

economic review

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FEDERAL RESERVE BANK OF CLEVELAND

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THE DEALER MARKET FOR U. S. GOVERNMENT SECURITIES AND MONETARY POLICY

In comparison to organized securities markets such as the New York or American Stock Exchange, the market for U. S. Government securities is certainly less widely known. Yet, in terms of activity as measured by the dollar volume of transactions, the U. S. Government securities market far surpasses any of the well-known organized securities markets. For example, in 1966, the total volume of transactions (both sides, i.e., purchases and sales) by dealers in U. S. Government securities was valued at about \$573 billion compared with the volume of stock transactions valued at \$98.6 billion (one side) on the New York Stock Exchange and the \$24.4 billion (one side) on all other registered securities exchanges in the country.

Even more importantly perhaps, the role of the U. S. Government securities market — and the dealers in that market — may be considered special in the sense that the market provides important (indeed essential) services to both private and public institutions. On the public side, both the U. S. Treasury and the Federal Reserve System make use of securities dealers to carry out their

responsibilities — the Treasury in connection with marketing and refinancing the national debt and the Federal Reserve in connection with the conduct of open market operations. At the same time, private institutions such as commercial banks, insurance companies, savings and loan associations, and nonfinancial corporations, among others, rely on securities dealers for executing transactions in U. S. Government securities.

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Firms in the Market. At present, there are approximately 20 firms acting as primary dealers in U. S. Government securities. Some of these are special departments of commercial banks and are accordingly classified as bank dealers, while the rest are essentially securities houses that are designated as non-bank dealers. In addition to handling U. S. Government securities, some of the dealers in the second category engage in other investment banking activities. Although the main offices of most dealer firms are located in New York City, branches are maintained by several in leading metropolitan areas

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throughout the country.

Formally speaking, the dealer market for U. S. Government securities is an "over-the-counter" market in which the bulk of transactions is conducted by telephone and teletype. That is to say, almost invariably, transactions are first contracted through telephone or teletype and then confirmed in writing.

The key to the organization and the functioning of a dealer firm is the trading room. It is there that markets in U. S. Government securities are in effect made. The terms at which securities can be bought and sold are set by individual traders in each firm. Terms are constantly readjusted as financial market conditions change, and news about business and financial developments is circulated. The terms traders quote for buying or selling securities are the market, and tend to reflect the desire of dealers to add to or reduce positions in light of their reading of current developments.

Transactions. Most dealer firms usually stand ready to execute transactions in some size in all maturity ranges of U. S. Government securities. Smaller firms, however, confine most of their business to short-term issues, primarily because they cannot afford the capital risk involved in longer maturities, preferring to concentrate in the most active sector in which risks are less.

Dealer quotations differ according to the maturity of the issue under consideration. Treasury bills are quoted on a yield basis. For example, Treasury bills maturing three months from now may be quoted at 4.90 "bid" and 4.80 "asked." This simply means that a dealer is willing to buy a block of these bills with a given maturity value at a price that

would yield him 4.90 percent for the holding period, or is willing to sell the same bills at a price that would yield 4.80 percent to the buyer. In other words, the dealer's selling price is higher than his buying price. The difference, or spread, between the buying and selling price constitutes trading income for the dealer.

Trading spreads are also maintained on outstanding certificates, notes, and bonds. Dealer quotations on these issues are expressed in terms of prices rather than yields. For example, a bond issue bearing a coupon of $3\frac{1}{2}$ percent and maturing in 1980 may be quoted in the market at 83.24 bid and 84.8 asked. Since the figures after the decimal point are in thirty-seconds, the above quotation should be read as 83-24/32 bid and 84-8/32 asked, which indicates that the dealer is willing either to pay \$83.75 or to receive \$84.25 for every \$100 in maturity value of these bonds. A narrowing of spreads indicates greater willingness on the part of dealers to conduct transactions, i.e., to make a narrower market for U. S. Government securities, and reflects dealers' assessment of risk and their ability to turn over inventories.

The volume of securities transactions is often considered an indicator of performance. That is to say, a large and increasing volume may suggest the greater ability of the market to meet the varied needs of diversified groups of investors who wish to carry out transactions. Table I contains data on dealer transactions in the U. S. Government securities market during 1961-1967, and includes combined dealer purchases and sales as reported to the Federal Reserve Bank of New York. The data indicate that the level of market activity

has risen fairly steadily during the 1960's, particularly in more recent years. The average daily volume of transactions for all maturity classes increased from \$1,552 million in 1961 to \$2,095 million in 1966. Average daily trading in issues maturing within one year has also shown consistent growth during the 1960's, rising from \$1,203 million in 1961 to \$1,706 million in 1966, in fact, accounting for virtually all of the increase in total transactions. In 1-5 year maturities, dealer transactions declined from an average daily level of \$265 million in 1961 to \$242 million in 1966. During the first nine months of 1967, the average increased to \$257 million. Dealer transactions in issues maturing after five years increased during 1962 and 1963, but then declined slightly during each of the next three years, and the first nine months of 1967. Nevertheless, average daily transactions in longer term issues during 1966 and 1967 were considerably higher than in 1961 (see Table I).

Positions. U. S. Government securities dealers do not act as mere middlemen for buyers and sellers, as is usually the case with brokers for registered stocks. Instead, dealers buy and sell securities for their own account, and in so doing act as principals rather than brokers. Consequently, dealer holdings of U. S. Government securities are subject to capital gains and losses due to interest rate changes. For this reason, dealers' inventory positions are sometimes referred to as "positions of risk."

Technically, a dealer may take two types of positions — a long position and a short position. A dealer takes a long position when he buys securities outright for his own account. In a short position, the dealer sells

TABLE I
Dealer Transactions in U. S. Government Securities, 1961-1967
Par Value
(millions of dollars)

Year	All Maturities	Within 1 Year	1-5 Years	After 5 Years
1961	\$1,552	\$1,203	\$265	\$ 84
1962	1,786	1,401	228	158
1963	1,734	1,322	218	193
1964	1,770	1,382	220	168
1965	1,827	1,481	194	151
1966	2,095	1,706	242	146
1967*	2,087	1,733	257	96

* First nine months only.

NOTE: Data on transactions are averages of daily figures based on the number of trading days in the period. Transactions data represent combined totals of dealer purchases and sales as reported to the Federal Reserve Bank of New York. Excluded from the data are allotments and exchanges for new U.S. Government securities, redeemed securities before or at maturity, dealer security sales under the condition that they must be bought back by dealers, and dealer purchases that must be sold back to original owners.

Source: Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin* (various issues)

securities that he does not have in his account but borrows the securities in order to deliver them to the purchaser. The dealer, of course, must buy back and return the borrowed securities at a later date. In addition, the dealer must put up securities that he owns as collateral for the borrowed securities. Not surprisingly, there are risks involved in both long and short positions. For example, if a dealer has taken a position and securities prices rise (interest rates fall), capital gains will be realized in the long position and capital losses in the short position. (In the latter case, the dealer will have to pay a price that is higher than his original selling price to buy back the borrowed securities.)

Obviously, the actual behavior of interest rates, as well as expectations about that

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behavior, will influence dealer position policy. If interest rates are expected to rise in the future (securities prices fall), dealers will tend to decrease long positions and increase short positions. In the event that dealers expect interest rates to decline (securities prices rise), positions in securities will tend to be reversed. Dealers, of course, realize that expectations do not always materialize and to avoid the penalties or costs of mistaken expectations, dealers may hedge positions. That is to say, if dealers are not certain about the future course of interest rates, they can reduce or eliminate risk by covering long positions with short positions. In other words, dealers can sell a certain amount of securities short each time that the same amount of securities is taken into a long position.

Hedging also contributes to the improvement of the market by permitting the dealer to sell an issue that he does not hold against one that he does, and thereby satisfies a customer's need. In fact, many hedged positions result from security swaps with customers. In any event, from the standpoint of a well-functioning U. S. Government securities market, it is important to have dealers who are willing to take positions. Only in this way can the interests of individual investors be best served.

To a large extent, dealer willingness to take new positions is influenced by the size of actual positions already taken. Table II contains annual data on average daily positions during 1961-1967. It should be noted that the data represent "net" positions, i.e., short positions have been deducted from long positions, so that net positions are in effect long positions "not hedged." Although Table II shows

positive net positions on balance throughout the 1961-1967 period, net positions may have been negative for short time periods, in some maturity categories. Over longer time periods, however, long positions as a rule tend to be several times larger than short positions.

As shown in Table II, average daily positions in all maturities in 1961 were over \$2.7 billion. Dealer positions rose to and remained at a level of around \$3½ billion during the next four years. In 1966, the daily average of dealer positions fell appreciably, in fact, to almost \$300 million less than the 1961 level, with a similar pattern emerging in positions classified by maturity. The decline in dealer positions in 1966 in large part can probably be ascribed to the marked and dramatic shifts that occurred in financial flows and

TABLE II
Dealer Positions in U. S. Government Securities, 1961-1967
Par Value
(millions of dollars)

Year	All Maturities	Within 1 Year	1-5 Years	After 5 Years
1961	\$2,748	\$2,357	\$338	\$ 54
1962	3,320	2,922	276	122
1963	3,406	2,876	385	145
1964	3,423	2,901	313	217
1965	3,348	2,816	140	391
1966	2,476	2,262	142	76
1967*	3,469	2,911	415	143

* First nine months only.

NOTE: Data are averages of daily figures based on number of trading days in the period. Position figures are on "net" basis, i.e., short sales have been deducted from long positions. Securities sold by dealers under the condition that they must be repurchased at a later date (unless such sales are offset by equivalent amounts of securities purchased by dealers under the condition that they must be resold later to original owners) are included in long positions and therefore are reflected in net positions.

Source: Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin* (various issues)

financial markets, as well as in expectations. However, during the first nine months of 1967, when market conditions and expectations changed, dealer positions increased sharply in all maturity categories. Thus, on balance, the willingness of dealers to take positions in U. S. Government securities seems to have improved during the 1960's.

Financing. Dealer transactions, positions, and financing during 1960-1967 are illustrated in the chart. As the chart shows, dealer transactions, in general, tend to move in the same direction as dealer positions and financing, although the relationship between dealer positions and financing is certainly a closer one — indeed, the two series are conspicuously close. The latter relationship should not be surprising in that, although dealers act as principals in buying and selling securities, they use very little of their own funds. The bulk of dealer working capital is accounted for by borrowing. Securities dealers can usually borrow money from banks on a 2-5 percent margin of equity capital when making bond purchases and on virtually zero margin for bill purchases.

Dealers depend basically upon two types of loans to finance positions: bank loans (for which the securities purchased are used as collateral) and repurchase agreements (RPs). Bank loans as a rule carry a higher financing cost for the dealer than do RPs.¹ Accordingly, from the dealers' viewpoint, RPs constitute the preferred source of financing. Usually, a repurchase agreement involves a dealer's commitment to buy back securities that he

has sold earlier. The interval from the time the dealer sells the securities to the time he buys them back may vary from one business day to several weeks, or even months. The relative amounts of dealer positions financed through collateralized bank loans and through repurchase agreements depend largely upon the general availability and distribution of funds in the money market. When interest rates are high and the availability of funds limited, the reliance on RPs for dealer financing tends to increase relatively.

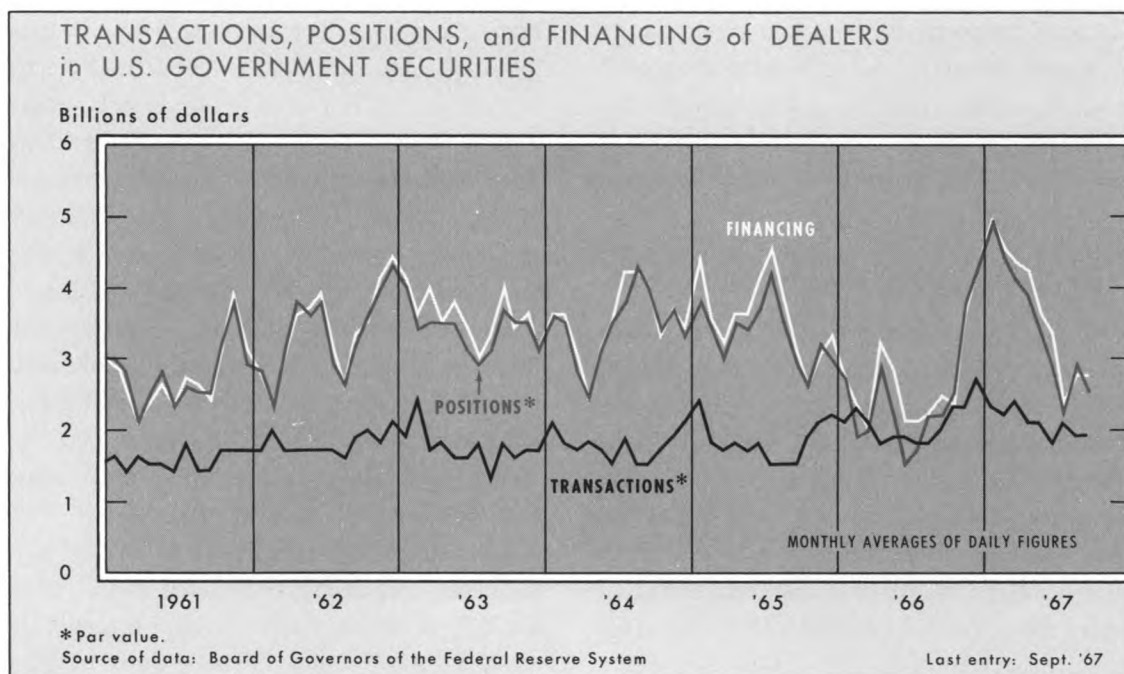
U. S. Government securities dealers execute repurchase agreements with a number of institutions, including commercial banks, non-financial corporations, Federal Home Loan banks, and state and local governments. In addition, the Federal Reserve Bank of New York makes funds available under repurchase agreements to *nonbank* dealers. This, of course, is done at the initiative of the Federal Reserve Bank, when it is deemed desirable from the standpoint of open market operations.

Table III presents data on the major sources and extent of dealer borrowing during 1961-1967. As indicated earlier, the volume of dealer financing needs depends mainly upon the size of dealer positions. Throughout the 1960's, commercial banks have been the most important source of dealer borrowings, providing nearly half of dealer financing. Corporations have provided over 40 percent of dealer financing, while borrowings from other sources (including RPs from the Federal Reserve Bank of New York) have contributed over 10 percent during 1961-1967.

Income. As noted earlier, the spread between dealers' selling and buying prices

¹ For a more complete discussion of the role of RPs in dealer financing, see *Money Market Instruments*, Federal Reserve Bank of Cleveland, 1965, pp. 19-30.

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constitutes an important source of dealer income. Spreads vary according to the maturity of the issue. For example, the spread on U. S. Treasury bills is likely to be small. This is true first, because bills are not as susceptible as longer term issues to large capital losses, and second, because the volume of dealer transactions in bills is much greater than in coupon issues. Accordingly, the spread is usually much larger for longer term issues, which carry a greater risk of capital loss. Typically, spreads on 3-month bills average about 2-5 basis points, while spreads on long-term bonds average around 8-16 thirty-seconds, i.e., \$0.25-\$0.50 on a \$100 bond.

A second source of dealer income arises from price changes in securities that dealers hold in position, which, of course, is not always positive. During periods of rising yields

(falling securities prices), a dealer is likely to incur capital losses in his long positions and capital gains in his short positions. If long positions are larger than short (as is usually the case since dealers must maintain at least minimum trading positions), rising yields will tend to have a negative effect on dealer income. When interest rates are falling, the effect on income would be the reverse.

Finally, the difference between interest earned on securities in position and the interest cost of financing such securities constitutes another source of income for a dealer; usually referred to as "carry" income. Whether income from carry is positive depends mainly upon the composition of dealer long positions and the term structure of interest rates. For example, if a considerable

TABLE III
Financing of Dealers in U. S. Government
Securities, 1961-1967
Par Value
(millions of dollars)

Year	All Sources	Commercial Banks	Corporations	All Others
1961	\$2,725	\$1,289	\$1,177	\$259
1962	3,359	1,542	1,461	256
1963	3,559	1,705	1,465	389
1964	3,503	1,812	1,317	374
1965	3,546	1,738	1,336	471
1966	2,666	1,238	1,018	411
1967*	3,591	2,256	798	537

* First nine months only.

NOTE: Financing data are averages of daily figures based on the number of calendar (rather than trading) days in the period.

Source: Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin* (various issues)

portion of dealer long positions consists of coupon issues, and short-term interest rates are above long-term rates, the carry is likely to be negative. This could be the case because dealers finance positions through short-term funds and the interest cost would tend to be greater than the interest earned on long-term securities held in position.

Published data on dealers' income are not available for the period of the 1960's. In an earlier study, however, it was found that income of securities dealers varied widely during the 1948-1958 period, with net income before taxes ranging from a high of \$38.8 million in 1958 to a low of -\$1.9 million in 1955.²

² Allan H. Meltzer and Gert von der Linde, *A Study of the Dealer Market for Federal Securities*, Joint Economic Committee, 86th Congress, 2nd Session (Washington, D. C.: U. S. Government Printing Office, 1960).

THE DEALER MARKET AND MONETARY POLICY

The Federal Reserve System, in carrying out its role in economic stabilization policy, relies mainly upon three instruments of monetary management: reserve requirement variation, discount rate changes, and open market operations. Of the three, open market operations are used most frequently. Open market policy is made by the Federal Open Market Committee, and in turn is executed at what is commonly known as the Trading Desk of the Federal Reserve Bank of New York, under the responsibility of the Manager of the Federal Open Market Account, who is an officer of the Federal Reserve Bank of New York.

Dealer services are essential in the process of implementing open market operations. In fact, the role of the dealers in this process may be construed as the first link in the series of events that transform actions taken by the Desk into financial and economic effects. Federal Reserve open market operations are initially reflected in the reserve position of commercial banks. Suppose, for example, that the Trading Desk sells securities to dealers. Bank dealers pay for the securities acquired from the Desk by drawing on their reserve accounts at the Federal Reserve Bank of New York. Nonbank dealers pay by using a check drawn on a commercial bank, which clears the transaction (the transaction is usually conducted in Federal funds, i.e., same day money); when this check is received, the Federal Reserve Bank of New York reduces the reserve account of the commercial bank. On the other hand, purchases by the Trading

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Desk lead to increases in member bank reserves. In this case, bank dealers are paid by credits to their accounts at the New York Federal Reserve Bank, as are eventually the banks with whom nonbank dealers do business.

In its approach to dealers, the Desk often employs a technique commonly known as a "go-around." This procedure begins when the Desk's traders contact securities dealers and ask for "firm" bids or offers, i.e., quotations that ordinarily cannot be changed or withdrawn within a stated time interval without the consent of the Desk. After all dealers have been contacted and their offerings tabulated and compared, the Desk chooses the offerings on a best price basis, while also taking into account several other considerations, for example, those affecting the System's portfolio. Dealers are then informed about the outcome of their offerings. The entire operation involved in a "go-around" is on average completed within 30 minutes time.

Types of Transactions. There are basically two types of transactions that the Desk may enter into with dealers. The Desk may buy or sell securities outright on behalf of the System's Account without any conditions attached. Alternatively, it may buy or sell while simultaneously contracting to resell (a repurchase agreement) or to repurchase (a matched sale-purchase transaction). All transactions are undertaken at the initiative of the Desk, which also determines the aggregate volume of transactions.

Only nonbank dealers are eligible for repurchase agreements (RPs), while matched sale-purchase transactions are carried out with all dealers. The length of time covered

by the contract involving RPs between the Desk and dealers cannot be any longer than 15 days. At any time within the time interval of the contract, the agreement may be terminated by either party. RPs involve a repurchase price that affords a return to the System that is usually equal to the discount rate of the Federal Reserve Bank of New York. In matched sale-purchase transactions, the Desk offers to sell selected issues of Treasury bills at specified rates, with dealers competing at the rate at which they will sell the securities back within a stipulated time of several days. Contracts are concluded up to an amount the Desk wishes to do at the best rates available. Neither party can alter the terms of the transaction, once consummated.

Whether the Desk uses outright purchases or RPs depends, among other things, upon conditions in financial markets and the objectives of the Trading Desk and the Federal Open Market Committee. Outright transactions are usually undertaken when the System wishes to supply or withdraw bank reserves on a more permanent basis, whereas RPs or matched transactions are used to inject or withdraw reserves for a limited time only.

System Transactions, 1961-1967. The volume and nature of System transactions during 1961-1967 is shown in Table IV. Taken together, the volume of outright transactions and RPs increased from \$24.6 billion during 1961 to \$45.1 billion in 1966. The total of \$41.0 billion of such transactions during the first nine months of 1967 suggests that System transactions in 1967 as a whole will surpass those of 1965 and 1966. The average volume of transactions during 1961-1966 was \$34.7 billion per year. When total transactions

TABLE IV
Federal Reserve System Open Market Transactions
(millions of dollars)

Year	Outright (purchases plus sales)	Repurchase Agreements (purchases plus sales)	Total Transactions
1961	\$15,162	\$ 9,481	\$24,643
1962	16,550	12,047	28,597
1963	13,322	18,121	31,443
1964	15,891	18,046	33,937
1965	14,115	30,094	44,209
1966	25,948	19,176	45,124
1967*	13,491	27,531	41,022
Annual Average 1961- 1966	\$16,831	\$17,827	\$34,658

* First nine months only.

NOTE: Sales figures do not include redemptions.

Source: Board of Governors of the Federal Reserve System

are broken down into outright and repurchase agreements, it can be observed that, although the average RP volume of \$17.8 billion was about \$1.0 billion greater than that of outright transactions, the amounts of the two types of transactions varied from year to year. RPs exceeded outright transactions during 1963, 1964, 1965, and the first nine months of 1967.

Maturity Breakdown of Outright Transactions, 1961-1967. The bulk of outright transactions during 1961-1967 was conducted in Treasury bills (see Table V). System purchases during 1961-1966 amounted to \$63.7 billion, of which \$53.5 billion (84 percent) were in Treasury bills. The remainder of the purchases were in coupon issues varying in maturity from less than a year to over ten years.

System outright sales were even more concentrated in Treasury bills than were

TABLE V
Maturity Distribution of Federal Reserve System Outright Purchases and Sales
(millions of dollars)

	1961	1962	1963	1964	1965	1966	1967*	Annual Average 1961-1966
Purchases:								
Treasury bills	\$5,794	\$6,813	\$7,280	\$ 9,433	\$8,958	\$15,177	\$ 8,969	\$ 8,909
Other issues within 1 year	600	1,085	56	5	0	199	51	324
1-5 year issues	1,923	1,569	843	465	500	208	543	918
5-10 year issues	660	326	543	440	340	50	244	393
Over-10 year issues	128	37	68	111	90	17	133	75
TOTAL	\$9,105	\$9,829	\$8,790	\$10,454	\$9,888	\$15,651	\$ 9,940	\$10,619
Sales:								
Treasury bills	\$4,486	\$6,211	\$4,429	\$ 5,437	\$4,227	\$10,297	\$ 3,555	\$ 5,847
Other issues within 1 year	1,474	402	54	0	0	0	0	322
1-5 year issues	97	108	50	0	0	0	0	42
5-10 year issues	0	0	0	0	0	0	0	0
Over-10 year issues	0	0	0	0	0	0	0	0
TOTAL	\$6,057	\$6,721	\$4,533	\$ 5,437	\$4,227	\$10,297	\$ 3,555	\$ 6,212

* First nine months only.

NOTE: Sales figures do not include redemptions.

Source: Board of Governors of the Federal Reserve System

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purchases. Of a total of \$37.2 billion of securities sales, only \$2.2 billion were in issues other than bills and almost all of these sales were in issues maturing within one year. The System did not undertake any sales of securities carrying maturities of five years or longer.

Although System transactions outside the Treasury bill area were small, they nevertheless constituted a departure from previous practice in that before 1961, System transactions were normally confined to Treasury bills. The Trading Desk bought and sold securities with longer term maturities only in unusual circumstances, such as disorderly conditions in the market for U. S. Government securities. Beginning in February 1961, however, the Federal Open Market Committee authorized transactions in longer term issues under other circumstances. The Committee's decision was prompted in part by the need to help protect the United States balance of payments position at a time when domestic economic conditions dictated a stimulative monetary policy. Under such conditions, there was some feeling that open market purchases of longer term issues would help the System to provide bank reserves without depressing short-term interest rates — an approach that, it was believed, would tend to reduce short-term capital outflow from the United States while at the same time encouraging domestic economic activity.

SUMMARY

This article has attempted to describe the market for U. S. Government securities and its relationship to Federal Reserve open

market operations. In terms of number of firms, the dealer market is relatively small; only about 20 firms are responsible for all the business in the market. Nevertheless, these firms occupy a key position in the American financial system by virtue of the fact that they provide important services to private as well as to public institutions.

It is, of course, not easy to find independent criteria upon which the technical performance of the dealer market can be evaluated. The data on the volume of dealer transactions and the size of dealer positions, however, suggest a secular improvement in the functioning of the market during the 1960's. For financing securities positions, dealers depend largely upon borrowed funds, all of which are in the form of short-term loans. The dealers have developed several ingenious ways for tapping temporarily idle funds from financial and nonfinancial institutions, with repurchase agreements a case in point. During 1961-1967, commercial banks have been the largest source of dealer borrowings, with business corporations running a strong second.

From the standpoint of monetary policy, dealers are important mainly because of their role in the execution of open market operations, which is the most frequently used method of influencing the availability of credit. By standing ready to buy and sell securities from the System's Open Market Account, the dealers constitute in effect the principal channel through which the Federal Reserve ultimately influences the entire economy.



AN ECONOMIC PROFILE OF AKRON

Akron is the sixth largest metropolitan area (SMSA) in Ohio and the forty-eighth largest in the nation.¹ The City is known as the rubber capital of the world; however, Akron's importance in the nation's rubber industry has been sharply reduced as a result of decentralization by the major rubber companies to other areas in the United States and foreign countries.

POPULATION

As shown in Table I, population in the Akron SMSA recorded the largest gain among Ohio's eight major SMSA's between 1900 and 1965.² The largest ten-year population gain in the Akron metropolitan area occurred between 1910 and 1920, mainly reflecting the growth of the rubber industry. Akron's first rubber plant was established in 1870; however, the industry's most rapid expansion in the City did not take place until the period from 1910 to 1920, when tire production increased in response to gains in the automobile industry.

¹ The Akron Standard Metropolitan Statistical Area includes Summit and Portage counties.

² Major Standard Metropolitan Statistical Areas in Ohio are those having a population of 500,000 or more, or 40,000 or more employed in manufacturing.

Although the Great Depression had a severe impact on employment in the Akron area, and population failed to increase during the decade of the 1930's, World War II provided renewed stimulus to Akron's economy, and population growth was resumed. In fact, Akron's population grew at rates above those of both the State of Ohio and the United States during the 1940's and 1950's. During 1960-1965, the growth of Akron's population continued to exceed the rate for Ohio; however, it fell short of the national pace.

EMPLOYMENT DISTRIBUTION

Manufacturing is by far the most important source of nonagricultural wage and salary employment in the Akron SMSA and accounted for 43 percent of total nonfarm employment in 1966 (see Table II). This proportion was the third largest among Ohio's major SMSA's, and was substantially higher than in the United States as a whole. Due to the high percent of employment in manufacturing, the proportion of employment in other industries, particularly services, construction, and finance, insurance, and real estate, was low in the Akron SMSA compared with other major Ohio SMSA's, the State of Ohio, and the United States.

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TABLE I

Population

Akron SMSA, Other Selected SMSA's in Ohio, State of Ohio, and United States 1900-1965

	Population (thousands of persons)								Percent Increase	
	1900	1910	1920	1930	1940	1950	1960	1965	1900-1965	1960-1965
United States	76,212	92,229	106,022	123,203	132,165	151,326	179,323	193,795	154%	8.1%
Ohio	4,158	4,767	5,759	6,647	6,908	7,947	9,706	10,241	146	5.5
Total 8 SMSA's	2,114	2,614	3,502	4,346	4,504	5,343	6,746	7,171	239	6.3
Akron	101	139	322	387	386	474	605	650	544	7.4
Canton	95	123	177	222	235	283	340	356	275	4.5
Cincinnati	618	675	713	844	885	1,023	1,269	1,347	118	6.2
Cleveland	498	699	1,013	1,288	1,320	1,533	1,910	2,000	302	4.7
Columbus	218	275	336	414	443	536	755	847	289	12.1
Dayton	229	262	312	381	407	546	727	791	245	8.8
Toledo	238	272	358	451	455	531	631	657	176	4.2
Youngstown- Warren	117	169	270	359	373	417	509	523	347	2.7

Source: U. S. Department of Commerce, Bureau of the Census

LONG-TERM EMPLOYMENT TRENDS

Pre-World War II. Because manufacturing has been the bellwether of Akron's economy, a long-term perspective on employment trends in that sector reveals much about the ebb and flow of economic activity in the area.

As mentioned earlier, Akron's most rapid period of industrialization occurred between 1910 and 1920, and was spearheaded by the rubber industry.³ In 1919, manufacturing employment totaled 91,000 in Akron (Summit County) with the rubber industry accounting for 85 percent of the total. Between 1919 and 1929, manufacturing employment declined 15 percent in Akron (but less than 2 percent in the United States). Akron's loss is attributable entirely to the beginning of decentralization of the rubber industry.

³ In Akron, the tire and inner tube portion of the rubber industry has always been predominant.

From 1929 to 1939, the economy of Akron experienced another severe jolt, as manufacturing employment plunged 32 percent. Again, the rubber industry accounted for all of the decline. In contrast, there was a net loss of only 1 percent in the nation's manufacturing employment over the same ten-year period. By 1939, manufacturing employment in Akron had been reduced to 53,000; however, the rubber industry still accounted for two-thirds of the total despite the loss of 42,000 jobs in Akron's rubber industry over the previous twenty years. Not all of that employment loss was accounted for by decentralization; weak demand for tires was partly responsible. Although tire plants in the rest of the nation also reduced employment during the 1920's and 1930's, the losses were well below those in the Akron area.

A number of economic forces were responsible for decentralization of the rubber

TABLE II
Percent Distribution of Total Nonagricultural Employment
Seven Major Employment Categories
Akron SMSA, Other Selected SMSA's in Ohio, State of Ohio, and United States
 1966 Annual Average

Manufacturing		Wholesale and Retail Trade		Services		Government	
Canton	49.4%	Toledo	21.3%	United States	15.0%	Columbus	20.8%
Youngstown-Warren	47.5	Columbus	20.7	Columbus	15.0	Dayton	17.6
Akron	42.9	United States	20.7	Toledo	14.2	United States	17.0
Dayton	41.9	Cincinnati	20.4	Cleveland	13.9	Ohio	13.7
Ohio	39.6	Cleveland	20.1	Youngstown-Warren	13.1	Cincinnati	13.0
Cleveland	39.2	Akron	19.7	Ohio	12.8	Akron	12.6
Toledo	36.6	Ohio	19.2	Dayton	12.4	Toledo	12.5
Cincinnati	35.6	Canton	17.8	Akron	12.3	Cleveland	11.8
United States	29.9	Youngstown-Warren	17.7	Canton	11.8	Youngstown-Warren	9.2
Columbus	26.2	Dayton	17.4			Canton	8.7
Transportation and Public Utilities		Contract Construction		Finance, Insurance, and Real Estate			
Cincinnati	7.5%	United States	5.1%	Columbus	6.1%		
Toledo	7.3	Columbus	5.1	Cincinnati	5.1		
United States	6.5	Toledo	4.7	United States	4.8		
Akron	6.3	Ohio	4.4	Cleveland	4.6		
Cleveland	6.2	Cincinnati	4.4	Ohio	3.8		
Columbus	6.0	Youngstown-Warren	4.3	Canton	3.3		
Ohio	5.9	Cleveland	4.2	Toledo	3.2		
Youngstown-Warren	5.4	Dayton	4.1	Akron	2.7		
Canton	5.0	Canton	3.8	Dayton	2.7		
Dayton	3.8	Akron	3.5	Youngstown-Warren	2.6		

Sources: U. S. Department of Labor and Division of Research and Statistics, Ohio Bureau of Unemployment Compensation

industry. For one thing, technological developments permitted Akron's tire companies to build smaller capacity tire plants (as efficient as larger plants) in other parts of the United States as well as in foreign countries,

thus achieving marketing economies. During the 1930's, unfavorable labor relations and high labor costs in Akron's rubber industry contributed further to decentralization. Moreover, it was held that the operation of

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Akron's tire plants on a six-hour, six-day week encouraged firms to establish plants outside the Akron area, where a more efficient eight-hour, five-day week was the practice.⁴ The following figures highlight of the long-run decline of Akron's position in the nation's tire industry.

Akron's* Share of the Nation's Tire and Tube Industry

	<u>Production Workers</u>	<u>Wages</u>
1929	61%	65%
1939	48	51
1947	35	33
1954	35	32
1958	32	31
1963	30	30

*Summit County only, 1929-1958; Portage County included in 1963 data.

Source: Census of Manufactures

During World War II, manufacturing employment in the Akron area rose to more than 100,000 — with over three-quarters of the workers engaged in the production of airships and rubber products. The war, however, gave further impetus to decentralization of Akron's rubber industry.

Post World War II. After serious employment losses during the two decades before World War II, Akron's economy recovered smartly; nevertheless, it remained vulnerable to the vagaries of the business cycle. During the nation's four postwar recessions, manufacturing employment declined relatively more in the Akron area than in the United

States as a whole and employment in the rubber industry in Akron bore the brunt of each recession (see chart).

Interestingly, growth in manufacturing employment *within* the Akron SMSA failed to keep pace with employment gains of those who live in the area. As a case in point, employment in manufacturing of persons living in the Akron SMSA (but not necessarily working therein) increased 13 percent between 1950 and 1960. In contrast, manufacturing employment within the Akron SMSA (by place of work) grew only 3 percent over the same period.⁵ The data indicate a rapid growth in the number of workers who commute to places outside the Akron SMSA, particularly the Cleveland area. This is indeed indicative of the growing closeness of the Cleveland and Akron SMSA's — geographically as well as in terms of economic activity.

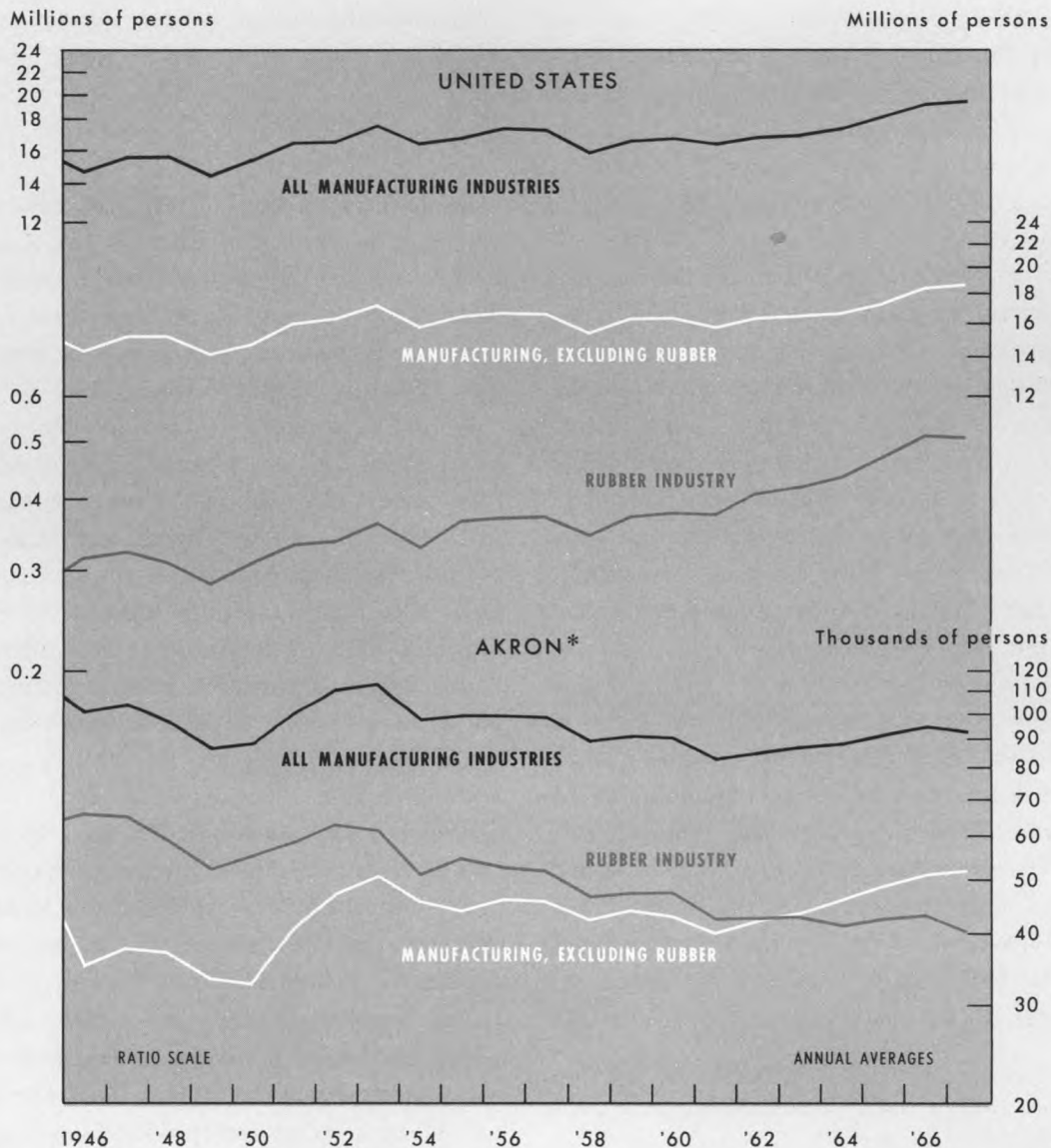
As illustrated in the chart, the stimulus to manufacturing employment in the Akron area during the early Fifties came largely from industries other than rubber. The sharp rise in manufacturing employment, excluding rubber, during the Korean War followed mainly from the reactivation of Akron's airship and airplane parts industry. The rubber industry in Akron also received a temporary boost during the Korean War, but then resumed its long-run downward trend. Nevertheless, the rubber industry continued to account for more than half of Akron's manufacturing employment until 1962.

⁴ In mid-1965, workers gave approval to management of one major rubber company in Akron to change over to an eight-hour, five-day week. For further discussion of this subject, the decentralization movement, and the rubber industry, see Warren W. Leigh, *Rubber Industry, With Particular Reference To The Tri-County Region of Ohio*, Tri-County Regional Planning Commission, Akron, Ohio, 1965.

⁵ Employment by place of residence is recorded by the U. S. Department of Commerce, Bureau of the Census, while employment by place of work is recorded by the U. S. Department of Labor, Bureau of Labor Statistics.

EMPLOYMENT in MANUFACTURING INDUSTRIES and the RUBBER INDUSTRY

United States and Akron SMSA



* Covered employment under Ohio Unemployment Compensation Law.
 Note: Average for first nine months of 1967.

Sources of data: U.S. Department of Labor and Division of Research and Statistics,
 Ohio Bureau of Unemployment Compensation

Last entry: '67

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Recent Growth Patterns. Beginning in 1962 (the first time since Akron became established as the Rubber Capital) and in each succeeding year, the rubber industry's share of Akron's manufacturing employment has consistently been below 50 percent.⁶ Growth in the area's manufacturing employment during recent years has been moderate compared with gains in the United States and most metropolitan areas of Ohio (see Table III).

In contrast, as shown in Table III, non-manufacturing sectors in Akron posted very respectable employment gains during the 1960-1966 period, as was the case during the 1940's and 1950's. For example, from 1960 to 1966, government employment increased 40 percent, which was substantially more than in any other major SMSA in Ohio, the State of Ohio, or the United States as a whole. In fact, Federal Government employment in the Akron SMSA recorded the largest gain among the major Ohio SMSA's, due in large part to increases in employment by the Post Office Department. Gains in state and local government employment in the Akron SMSA also compared favorably with other major SMSA's in Ohio. Wholesale and retail trade employment in the Akron SMSA increased more rapidly than in the major Ohio SMSA's, the State of Ohio, or the United States as a whole (see Table III).

⁶ A high rate of productivity increase is one factor that helps to explain why there has been no net growth in employment in the tire industry (either in Akron or in the United States) during the past decade. According to the Bureau of Labor Statistics, output per employee man-hour between 1957 and 1964 grew twice as fast in the tire and inner tube industry as in manufacturing as a whole.

As a result, although trailing the national pace, the growth rate of Akron's total non-agricultural employment during 1960-1966 was exceeded by the growth rates of only Columbus and Dayton, among Ohio's major SMSA's.

OTHER MEASURES OF ECONOMIC ACTIVITY

Unemployment Rates. Even with the dominance of the rubber industry in the Akron SMSA and the long-term decline in employment in that industry, the rate of unemployment in Akron has been relatively low in the past several years (see Table IV). In 1966, for example, the unemployment rate in the Akron SMSA averaged 2.7 percent, the third lowest rate among the major SMSA's in Ohio, and was somewhat less than in the State of Ohio as a whole, and substantially less than in the United States. As was the case in the Fifties, the continuation of "outside" employment of persons living in Akron may be one possible explanation of the SMSA's relatively low rate of unemployment.

Wages in Manufacturing. During 1966, average hourly earnings of production workers in the Akron SMSA were \$3.42, the highest level among Ohio's major SMSA's, and were considerably higher than the level in the United States as a whole (see Table V). The wage differential in Akron's manufacturing sector is largely attributable to the tire industry, which requires highly skilled labor, and in which both productivity and wage levels are high. In 1966, average hourly earnings in the tire and inner tube industry were \$3.83 in the Akron SMSA compared with \$3.68 in

TABLE III

Nonagricultural Employment

Seven Major Employment Categories

Akron SMSA, Other Selected SMSA's in Ohio, State of Ohio, and United States

1966 Annual Average and Percent Change 1960-1966

	Total Nonagricultural Employment		Manufacturing		Contract Construction		Transportation and Public Utilities		Wholesale and Retail Trade		Finance, Insurance, and Real Estate		Services		Government	
	1966 (000)	Percent Change 1960-1966	1966 (000)	Percent Change 1960-1966	1966 (000)	Percent Change 1960-1966	1966 (000)	Percent Change 1960-1966	1966 (000)	Percent Change 1960-1966	1966 (000)	Percent Change 1960-1966	1966 (000)	Percent Change 1960-1966	1966 (000)	Percent Change 1960-1966
	United States	63,864	+18%	19,081	+14%	3,281	+14%	4,137	+ 3%	13,220	+16%	3,086	+16%	9,582	+29%	10,850
Ohio	3,528	+12	1,399	+11	157	+ 8	208	- 1	678	+ 9	134	+12	451	+21	484	+21
Akron	221	+12	95	+ 4	8	+10	14	+ 5	43	+18	6	+ 9	27	+23	28	+40
Canton	125	+12	62	+12	5	+ 7	6	+ 3	22	+ 9	4	+11	15	+24	11	+20
Cincinnati	456	+ 7	162	+ 2	20	- 5	34	- 1	93	+ 4	23	+ 4	63	+20	59	+25
Cleveland	798	+11	312	+ 8	33	- 2	49	+ 4	161	+ 8	36	+11	111	+23	95	+25
Columbus	324	+20	85	+13	16	+27	19	+ 4	67	+17	20	+24	49	+30	67	+30
Dayton	297	+18	124	+19	12	+20	11	+10	52	+16	8	+20	37	+29	52	+12
Toledo	218	+12	80	+ 7	10	+20	16	+ 5	46	+ 9	7	+ 9	31	+27	27	+26
Youngstown- Warren	180	+ 9	86	+ 9	8	-20	10	+ 5	32	+ 9	5	+ 4	24	+29	17	+15

NOTE: 1960 data for Akron, Cincinnati, Cleveland, Columbus, Dayton, and Toledo have been modified by Federal Reserve Bank of Cleveland to be comparable with 1966 data.

Sources: U. S. Department of Labor and Division of Research and Statistics, Ohio Bureau of Unemployment Compensation

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TABLE IV

Rate of Unemployment Among all Civilian Workers 14 Years of Age and Over
Akron SMSA, Other Selected SMSA's in Ohio, State of Ohio, and United States
1960-1966

	1960	1961	1962	1963	1964	1965	1966
United States	5.6%	6.7%	5.6%	5.7%	5.2%	4.6%	3.9%
Ohio	5.3	7.3	5.7	5.1	4.2	3.5	3.1
Akron	4.6	7.4	4.9	4.7	4.2	3.2	2.7
Canton	5.9	8.9	7.0	6.3	4.4	3.5	3.0
Cincinnati	4.0	5.5	4.4	4.2	4.8	4.0	3.1
Cleveland	4.8	7.0	5.2	4.4	3.6	3.1	2.6
Columbus	3.8	4.3	3.3	3.3	3.3	2.8	2.6
Dayton	3.6	5.1	3.9	3.7	3.0	2.8	2.5
Toledo	5.0	8.4	6.2	5.1	4.4	3.7	3.3
Youngstown-Warren	7.4	9.9	8.3	6.5	4.2	3.9	3.6

Sources: U. S. Department of Labor and Division of Research and Statistics, Ohio Bureau of Unemployment Compensation

the United States as a whole. Despite relatively slow growth in Akron's manufacturing employment between 1960 and 1966 (less than one-third the national rate), growth in average hourly earnings for the Akron area matched the percent gain for the United States.

Value Added and Capital Spending. Other measures of industrial activity also reflect the slower growth of manufacturing activity in the Akron SMSA, compared with other major metropolitan areas in Ohio or the nation. Value added by manufacture, for example, increased 25 percent from 1958 to 1963 (the most recent year for which figures are available) well below the gain in Ohio and the United States. During the period, only Youngstown-Warren, among Ohio's SMSA's, recorded a smaller increase (see Table VI).

A small gain (16 percent from 1958 to 1963) in value added by the manufacture of rubber and miscellaneous plastics products, which was partly tempered by a sharp decline in wholesale prices of rubber products, largely accounted for the relatively slow growth of value added. Increases in

other industry groups, however, partially offset the sluggishness in value added by the rubber industry. Among the other large manufacturing industries in the metropolitan area, fabricated metal products recorded a 24-percent increase in value added during the five-year period, and nonelectrical machinery a gain of 111 percent.

TABLE V

Average Hourly Earnings in Manufacturing
Akron SMSA, Other Selected SMSA's in Ohio,
State of Ohio, and United States
1966

	1966	Percent Change 1960-1966
United States	\$2.71	+20%
Ohio	3.10	+19
Akron	3.42	+20
Canton	3.10	+16
Cincinnati	2.92	+20
Cleveland	3.17	+19
Columbus	2.97	+20
Dayton	3.39	+24
Toledo	3.23	+19
Youngstown-Warren	3.37	+15

Sources: U. S. Department of Labor and Division of Research and Statistics, Ohio Bureau of Unemployment Compensation

TABLE VI
Measures of Manufacturing Activity
Akron SMSA, Other Selected SMSA's in Ohio, State of Ohio, and United States

	Value Added by Manufacture			Capital Expenditures (new)		
	(mil. \$)		Percent Change 1958-1963	(mil. \$)		Percent Change 1958-1963
	1958	1963		1958	1963	
United States	\$141,541	\$192,103	+36%	\$9,545	\$11,371	+19%
Ohio	11,473	15,506	+35	796	848	+ 7
Akron	809	1,014	+25	59	63	+ 8
Canton	450	667	+48	27	33	+25
Cincinnati	1,555	2,057	+32	107	78	-27
Cleveland	2,558	3,379	+32	143	177	+23
Columbus	680	962	+41	52	58	+10
Dayton	912	1,318	+45	42	60	+43
Toledo	716	911	+27	58	43	-26
Youngstown-Warren	729	902	+24	53	57	+ 8

Source: U. S. Department of Commerce

New capital expenditures by manufacturers in the Akron metropolitan area totaled \$63 million in 1963 — a gain of only 8 percent from the 1958 level. The rubber industry accounted for slightly more than one-half of manufacturers' new capital expenditures in the Akron area during 1963; however, in that year Akron did not receive its usual share of new capital expenditures by the nation's tire industry. In 1963, the Akron SMSA accounted for 31 percent of employment in the nation's tire and tube industry, but received only 25 percent of the industry's new capital expenditures.

Financial Activity. Several measures of financial activity in the Akron metropolitan area have shown marked growth in recent years, compared with other major cities in Ohio. Bank debits in Akron, for example, increased 77 percent from 1960 to 1966 (see Table VII). Among the other major SMSA's in Ohio, only Columbus scored a

larger gain in that period. Savings deposits of individuals at Akron banks virtually doubled between 1960 and 1966.

The volume of loans outstanding at banks in the Akron SMSA increased 78 percent between 1960 and 1966, the second largest gain among the major SMSA's in Ohio. Despite the fact that several national companies headquartered in Akron tend to borrow elsewhere (largely because of size consideration), commercial and industrial loan volume at Akron banks increased 129 percent in the period — a greater increase than that of any other major metropolitan area in Ohio.

CONCLUDING COMMENTS

Total employment in Akron is currently at an all-time high, and is moving forward. With the exception of manufacturing, Akron's economy has experienced a fair rate of economic growth in recent years (compared with the State of Ohio and most

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TABLE VII

**Bank Debits, Savings Deposits of Individuals, and Loans Outstanding
Akron and Other Selected Cities in Ohio
1966**

	Bank Debits (annual totals)		Savings Deposits of Individuals (annual average)		Loans Outstanding (yearend)			
					Total		Commercial and Industrial	
	(mil. \$) 1966	Percent Change 1960-1966	(mil. \$) 1966	Percent Change 1960-1966	(mil. \$) 1966	Percent Change 1960-1966	(mil. \$) 1966	Percent Change 1960-1966
Akron	\$12,365	+ 77%	\$ 318	+ 99%	\$ 514	+ 78%	\$ 144	+129%
Canton	3,852	+ 57	135	+ 96	236	+ 52	62	+ 50
Cincinnati	32,085	+ 50	361	+ 84	1,136*	+ 51	428*	+ 60
Cleveland	73,515	+ 58	1,852	+ 56	3,473	+ 76	1,175	+102
Columbus	28,445	+112	331	+210	844	+129	237	+ 87
Dayton	10,704	+ 70	152	+142	511	+ 66	141	+ 23
Toledo	12,253	+ 42	279	+ 85	436†	+ 71	121†	+ 58
Youngstown-Warren	6,374	+ 50	132‡	+ 39‡	341	+ 58	70	+ 71

* Does not include Dearborn County, Indiana.

† Does not include Monroe County, Michigan.

‡ Youngstown only.

NOTE: Bank debits and savings deposits data are for reporting banks (member and nonmember) in selected centers, which are reported monthly to the Federal Reserve Bank of Cleveland. Savings deposits at reporting banks (member and nonmember) represent chiefly savings deposits of individuals and eleemosynary organizations, Christmas savings and similar thrift accounts, and time certificates of deposit of individuals. Loan data are from call reports of all insured commercial banks in the SMSA's.

Source: Federal Reserve Bank of Cleveland

major metropolitan areas in the State).

Over the long run, Akron's economy has become progressively less dependent on manufacturing in general, and on the rubber industry in particular. Fifty years ago, every other employee in Akron worked in the rubber industry. Today, only one out of every five employees in the Akron area works in the rubber industry. Akron's share of total employment in the nation's tire industry declined sharply before World War II, and continued to decline from a postwar high of 46 percent in 1949 to about 35 percent today. Nevertheless, because a number of major rubber companies are headquartered in Akron, the City undoubtedly will continue to be recognized as the "Rubber Capital of the World."

In 1967, selected indicators of economic activity in the Akron metropolitan area have shown a mixed pattern, which is not surprising in view of the sluggishness in the United States economy as a whole during the first half of the year, as well as the strikes in the rubber industry earlier this year. Employment increased 3 percent in the Akron SMSA in the first eight months of 1967, more than in any other major SMSA in Ohio, but the unemployment rate in September was virtually the same as in January and in September a year earlier. Among the financial indicators, savings deposits of individuals increased 7 percent through October, but bank debits declined 5 percent, the only decline among Ohio's major SMSA's.

CAPITAL SPENDING PLANS IN MAJOR METROPOLITAN AREAS OF THE FOURTH DISTRICT

According to the results of the most recent official survey,¹ total spending for new plant and equipment in the nation, on a year-to-year basis, will increase considerably less in 1967 (2 percent) than in 1966 (16 percent). Spending for new plant and equipment by manufacturing firms in 1967 will show no gain compared with an increase of 20 percent in 1966. In both cases, the latest figures are less than earlier expectations of 1967 spending. A similar pattern of reduced spending in 1967 was evident in the results of the most recent semiannual surveys of capital spending plans undertaken by the Federal Reserve Bank of Cleveland in major metropolitan areas of the Fourth Federal Reserve District.²

Responses to the fall 1967 surveys in the District indicated that, in the six-month interval between the spring and fall surveys, a large proportion of participating manufacturing firms scaled down spending in

1967 and raised spending plans for 1968. As a result, the margin of increase in spending in 1967 over 1966 was reduced from what had been expected earlier. At the same time, the outlook for 1968 was improved from what had been expected in the spring, with many planned cutbacks in spending becoming increases or smaller cutbacks. The net result for 1967-1968 of the revisions reported in the fall survey (for manufacturing firms participating in both the spring and fall surveys) was an increase in total capital spending planned in two of the major areas of the District, and a decline in one area.

CLEVELAND AREA

The fall 1967 survey of capital spending plans in the Cleveland metropolitan area revealed that large manufacturing firms reporting in both the spring and fall surveys³

¹ The survey is conducted jointly by the U. S. Department of Commerce and the Securities and Exchange Commission.

² The survey in the Pittsburgh area is conducted by special arrangement with the University of Pittsburgh.

³ The spring survey, undertaken jointly by the Cleveland Chamber of Commerce, the Greater Cleveland Growth Board, and the Federal Reserve Bank of Cleveland, was more comprehensive, and included small as well as large firms. See *Economic Review*, Federal Reserve Bank of Cleveland, May 1967, pp. 10-13.

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planned to spend 12 percent more for plant and equipment in 1967 than in 1966 (see Table I). In the spring, the same firms had expected to increase spending by 38 percent. Between the spring and fall surveys, 58 percent of the reporting firms reduced spending plans for 1967, while 28 percent raised them.

The scaling down of increases in spending plans for 1967 was most pronounced in the durable goods industries as a group, from 36 to 8 percent. In the fall survey, each of the individual industries showed a smaller percent increase or a larger percent decline than was the case in the spring. In the nondurable goods group — where much smaller dollar totals are involved — the earlier expectation of a 55-percent increase for 1967 was reduced to 46 percent. Cutbacks in spending among individual industries in that group were generally smaller than in the durable goods group, and one industry

—printing and publishing—raised its sights between the spring and fall surveys.

Revised spending plans of all manufacturing firms indicated a 47-percent increase in 1968 over the revised total for 1967 (see Table I), which represented a considerable upgrading of the 5-percent increase (from a larger base) reported in the spring survey. The overall increase reflects the combined effect of upward revisions by 54 percent of the participating firms, and downward revisions by 33 percent.

The pattern of revisions was largely dominated by the durable goods group; in the nondurable goods group, curtailed spending for 1967 was not uniformly accompanied by raised spending plans for 1968. In 1968, the nondurable goods industries as a group will about match the level of 1967 spending; in the spring, the group had expected 1968 spending to exceed that in 1967 by 36 percent.

The 1967 and 1968 proportions of spending for structures (see Table II) did not differ significantly from the earlier survey. However, the relative decline in spending for expansion of facilities expected in 1968 was considerably more severe than indicated in the spring survey. This implies a reduced need to increase manufacturing capacity or at least less incentive for doing so, and reflects relatively large amounts of unused capacity, as well as rising cost pressures and smaller profit margins.

Answers to the question on capacity were virtually unchanged between the two survey dates for the manufacturing group as a whole. Manufacturing capacity was reported "adequate" by over one-half of the firms

TABLE I
Capital Spending by Manufacturing Firms
Cleveland Metropolitan Area
(Fall 1967 Survey)
Year-to-Year Percent Changes

	1966 (actual) to 1967 (planned)	1967 (planned) to 1968 (planned)
Durable goods	+ 8%	+ 54%
Primary metals	+ 34	+ 32
Fabricated metals	+ 6	+209
Machinery	- 29	+ 13
Electrical equipment	+ 1	+ 34
Transportation equipment	- 3	+ 49
Nondurable goods	+ 46	- 1
Food	+ 34	- 2
Printing and publishing	+ 59	- 7
Chemicals	+ 13	- 6
Rubber and plastics	+135	+ 23
TOTAL	+ 12%	+ 47%

Source: Federal Reserve Bank of Cleveland

TABLE II
Capital Spending by Manufacturing Firms
Cleveland Metropolitan Area
(Fall 1967 Survey)

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

	Structures†			Expansion‡		
	1966	1967	1968	1966	1967	1968
Durable goods	19%	15%	24%	61%	56%	44%
Primary metals	12	11	10	73	70	65
Fabricated metals	12	20	52	68	34	21
Machinery	26	14	16	51	36	38
Electrical equipment	47	34	37	59	67	71
Transportation equipment	13	10	14	58	54	41
Nondurable goods	24	18	14	51	70	57
Food	22	18	17	14	3	10
Printing and publishing	14	33	45	57	67	70
Chemicals	33	20	5	53	90	43
Rubber and plastics	12	2	0	79	92	89
TOTAL	20%	15%	23%	59%	59%	46%

* 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

replying to the question and "less than required" by one-third.

EIGHT NORTHEASTERN OHIO COUNTIES

Spending plans of manufacturing firms in the eight-county northeastern Ohio area, which includes Ashtabula, Lorain, Portage, Summit counties, and the four counties that comprise metropolitan Cleveland, closely followed the Cleveland pattern (see Table III). This is not surprising since metropolitan Cleveland accounts for over three-fourths of total capital spending in the eight coun-

ties. In the entire area, both the percent increases in spending plans (7 percent for 1967 and 39 percent for 1968) and the effects of revisions of spring plans were similar to those in the Cleveland area. This similarity was particularly apparent for the durable goods industries, where the Cleveland area accounts for more than 90 percent of the total capital outlays in the eight counties. In contrast, however, spending plans in the nondurable goods group followed a different pattern. In that group, firms located outside metropolitan Cleveland account for three-fourths of all capital spending in the eight counties. In the rubber industry, for example, spending plans for 1967 and 1968 in the entire area reflect the continuation of strong

TABLE III
Capital Spending by Manufacturing Firms
and Public Utilities
Eight Northeastern Ohio Counties*
(Fall 1967 Survey)

Year-to-Year Percent Changes

	1966 (actual)	1967 (planned)
	to 1967 (planned)	to 1968 (planned)
Durable goods	+11%	+ 42%
Stone, clay, and glass . .	+21	+ 28
Primary metals	+34	+ 32
Fabricated metals	- 3	+136
Machinery	-28	+ 13
Electrical equipment . . .	+ 1	+ 35
Transportation equipment.	- 3	+ 48
Nondurable goods	- 2	+ 29
Food	-24	+ 3
Printing and publishing . .	+60	- 7
Chemicals	0	+ 38
Rubber and plastics	+14	+ 12
TOTAL MANUFACTURING . .	+ 7%	+ 39%
PUBLIC UTILITIES	- 1%	+ 53%

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

Source: Federal Reserve Bank of Cleveland

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spending programs of the large Akron rubber manufacturers.

The total amount that manufacturers in the eight-county area participating in both surveys plan to spend in 1967 and 1968 combined exceeds the spring estimate by almost 5 percent. In the Cleveland area, the spring and fall totals for the two-year period were virtually the same.

Spending in 1967 on new plant and equipment by public utilities in the eight-county area was estimated in the latest survey to fall short of the 1966 figure by 1 percent, compared with an estimated increase of 12 percent reported in the spring. Spending plans for 1968, which most utilities had been unable to report in the spring, indicate a 53-percent increase over 1967, due mainly to one company's plans to spend more than twice as much in 1968 as in 1967.

CINCINNATI AREA

According to the most recent survey, capital spending by manufacturing concerns in the seven-county Cincinnati metropolitan area will be 17 percent larger in 1967 than in 1966 (see Table IV), instead of 31 percent, as estimated in the spring. Public utilities reduced estimated increases in capital spending for 1967 over 1966 from 21 percent to 13 percent. Within the totals, however, a few more of the individual firms participating in both surveys reported increases over earlier estimates than reported reductions.

Even after downward revisions, capital spending in the soft goods industries in 1967 will still exceed actual 1966 outlays, but by a much smaller margin than estimated in the spring (except for the food industry,

where the margin widened). In the hard goods sector, however, spending in 1967, as estimated in the fall, will fall short of 1966 for the entire group, as well as for all individual industries shown in Table IV.

Between the two survey dates, spending plans for 1968 were raised by four times the number of firms that reported a downward revision. As a result, total capital spending by participating manufacturers was expected to rise 15 percent above 1967; a decline of 24 percent had been anticipated in the spring.

The general upward revision of spending plans for 1968 was not evenly distributed throughout all manufacturing industries. As shown in Table IV, some of the nondurable goods industries plan to spend less in 1968 than in 1967. In contrast, the durable goods industries expect to spend more in 1968 than

TABLE IV
Capital Spending by Cincinnati Area Firms
(Fall 1967 Survey)
Year-to-Year Percent Changes

	1966 (actual) to 1967 (planned)	1967 (planned) to 1968 (planned)
MANUFACTURING	+17%	+ 15%
Durable goods	- 9	+ 26
Primary and fabricated metals*	- 8	+ 63
Machinery	-23	+ 81
Electrical equipment . .	-23	+110
Transportation equipment	- 2	- 15
Nondurable goods	+49	+ 5
Food	+55	+ 17
Paper	+71	- 3
Printing and publishing .	+26	- 51
Chemicals	+52	+ 21
PUBLIC UTILITIES	+13	+ 25
TOTAL	+15%	+ 19%

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

Source: Federal Reserve Bank of Cleveland

in 1967, with one notable exception — transportation equipment — where capital investment reductions are scheduled for two successive years. Despite these reductions, the transportation equipment industry will account for 43 percent of total spending by all participating manufacturing firms in the area in 1967 and for 36 percent in 1968. Revised total spending plans for 1967 and 1968 combined of manufacturing concerns participating in both surveys exceeded the spring estimate by 9 percent.

Public utilities plan to spend 25 percent more in 1968 than in 1967, up slightly from the earlier estimate. Because of a reduced base figure for 1967, however, the utilities' total spending will be smaller in dollar terms than the spring estimate.

A relatively high proportion of spending by manufacturing firms in 1967 and 1968 is designated for new structures (see Table V). A high figure for 1967 had been indicated in the spring survey; the reported proportion for 1968, however, represented a sizable increase over the spring estimate. In Cincinnati, spending for expansion continues to surpass spending for replacement and modernization of facilities. This is somewhat surprising since capacity pressures appear to be lessening in the area, as reflected in the fact that in the three most recent surveys the number of manufacturers reporting "less than required" facilities declined from 25 percent to 22 percent to 19 percent.

PITTSBURGH AREA

The most recent survey conducted by the University of Pittsburgh under arrangements with the Federal Reserve Bank of Cleveland

TABLE V
Capital Spending by Cincinnati Area Firms
(Fall 1967 Survey)

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

	Structures†			Expansion‡		
	1966	1967	1968	1966	1967	1968
MANUFACTURING	22%	33%	33%	64%	69%	73%
Durable goods	18	10	31	61	63	66
Primary and fabricated metals§	13	16	48	15	31	49
Machinery	23	13	41	71	57	80
Electrical equipment	31	10	31	48	54	52
Transportation equipment	16	4	13	75	75	64
Nondurable goods	26	48	36	66	73	81
Food	16	50	38	57	63	64
Paper	9	52	8	58	77	70
Printing and publishing	9	19	40	28	31	71
Chemicals	40	54	37	86	92	87
PUBLIC UTILITIES	28	32	28	75	70	74
TOTAL	23%	33%	32%	66%	69%	73%

* 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

indicated that spending for new plant and equipment by business firms in the four-county Pittsburgh metropolitan area in 1967 would exceed actual spending in 1966 by 8 percent. Manufacturing firms expected to increase capital spending in 1967 by 18 percent over 1966 (see Table VI), which represented a downward adjustment of plans reported in the spring. At that time, business firms had expected to spend 21 percent more than in 1966, while manufacturing firms had anticipated a 25-percent increase. Between

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TABLE VI
Capital Spending by Pittsburgh Area Firms
(Fall 1967 Survey)
Year-to-Year Percent Changes

	1966 (actual) to 1967 (planned)	1967 (planned) to 1968 (planned)
MANUFACTURING	+ 18%	-10%
Durable goods	+ 14	- 8
Stone, clay, and glass. .	- 23	-53
Primary metals	+ 4	- 1
Fabricated metals	+ 20	-60
Machinery	+124	+98
Electrical equipment . .	+123	+18
Nondurable goods	+ 54	-24
Food	+ 31	-49
Chemicals	+ 14	+11
TRANSPORTATION	+ 11	-48
PUBLIC UTILITIES	- 14	+ 9
RETAIL TRADE	+ 20	+65
TOTAL	+ 8%	- 8%

Sources: University of Pittsburgh and
 Federal Reserve Bank of Cleveland

the spring and fall surveys, 42 percent of all firms participating in both surveys reported reduced spending plans, and 36 percent reported higher spending.

Fall estimates of 1968 spending plans, although higher than the spring estimates, were still short of expected spending in 1967. Manufacturing firms plan to spend only 10 percent less in 1968 than in 1967, compared with a 28-percent reduction anticipated in the spring. All participating business firms combined plan to spend 8 percent less in 1968 than in 1967; the previous survey had indicated a 20-percent reduction. The smaller percent decline reflects not only a reduced 1967 base figure but some enlarged plans in individual cases. Almost half of the individual firms participating in both surveys plan to spend more in 1968 than they had indicated in the spring, while only one-fifth re-

duced earlier estimates. Revised spending plans for 1967-1968 combined of all manufacturers participating in both the spring and fall surveys amount to 7 percent less than was reported in the spring survey.

Most individual industries listed in Table VI follow the pattern of the combined manufacturing group, showing higher spending in 1967 than in 1966 and less spending in 1968 than in 1967. In the machinery, electrical equipment, and chemicals industries, however, capital spending is expected to rise in

TABLE VII
Capital Spending by Pittsburgh Area Firms
(Fall 1967 Survey)
Percent Distribution of Total Spending by Type*
(Between Structures and Equipment and Between Expansion and Replacement)

	Structures†			Expansion‡		
	1966	1967	1968	1966	1967	1968
MANUFACTURING	21%	16%	15%	18%	32%	29%
Durable goods	21	16	16	16	30	29
Stone, clay, and glass	12	6	1	34	3	1
Primary metals	22	12	17	12	20	29
Fabricated metals	34	14	25	36	38	9
Machinery	4	5	6	64	51	47
Electrical equipment	6	31	13	15	65	35
Nondurable goods	9	16	4	51	60	31
Food	14	3	6	51	56	37
Chemicals	5	4	4	54	55	51
TRANSPORTATION	5	3	13	1	2	2
PUBLIC UTILITIES	34	38	37	56	56	56
RETAIL TRADE	58	55	77	59	62	78
TOTAL	25%	22%	25%	26%	34%	36%

* 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

both years, with rather substantial increases in machinery and electrical equipment in 1967. All three of these industries have earmarked a large proportion of total spending in both years for expansion, mostly for machinery and equipment (see Table VII). The primary metal industries, despite very little increase in spending, continue to account for more than half of total capital outlays by all manufacturing firms in the Pittsburgh area.

One in every six dollars of new capital investment by manufacturing firms in 1967 and 1968 will be spent for structures, compared with one dollar in every four by all participating business firms combined. Although there

were some changes for individual industries, those proportions changed little between the spring and fall surveys.

Spending for expansion of facilities by both manufacturing and all business firms was expected to be lower in 1967 and 1968 than was reported in the spring. This downward revision was consistent with the change in the proportion of firms reporting capacity shortages. "Less than required" facilities were reported in the spring survey by one in every four firms answering the question compared with one in nine firms in the most recent survey. The proportion of responding firms with "adequate" facilities rose from two-thirds to three-fourths of the total.



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