

MONTHLY REVIEW



Market values of Fifth District farmland have moved steadily upward since the Great Depression, with only minor interruptions.

FEDERAL RESERVE BANK OF RICHMOND

NOVEMBER 1964

FARM REAL ESTATE VALUES

Farm real estate values, widely viewed as a barometer of the economic health of agriculture, are currently at the highest level in history. U. S. Department of Agriculture data for the second quarter of 1964 show a continuation of a rising trend in these values which has proceeded, with only minor interruptions, since 1933. The increase since late 1953, amounting to more than 60%, has come about despite a continued downtrend in both farm income and farm commodity prices. The paragraphs that follow analyze the behavior of farmland values over the past several years, with special emphasis on Fifth District states.

Farm real estate values, defined in official statistics as the combined value of both farmland and buildings, comprise roughly two thirds of the market value of all farm assets. Changes in these values are of interest not only to prospective purchasers and sellers of farmland but also to farm-mortgage lenders.

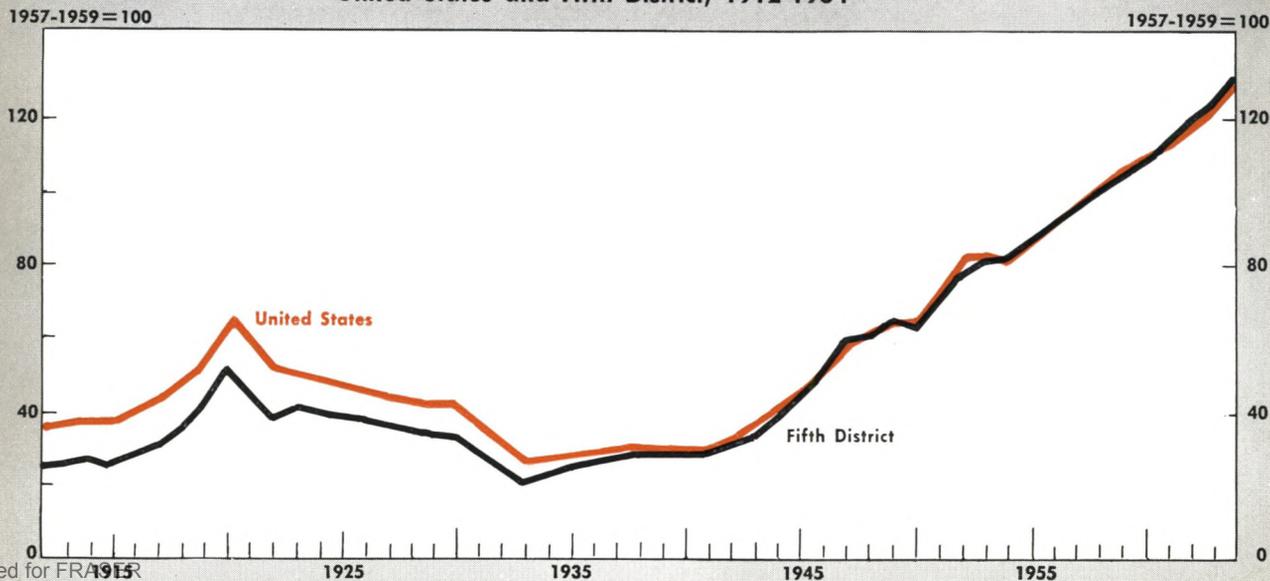
National and District Values The total market value of all United States farm real estate as of March 1, 1964 was estimated by the Department of Agriculture at \$150.8 billion, an increase of \$20.8 billion or 16% since 1960. For Fifth District states, the comparable figure was \$8.6 billion, or approximately 6% of the national total. The increase in the District total between 1960 and 1964 also amounted to 16%, or \$1.2 billion. The July index of average values per acre shows a 2% rise in the District in

the second quarter of 1964 and a 3% gain for the nation. In both the District and the nation, the index in July was 6% above a year ago.

District values per acre averaged \$192 in March, five times as high as in 1940 and two and one-fourth times the 1950 value. By comparison, the national average in March was \$137 per acre, four and one-third times the 1940 level and slightly more than double the 1950 figure. Within the District, average per-acre values in March ranged from a low of \$86 in West Virginia to a high of \$365 in Maryland. The average was \$234 in North Carolina and \$164 and \$163, respectively, in Virginia and South Carolina. The location factor and the large potential demand for nonfarm uses account for the high land values in Maryland, which ranks fifth among the 48 states for which data are published.

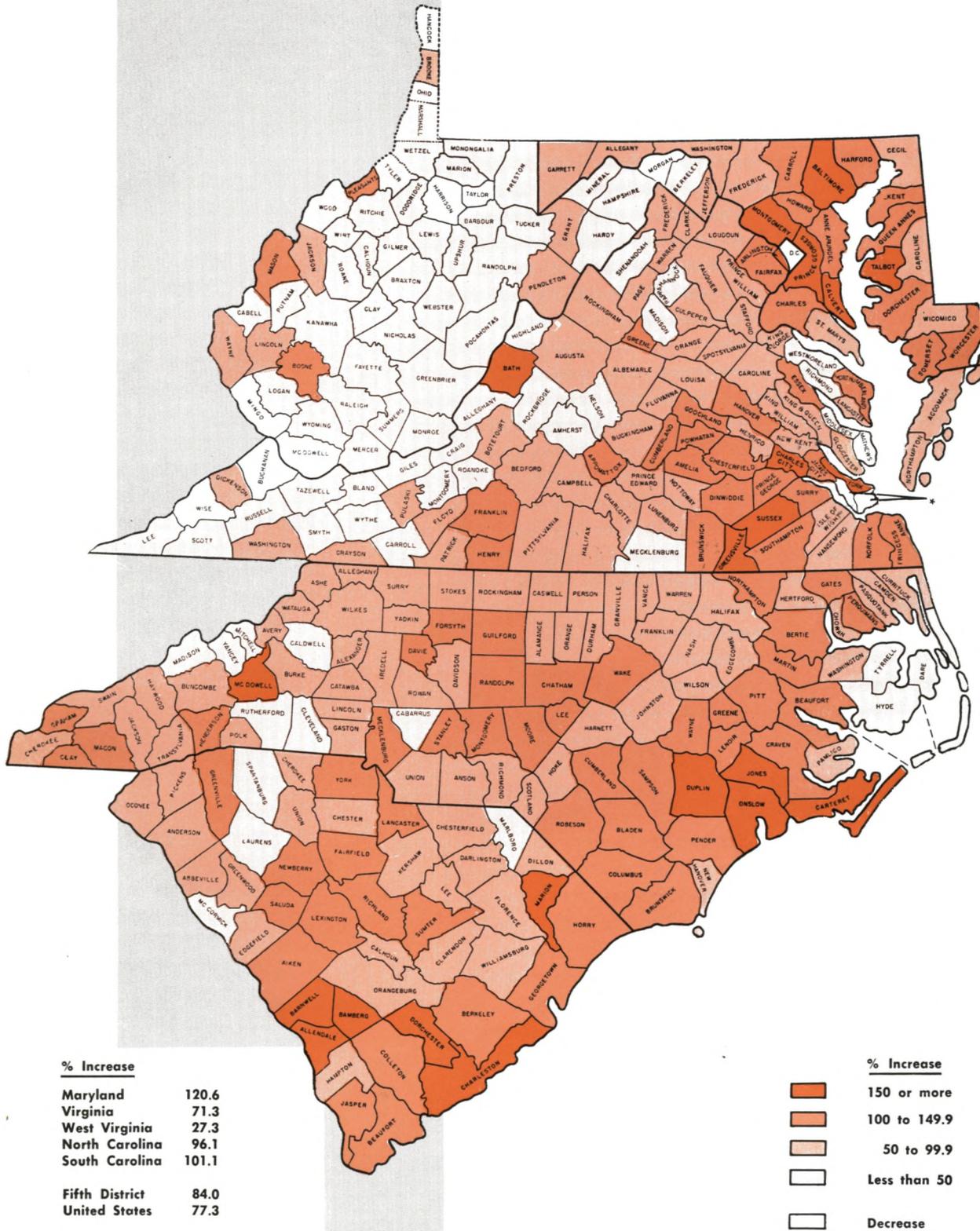
The average value of land and buildings per Fifth District farm in March was slightly more than \$23,700. Values per farm ranged from \$14,250 in West Virginia—the lowest in the country—to around \$57,000 in Maryland. Real estate values per farm in other District states were: North Carolina, \$21,000; South Carolina, \$22,500; and Virginia, \$25,750. District values per farm averaged nearly three and one-third times the 1950 level, although changes over this period varied substantially from state to state. In West Virginia, for example, per-farm values were only around two and one-third times the 1950

**FARM REAL ESTATE: AVERAGE VALUE PER ACRE*
United States and Fifth District, 1912-1964**



CHANGE IN AVERAGE VALUE OF FARM REAL ESTATE PER ACRE

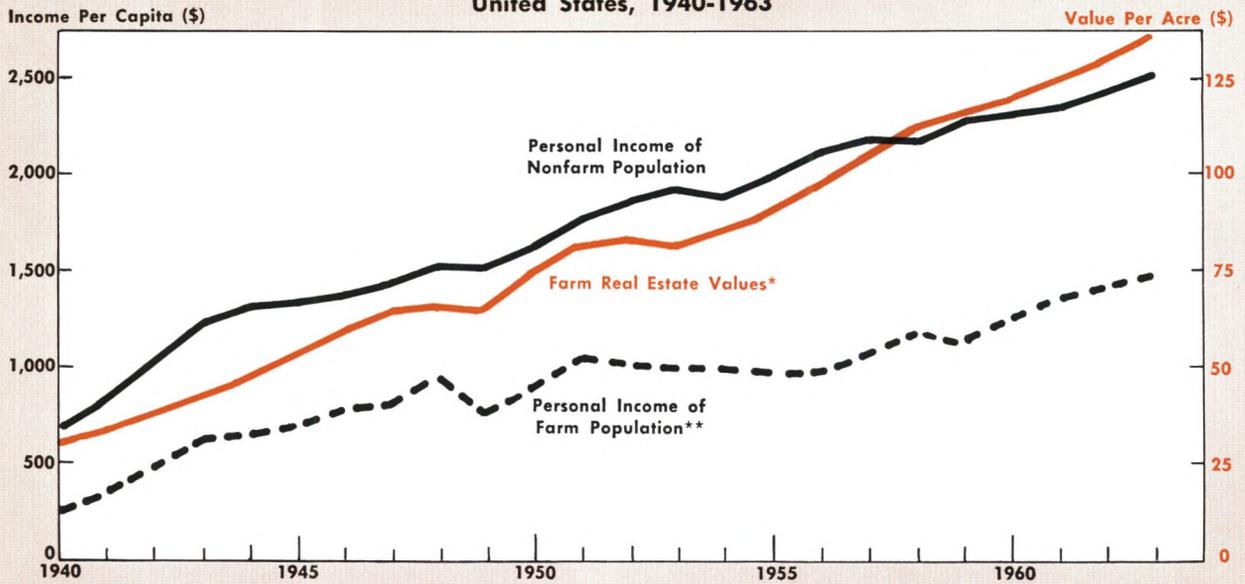
Fifth District, by Counties, 1950-1959



*Independent Cities.

Source: U. S. Bureau of the Census.

**VALUE OF FARMLAND AND PER CAPITA PERSONAL INCOME
OF FARM AND NONFARM POPULATIONS
United States, 1940-1963**



*Farmland and buildings, March 1 of following year.
 **From farm and nonfarm sources.
 Source: U. S. Department of Agriculture.

average, while Maryland's values per farm averaged more than four times their 1950 level. Values per farm have increased at a considerably faster rate than per-acre values because of the steady increase in the average size of farms.

Average real estate values per farm often conceal large variations in average values of different sizes, types, and economic classes of farms. The 1959 census revealed, for instance, that real estate values for all commercial farms in Maryland averaged about \$47,100 but ranged from around \$19,400 for farms with sales under \$2,500 to a high of \$178,400 for farms with sales totaling \$40,000 and over.

Historical Trends The chart on page 2 shows a close similarity between the movement of Fifth District and national per-acre values since yearly data first became available. During much of this period, the price of farmland followed the movement of farm commodity prices and farm income. Over the past decade, however, land prices have continued upward despite downtrends in both farm commodity prices and income.

The start of World War II set off a long upward movement in the price of farmland. Farm real estate values more than doubled by early 1949, responding in part to an even sharper increase in farm income. They then fell off slightly, largely because of a drop in farm prices and income accompanying a downturn in overall economic activity.

The 1949 decline was of short duration, however.

With the outbreak of war in Korea in June 1950, values of farmland turned upward again, rising by March 1953 to a new high almost 30% above the pre-Korean level and nearly 175% higher than at the beginning of World War II. They receded somewhat from this high level in late 1953, but the decline totaled less than 2%. Prices of farm commodities, which had turned down after reaching an all-time high in February 1951, dropped more than one fifth between that time and late 1953.

Early in 1954, values of farmland turned upward again despite continued declines in farm product prices and farm income. The upward movement in farm real estate prices has continued since, with only a brief interruption in the fall of 1960. This interruption, incidentally, did not apply to District values. Net farm income and farm product prices fell through the mid-Fifties, and while they have since moved up again, they have not regained their previous peaks.

Factors Raising Land Values A number of factors help to explain the unusual behavior of the market values of farmland since early 1954. Despite the downtrend in farm income, farmers themselves have helped to bid up the price of land. An estimated two thirds of all farm real estate purchases in the nation in 1963 were made by farmers.

One of the strongest factors forcing prices upward has been farmers' demand for land to enlarge their farms in an effort to utilize machinery and equipment more efficiently and to cut costs of production

per unit of output. Farm census tallies show, for instance, that the number of Fifth District farms 500 acres and larger in 1959 was 25% greater than in 1945. Much of the farm enlargement has come about through purchases of parcels and tracts of land that were split from sellers' farms rather than through purchases of complete farm units. Prices in the so-called "parcel market" have averaged higher than prices paid for single farms and tend to set the level of prices for all farmland.

An important factor in Fifth District farmers' demand for additional land in recent years has been the cuts in acreage allotments of tobacco, cotton, and peanuts. These reductions provide additional incentive to farmers to purchase land since they can increase the size of their allotments only by acquiring land that carries an allotment.

A closely related factor is the capitalization of acreage allotments into land values. A cooperative study made in four specialized tobacco counties by the Virginia and North Carolina Agricultural Experiment Stations showed, for example, that the market value of one allotted acre of flue-cured tobacco (without associated land or buildings) ranged from \$1,673 to as high as \$2,500 in 1957. Yet census data reveal that the average value of all farmland and buildings in these same counties in 1959 ranged from \$119 to \$448 per acre. Values of farmland in rural counties, as the map on page 3 indicates, have been strongly influenced by the large acreages planted to high-value crops such as tobacco and peanuts.

Other Contributing Factors Demand for part-time farms and rural residences has also contributed to the strength in farm real estate values. This is evidenced by the nearly 50% increase between 1950 and 1959 in the number of part-time farms in the District. Part-time farms in 1959 comprised 30% of all District farms against only about 13% in 1950. An additional 15% of all District farms in 1959 were operated on a part-retirement basis by farmers 65 years old and over.

Rural land values have also been strongly influenced by the purchase of land for nonfarm uses. Indeed, the rise in the price of farmland, noted in the accompanying chart, has followed the per capita income of the nonfarm population more closely than that of the farm population since the mid-Forties. Market values of farmland in metropolitan counties in 1959 averaged significantly higher than those in rural counties, and as noted in the map, have tended to show a bigger increase since 1950. Nonfarm demand for land is not confined, however, to areas sur-

rounding metropolitan centers. Throughout much of the District, farmland has been, and is being, sought for such nonagricultural purposes as industrial development, interstate highways, recreation facilities, airports, timber and pulp production, and motel sites. One mile of interstate highway, for example, requires nearly 40 acres, and a single interchange takes another 10 acres. Construction of the runways and service area for Dulles International Airport, located in Loudoun and Fairfax Counties, Virginia, required 10,000 acres, and the 17-mile access road to Washington, D. C., took another 915 acres.

The limited number of farms for sale, in combination with the growing demand for farmland, has been one of the prime factors exerting upward pressure on the land market in recent years. Since 1950, the rate at which farms in both the District and the nation have changed ownership has been significantly below that of the Thirties and Forties. Farms in the District are currently changing hands at an annual rate of only 40 per 1,000, up slightly from 1963's all-time low transfer rate of 38 per 1,000. Voluntary sales, which have trended downward during this 15-year period, are now being made at the rate of about 20 per 1,000 farms but range from a low of 15 per 1,000 in North Carolina to a high of 37 per 1,000 in Maryland. Foreclosures have remained at nominal levels; however, administrators' and executors' sales, and sales resulting from inheritance and gifts and other miscellaneous methods of transfer have followed a slight upward trend.

Farm Real Estate Debt The upward trend in the market values of farmland since 1950 has been accompanied by an even greater increase in farm real estate debt. With the increase in the level of farm-mortgage debt, the debt-to-value ratio has also risen, although it is still below that of the Thirties and early Forties. From a balance sheet viewpoint, farmers' equity in their farms has risen despite the rise in indebtedness. Fifth District full-owner operators of mortgaged farms in 1961, according to a special census report, had an average farm-mortgage debt of \$6,014 compared with an indebtedness of \$2,457 in 1950. Full owners had an average equity, however, of \$14,512 in their farms, up 118% or \$7,852 from their equity in 1950. Over the same period, the equity in mortgaged farm real estate owned by part-owner operators increased even more, from \$6,291 to \$15,265 or by 143%, although average debt of part owners also rose faster, from \$2,289 to \$5,932. Actually, 68% of Fifth District farmland and buildings, by value, was free of debt in 1961.

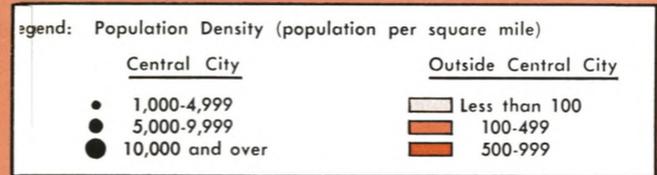
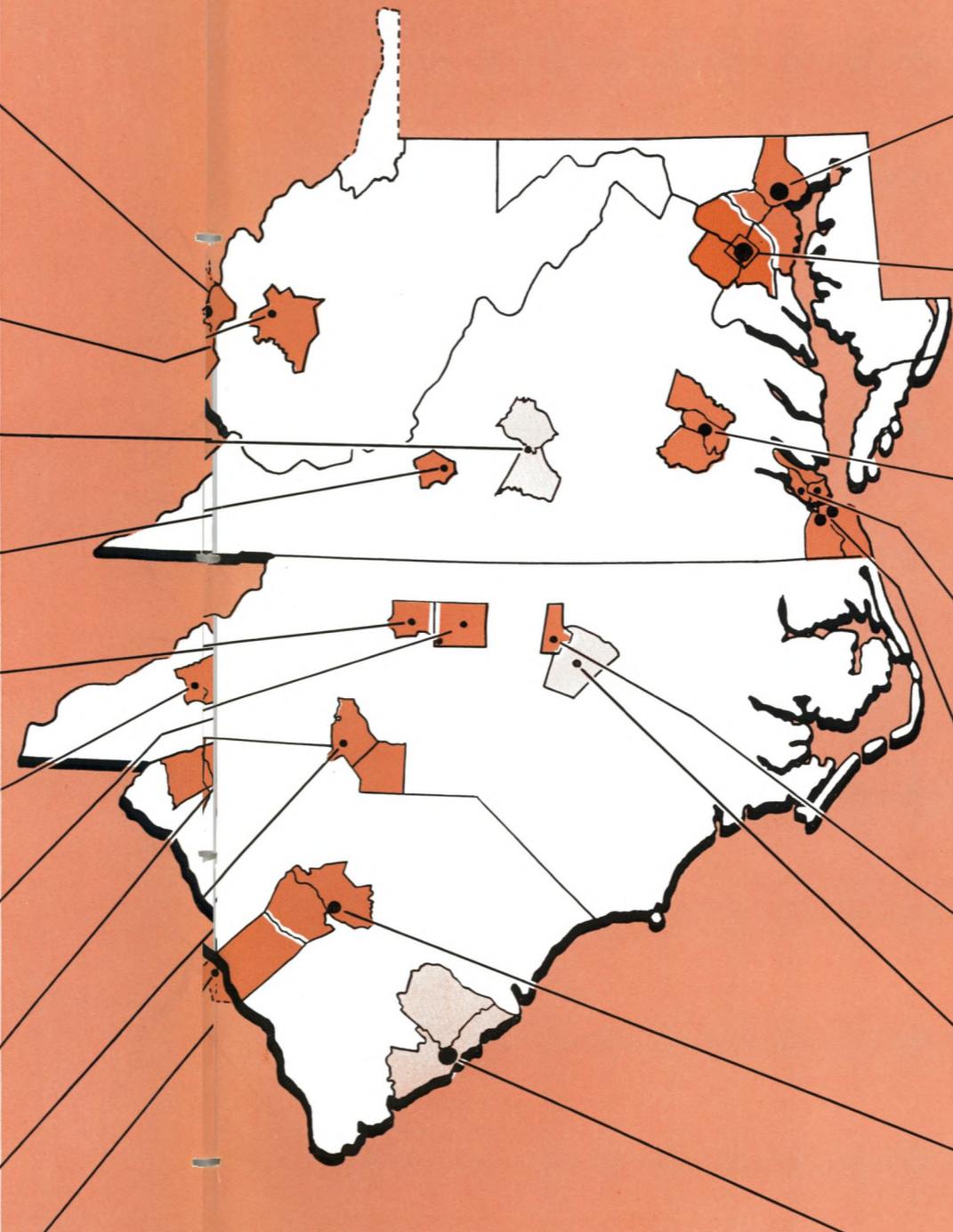
STANDARD METROPOLITAN STATISTICAL AREAS

The emergence of numerous urban centers embracing large suburban populations that are not, for administrative purposes, part of the central cities has created problems for the economic statistician. Traditional local-area statistics take the city, defined by its corporate limits, as the basic unit. Changes in the population density and the characteristics of some suburban areas, however, have caused city limits to be less meaningful for purposes of economic analysis. To provide a more rational basis for compiling local-area statistics, the Bureau of the Budget has developed the concept of the Standard Metropolitan Statistical Area (SMSA).

Except in New England, where the city and town are administratively more important, the county is the basic unit in the SMSA. Defining individual standard areas involves criteria relating to population and to the degree of social and economic integration between the central county and the surrounding area. Each SMSA must include at least one city having 50,000 or more inhabitants or two cities with contiguous boundaries and a combined population of at least 50,000. The county must meet several requirements respecting population density and the percentage of nonagricultural workers in the labor force. An outlying county is considered part of the SMSA if at least 15% of its residents work in the central county or if residents of the central county make up at least 25% of its working force.

The Fifth District includes 17 of the country's 219 Standard Metropolitan Statistical Areas. Also located in the District are the central city of an SMSA much of which lies in the Fourth District and one outlying county of an SMSA most of which is in the Sixth District. The SMSA's in the Fifth District vary in population from 110,701 to over 2 million and in area from 255 to over 2,000 square miles.

| AREA DEFINITION | POPULATION |
|--|------------|
| HUNTINGTON-ASHLAND, W. VA.-KY.-OHIO | 254,780 |
| Huntington City | 83,627 |
| Ashland City | 31,283 |
| Outside Central City | 139,870 |
| Cabell and Wayne Counties in W. Va.; Boyd County in Ky.; Lawrence County in Ohio | |
| CHARLESTON, W. VA. | 252,925 |
| Charleston City | 85,796 |
| Outside Central City | 167,129 |
| Kanawha County | |
| LYNCHBURG, VA. | 110,701 |
| Lynchburg City | 54,790 |
| Outside Central City | 55,911 |
| Campbell and Amherst Counties | |
| ROANOKE, VA. | 158,803 |
| Roanoke City | 97,110 |
| Outside Central City | 61,693 |
| Roanoke County | |
| WINSTON-SALEM, N. C. | 189,428 |
| Winston-Salem City | 111,135 |
| Outside Central City | 78,293 |
| Forsyth County | |
| ASHEVILLE, N. C. | 130,074 |
| Asheville City | 60,192 |
| Outside Central City | 69,882 |
| Buncombe County | |
| GREENSBORO-HIGH POINT, N. C. | 246,520 |
| Greensboro City | 119,574 |
| High Point City | 62,063 |
| Outside Central Cities | 64,883 |
| Guilford County | |
| GREENVILLE, S. C. | 255,806 |
| Greenville City | 66,188 |
| Outside Central City | 189,618 |
| Greenville and Pickens Counties | |
| CHARLOTTE, N. C. | 316,781 |
| Charlotte City | 201,564 |
| Outside Central City | 115,217 |
| Mecklenburg and Union Counties | |
| AUGUSTA, GA.-S. C. | 216,639 |
| Augusta City | 70,626 |
| Outside Central City | 146,013 |
| Richmond County in Ga.; Aiken County in S. C. | |



| AREA DEFINITION | POPULATION |
|--|------------|
| BALTIMORE, MD. | 1,727,023 |
| Baltimore City | 939,024 |
| Outside Central City | 787,999 |
| Baltimore, Anne Arundel, Carroll and Howard Counties | |
| WASHINGTON, D. C. -MD.-VA. | 2,001,897 |
| Washington, D. C. | 763,956 |
| Outside Central City | 1,237,941 |
| Montgomery and Prince Georges Counties in Md.; Alexandria, Fairfax and Falls Church Cities and Arlington and Fairfax Counties in Va. | |
| RICHMOND, VA. | 436,044 |
| Richmond City | 219,958 |
| Outside Central City | 216,086 |
| Hanover, Henrico and Chesterfield Counties | |
| NEWPORT NEWS-HAMPTON, VA. | 224,503 |
| Hampton City | 89,258 |
| Newport News City | 113,662 |
| Outside Central Cities | 21,583 |
| York County | |
| NORFOLK-PORTSMOUTH, VA. | 578,507 |
| Norfolk City | 304,869 |
| Portsmouth City | 114,773 |
| Outside Central Cities | 158,865 |
| Chesapeake and Virginia Beach Cities | |
| DURHAM, N. C. | 111,995 |
| Durham City | 78,302 |
| Outside Central City | 33,693 |
| Durham County | |
| RALEIGH, N. C. | 169,082 |
| Raleigh City | 93,931 |
| Outside Central City | 75,151 |
| Wake County | |
| COLUMBIA, S. C. | 260,828 |
| Columbia City | 97,433 |
| Outside Central City | 163,395 |
| Lexington and Richland Counties | |
| CHARLESTON, S. C. | 254,578 |
| Charleston City | 65,925 |
| Outside Central City | 188,653 |
| Berkeley and Charleston Counties | |

FEDERAL FUNDS

One of the most important money market developments in the postwar period has been the growth of trading in Federal funds, or deposit balances held with Federal Reserve Banks. The intricacies of this market are familiar only to those who use it in the course of conducting their business. To others, even its general outline and purpose may be somewhat obscure. The following article describes this important market and attempts to delineate its role in the country's financial structure.

What are Federal Funds? Arriving at a workable definition is not easy because there are a number of rather closely related transactions involving the use of immediately available funds which might conceivably be classified as Federal funds transactions.

After several years of intensive study, the Federal Reserve System brought out a "New Series on Federal Funds" in its August 1964 *Bulletin*. In this series, which will be published regularly in the *Bulletin* and made available each week in a new statistical release (H.5), a useful distinction has been made between interbank Federal funds transactions and related transactions with Government securities dealers. This article will deal only with interbank transactions.

For present purposes, a Federal funds transaction is defined as any transaction between banks involving the purchase (borrowing) or sale (lending) of member bank deposits at Federal Reserve Banks for one business day at a specified rate of interest. A supply of Federal funds arises because some member banks have reserves on a given day in excess of reserve requirements. Demand arises because other member banks on the same day run reserve deficits. Since excess reserves yield no income, bankers try to convert them into earning assets. This may be done in a variety of ways, but if the excess is expected to be only temporary, a practical approach is to sell Federal funds. If the bank then suddenly loses reserves, it may reverse its operation and enter the market as a buyer.

Thus, the Federal funds market affords the banker a maximum degree of flexibility in adjusting his reserve position so as to come out with a minimum of excess reserves over the course of the reserve averaging period—one week for reserve city banks and two weeks for country banks.

Participants in the Market Historically, most of the trading in Federal funds has been conducted by relatively large member banks. This is natural since participation in the market requires a very close and almost constant scrutiny of the bank's money position, and only the larger banks have found it economical to employ full-time money position managers. Another factor has been the market practice of trading funds only in very large blocks, typically in units of \$1 million. In recent years, trading in smaller units has become increasingly common as smaller banks have become more active in the market. Their greater participation has been due, in part, to the increasing cost of holding idle funds as interest rates have risen. Also important has been the growing readiness of large banks to trade funds in smaller blocks as an accommodation to their correspondents.

Location of the Market In a sense, the Federal funds market is nationwide inasmuch as excess reserves may arise anywhere in the country. Since funds in even multiples of \$1,000 may be transferred instantaneously and without cost over the Federal Reserve's wire transfer facilities, any member bank is potentially a part of a nationwide network.

Although funds may originate anywhere and be dispatched anywhere, the focal point of the market is New York City. Because of its prominence as a commercial, industrial, and financial center, a system of communications has developed which makes it convenient to channel a majority of transactions through New York. In the first place, the money market banks in New York are generally net buyers of Federal funds and out-of-town banks have come to look on New York as a place where funds can readily be sold. Second, these New York banks serve as correspondents for banks all over the country and are therefore in a position to know where Federal funds can be located and where they are needed. Third, some of these banks stand ready to accommodate their out-of-town correspondents by absorbing or supplying funds regardless of their own reserve positions. Fourth, two stock exchange firms and one large bank in New York City serve as brokers, receiving reports on sources of and demand for funds and bringing buyers and sellers together.

Development of the Market The practice of trading in balances at the Federal Reserve originated in the early 1920's in New York City. Local markets

also developed in other financial centers, but trading between Federal Reserve Districts remained quite small. Federal funds trading of all types died out almost completely in the 1930's and remained dull in the 1940's when the Federal Reserve System helped finance the war by standing ready to buy Government securities at fixed prices. Banks preferred to make reserve adjustments in this period by purchasing and selling Government securities, since Federal Reserve practices eliminated the risk of market loss.

It was not until the resumption of flexible monetary policy in the early 1950's that the market in Federal funds began to revive. With the unpegging of bond prices and increased borrowing from the Federal Reserve, banks began to seek alternative means of adjusting reserve positions. The secular rise in interest rates also encouraged them to manage their reserve positions more carefully.

Although the basic function of the market has not changed much since the 1920's, the breadth of the market has expanded greatly. This has been largely due to the rise of accommodating banks and their practice of trading in relatively small blocks of funds.

Types of Transactions Federal funds transactions are of three basic types. The most common is the so-called "straight" transaction which involves a purchase and sale of Federal funds on an unsecured, overnight basis. Closely akin to the "straight" transaction is that in which the overnight borrower (buyer) of Federal funds pledges appropriate collateral to secure the loan.

Repurchase agreements are sometimes, though not frequently, used in interbank transactions. As a rule banks dislike the extra bookkeeping, trouble and expense that is involved. Under the terms of the repurchase contract, the borrowing bank obtains Federal funds by selling securities to the lending bank. The borrower then repays the "loan" the following day by repurchasing the securities generally at the same price plus interest at a rate specified in the contract. Some repurchase agreements are made for more than one business day, but these are generally made with Government securities dealers and are therefore outside the scope of this article.

Market Mechanics The mechanics of market transactions vary, of course, with the type of transaction and the location of the buyers and sellers. Since "straight" transactions constitute the bulk of trading, the mechanics of this type operation are of primary interest.

Trading between banks in New York City is customarily accomplished by a simultaneous exchange of

checks. The selling bank gives the buying bank a check drawn on its balance at the Federal Reserve and receives in exchange a check which the buying bank writes on itself. The draft on the Federal Reserve Bank is paid immediately, but the check which the buying bank writes on itself is collected through the clearing house and is not paid until the following day. Thus, the buying bank has use of the selling bank's excess reserves for one day and for this pays the agreed rate on Federal funds. The interest on the loan is normally included in the clearing house check which the buyer gives the seller.

Exchange of checks is confined largely to New York City. Procedures differ somewhat in other areas, but in general, trading within a single Federal Reserve District may be described as follows. After arranging the terms of the transaction by phone, the seller notifies the Federal Reserve Bank to transfer the agreed-upon amount from his account to that of the buyer. The notification may be made by letter, by wire, or by telephone followed by written confirmation. The following day the procedure is reversed. The interest on the loan may be paid with the principal in the return transfer, or it may be remitted separately either by debiting or crediting a correspondent balance, or if no correspondent relationship exists, by cashier's check.

When the transaction is between banks in different Federal Reserve Districts, the actual transfer is made over the leased-wire facilities which connect all Federal Reserve Banks and branches. After arranging the details of the transaction by telegraph or long-distance telephone, the selling bank orders the Federal Reserve Bank in its District to debit its reserve account and to wire instructions to the buyer's Federal Reserve Bank to credit a like amount to its account. Repayment is made the following day by reversing the procedure. Normally, the interest on the loan is not included in the return wire because the Federal Reserve levies a charge on wires involving amounts not in multiples of \$1,000. Interest, therefore, is generally paid by separate check or by debiting or crediting a correspondent balance.

These procedures apply also to secured transactions, with only one additional step. The borrowing (buying) bank offers collateral by pledging securities which will be held in custody for the account of the selling bank until the transaction is reversed.

Importance of the Federal Funds Market The Federal funds market is important to bankers because of its prominent role in the process of reserve adjustment. As already mentioned, member banks try to hit their required reserve targets as accurately as

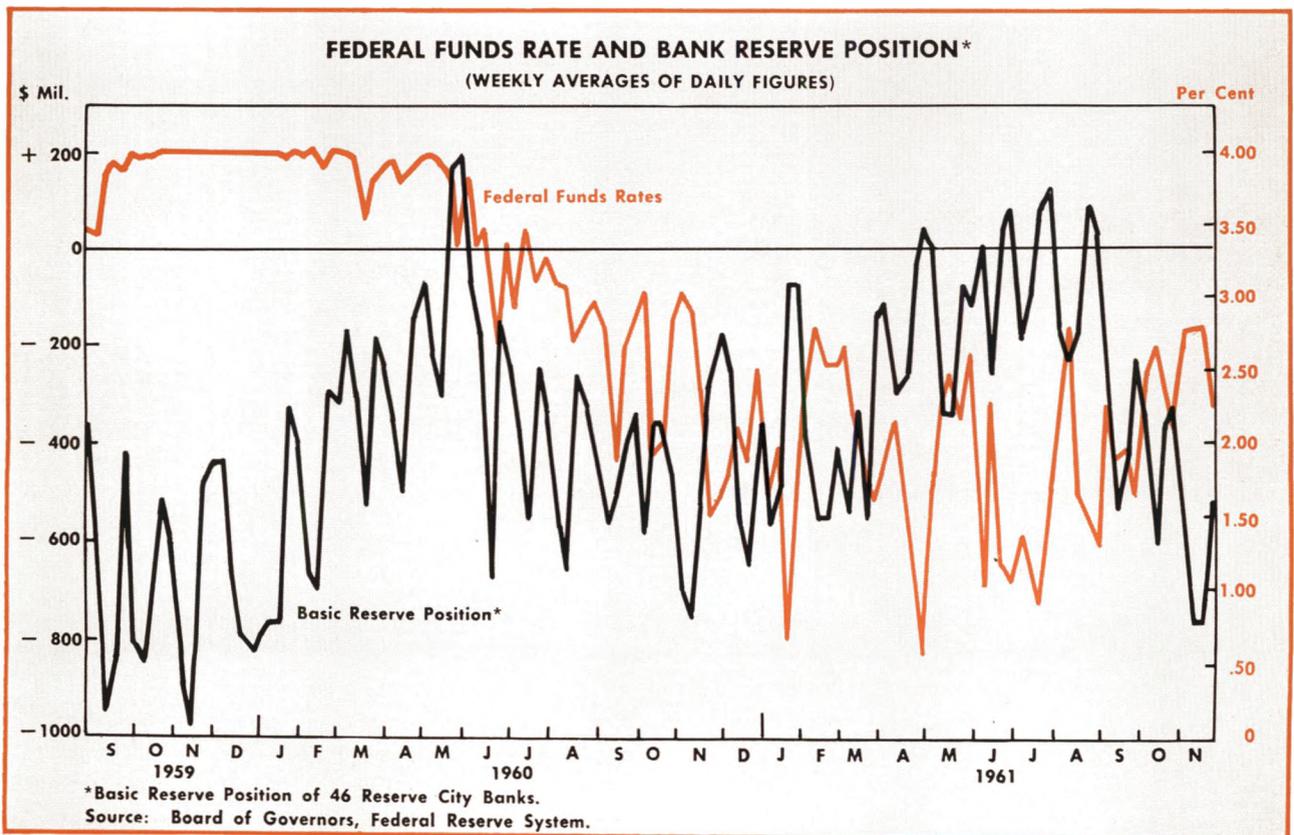
possible because deficiencies may be charged at the discount rate plus 2% and the existence of excess reserves means loss of income.

The Federal funds market, of course, is not the only means of reserve adjustment. A bank needing additional reserves may sell Treasury bills or other marketable paper, borrow from the Federal Reserve, call a loan with a Government securities dealer, or raise dealer loan rates to encourage the dealers to refinance elsewhere. To a large extent a bank's choice depends on relative costs and also on the length of time the additional reserves will be needed. If funds are needed for only a very brief time, the bank may buy Federal funds or borrow from the Federal Reserve to avoid the cost involved in selling short-term assets one day and buying them back the next.

The Federal funds market is also important to the monetary authorities because it speeds up the transmission of changes in monetary policy. This is true because the shifting of reserves from banks with excesses to those with deficits permits banks in the aggregate to stay more fully invested. In other words, a given volume of banking business can be conducted with a smaller volume of excess reserves. This minimizing of excess reserves results in less slippage between a change in monetary policy and the resulting response.

The market also supplies useful information to policy-makers, as it is highly sensitive to changes in the demand for and supply of funds. The Federal Reserve personnel who manage the System's Open Market account watch closely the rate and the volume of transactions because these are excellent barometers of ease and tightness in the central money market.

Rate Determination As with other free market rates, the rate on Federal funds depends on supply and demand conditions in the market. It is difficult, if not impossible, however, to identify these factors rigorously. A useful approach centers about the concept of the "basic reserve position," which takes into account both the volume and distribution of reserves in the banking system. Weekly data on the basic reserve positions of the large money market banks are now published in the *Federal Reserve Bulletin*. The basic reserve position is defined as excess reserves minus the sum of borrowings from the Federal Reserve and net Federal funds purchases. As a rule, changes in the basic reserve deficit of these banks has tended to vary directly with the Federal funds rate. The chart on this page shows clearly that during the period 1959 through 1961 Federal funds rates usually rose and fell with the size of the basic reserve deficit of the large city banks.



THE FIFTH DISTRICT



Business activity in the Fifth District appears to be advancing normally for the fall season. Farming may turn out to be the exception, however, as harvesting activity in parts of North and South Carolina has been severely curtailed by heavy rains, and some crop damage seems inevitable. The manufacturing sector has displayed seasonal strength, with no signs of any slowdown except in transportation equipment, recently affected by strikes in the automobile industry. Seasonally adjusted department store sales receded somewhat in both September and October after reaching an all-time high in August. The further reduction of personal income tax liabilities in 1965 may, however, bode well for near-term retail prospects. A recent U. S. Treasury release estimates that these tax liabilities in Fifth District states will be nearly \$800 million lower than in 1963.

The Statistical Record The latest statistics reflect widespread strength in Fifth District business, and more recent business news contains no hint of a change. Bank debits rose sharply again in September, to a level just under the July record. New highs were reached in the District of Columbia and in South Carolina. For the District as a whole over the first nine months of this year, bank debits were 10% higher than in the comparable period of 1963.

Seasonally adjusted nonfarm employment has risen in every month since April and has set consecutive new records since June. The September rise, however, was too small to be significant. Slight gains in durable goods manufacturing, mining, construction, transportation and related industries, financial enterprises, and government were nearly matched by small declines in nondurable goods, trade, and services. Unemployment in the District labor force declined further in August, and rates of insured unemployment continued to improve in September and October.

Seasonally adjusted factory man-hours fell off slightly in September after rising in August to the highest level since last December. Mainly because of rising productivity, man-hours in recent years have increased more slowly than some other manufacturing indicators. This trend appears to be continuing, and the slight decline in September does not seem large

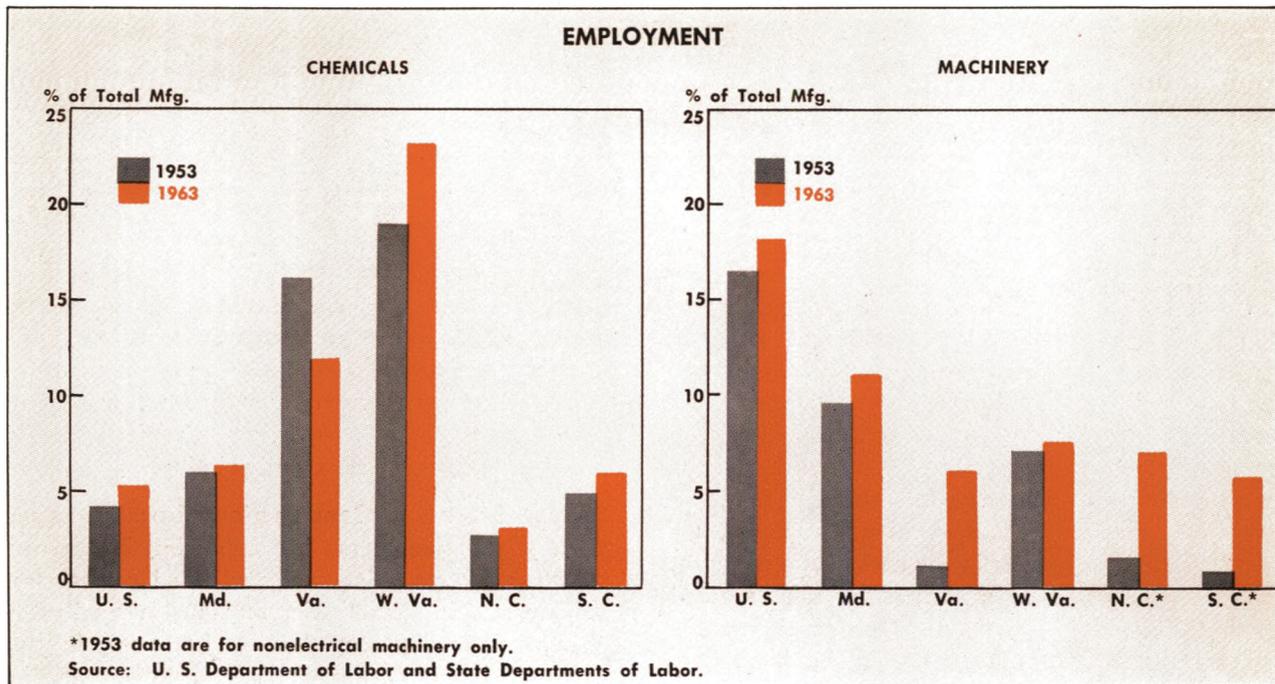
enough to suggest any curtailment of output. In the durable goods sector, gains in transportation equipment and primary metals more than offset small declines elsewhere. Among nondurables, man-hours rose in food, apparel, paper, and chemicals but receded in textiles, tobacco, and printing.

Slower Growth in Construction Locally, as nationally, question marks are appearing in the construction picture. Seasonally adjusted construction employment in the District remained virtually unchanged from February through June, rose in July to an all-time high, dropped 1% in August and increased slightly again in September. Building permits rose less than seasonally in September, remaining below the September 1963 level. Despite wide fluctuations, building permits issued thus far in 1964 have averaged well above those of any previous year. But the cumulative year-to-year gain, as high as 40% back in March, had dropped to 22% by September.

The same general pattern is apparent in District construction contract awards. After advancing briskly last year and early this year, awards settled into a pattern of fluctuation around an all-time high average. On a cumulative basis, they were one-third ahead of last year in March and April but the margin over 1963 has since declined to about one sixth. The recent behavior of construction employment, building permits, and contract awards may indicate a leveling out in construction activity.

Growth in Chemicals To meet rapidly growing demand, the chemical industry has steadily expanded capacity and is becoming increasingly important in the Fifth District economy. In 1962, the most recent year with broad statistical coverage, District chemical plants were credited with \$2.1 billion of value added by manufacture. This was more than one eighth of the national total for chemicals and allied products and almost one sixth of all value added by manufacture in the District. Value added per employee in the production of chemicals was over \$21,000 in 1962 compared with around \$8,700 for all other District manufacturing industries.

The data also show rapid growth in physical output. Value added by chemical plants almost doubled



in the District between 1952 and 1962, and since wholesale prices of chemicals and allied products rose less than 3%, most of the gain represented increased physical volume. Value added in this industry nationally rose 88% during this ten-year period, a somewhat smaller gain than occurred in the District.

In chemicals, wage and salary payments account for about 30% of value added compared to over 50% for manufacturing industries generally. Chemical workers in the District now number about 115,000, nearly one tenth of all manufacturing employment. Rising productivity has opened a wide gap between growth rates in output and employment. Despite the sizable increase in output over the past decade, employment has risen only 13%. Employment increases in other manufacturing industries have generally been well below this figure. As a result, the chemical industry has become relatively more important as a source of jobs in the District, as the left-hand chart on this page shows. In all District states except Virginia, employment in chemicals last year was a larger fraction of total factory employment than it was a decade earlier. The decline in the Old Dominion was largely due to the decreasing demand for rayon.

Machinery Large investments in new plant and equipment have brought new business to machinery manufacturers. Textile firms account for a good share of the local demand, and growth in textile machinery production was evident at the 23rd Southern Textile Exposition held in Greenville, South Caro-

lina during the week of October 12. Nearly 500 firms put their latest equipment on display. Ten years ago there were less than half as many exhibitors, with only one fourth listing Fifth District addresses then compared with nearly two fifths now.

For the machinery industry generally, Maryland held undisputed first place among District states until recently. Current statistics, however, show about 39,000 machinery industry employees in North Carolina against 29,000 in Maryland. The right-hand chart on this page shows how the industry has progressed in relative importance during the past decade. Virginia and the Carolinas account for most of the gain.

District machinery makers now provide nearly 116,000 jobs. Some 20,000 of these are in Virginia, 18,000 in South Carolina, and 10,000 in West Virginia. Growth during the current business upswing has been particularly fast in South Carolina, where only 5,300 on average were employed in nonelectrical machinery in 1961 versus 10,000 now, and where electrical machinery and equipment workers, not reported separately in 1961, now number between 7,000 and 8,000. Machinery employment has gained rapidly in Virginia also.

PHOTO CREDIT

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