

economic review

JUNE 1969

IN THIS ISSUE

The Role of U. S.
Government Demand
Deposits in the
Monetary Process 3

Capital Spending in
Major Areas of the
Fourth District 12

FEDERAL RESERVE BANK OF CLEVELAND

Additional copies of the ECONOMIC REVIEW may be obtained from the Research Department, Federal Reserve Bank of Cleveland, P. O. Box 6387, Cleveland, Ohio 44101. Permission is granted to reproduce any material in this publication providing credit is given.

THE ROLE OF U.S. GOVERNMENT DEMAND

DEPOSITS IN THE MONETARY PROCESS

The behavior of different monetary variables in recent years has generated considerable discussion about the nature and intent of monetary policy. One variable used frequently to interpret the nature of monetary policy is the money supply. Occasionally, however, this measure has behaved quite erratically over short periods of time and in many cases has run counter to the stated intent of the monetary authorities. This behavior has, in turn, led to wide discussion of the factors, other than Federal Reserve actions, that influence the money supply, such as U. S. Government deposits at commercial banks.¹ Although Treasury deposits are not the sole cause of the erratic behavior of the money supply, changes in the level of these deposits at commercial banks have contributed at times to large changes in the money supply. This

¹For example, see "Definitional Aspects of the Money Supply," *Economic Commentary*, Federal Reserve Bank of Cleveland, November 9, 1968. Also see Albert L. Kraus, "The Money Supply," *New York Times*, February 26, 1969, p. 61.

article discusses the nature of Government deposits and their relationship to selected monetary magnitudes.

U. S. Government deposits have generally been excluded from any definition of the money supply because they are not held by the public. However, there is reason to re-examine this exclusion. For one thing, changes in the dollar amount of Treasury deposits at commercial banks can directly change the level of the conventionally defined money supply. In addition, Treasury demand deposits can affect the use of bank reserves. One measure of the amount of reserves available to the commercial banking system is the reserve base.² This measure is frequently used as

²The reserve base is derived from the summary of Factors Affecting Bank Reserves (H.4.1) and Table A-4 in the *Federal Reserve Bulletin*. This variable is also referred to as the monetary base. See, for example, L. C. Andersen and J. Jordan, "The Monetary Base—Explanation and Analytical Use," *Review*, Federal Reserve Bank of St. Louis, August 1968.

ECONOMIC REVIEW

an indicator of monetary policy because the total reserve base is assumed to be free from influence by the banking system. Although various factors supplying or absorbing reserves are not directly under the control of the Federal Reserve System, others are. Therefore, the monetary authorities can achieve any desired level of the reserve base by altering the reserve factors under their control in a countervailing fashion. One derivation of the reserve base includes Federal Reserve credit (Federal Reserve holdings of U. S. Government securities, discounts and advances, and float), the gold stock, and Treasury currency outstanding less Treasury cash holdings. Other Federal Reserve deposits and other Federal Reserve accounts are subtracted from this figure. U. S. Treasury deposits and foreign deposits are included in other Federal Reserve deposits. Other Federal Reserve accounts include not only the capital accounts of the Federal Reserve System but more importantly the System's holdings of foreign currencies.³ When Government deposits are transferred from commercial banks to the Federal Reserve, other Federal Reserve deposits increase, and other things being equal, the reserve base falls. As Treasury balances at Federal Reserve banks are drawn down, the reserve base increases.⁴

³Recently, other Federal Reserve accounts were separated into two accounts in the Weekly Report of Condition (H.4.1). Other Federal Reserve assets now appear as a source of reserves, while other Federal Reserve liabilities and capital appears as a use of reserves. The former account includes foreign currency holdings, while the latter account primarily includes the capital accounts of the Federal Reserve System.

⁴See "Sources of Change in the Monetary Base," *Economic Commentary*, Federal Reserve Bank of Cleveland, May 19, 1969.

MECHANICS OF U. S. GOVERNMENT DEMAND DEPOSITS

Although Treasury deposits affect the behavior of commercial banks, it has generally been assumed that such deposits have little or no effect on private economic activity, since the Government makes its payments from its accounts at the Federal Reserve banks. That is, the spending stream from the Government into the economy relies upon the accounts at Federal Reserve banks as the direct media and only indirectly involves the accounts at commercial banks.

Treasury Balances at Commercial Banks. Tax and loan accounts are the most important type of Treasury deposits at commercial banks. Funds flow into tax and loan accounts from several sources. Proceeds from the sale of Treasury securities can be deposited directly into these accounts.⁵ Funds also come into tax and loan accounts when withheld income and employment taxes and certain excise taxes are collected. Although these taxes can be paid directly to the Internal Revenue, these tax payments can also be made through a commercial bank that qualifies as a special depository. Many banks that qualify as depositories for tax and loan accounts aggressively solicit tax payments. In addition, some quarterly payments of income and profit taxes are made into tax and loan accounts. Finally, the Treasury can transfer funds directly to its accounts at commercial banks if its balances at the Federal Reserve banks are larger than desired.

As mentioned earlier, the dollar volume of Treasury balances at commercial banks varies considerably over the short run, primarily because

⁵In some Government financings, some special depositories are encouraged to purchase the new issues by crediting their tax and loan accounts.

the collection of funds tends to be concentrated at certain points in time. For example, Treasury balances usually increase at or around tax collection dates, as most individuals and businesses wait until the last moment to pay their taxes. A substantial inflow also occurs when the Government raises funds through a new security offering.

Transfer Process. Funds are transferred from commercial banks to the Federal Reserve (or are redeposited in commercial banks) by means of "calls" on the various banks that hold tax and loan accounts. Banks are divided into three call classifications, based upon total deposit size. Group A depositories include banks with total deposits of \$200,000 or less. Group B depositories have total deposits ranging from \$200,000 to \$500 million, and Group C depositories have total deposits in excess of \$500 million. Although all three types of depositories are subject to regular calls made by the Treasury, Group C are also subject to special calls.

Group A depositories, the smaller banks, are usually called only once a month, although calls can be more frequent. Because of the regularity of Group A calls, the banks can plan for them. When necessary, the Treasury makes regular calls on Group B and C depositories on Mondays; however, additional calls can be made on Thursdays. Transfers of funds to the Treasury are then due from four to seven days after the call is made. That is, if calls are announced on Monday, payments fall due on the following Friday and Monday, while calls made on Thursday are due the next Tuesday, Wednesday, and Thursday.

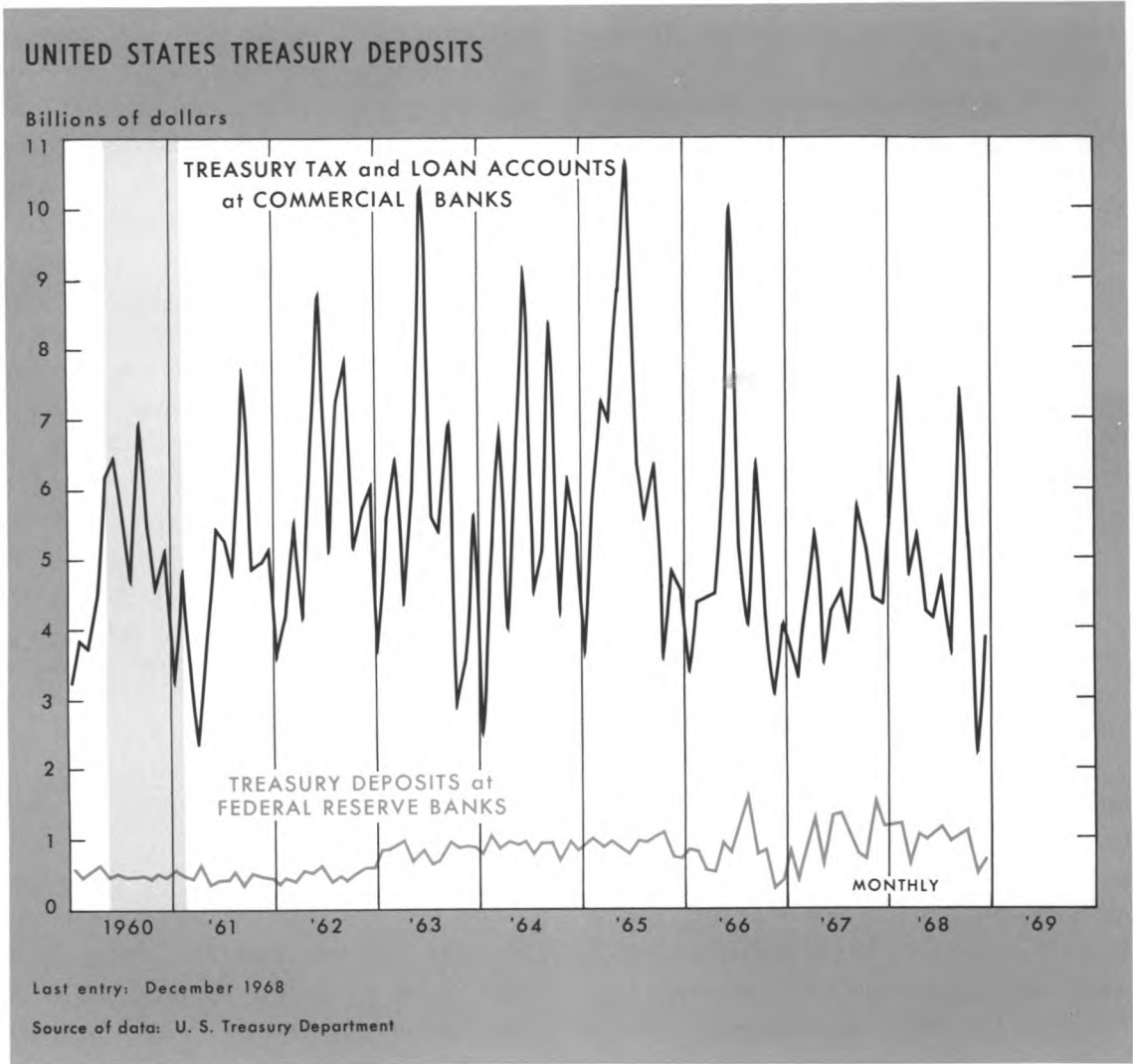
Calls are made after consultation between Treasury and Federal Reserve officials and are based on daily forecasts of payments into and out of the Treasury accounts held at the Federal Reserve banks. Once Treasury cash needs have

been determined and the effects on banks reserves have been considered, the banks concerned are notified of the amounts of the call.

In the time that takes place between the call and the transfer of funds, the actual flow of funds into the tax and loan accounts might be substantially different from the original forecasts. However, adjustment can be made by "special" calls at the Group C banks. Because the Group C depositories include the nation's largest banks, it is assumed that they can more readily absorb short-run changes in Government deposits and adjust their balance sheet positions more rapidly than can the smaller banks. Special calls can be made daily, and the banks that are concerned are usually notified by 11 a.m. on the day the call becomes effective. These calls can be used to withdraw more funds from the commercial banking system, to cancel part or all of a previous call, or to allow the Treasury to redeposit funds in commercial banks. Special calls are designed to give the Treasury better control and more flexibility in managing its deposits at the Federal Reserve.

The total amount outstanding in tax and loan accounts varies substantially, as shown in the chart. The sharp fluctuations reflect the irregular inflow of tax payments and outflow of Government expenditures as well as the Treasury's attempts to maintain a fairly stable average balance at the Federal Reserve banks.

Treasury Balances at the Federal Reserve Banks. One of the functions of the Federal Reserve System is to serve as the fiscal agent of the U. S. Treasury. Because of its responsibility to assist the Government to place debt, make payments to the public, redeem matured Treasury issues, and purchase Treasury securities for various



Government trusts or investment funds, the Federal Reserve is closely concerned with the flow of funds into and out of the Treasury. Since almost all Treasury payments proceed from Federal Reserve accounts, nearly all funds received by the Government at one time or another pass through the Treasury's accounts at the Federal Reserve banks.

It is necessary, therefore, for the Treasury to maintain sufficient working balances at the Federal Reserve banks in order to handle daily expenditures. Similar to any other economic unit, Treasury balances should be adequate to cover daily transactions, yet not too large. Relatively large balances would not only reflect an inefficient use of funds, but could also have a restrictive

effect on commercial bank reserves.

The Treasury presumably has a general target balance that it attempts to maintain, over time, at the Federal Reserve banks. In order to accomplish this goal, the Treasury adds or withdraws deposits from commercial banks in order to keep its balance at the Federal Reserve fairly close to the desired level. In this way, the Treasury attempts to minimize the effect that changes in Government deposits have on the reserves of the commercial banking system. It is apparent from the chart that Treasury balances at the Federal Reserve have remained relatively stable compared with the balances in tax and loan accounts at commercial banks. Since 1965, balances at the Federal Reserve have shown increased volatility, presumably due to the changed expenditure patterns associated with the Vietnam conflict and more erratic receipts due to changes in the timing of tax dates and Treasury financings.

EFFECTS OF CHANGES IN GOVERNMENT DEMAND DEPOSITS

The Treasury's management of its balances at the Federal Reserve banks and at commercial banks has a very significant influence on the conventionally defined measure of the money supply. For example, if Treasury balances at the Federal Reserve banks are near the desired level and the Government is collecting tax receipts, the receipts will be redeposited, or allowed to remain in tax and loan accounts at commercial banks. When this occurs, however, the conventionally defined money supply will decline, because deposits are being transferred from accounts of private economic units to that of the Government. The former account is included in the conventional measure of the money supply, while the latter is not. Obviously, all other things remaining

equal, the conventional measure of the money supply must fall. However, the reserves available to the banking system remain constant because no reserves were withdrawn.

If it were desirable to maintain a given level of the money supply despite an increase in Treasury deposits, the Federal Reserve could provide additional reserves to the banking system. In this case, the reserve base would increase, and the decline in the money supply due to Treasury actions would be offset. If the goal of monetary policy were to increase the money supply, bank reserves would have to be supplied in an even greater quantity. In other words, in periods when payments are made into Government demand deposits at commercial banks, the reserve base must be increased in order to maintain a given level of the conventionally defined money supply, but if the money stock is to grow, on balance, the reserve base must be increased by a larger amount.

On the other hand, if the transfer of Government deposits from commercial banks to Treasury accounts at the Federal Reserve were to take place without a reduction in these accounts at the Federal Reserve, the reserves available to the commercial banking system would decline; that is, the reserve base would fall. However, the money supply or the volume of private demand deposits would not be affected.

When the Treasury draws down its deposits at the Federal Reserve to make payments to the private sector, and it is desirable to maintain the level of the money supply, reserves must be withdrawn from the banking system by other means to offset Treasury actions. If it were desirable for the money supply to increase, the course of action followed by the monetary authorities would depend upon the desired growth of the money supply relative to the growth of the money

ECONOMIC REVIEW

supply induced by the Treasury operations. If the monetary authorities desire a growth of the money supply above the growth rate that would result from the Treasury operations, the Federal Reserve would have to supply additional reserves.

Treasury flows of funds are not independent of one another. Generally, when Treasury deposits at the Federal Reserve banks are reduced, they are replaced as quickly as possible in order to bring Government balances back to the desired level. If this occurs, reserves in the banking system will not change; that is, the reserve base will remain constant, but the money supply will increase. In order to maintain a given level of the money supply or to allow the money supply to grow, the reserve base would have to be reduced or increased at a slower rate of growth than would otherwise be necessary.

U. S. Treasury deposits at commercial banks can be an important influence on other monetary variables. A change in Treasury deposits can have a twofold effect: (1) changes can affect the rate of growth of the money supply; and (2) changes can alter the amount of reserves available to commercial banks.

RECENT EXPERIENCE

To understand the effects of changes in Government demand deposits on various monetary variables, quarterly data from 1960 through 1968 were analyzed. From these data, it is apparent that changes in Government demand deposits have a significant effect on any given measure of the money supply and the reserve base. In this analysis, Government demand deposits are added to the components in the conventional definition of the money supply (M_1) and to the components of the broader definition that includes time deposits at commercial banks (M_2). These newly

formed measures are referred to as M_3 (that is, M_1 plus Government demand deposits) and M_4 (M_2 plus Government demand deposits).

The exact pattern of response in any of the monetary measures, that is, any measure of the money supply, depends on several factors, including among others, the lag pattern between changes in the reserve base and changes in the money supply, the private demand for currency in relation to deposits at commercial banks, and the quantity of reserves commercial banks are willing to hold in relation to the amount of outstanding deposits. However, this analysis does not attempt to isolate the influence of these various factors.

During the period under review, Government demand deposits frequently were subject to large changes. In order to emphasize the effects of changes in Treasury deposits on various monetary aggregates, only quarterly changes of more than \$500 million are discussed. In 15 of the 36 quarters in the 1960-1968 period, average Government deposits changed by more than \$500 million. In 7 of the 15 quarters, Government deposits at commercial banks increased by more than \$500 million (see Table I). As shown in Table I, the quarterly increases differ not only in terms of size, but also in relation to effects on the reserve base and the other monetary measures.

As suggested earlier, if Government demand deposits at commercial banks increase and if there is no offsetting action on the part of the monetary authorities, M_1 and M_2 should decline, while M_3 and M_4 and the reserve base should remain unchanged. If the reserve base is increased sufficiently to offset the decrease in private demand deposits, M_1 and M_2 should remain unchanged, but M_3 and M_4 should grow. If the reserve base is increased in a greater amount than necessary to maintain the previous level of private demand

TABLE I

Changes in Monetary Variables
Selected Quarters, 1961-1968

Periods When Government Demand Deposits Increased	Seasonally Adjusted Change in Government Demand Deposits (bil. of \$)	Reserve Base	Seasonally Adjusted Annual Rate of Change			
			M_1	M_2	M_3	M_4
1961 IV	+\$1.3	+6.0%	+4.2%	+ 6.6%	+7.9%	+ 9.1%
1962 II	+ 0.8	+3.6	+1.1	+ 7.0	+3.2	+ 8.6
1964 I	+ 0.6	+4.8	+2.3	+ 6.5	+3.5	+ 7.4
1965 II	+ 1.2	+4.5	+3.0	+ 7.8	+5.3	+10.8
1967 I	+ 1.1	+6.6	+3.5	+ 9.1	+4.6	+ 9.2
1967 IV	+ 1.3	+6.3	+4.9	+ 8.1	+9.0	+10.0
1968 I	+ 1.3	+7.3	+4.4	+ 5.7	+4.9	+ 7.5
Periods When Government Demand Deposits Decreased						
1961 II	-\$1.1	+0.7%	+3.1%	+ 6.4%	-0.6%	+ 4.7%
1962 I	- 0.6	+2.9	+2.5	+ 8.3	+0.8	+ 6.5
1963 IV	- 0.9	+5.5	+4.5	+ 8.3	+2.3	+ 6.8
1965 III	- 0.9	+3.8	+5.2	+ 9.4	+2.8	+ 5.6
1965 IV	- 1.5	+6.9	+6.6	+10.7	+3.8	+ 9.0
1966 IV	- 0.6	+1.8	+0.4	+ 0.8	-0.3	+ 0.6
1967 II	- 0.9	+5.3	+5.8	+11.2	+4.8	+11.0
1968 II	- 2.1	+5.0	+6.8	+ 6.0	+3.6	+ 3.8

NOTE: Annual rates of change are based on quarterly averages derived from monthly averages of daily figures.

Sources: Board of Governors of the Federal Reserve System and Federal Reserve Bank of St. Louis

deposits, then M_1 and M_2 should grow but at a slower rate than M_3 and M_4 .

In the seven quarters selected for discussion, the reserve base increased concurrently with Government deposits (see Table I). Since M_1 and M_2 also increased, the reserves supplied to the banking system apparently more than offset the decline in private demand deposits. It can also be observed that the growth of M_1 was slower than the growth of M_3 in all cases, as was the growth of M_2 compared with M_4 . It can be concluded that for any given expansion in the reserve base, the

transfer of demand deposits from private accounts to Government accounts has a depressing effect on the expansion of M_1 and M_2 .

During the 1960-1968 period, U. S. Government deposits declined by more than \$500 million in eight quarters (see Table I). A decline in Treasury deposits at commercial banks is usually accompanied by a rise in reserves available to these banks, as well as a rise in private demand deposits and M_1 and M_2 , because the Government has made payments out of its accounts at the Federal Reserve banks. (Transfers to Federal Reserve

ECONOMIC REVIEW

accounts to replenish Treasury balances do not have to be made at the same time the Government makes payments to private individuals; the lag, however, is thought to be short.) If the reserve base increases at this time, the growth of M_1 or M_2 can be quite large. As in the earlier example, the reserve base increased in all eight cases in which a decline in Government demand deposits occurred. M_1 and M_2 increased by large amounts in all periods except one. The exception occurred at the time of the severe credit restraint in the fall of 1966. As would be expected, however, the transfer of funds did result in the larger growth of M_1 relative to M_3 , and M_2 relative to M_4 in all cases.

One further comment should be made concerning the relative growth rates of two of the above monetary measures. When Government demand deposits are increasing, the rate of growth of M_1 is, in most cases, considerably less than the rate of growth of the reserve base. However, when Government demand deposits are decreasing, the growth rates of the two monetary measures are much closer together; in fact, in four out of eight cases, the growth rate of M_1 exceeded that of the reserve base.

A convenient measure of comparison is obtained if the percent growth of M_1 is divided by the percent growth of the reserve base. The resulting number is called the elasticity of M_1 with respect to the reserve base, and it shows the relative response of the money supply to a given change in the reserve base. Elasticities for the periods under review are presented in Table II. In periods when Government demand deposits declined, the measure of elasticity ranged from 0.82 to 4.43, excluding the fourth quarter of 1966. In periods when Government demand deposits increased, the measure ranged from 0.31 to 0.78.

TABLE II

Elasticity of the Money Supply With Respect to the Reserve Base Selected Periods

<u>Periods When Government Demand Deposits Increased</u>	<u>Elasticity</u>
1961 IV	0.70
1962 II	0.31
1964 I	0.48
1965 II	0.67
1967 I	0.53
1967 IV	0.78
1968 I	0.60
<u>Periods When Government Demand Deposits Decreased</u>	<u>Elasticity</u>
1961 II	4.43
1962 I	0.86
1963 IV	0.82
1965 III	1.37
1965 IV	0.96
1966 IV	0.22
1967 II	1.09
1968 II	1.36

Source: Federal Reserve Bank of Cleveland

The calculated response of the conventional measure of the money supply to the reserve base was lower in periods when Government demand deposits were increasing than in periods when such deposits were declining. It is, therefore, apparent that if the growth rates of M_1 and the reserve base are compared at different times, different conclusions could be obtained concerning the response of the money supply to the reserve base. Thus, an analyst could be misled into thinking that the money supply was growing too slowly for a given growth in the reserve base, when, in fact, Government demand deposits also were increasing and absorbing bank reserves that otherwise could support the growth of private deposits.

CONCLUDING COMMENTS

U. S. Government demand deposits at commercial banks are an important influence on other

monetary measures in the short run. In particular, changes in these deposits can affect the growth rates of other important monetary variables that are often used as indicators of the current intent of monetary policy. Such changes do not invalidate the use of these indicators, but they do make the interpretation of their movements in a short period of time more difficult. In fact, in 15 of the 36 quarters reviewed, the effect of changes in

these deposits was substantial. Moreover, these changes in Treasury deposits can affect the quantity of reserves available to the banking system and lead to defensive operations on the part of the Federal Reserve System. A better understanding of monetary policy at any given time is possible only with a fuller understanding of all the various factors that can affect the monetary and reserve measures.



CAPITAL SPENDING IN MAJOR AREAS OF THE FOURTH DISTRICT

The regular spring surveys of capital spending plans of manufacturing and other selected business firms in several major areas of the Fourth District,¹ which were conducted by the Federal Reserve Bank of Cleveland in April, reveal that substantial increases in overall spending for new plant and equipment are planned in 1969. The planned increases in the District are similar to the 13-percent increase in capital outlays predicted for firms across the nation. Results of the area surveys are summarized below.

NORTHEASTERN OHIO

Almost two out of every three manufacturing firms participating in the survey in eight north-

eastern Ohio counties² plan to spend larger amounts for new plant and equipment in 1969 than they did in 1968. As shown in Table I, total 1969 spending by all participating manufacturers is expected to exceed the actual 1968 total by 14 percent. The expected 1969 increases in capital spending are similar in the durable goods and the nondurable goods group (14 percent and 13 percent, respectively).

However, more than half the participating manufacturers anticipate reduced spending in 1970. A 24-percent decline is expected for all manufacturing companies, with nearly equal reductions for the durable and nondurable goods groups (see Table I). Thus, total spending in 1970 would drop to about 13 percent below the actual level of spending in 1968.

Public utilities operating in the eight northeastern Ohio counties anticipate little change in

¹The surveys in northeastern Ohio (including Cleveland) and Cincinnati were undertaken with the cooperation of the Greater Cleveland Growth Association and the Greater Cincinnati Chamber of Commerce, respectively; the Pittsburgh survey was conducted for the Federal Reserve Bank of Cleveland by the University of Pittsburgh.

²Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit counties.

TABLE I

Capital Spending by Manufacturing Firms
and Public Utilities
Eight Northeastern Ohio Counties*
(Spring 1969 Survey)
Year-to-Year Percent Change

	1968 (actual) to 1969 (planned)	1969 (planned) to 1970 (planned)
MANUFACTURING	+14%	-24%
Durable goods	+14	-24
Ordnance	+38	-41
Primary metals	- 3	-30
Fabricated metals	-20	-17
Machinery	+47	-17
Electrical equipment	+44	- 4
Transportation equipment	+30	-22
Nondurable goods	+13	-27
Food	-22	+83
Printing and publishing	+32	-42
Chemicals	+20	-68
Rubber and plastics	+11	-16
PUBLIC UTILITIES	+ 1	- 3
TOTAL	+10%	-18%

* Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit counties.

Source: Federal Reserve Bank of Cleveland

the level of spending in the near term. Their combined outlays are expected to rise by 1 percent in 1969 and to decline by 3 percent in 1970.

When surveyed in the fall of 1968, manufacturing firms in the eight counties expected to spend 15 percent less in 1969 than in 1968, with a particularly severe reduction in the durable goods sector. Therefore, the 14-percent increase in spending plans for 1969 indicated by the spring survey sharply revises earlier expectations. The revision reflects a combination of raised spending

plans for 1969 and lower than expected actual spending in 1968. More than half of the manufacturing firms participating in both the fall and spring surveys upgraded their spending plans for 1969 between the two survey dates, while in this spring's survey, three out of every four companies reported less actual spending in 1968 than they had anticipated last fall.

CLEVELAND AREA

Capital spending plans of manufacturing firms in the Cleveland metropolitan area closely resemble those of manufacturers in the eight northeastern Ohio counties, reflecting the fact that the four counties included in metropolitan Cleveland form the nucleus of the larger eight-county area. A comparison of the data in Tables I and II shows that the spending pattern of firms in the eight counties differs significantly from the pattern for Cleveland-area firms in only two industries—rubber and plastics and chemicals—both having major facilities outside the Cleveland area. In the rubber and plastics industry, spending by Akron manufacturers easily outweighs spending by all other firms in the industry in the northeastern Ohio area. On the other hand, the construction of a large new plant in Ashtabula County is currently having a marked influence on spending in the chemical industry in the eight-county northeastern Ohio area.

Cleveland-area manufacturing firms plan to spend 18 percent more for new plant and equipment in 1969 than in 1968, as shown in Table II. Spending is expected to drop back in 1970 by 22 percent, which would mean spending at a level of 8 percent below actual outlays in 1968.

In the Cleveland area, nondurable goods manufacturers as a group expect to increase spending in 1969 by 35 percent, compared with an increase of

ECONOMIC REVIEW

TABLE II

Capital Spending by Manufacturing Firms
Cleveland Metropolitan Area
(Spring 1969 Survey)
Year-to-Year Percent Change

	1968 (actual) to 1969 (planned)	1969 (planned) to 1970 (planned)
Durable goods	+ 16%	-24%
Primary metals	- 3	-31
Fabricated metals	- 18	- 7
Machinery	+ 51	-19
Electrical equipment	+ 39	- 5
Transportation equipment	+ 32	-20
Nondurable goods	+ 35	- 7
Food	- 30	+91
Printing and publishing	+ 32	-42
Chemicals	+102	-32
Rubber and plastics	+ 98	-26
TOTAL	+ 18%	-22%

Source: Federal Reserve Bank of Cleveland

16 percent by the predominant durable goods group. On the other hand, the expected reduction in outlays in 1970 is much smaller in the nondurable than in the durable goods industries. Substantial increases in planned outlays for 1969 in the chemical industry and for 1970 in the food industry account for the larger rise in spending by the nondurable goods group in 1969 and the smaller decline in 1970. On the other hand, the primary metal and the transportation equipment industries, which account for about two-thirds of all capital outlays by manufacturing concerns in the Cleveland area, largely determine the size of the year-to-year changes in overall spending in the durable goods group. In 1969, investment in the primary metal industries, especially basic steel, will remain close to the high level of 1968 but is

expected to decline in 1970 as the installation of modern equipment nears completion. In the transportation equipment industry, spending will rise substantially in 1969 but will drop in 1970 as construction of new manufacturing facilities progresses.

Spending for new structures is expected to rise as a share of total capital spending by manufacturing firms in 1969 and 1970—accounting for nearly \$1 out of every \$4 spent, compared with \$1 out of every \$5 in 1968 (see Table III). The rise reflects large construction projects in the transportation equipment, machinery, and chemical industries that are in progress or planned for 1970.

A significantly larger proportion of total outlays in the Cleveland area is earmarked for expansion of manufacturing facilities in 1969 than in 1968 (see Table III). The increased share is particularly striking in the nondurable goods group but is also noticeable for some industries in the durable goods group.³ In 1970, spending for expansion is expected to drop back to its 1968 proportion. The results of the spring survey give no indication of capacity shortages. In fact, the percent distribution of returns showing too little, enough, or too much capacity, respectively, was the same in the spring of 1969 as in the fall of 1968.

Almost four out of every five manufacturing firms responding to the question on financing capital investments expect to rely exclusively on

³Where year-to-year changes in the proportion of spending for expansion appear inconsistent with changes in the proportion for construction in a given industry, the explanation can generally be found in the fact that some questionnaires show a breakdown of total spending between structures and machinery but fail to supply a breakdown between expansion and replacement; thus, two different bases are used in calculating percent distributions.

TABLE III

Capital Spending by Manufacturing Firms
Cleveland Metropolitan Area
(Spring 1969 Survey)

Percent Distribution of Total Spending by Type*
(Between Structures and Equipment and
Between Expansion and Replacement)

	Structures†			Expansion‡		
	1968	1969	1970	1968	1969	1970
Durable goods	19%	23%	24%	64%	68%	63%
Primary metals	9	9	10	66	76	79
Fabricated metals	50	32	27	56	48	66
Machinery	35	42	27	58	66	55
Electrical equipment	35	29	41	69	61	54
Transportation equipment	17	31	32	63	43	31
Nondurable goods	32	33	23	57	77	63
Food	31	32	28	69	52	54
Printing and publishing	40	41	29	30	69	60
Chemicals	30	35	28	86	93	74
Rubber and plastics	9	9	6	82	91	82
TOTAL	20%	24%	24%	63%	70%	63%

* Based only upon returns in which these breakdowns were supplied.

† Spending for equipment equals 100 percent less the percent shown for structures.

‡ Spending for replacement equals 100 percent less the percent shown for expansion.

Source: Federal Reserve Bank of Cleveland

internal sources of funds in 1969 and 1970; this is virtually the same proportion as in 1968. In 1969, responding manufacturing firms expect to finance internally more than three-fourths of their total outlays, while in 1970, five-sixths of total outlays will be internally financed. In 1968, three-fourths of capital spending was internally financed.

CINCINNATI AREA

Capital spending by manufacturing firms in the seven-county Cincinnati metropolitan area will be

15 percent greater in 1969 than in 1968 (see Table IV). Durable goods manufacturers expect to increase their capital spending in 1969 by 30 percent over 1968, in contrast to a 2-percent cutback by nondurable goods manufacturers. Public utilities plan to spend 34 percent more in 1969 than in 1968.

In 1970, capital spending by manufacturers in the area is expected to decline by 17 percent, which would reduce the level of spending to 5 percent below total outlays in 1968. The expected decline in spending in 1970 is greater among the nondurable goods group than among the durable goods industries. Public utilities expect to spend only 7 percent less in 1970 than in 1969.

TABLE IV

Capital Spending by Cincinnati Area Firms
(Spring 1969 Survey)
Year-to-Year Percent Change

	1968 (actual) to 1969 (planned)	1969 (planned) to 1970 (planned)
MANUFACTURING	+ 15%	- 17%
Durable goods	+ 30	- 14
Primary and fabricated metals*	- 29	+ 62
Machinery	- 26	+ 7
Electrical equipment	+ 15	- 6
Transportation equipment	+106	- 25
Nondurable goods	- 2	- 23
Food	- 1	- 8
Paper	- 18	+135
Printing and publishing	- 33	- 74
Chemicals	+ 1	- 33
PUBLIC UTILITIES	+ 34	- 7
TOTAL	+ 23%	- 12%

* Combined in order to preclude disclosure of individual establishment data.

Source: Federal Reserve Bank of Cleveland

ECONOMIC REVIEW

Here again, spending plans for 1969 were revised since the preceding survey. In the fall of 1968, Cincinnati-area manufacturing firms had anticipated a 3-percent decline in spending for 1969, while public utilities had expected a 23-percent rise in their capital investments. Between the two survey dates, one-half the firms participating in both surveys raised their spending plans for 1969, while actual 1968 outlays were less than previously expected at a somewhat smaller number of firms. All of the public utilities raised their plans for 1969, while two-thirds of that group spent less than expected in 1968.

Manufacturing firms participating in the spring survey in the Cincinnati area were almost evenly divided between those planning to spend more and those planning to spend less for new plant and equipment in 1969 than in 1968. Nevertheless, the level of spending is expected to be higher in 1969 than in 1968, due to the large size of some of the spending increases, particularly in one industry. Reduced outlays for 1969 are indicated for a majority of the industries included in Table IV. On the other hand, more than twice as much spending is planned in 1969 than in 1968 in the transportation equipment industry, including a multimillion dollar construction project by one of the large national corporations and sizable spending increases by other area members of the industry. Without the contribution from the transportation equipment industry, the manufacturing industries as a group would show a 6-percent decline rather than a 15-percent rise in spending for 1969.

More than one-third of total spending in 1969 will be for construction, about the same proportion as in 1968. In 1970, however, the share of spending for construction is expected to decline in the manufacturing group and to increase in the public utilities group (see Table V).

TABLE V

Capital Spending by Cincinnati Area Firms
(Spring 1969 Survey)
Percent Distribution of Total Spending by Type*
(Between Structures and Equipment and Between
Expansion and Replacement)

	Structures†			Expansion‡		
	1968	1969	1970	1968	1969	1970
MANUFACTURING	37%	37%	29%	66%	73%	58%
Durable goods	36	41	24	57	70	61
Primary and fabricated metals§	27	8	32	34	12	4
Machinery	52	40	32	53	78	69
Electrical equipment	26	35	18	45	49	44
Transportation equipment	13	42	13	70	68	62
Nondurable goods	39	33	37	76	76	55
Food	45	33	47	60	61	37
Paper	45	47	49	79	24	15
Printing and publishing	44	39	6	67	79	84
Chemicals	30	28	28	90	89	84
PUBLIC UTILITIES	37	38	45	71	72	76
TOTAL	37%	38%	35%	67%	73%	64%

* Based only upon returns in which these breakdowns were supplied.

† Spending for equipment equals 100 percent less the percent shown for structures.

‡ Spending for replacement equals 100 percent less the percent shown for expansion.

§ Combined in order to preclude disclosure of individual establishment data.

Source: Federal Reserve Bank of Cleveland

Manufacturers plan to use an even larger portion of their total capital spending for expansion of facilities in 1969 than in 1968. The relative increase, however, will be more than cancelled in 1970 (see Table V). No reasons for the increased spending for expansion in 1969 can be gleaned from the questionnaires, as virtually the same proportions of manufacturing firms with either "adequate" or "insufficient" facilities were reported in both the spring and fall surveys.

About four out of every five Cincinnati-area manufacturing firms supplying information on financing their capital investments expect to obtain all of their needed funds from internal sources in both 1969 and 1970, the same proportion as in 1968. At least 90 percent of total spending by reporting manufacturers is expected to be financed internally in 1969 and 1970, in contrast to less than 80 percent of actual outlays in 1968.

PITTSBURGH AREA

Business firms in the four-county Pittsburgh metropolitan area participating in the spring survey plan to spend 12 percent more for new plant and equipment in 1969 than in 1968. The major contribution to increased spending will come from public utilities and durable goods manufacturers; in contrast, nondurable goods manufacturers and some nonmanufacturing industries expect lower outlays in 1969 than in 1968. In 1970, except for the nondurable goods group (especially chemical companies), all major industry divisions will contribute to a 13-percent reduction in spending by participating firms (see Table VI). The planned reduction would move the level of total outlays to about 3 percent below the level for 1968.

The results of the spring survey show an upward revision of spending plans for 1969. The fall 1968 survey indicated that, in 1969, capital spending by all business firms and by all manufacturing firms would decline by 5 percent for each group. The spring 1969 survey indicates a rise in spending for both the manufacturing sector and all groups combined.

Among manufacturing industries, the stone, clay, and glass industry and the fabricated metals industry stand out with large spending increases planned for 1969, reflecting substantial invest-

ments in new machinery and equipment by several firms in those two industries. Increased spending in the stone, clay, and glass industry is in line with large investments planned by manufacturers of building materials throughout the nation.

Spending plans by manufacturers for 1969 and 1970 involve a noticeable reduction of spending for construction, from \$1 out of every \$4 in 1968 to \$1 out of every \$6–\$7 in 1969 and 1970. A similar cutback in the share of spending for structures in nonmanufacturing industries is not expected until 1970 (see Table VII).

About one-third of total spending in 1969 is earmarked for expansion of present facilities by manufacturers as well as by the entire group of

TABLE VI
Capital Spending by Pittsburgh Area Firms
(Spring 1969 Survey)
Year-to-Year Percent Change

	1968 (actual) to 1969 (planned)	1969 (planned) to 1970 (planned)
MANUFACTURING	+ 5%	-12%
Durable goods	+ 11	-20
Stone, clay, and glass	+155	-11
Primary metals	+ 3	-12
Fabricated metals	+ 59	-22
Machinery	+ 10	- 7
Electrical equipment	- 4	-37
Nondurable goods	- 27	+23
Food	+ 15	-48
Printing and publishing	- 56	-29
Chemicals	- 52	+63
TRANSPORTATION	- 23	*
PUBLIC UTILITIES	+ 46	-11
RETAIL TRADE	- 15	-74
TOTAL	+ 12%	-13%

* No change.

Sources: University of Pittsburgh and Federal Reserve Bank of Cleveland

ECONOMIC REVIEW

TABLE VII

Capital Spending by Pittsburgh Area Firms
(Spring 1969 Survey)
Percent Distribution of Total Spending by Type*
(Between Structures and Equipment and
Between Expansion and Replacement)

	Structures†			Expansion‡		
	1968	1969	1970	1968	1969	1970
MANUFACTURING	26%	14%	16%	37%	33%	35%
Durable goods	22	15	14	38	33	27
Stone, clay, and glass	8	8	19	54	32	23
Primary metals	20	17	9	35	31	23
Fabricated metals	22	11	34	22	18	30
Machinery	11	9	5	37	44	49
Electrical equipment	35	9	13	57	48	18
Nondurable goods	47	5	23	29	39	57
Food	3	3	4	53	62	50
Printing and publishing	19	19	0	15	2	1
Chemicals	66	5	31	26	33	52
TRANSPORTATION	11	49	n.a.	2	23	n.a.
PUBLIC UTILITIES	27	25	18	48	54	47
RETAIL TRADE	27	26	0	31	13	0
TOTAL	23%	22%	15%	30%	35%	38%

n.a. Not available.

* Based only upon returns in which these breakdowns were supplied.

† Spending for equipment equals 100 percent less the percent shown for structures.

‡ Spending for replacement equals 100 percent less the percent shown for expansion.

Sources: University of Pittsburgh and Federal Reserve Bank of Cleveland

participating firms. Compared with 1968, this represents a smaller share of total spending for manufacturing and a larger share for all industries combined. The proportion of outlays for expansion is considerably smaller in the Pittsburgh area than in the Cleveland and Cincinnati areas (and also in the entire country) and will remain so despite a small rise expected in 1970.

Nine-tenths of all capital spending by Pittsburgh-area manufacturing firms furnishing information on financing is expected to be financed internally in 1969, a slightly larger proportion than in 1968 but less than anticipated for 1970. Four out of every five responding firms plan to finance all of their capital investment from internal sources in 1969 and 1970, compared with three out of every four in 1968.

CONCLUDING COMMENTS

According to recent nationwide surveys, both public and private, 1969 will see a capital spending boom similar in magnitude to the surge in spending in the 1964-1966 period. A private survey predicts further rises in nationwide capital outlays, although of minor proportions, for three years beyond 1969. Spending plans in at least two of the three surveyed areas in the Fourth District indicate a rise in spending for 1969 of similar proportions to those expected nationally. On the other hand, substantially reduced outlays are predicted for 1970 in all three District areas. In comparing the regional survey results with the national pattern, neither the similarity in 1969 nor the divergence in 1970 should be overemphasized. Regional patterns of capital investment may deviate from the national pattern for various reasons, including differences in industrial mix and differences in timing of local expansion or modernization programs by multi-plant national concerns.

The expected substantial increase in both regional and national spending for 1969, together with the rise in the share of total outlays designated for expansion, does not appear to reflect need for additional capacity, since the utilization rate of overall manufacturing capacity has been at the rather low level of 84 percent for the past two years. Instead, it may be an indication of "forward

buying" in anticipation of continued price increases for capital goods and construction. In any event, fulfillment of the current spending goals for

1969, both regional and national, will depend in large part upon the availability of sufficient physical resources and financing.



