same as those two

Deposit and loan services viewed favorably

Quality of service	Businesses				Households			
	Deposit services		Loan services		Deposit services		Loan services	
	1966	1968	1966	1968	1966	1968	1966	1968
	(percent of respondents)							
Excellent	79%	73%	69%	59%	70%	60%	66%	49%
Good	17	21	20	23	26	29	24	26
Adequate	4	5	7	10	3	9	6	17
Poor	0	1	4	8	1	2	4	8
Total	100	100	100	100	100	100	100	100

Quality of bank services considered better after the merger

Quality in 1968 compared with 1966	Businesses	Households
	(percent of respondents)	
Better	47%	39%
Unchanged	47	52
Poorer	6	9
Total	100	100

years before. Only the largest business firms reported obtaining any significant amount of banking services from banks outside Elkhart.

However, the merger appears to have affected two other aspects of local banking. The number of firms and households using more than one bank had declined—doubtless because the number of banks had been reduced.

In 1968, more households considered banks in neighboring towns to be convenient alternatives to their Elkhart banks than in 1966, probably because of the smaller number of banks available locally. More than 30 percent of the households viewed out-of-town banks as alternatives to local banks, compared with only 10 percent two years earlier. Forty percent of the businesses also considered out-of-town banks convenient alternatives, but because this question was not asked businesses in 1966 any effects of the merger could not be measured.

One-fifth of the firms, about the same proportion as in 1966, reported having used credit from financial institutions other than commercial banks in the last five years. Finance companies, factors, and acceptance houses were mentioned most frequently in this report. Longer maturity was the reason cited most often for using nonbank credit, with lower interest rates a close second. Some of the firms had increased their use of nonbank credit since the previous survey. They attributed the increase to greater credit needs, not to the bank merger.

Households visit banks frequently

Almost 60 percent of the households reported that some member of the household visited their primary bank at least once a week. Another 38 percent reported visits less than once a week but more often than once a month. Secondary banks were visited somewhat less frequently. Two-thirds of the households that used more than one bank visited their second bank at least once a month.

Number of banks and banking offices considered "just right" by most customers

Evaluation by respondent	Businesses		Households	
	Banks	Offices	Banks	Offices
	(percent of respondents)			
Too few	25%	6%	22%	5%
Too many	1	12	2	11
Just right	74	82	76	84
Total	100	100	100	100

The high frequency of visits to banks underscores the importance of convenient locations to households. The survey conducted in 1966 showed that fully 75 percent of all households in Elkhart used the bank most convenient to their residence or place of employment as their primary bank.

One-fifth of the households banked by mail, slightly fewer than in 1966. As might be expected, these households did not visit their banks as often as other respondents. One-third of the households banking by mail visited their primary bank weekly.

In summary, customers' evaluations and use of banking services in 1966 and 1968—before and after the merger—were very similar. Only a small proportion of the customers viewed the decline in number of banks as having an unfavorable effect on either the quality of banking services or the number of competitors. However, even minority views warrant consideration in evaluating the impact of a bank merger on the community. The changes in banking patterns—use of fewer banks and greater willingness to consider out-of-town banks as alternatives— probably can be attributed to the smaller number of local

alternatives, irrespective of any change in quality of services.

The banking services used by businesses and households in Elkhart and the relationships between customers and their banks were remarkably similar to those found in other surveys. There is a growing body of evidence that banking patterns are quite similar, even in communities with widely different characteristics and bank structures.

Important stake in free trade

Midwest producers have a very real stake in the continued growth of world markets—so much that any movement toward increased protection (whether initiated abroad or in this country) could pose a serious threat to their further development of overseas markets.

Fast growing export region . . .

The north-central states—the 12 Midwest states making up the nation's industrial and agricultural heartland—accounted for more than 30 percent of the nation's manufactured exports in 1966 (the latest year for which complete estimates are available) and between 40 and 50 percent of agricultural exports.[1] The five states of the Seventh Federal Reserve District—which make up the core of this highly productive region—shipped a fourth of the nation's manufactured goods and a fourth of its agricultural goods. Illinois led the nation in the value of both manufactured and agricultural goods sold in export markets. Michigan ranked fifth in manufactured exports and Wisconsin ninth. Iowa ranked fourth in agricultural exports and Indiana sixth.

Not only are these states important exporters—especially states of the Seventh District—but their growth in exports has been much faster than for the nation as a whole. The value of manufactured exports from the United States expanded 46 percent between 1960 and 1966—an average annual increase of about 6 percent. During that time, exports from the north-central states grew 57 percent—8 percent a year. And exports from states of the Seventh District increased 61 percent—9 percent a year.

Within the district, Wisconsin made the greatest percentage gain in manufactured exports. Illinois—with its large export base—made the smallest percentage increase but had the largest absolute gain, shipping 37 percent of the district's manufactured exports in 1966. Michigan followed close behind, shipping nearly as many manufactures as Indiana, Iowa, and Wisconsin combined.

The district's relative gain in agricultural exports was even greater. Between 1960 and 1966, the nation increased exports of farm products 48 percent—an average annual in-

[1]Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

crease of 7 percent. Exports from the north-central states rose 87 percent—about 12 percent a year. And exports from states of the Seventh District soared 107 percent—about 15 percent a year.

With this high rate of growth, states of the district have become steadily more important in the nation's export trade, increasing their shipments from 22 percent of U. S. exports in 1960 to 24 percent in 1966.

Agricultural exports have clearly slumped since 1966—mainly because of record production of food and feed grains overseas and fresh competition (including restricted entry) from European Common Market countries. Despite these setbacks, however, the Midwest has outpaced the nation in agricultural exports so far in the 1960s.

Meanwhile, the uptrend in manufactured exports has continued, doubtlessly pushed along by rising world demand for goods incorporating high degrees of technology and requiring large plant investments. Goods of this kind—such as heavy machinery and equipment—are typical of much Midwest industrial output. In 1966, for example, 37 percent of the manufactured exports from the Seventh District were nonelectrical machinery and 23 percent were transportation equipment.

But like American farm products, these high-cost goods also face increasing foreign competition—competition already strengthened by the rise in costs and prices in this country and the spread of technical competence and industrial capacity abroad. Together with these changes, the weight of additional protectionism could slow the rise in exports from the Midwest, cutting deeply into the region's future economic gains.

Seventh District leads the nation in growth of manufactured exports . . .

	Manufactured exports		Percentage change
	1960	1966	1960-66
	(millions of dollars)		
United States	$14,546	$21,299	46%
North-central states	4,804	7,568	57
District states	3,138	5,041	61
Illinois	1,227	1,885	54
Indiana	395	620	57
Iowa	222	353	59
Michigan	927	1,553	67
Wisconsin	367	630	71

SOURCE: Based on F.O.B. plant data from the U.S. Department of Commerce.

. . . and growth of agricultural exports

	Agricultural exports*			Percentage change		
	1959-60	1965-66	1967-68	1960-66	1966-68	1960-68
	(millions of dollars)					
United States	$4,517	$6,681	$6,315	48%	— 5%	40%
North-central states	1,701	3,181	2,761	87	—13	62
District states	784	1,603	1,381	104	—14	76
Illinois	303	666	585	120	—12	93
Indiana	135	317	251	135	—21	86
Iowa	211	426	392	102	— 8	86
Michigan	77	110	92	44	—16	20
Wisconsin	59	83	59	41	—29	0

*Fiscal year, July 1 through June 30.
SOURCE: U.S. Department of Agriculture.

. . . is also highly diversified

The highly productive Midwest is also highly diversified. This fact, which helps account for much of its export gain, makes it hard to envision any increase in protectionism that would not have a significant impact on the region. Illinois is a major producer of machinery, shipping nearly a fifth of the nation's exports of nonelectrical machinery and nearly a tenth of its electrical machinery. Illinois also ships more than a tenth

of the processed food and fabricated metal sent abroad. Michigan, which produces nearly a fourth of the transportation equipment shipped abroad, is also an important exporter of processed food, machinery, chemicals, and fabricated metals.

The relative importance of these goods is further emphasized when viewed in relation to total U. S. exports. Of the nation's nonelectrical machinery exported, the district states account for 40 percent. Transportation equipment and parts account for 34 percent; fabricated metals, 25 percent; processed foods and electrical machinery, 23 percent each; and chemicals, 10 percent.

Seventh District states contribute between 10 and 20 percent of the nation's exports of instruments, leather goods, rubber and plastic products, printed material, primary metals, and wearing apparel.

Illinois leads Seventh District in exports of manufactured goods

Export category	Seventh District (1966) (millions of dollars)	Percent of district exports†				
		Illinois	Michigan	Wisconsin	Indiana	Iowa
Nonelectrical machinery	$1,855	49%	16%	18%	7%	10%
Transportation equipment	1,186	12	67	6	15	*
Processed food	438	47	11	9	19	14
Electrical machinery	366	41	12	15	18	14
Chemicals	245	35	47	3	11	3
Fabricated metals	240	37	31	13	14	5
Other goods	711	41	26	13	14	5
All manufactures	5,041	37	31	13	12	7

*Less than 0.05 percent.
†Percentages may not add to 100 due to rounding.
SOURCE: Based on F.O.B. plant data from the U.S. Department of Commerce.

Michigan strong in transportation equipment

Export category	Seventh District (1966)	Percent of U.S. exports				
		Illinois	Michigan	Wisconsin	Indiana	Iowa
Nonelectrical machinery	39%	19%	6%	7%	3%	4%
Transportation equipment	34	4	23	2	3	*
Processed food	23	11	3	2	4	3
Electrical machinery	23	9	3	3	4	3
Chemicals	10	3	5	*	1	*
Fabricated metals	25	9	8	3	3	1
Other goods	5	2	1	1	1	*
All manufactures	24	9	7	3	3	2

*Less than .05 percent.
SOURCE: Based on F.O.B. plant data from the U.S. Department of Commerce.

The threat of protectionism

Although total exports from the Midwest have almost certainly continued to rise in the last two years—despite the decline in agricultural sales—pressures for new trade barriers and stricter maintenance of old barriers have been mounting. Because of the importance of exports to almost every state of the Midwest and the rapid increase in productive capacities abroad, any changes in international trade relations must be viewed as having potential significance for this region.

Discussions of possible internal taxes on vegetable oils and meals in Europe provide a case in point. The possibility of such taxes has been a legitimate concern in the Midwest, where most soybeans are grown and where farmers have already been hard hit by the loss of foreign markets. Of even

greater concern would be any serious suggestion that the United States might retaliate by restricting imports of industrial goods. Such a move could be one in a succession of steps taken first by one country then another toward greater restrictions on international trade, with the result that exports from the United States and its highly productive, well diversified Midwest would be severely hampered.

Measures of money and credit

A major function of the Federal Reserve System is to foster a flow of credit and money that will facilitate orderly growth, a stable dollar, and long-run balance in the nation's international payments. In this conception of the central bank's responsibility both credit and money are channels through which monetary policy works.

Much of the ongoing debate about monetary matters—although by no means all of it—centers on the question, what specific credit and money flows should be influenced in order to achieve the desired economic goals? Views differ sharply on which magnitudes are the most meaningful both as targets for monetary action and as indicators of what policy is accomplishing. It may be helpful, therefore, to compare the various available statistical series or measures and to note certain aspects of their behavior.

Over the past 16 years, major changes in the growth rates of two of the measures most widely watched—bank credit (loans and investments) and money (private demand deposits and currency outside banks and the Treasury)—have followed broadly similar patterns. Both measures have been closely associated with the pace at which the Federal Reserve has supplied reserves to the banking system. Shifts in growth rates of these measures have tended to be followed by shifts in the same direction in total credit and total spending—a pattern indicative of the time lags between policy actions that are taken and the economy's responses to those actions and, thus, the need for policy makers to focus on prospective economic developments.

Money versus credit

Credit and money, being "two sides of the same coin," are often lumped together in discussion of the monetary process. When credit is extended, money or purchasing power is acquired by borrowers. Because people seldom borrow merely to hold larger cash balances, borrowing is usually associated with spending. While credit growth often reflects only the transfers of existing funds from one group of holders to others, borrowers presumably will spend them for goods or services, increasing the rapidity with which the existing money stock is used.

The accompanying chart shows the relative magnitudes and growth rates of six common measures of money and credit and how they

have changed in relation to gross national product, a broad measure of total spending. Outstandings currently range from about $200 billion for the money stock to more than $1,500 billion for total credit. Annual growth rates over the past 16 years have ranged from 2.5 percent for money to 6.4 percent for bank credit.

Money

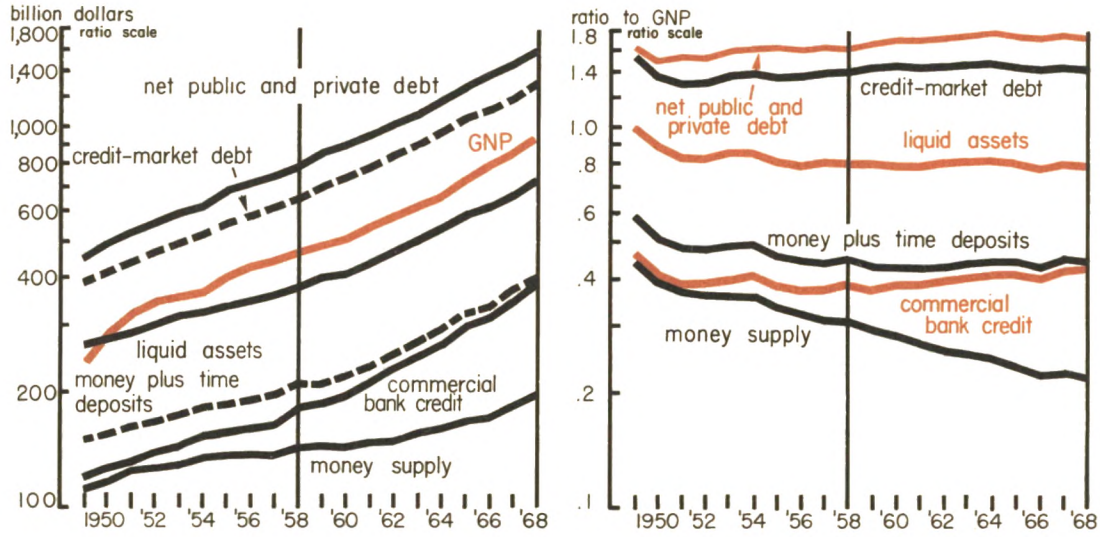
Those who consider money the most significant financial variable emphasize that it is the only asset used as a medium of exchange. None of the others can be spent directly, they first have to be converted into money. It is contended that total spending can be reduced by restricting the growth of money to a less rapid rate than the public wants. In this circumstance, it is believed, holders are induced to curtail their expenditures in order to increase their money balances to the levels desired. Conversely, spending can be increased if money supply growth is more rapid than the rate at which the public wants to increase holdings for transactions and precautionary reasons. The management of money, in order to achieve desired effects, calls for some judgment on the level of holdings desired by the public.

Total spending has been increasing more rapidly than the money stock since World War II, causing the turnover, or velocity, of money to increase. This tendency for a given volume of expenditures to be associated with a diminishing stock of money reflects many influences, including greater efficiency of the payments mechanism and the effect of rising interest rates, prices, and expectations on the public's desire to hold cash balances.

The stock of money is approximately doubled if it is defined to include commercial-bank time deposits in addition to private demand deposits and currency in circulation.

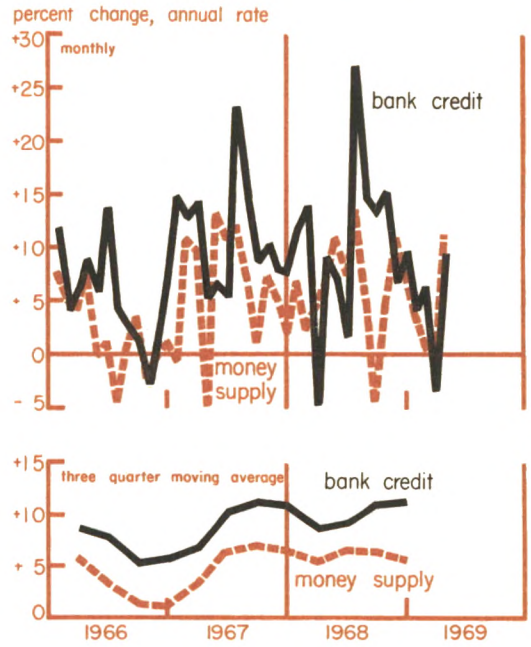
The inclusion of commercial-bank time de-

Money, credit, and GNP compared



posits in the money stock logically leads to the question of whether to include similar obligations of other financial institutions and certain other forms of short-term liquid assets and redeemable securities, such as U. S. savings bonds. A monthly Federal Reserve series on "liquid financial assets" includes, in addition to the broadly conceived money stock, mutual savings bank deposits, savings and loan shares, U. S. savings bonds, and government securities maturing within a year. This series marks a middle ground between the narrow money supply and the total amount of all credit outstanding. It is about $300 billion larger than the broad money supply, but has about the same stability relative to gross national product.

Monthly changes in bank credit and money vary greatly



Credit

A still broader measure of credit outstanding is provided by the annual Department of Commerce compilation of net public and private debt. This series includes all types and maturities of debt other than that owed between divisions of the same firm or government. Year-to-year changes in this series presumably reflect the net effects of credit transactions by all spending units.

Somewhat narrower in scope, smaller in magnitude, but similar in trend, is the category of credit-market debt, for which estimates are provided in the Federal Reserve's data on flows of funds. This series measures net new funds raised by the nonfinancial sectors of the economy through the credit markets. Although about $300 billion smaller than the Department of Commerce series, credit-market debt appears to move in about the same relation to total spending and the data are available quarterly, providing more current readings.

Bank credit—total loans and investments of commercial banks—makes up approximately a fourth of total debt and is of special interest since it can be influenced rather directly by the Federal Reserve through its control over bank reserves. It is largely through its operations on bank reserves that the Federal Reserve is able to influence bank credit, the money stock, and total credit. Largely the counterpart of commercial-bank demand and time deposits, bank credit is roughly comparable in both magnitude and flows to the broad money measure. When ceilings on interest rates that banks are permitted to pay on time deposits cause banks to seek funds from non-deposit sources—such as borrowings from other banks, the Federal Reserve, and the Eurodollar and commercial paper markets—the money and bank credit measures may diverge.

Conflicting guides?

Does it matter whether the focus of policy is on money or credit? They move consistently year to year, and the correlation between changes in their aggregates is very high. But this pattern strongly reflects the influence of trends affecting the two similarly and has little usefulness in formulating judgments on policy. To be used in making policy, information is needed on how changes in money and credit are associated on a shorter term basis, as from quarter to quarter or month to month, as well as on their influence on the rate of economic activity both now and later.

Statistics on the money stock, time deposits, and bank credit are available weekly. However, projections for weeks or months ahead are complicated by large and irregular fluctuations and large differences in behavior over short periods. These erratic movements also complicate interpretation of current figures. Within any single month, money—defined as currency and demand deposits only—and bank credit often move in opposite directions and this can result in inconsistent conclusions on the prevailing direction of financial influence on the economy. Moreover, the two measures may respond differently to any given change in bank reserves—the key factor subject to control by the Federal Reserve.

Frequently temporary but nevertheless sizable monthly fluctuations in money and bank credit reflect uneven demand, including such factors as major Treasury financings that follow no regular time patterns. Other reasons for differences in the movements of these measures range from such technical matters as difficulties encountered in making allowance for seasonal influences to the effects of shifts in the structure of bank liabilities induced by policy actions, such as changes in Regulation Q deposit interest ceilings.

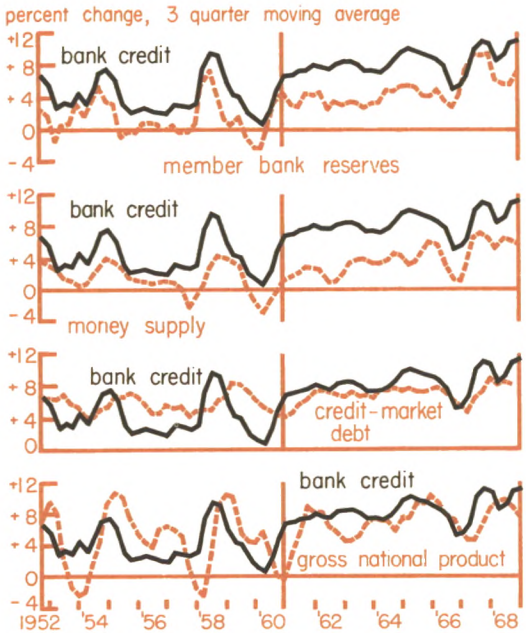
During the past 16 years, monthly rates of change in money—private holdings of currency and demand deposits—have shown relatively weak association with those for such other aggregates as bank reserves and bank credit. As could be expected, the correspondence between movements in the various money and credit series becomes stronger the more inclusive the measure of money and as quarterly rather than monthly data are compared. Fluctuations in U. S. Government balances are a major source of the variation between changes in money, as narrowly defined, and bank credit. Because these balances are not defined as money, temporary shifts between private deposits and Treasury deposits affect the money stock but have little effect on total bank credit. Such shifts may, of course, alter the distribution of deposits among banks.

Differences in the statistical bases of the series provide another source of variation between changes in money and changes in

Relationships between selected monetary aggregates

	Simple correlation coefficients of relative percentage changes, 1953 to 1968	
	Monthly	Quarterly
Bank reserves and money supply	.325	.546
Money supply and bank credit	.408	.670
Bank reserves and bank credit	.538	.852
Money supply plus time deposits and bank credit	.642	.867
Money supply plus time plus Treasury deposits and bank credit	.734	.946

Reserves, money, and bank credit show similar patterns



bank credit: money is calculated and reported as an average of daily figures and credit is based on end-of-month data. To reduce the variability associated with figures for a single day, total deposits of member banks are sometimes used as a proxy for daily average bank credit. But deposits of nonmember banks are not included in this proxy measure nor are non-deposit sources of funds that support bank credit growth.

The exclusion of time deposits from money is the biggest source of difference between the money stock and bank credit. Relative growth rates are distorted when the ability or willingness of banks to increase their time deposits changes, as for example, when yields on money-market instruments rise above the regulatory ceilings on the rates that banks are allowed to pay on CDs.

Another difference relates to the currency component of the money supply, for which there is no counterpart in bank credit.

Despite substantial conceptual differences and large short-run variations, money and bank credit tend to show consistent patterns of change that in turn are closely related to changes in bank reserves when comparisons are based on information averaged over long time periods. Statistics measuring the association between quarterly averages of reserves, money, and bank credit show much closer relationships than do the monthly data. As the accompanying charts show, the major expansions and contractions in growth rates of total bank reserves, bank credit, and money —when moving averages of quarterly data are used for comparison—have been coincident for the past 15 years.

Comparison of bank credit—or reserves or money—with total credit and total spending also reveals a fairly consistent relationship. When sustained over several quarters, growth in bank credit, whether exceptionally rapid or unusually slow, tends to be followed by similar changes in the credit-market debt series and by even stronger changes in the growth of total spending. This pattern suggests that policy measures, working through the stimulation or restraint of bank credit growth, have perceptible effects after a time lag on total spending and income and that this in turn feeds back to influence total demand for credit.

Furthermore, comparisons of growth in money and credit with growth of total spending in the past 15 years suggest that growth in bank credit of less than about 4 percent annually and growth in money of less than about 2 percent tend to be associated with substantial slowing in the growth of total spending. Conversely, periods of excess demand—indicated by accelerated increases in

the general price level—have tended to follow substantial expansions in bank credit at annual rates exceeding roughly 8 percent and expansions in money of 4 percent or more.

Policymakers must act on the basis of current economic forecasts and readings of recent and prospective changes in money and credit. The perspective gained from averages of past periods is instructive, but cannot be controlling in any given situation. Current data must be evaluated and interpreted as reliable and consistent indicators of current and prospective developments or, alternatively, as being temporarily distorted and of little or no use.

The monetary authorities have considered it inappropriate to focus on any one monetary or credit measure because of both conceptual and statistical problems. In retrospect, it seems clear that given enough time for random changes to be averaged out and after a lag both money and credit, however defined, have tended to follow a common pattern and to be associated with similar accelerations and slowings in gross national product. A "once and for all" choice of measure may be unnecessary and undesirable.

Furthermore, a specific range of monetary and credit growth rates may not be appropriate for all times and circumstances. Historical relationships must be reassessed continuously in light of structural changes in the financial mechanism and shifts in financial flows. The current situation is an example. With a cumulative runoff of certificates of deposit during the past six months, there undoubtedly has been a substantial shift from bank to nonbank credit. This raises a question whether slowing in the growth of bank credit under these conditions can be expected to hold its usual historical relationships with other financial measures and total spending. Under these circumstances, the money stock may be a preferable policy target as well as indicator of policy influence. But this need not be the case in other circumstances.

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