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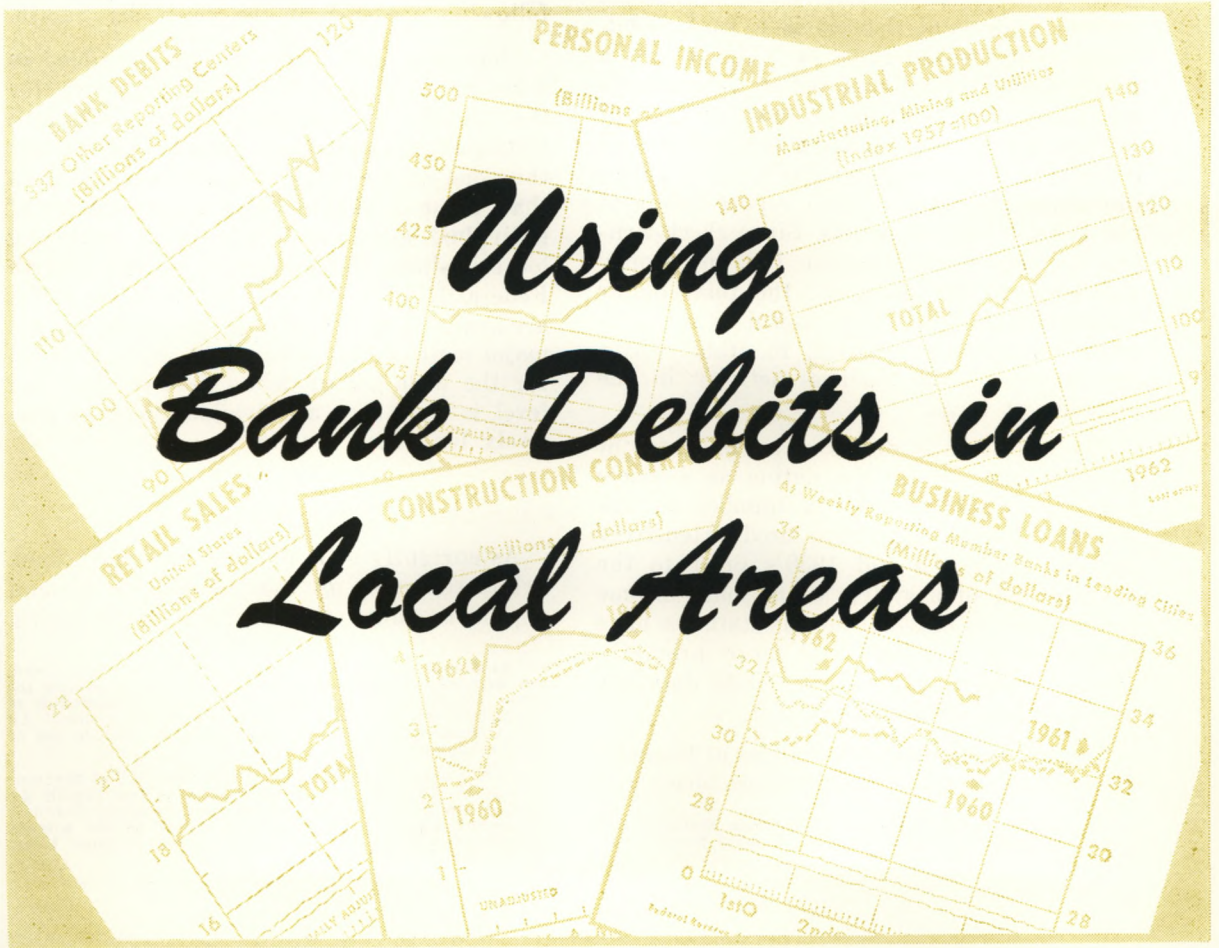

Using Bank Debits in Local Areas

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NEARLY all transactions in this economy involve the transfer of money between buyers and sellers. By far the preponderant amount of these transfers of money is accounted for by payments made by check. (The dollar amount of transactions involving an exchange of currency is small by comparison.)

As payments are made by check, banks charge individual checking accounts—demand deposits—i.e., when owners of these accounts write checks against them. The charge made against a demand deposit is a bank debit. Thus, when an individual or business pays a bill by check, a debit is placed on a depositor's accounting statement by his bank. A total of the amount of check-writing activity for all depositors is accumulated during each calendar month by banks which report debits to the Federal Reserve banks. Since check-writing activity constitutes the bulk of money payments in the economy, the total dollar volume of bank debits is useful as an indicator of economic activity, in other words, the movements in business activity in the economy at large.

The use of bank debits as an indicator of business activity for the nation as a whole has been established by a number of analysts.[1] Debits data were used extensively during the 1920's and 1930's prior to the development of a system of national income accounting. As national income statistics have become more complete and more promptly available, the way in which debits data are used has been altered somewhat.

There is perhaps no other series of financial data which is more widely reproduced and referred to on a local basis than are the debits statistics. This is due in large part to the following reasons. Aside from debits, there is a relative paucity of economic time series at the local level. In addition, debits statistics are not only available widely, but are available promptly. Measuring bank debits or check payments from the accounts of numerous spending units can be done quite easily by recourse to the records of a relatively few banks. Largely because of this, debits statistics are available usually within two weeks following the end of the reporting month.

Moreover, bank debits can be assembled in a variety of geographical groupings, e.g., for the nation, by county, and by standard metropolitan statistical area.[2] Debits are thus one of the few types of economic data that, being available for a large number of individual cities, can be used in analyzing local business developments. In the Fourth Federal Reserve District, for example, debits are available for 35 centers, including the ten major metropolitan areas. Still another reason for the wide use of debits data on the local level is that they are available over a relatively long time span.[3]

Coverage of Debits Statistics

As currently collected and published, bank debits represent all charges against demand deposit accounts of individuals, partnerships,

(1) See George Garvy, *Debits and Clearings Statistics and Their Use*, Board of Governors of the Federal Reserve System, 1959.

(2) As defined by the U. S. Bureau of the Budget, a standard metropolitan statistical area is a "unit encompassing the entire population in and around the city, the activities of which form an integrated economic and social system." An SMSA consists of a central county and may include one or more contiguous counties.

(3) Debits are also used in calculating the rate of turnover of deposits. This rate provides a measure of how rapidly depositors are using their checking-account balances. Turnover is derived from the ratio of total debits to the average amount of deposits for any given month, adjusted to an annual rate.

corporations, and state and local governments. Debits thus include payments for goods at each stage of the productive process rather than only being equivalent to the value of final output. To illustrate, checks that pass between manufacturers, wholesalers, retailers, and final buyers create debits for the *full* amount or value of the product at each stage of production and distribution. As a result, the amount of debits recorded for the various transactions involved in the production, distribution, and consumption of an economic good may be many times the final sale price of that good.

In this connection, debits differ from other widely-used measures of economic activity. This is in marked contrast, for example, to the measure of output reported as Gross National Product by the Department of Commerce, which includes (in the case of goods) only the value at each stage of the productive process. The total volume of debits in the economy is therefore many times greater than the total value of goods and services produced (GNP).

Bank debits also differ in another way from a measure of the value of final output. While most checks are written to pay for goods and current services, a sizable share of the total dollar volume of check payments results from purely financial transactions and transfers of existing physical assets. Securities transactions, for example, may cause the volume of check payments to expand without a corresponding increase in the nation's output of goods. Moreover, the size of such debits may experience fluctuations differing in degree as well as direction from those arising from productive and distributive activities. Still another factor inflating debits totals is the intracorporate movement of funds from one bank to another or from one region of the country to another. Transactions such as these have their greatest effect upon the demand debits of commercial banks in the nation's major metropolitan areas. In comparatively smaller centers, the distorting effects of such financial transactions are considerably less.

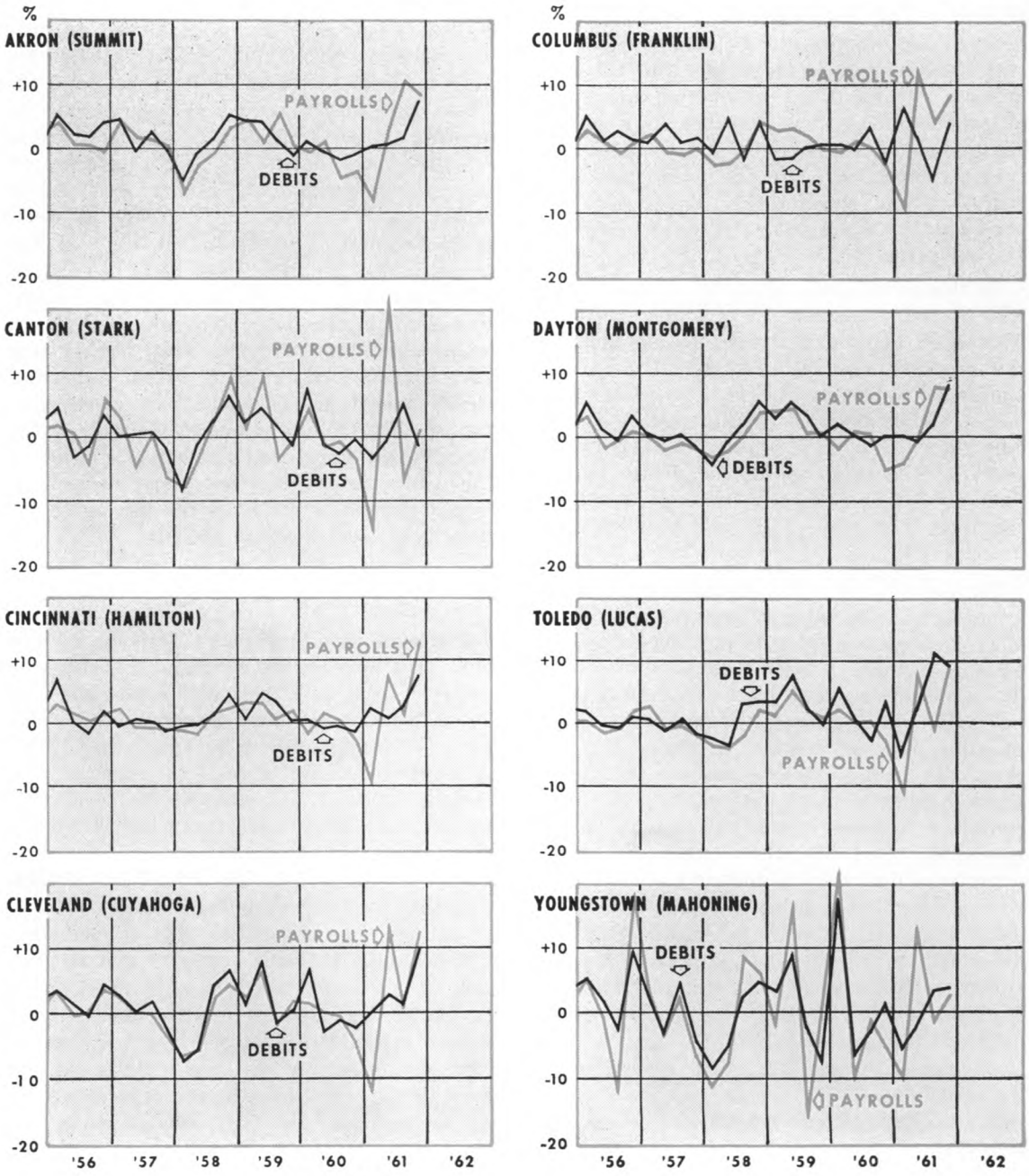
Past Revisions in Debits Statistics

In the past, attempts have been made to eliminate insofar as possible those transactions which tend to inflate the debits figures without a corresponding contribution to productive activity. In fact, extensive revisions were made in the bank debits series in 1953. These revisions were designed primarily to improve the meaning of debits in local areas. At that time, debits to U. S. Government accounts were eliminated because such debits reflect mainly shifts of Treasury deposits from commercial banks to the Federal Reserve Banks, and thus have little association with spending activity in individual areas. For similar reasons, interbank debits, i.e., transactions between commercial banks, were also excluded since such debits represent chiefly operational or mechanical transfers of funds. The 1953 revisions thus were in the direction of improving the comparability of the debits figures between areas, as well as improving debits statistics for use as an indicator of local business activity.

Debits in Local Areas in Ohio

For some time business analysts engaged in local area research have wanted a measure of regional economic activity comparable to Gross National Product or personal income. Such a measure might be known as "gross local product" or "gross local income." Although national and state estimates of personal income are available on a monthly basis, there are no comparable estimates for less-than-state areas. The lack of other information that could serve as benchmark data and which could be associated with or compared with changes in bank debits in a particular area is one reason there have been relatively few analytical studies of the use of bank debits in local areas—even though the use of local debits figures has been widespread and even though there have been extensive studies on the national level. In recent years, analysts have attempted to evaluate the significance of debits statistics in local areas by comparing debits with other selected measures

BANK DEBITS AND COVERED PAYROLLS IN THE EIGHT LARGEST OHIO COUNTIES
percentage changes from quarter to quarter



Seasonally adjusted.

of local business activity, e.g., retail sales and nonfarm employment.[4]

In seeking a series with which local debits data could be compared, it was decided at this bank to experiment with data on payrolls in the State of Ohio.[5] In Ohio, data on payrolls covered by unemployment compensation are available by county on a quarterly basis.[6] Covered payrolls represent most of total wage and salary income, which in turn constitutes a sizable share of personal income in a county.

In studying the relationship between debits and covered payrolls in local areas, the eight largest Ohio counties were selected, primarily because of completeness of data coverage.[7] The accompanying tier charts show the results of associating bank debits with covered payrolls in the eight Ohio counties. Since covered payroll data are only available quarterly, three-month totals of bank debits were used. The data are plotted in terms of percentage changes from quarter to quarter.[8] Of prominence in the charts is the variation in the degree of fluctuation among the counties. In some areas, e.g., Youngstown, there appears to be a relatively large degree of fluctuation before a peak or trough in the data is reached.

In the counties which contain Cleveland, Toledo, and Akron, debits statistics fluctuate less from quarter to quarter than in the case of Youngstown, although there are for the most part clearly discernible peaks and troughs in cyclical activity. This is not the case, however, in either Cincinnati or Columbus, where peaks and troughs are conspicuous by their absence. Instead, these two counties (Hamilton and Franklin) show little evidence of cyclical variation. In short, it appears that in six major Ohio counties where business activity is clearly reflected in covered payrolls, bank debits tend to correspond relatively well to the course of business activity in those areas. Because of the promptness with which debits data are available, they thus can be used in these areas in advance of other information to interpret general business developments.[9]

Adjustment of Monthly Debits Data

Perhaps the most troublesome problem of debits data on a local basis is that they are subject to sharp and irregular movements from month to month. Thus, in order to interpret meaningfully changes in the data, it is necessary to consider various methods of eliminating the irregular movements in debits that are seasonal and are composites of numerous individual payment patterns. The flow of some types of payments, such as rent and utilities, occurs regularly from month to month, whereas other important types of payments are due on specific dates, e.g., quarterly, semi-annually or annually. Moreover, retail trade has its traditional Christmas and Easter shopping seasons during which a large volume of bank debits are recorded.

Seasonal movements of debits may reflect in part the economic structure and the payment patterns of the area from which they are collected. In individual areas, seasonal fluctuations in debits tend to be more prominent than they are when individual areas are com-

(4) See Federal Reserve Bank of Chicago, *Business Conditions*, September 1960 and Federal Reserve Bank of San Francisco, *Monthly Review*, February 1961.

(5) This analysis was undertaken originally as part of the work being done by a Subcommittee within the Federal Reserve System. The group is studying the possible use of bank debits as a local business indicator.

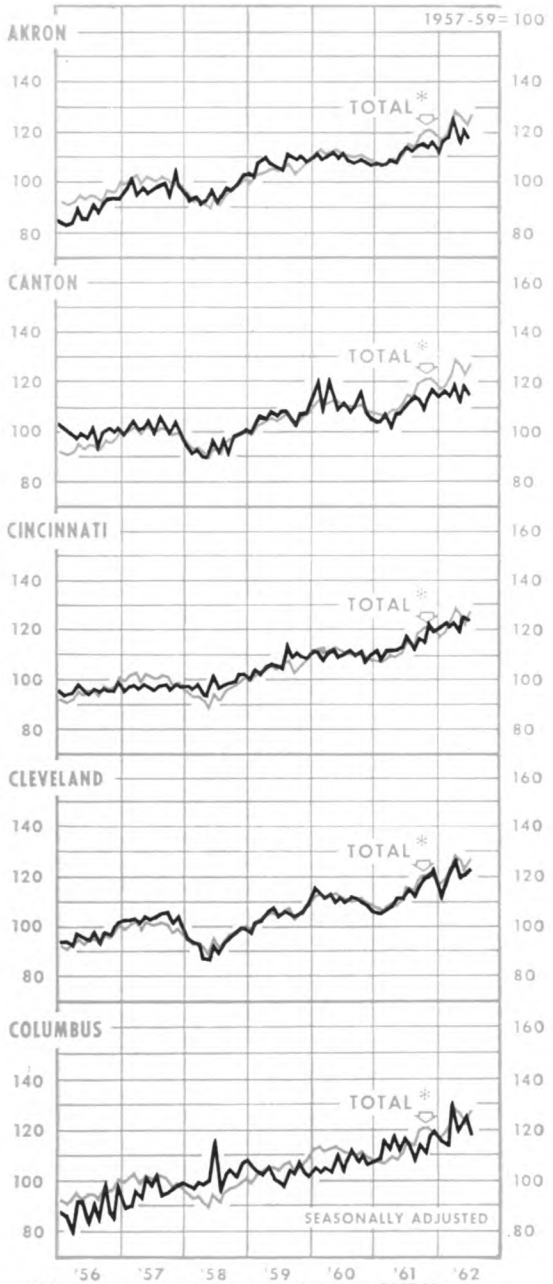
(6) Data were obtained from *Ohio Employment and Payrolls*, Division of Research and Statistics, Bureau of Unemployment Compensation, Columbus, Ohio. Comparable data are not available for debits centers in Pennsylvania.

(7) In all of the counties selected, banks that report debits held at least 90 percent of the total assets of all commercial banks within the county. The only benchmark which is available to measure the ratio of covered payrolls to personal income by county is a study by Madelyn L. and Milton Z. Kafoglis, *Personal Income in Ohio Counties, 1957, 1958, 1959*, Ohio State University, Columbus, 1961. Based on annual totals for 1959, covered payrolls in the selected counties ranged from 57 to 66 percent of personal income.

(8) Correlation and regression techniques were applied to the bank debits and covered payrolls in terms of percentage changes over the period from the third quarter of 1953 to the second quarter of 1961. The simple correlation coefficients showed wide variation among the counties in the association of bank debits and covered payrolls. The simple correlation coefficients in five of the counties ranged from .54 to .71. Youngstown (Mahoning) with a correlation coefficient of .78 was particularly high. However, two counties, Cincinnati (Hamilton) and Columbus (Franklin) had coefficients which were not significantly different from zero.

(9) In 1961 the debits statistics of Toledo began to change at a more rapid rate than previously (see chart). While the debits did reflect the increase in covered payrolls during the second and fourth quarters of 1961, debits in Toledo did not experience a decrease similar to covered payrolls during the third quarter. Since there is recent evidence of a relatively large volume of financial debits in Toledo, debits statistics should be interpreted with caution, particularly with respect to declines in cyclical activity.

BANK DEBITS OF MAJOR STANDARD METROPOLITAN STATISTICAL AREAS
Fourth District
as percent relatives of daily averages



* TOTAL: represents the sum of the 10 SMSA's.

bined into regional units, e.g., a state.

In recent years a substantial amount of attention has been given to a method which would adequately adjust debits data. Debits data even after seasonal adjustment show a considerable amount of fluctuation. Many analysts have suggested that it is important to consider an adjustment for the number of working days in a month. This adjustment consists of weighting the monthly totals of debits by the number of working days in a month, thereby obtaining daily averages.

The justification for this correction is that there must be some allowance made for the variation in the number of Saturdays and Sundays from month to month as well as for the number of holidays. Also, there must be some provision for the difference in the total number of days in February as contrasted with January or March, for example. By weighting the monthly totals of debits in this way, a significant part of irregular fluctuation could be removed from the data even prior to seasonal adjustment. (10)

Interarea Comparisons of Debits

As should be expected, there exist varying magnitudes of bank debits in individual areas. The variation in magnitude is due to a number of factors, including the size of population and the nature of the industrial complex, e.g., the relative extent of manufacturing activity, wholesale and retail trade, and services. In the ten major metropolitan areas of the Fourth District, for example, the amount of debits for 1961 ranged from $2.4 billion to $47.0 billion.

One way to present the data for purposes of comparison is in terms of percent relatives, i.e., percentage changes from some base period. Presented in this manner, debits statistics would show not only a relative change from the previous month but also a longer-term change from some period taken as an "average." Daily average debits, seasonally adjusted, for the major metropolitan areas of

(10) For a more complete description and analysis of the working-day adjustment, see the appendix at the end of this article.

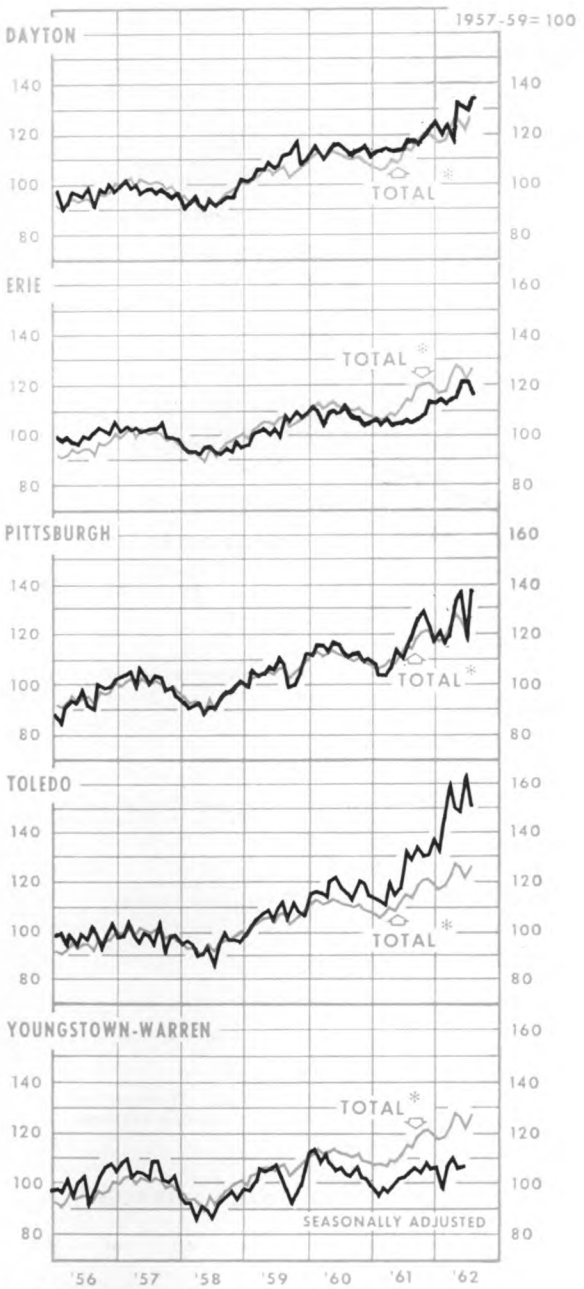
the Fourth District have been plotted in the accompanying charts as percentage changes from a base period consisting of an average of 1957-59. The data cover the period from 1956 through the first seven months of 1962, which includes three periods of advance in business activity.

The debits of the major metropolitan areas in the Fourth District in the current recovery show some interesting movements as compared with those of the two previous advances in business activity. In 1956, the percent relatives of the debits of each of the major areas except Columbus and Dayton were either coincident with or above the total of all of the major metropolitan areas. In the 1958-59 recovery period, the charts show that all of the major metropolian areas, except Columbus, by and large advanced at about the same rate in relation to the base period.

In the current upswing (which began in February 1961) Pittsburgh and Toledo have been the only two centers above the total of the major metropolitan areas. Four centers (Cleveland, Cincinnati, Columbus, and Dayton) have been roughly coincident with the total of the major areas, while the other four centers (Akron, Canton, Erie, and Youngstown-Warren) have been below the total.[11] From a comparison of percent relatives, there are important changes occurring in the growth of debits in the major SMSA's in the Fourth District in relation to the total debits of these areas. In short, those areas which were above the total of the major metropolitan areas in 1956 were below the total in the first seven months of 1962, while those areas which were coincident with or below the total in 1956 were above the total in 1962. Thus, the debits of Akron, Canton, Erie, and Youngstown-Warren in the current recovery in particular show clearly that the rates of advance in these areas have fallen behind the rates of advance in the debits of the other major metropolitan areas.

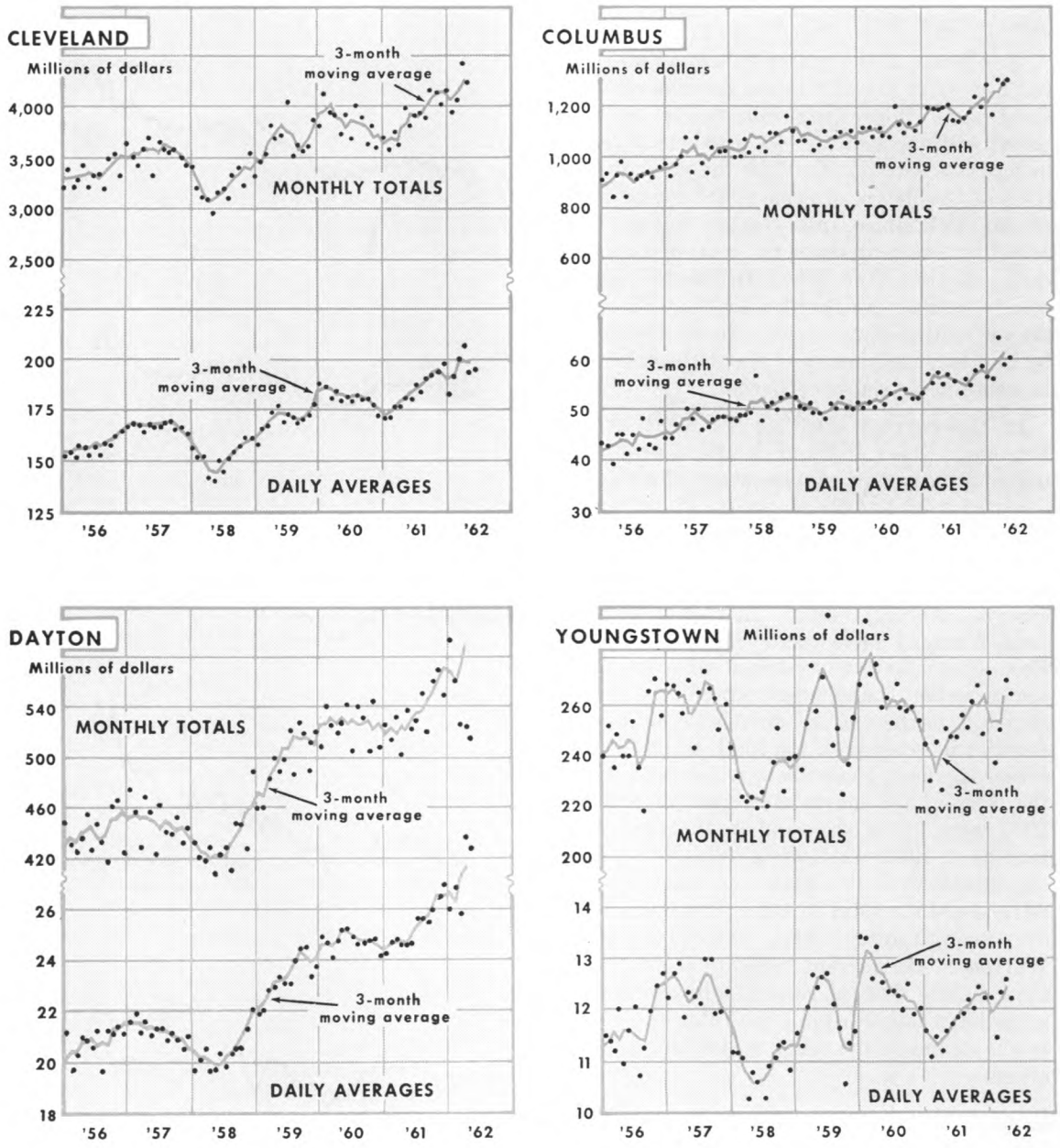
(11) As stated in footnote 9, the debits of Toledo must be interpreted with caution. In addition, as was pointed out earlier, in the association of bank debits and covered payrolls, there appears to be relatively little or no cyclical activity in Columbus or Cincinnati, at least insofar as these data are concerned.

BANK DEBITS OF MAJOR STANDARD METROPOLITAN STATISTICAL AREAS
Fourth District
as percent relatives of daily averages



* TOTAL: represents the sum of the 10 SMSA's.

BANK DEBITS OF SELECTED STANDARD METROPOLITAN STATISTICAL AREAS
Fourth District
3-month moving averages of seasonally adjusted figures



Charts on other areas in the Fourth District which report Debits are available upon request from the Research Department, Federal Reserve Bank of Cleveland.

APPENDIX — A Working-Day Adjustment

Each month the Federal Reserve Bank of Cleveland publishes a release on bank debits in 35 centers in the Fourth Federal Reserve District. Beginning with the June release, debits data were presented on both a monthly total and a daily average basis. In addition, seasonally adjusted data were provided for both series. It was stated in the June release that the use of debits on a daily average basis would be discussed more fully in a forthcoming article in the *Monthly Business Review.*

In recent years, a number of analysts have experimented with various statistical adjustments that are designed to smooth irregular fluctuations in monthly data. In an article in the *Journal of The American Statistical Association,* Harry Eisenpress has presented a working-day adjustment for the debits series for 337 centers outside New York City.(1) This adjustment involves weighting the monthly totals of debits by the number of working days in each month, thereby obtaining daily averages.

In line with the findings of Eisenpress, a working-day adjustment (prior to seasonal adjustment) was applied to the monthly debits of each of the reporting centers in the Fourth District. This adjustment was based on a five-day week, with a further allowance for the number of holidays actually observed by the debits reporters in the centers. (Even though many of the smaller banks in a center are open six days a week, most of the debits reporters, as measured by dollar volume, observe a five-day working week.) No allowance was made for regular monthly payments.

Because a choppiness persisted after seasonal adjustment of both sets of data, i.e., monthly totals and daily averages, the data were adjusted further, using a three-month moving average. If the number of months of cyclical dominance had been used as a criterion, debits for some of the centers would have required a four- or five-month moving average to smooth satisfactorily the data. However, in view of the time lag which would occur before a four- or five-month moving average could be plotted, it was decided to use the three-month moving average consistently, as a standard for comparison.

Monthly totals and daily averages of debits, seasonally adjusted, are shown in the four selected charts accompanying this appendix. Charts for the other debits reporting centers are available upon request. Based on preliminary comparisons, it is apparent that a working-day adjustment is highly desirable (see lower panels). In most centers a substantial amount of what was previously considered to be erratic or irregular fluctuation between months was reduced considerably by the use of daily average data, seasonally adjusted (compare upper and lower panels). Moreover, since there appeared to be a close correspondence in the months of peaks and troughs in both series, the working-day adjustment did not appear to either over- or under-adjust debits in particular months, thereby answering a criticism which has been frequently directed at working-day adjustments.

The working-day adjustment seemed to improve the data from the standpoint of identifying cyclical changes, e.g., Cleveland and Dayton. In each of these areas, debits on a daily average basis generally were closer to the three-month moving average than was the case with monthly totals.

In many centers the ability of the working-day adjustment to identify cyclical fluctuations appears to depend on the characteristics of business activity of individual centers. Columbus, for example, has experienced relatively mild cyclical fluctuations, although there has been strong secular growth in the past several years. Since bank debits in Columbus fluctuate within a relatively narrow range, irregular or unexplained movements evidently account for more of the short-term fluctuations in the debits of Columbus than is the case in centers such as Cleveland or Dayton which have more pronounced cyclical movements.

Youngstown, on the other hand, is an area which is highly specialized in primary metals. Cyclical fluctuations are thus relatively much more severe and adjustment of debits data is more difficult. Nevertheless, the working-day adjustment appears to help in Youngstown in that, for the most part, the daily averages are closer to the moving average than is the case with the monthly totals.

In other centers, the working-day adjustment seems to show little improvement over the monthly totals. At the same time, however, in no center for which it has been calculated does the working-day adjustment show more irregular fluctuations than do the monthly totals.

The working-day adjustment, as used on the debits data in the Fourth District, is admittedly open for improvement through more refined techniques. Daily average debits in some months, for example, are still unusual when compared with the surrounding months. When such peaks (or troughs) in monthly totals do not correspond to peaks (or troughs) in daily averages, it suggests that the working-day adjustment may be at fault. Since the average number of working days in a month is about twenty-two, a one- or two-day error in the number of working days may produce as much as a five- to ten-percent error in the adjusted data for a particular month. There is also the question of whether there should be some allowance made for regular monthly payments, that is to say, for rent, utilities, or debt repayment, which would be made regardless of the number of days or

(1) Harry Eisenpress, "Regression Technique Applied to Seasonal Corrections and Adjustments for Calendar Shifts," *Journal of the American Statistical Association,* December 1956.

week ends in a month. Actually, it is likely that there are a number of factors affecting debits which are overlapping and therefore not easily identified or separated out. Further study on interarea and even interbank data is needed in order to discern or isolate some of these factors.

Around the Fourth District—

Sharp gains in *department store sales* were reported throughout the Fourth District and the nation as a whole during the first week of September. As compared with the corresponding year-ago week, sales were up 12 percent in the Fourth District and 13 percent in the U. S. Moreover, in the District the improvement was sufficient to raise the year-to-year gain in cumulative sales since the first of January to 3 percent.

• • •

Savings deposits at 45 reporting banks in the Fourth District rose to a new high of $3,464 million at the end of August. However, the $30-million gain recorded in August was only two-thirds as large as the July advance.

• • •

Sales of new automobiles in Cleveland continued to exceed year-ago volume, but the margin of increase during the first two weeks of September was somewhat narrower than it had been previously.

• • •

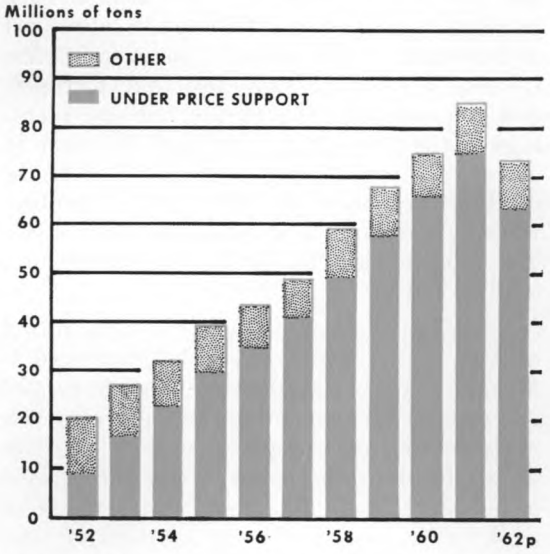
The number of stock *sheep and lambs* on farms in Fourth District states at the beginning of this year was somewhat below the year-earlier level. The sharpest year-to-year decline occurred in Kentucky where sheep inventories dropped 17 percent. In Ohio and in the nation as a whole, the year-to-year reduction measured 5 percent.

(The above items are based on various series of District or local data, which are assembled by this bank and are available to the public in the form of printed releases.)

Accumulation of Feed Grain Surplus Halted

THE TEN-YEAR BUILD-UP in surplus feed grains appears to have been reversed this year. The quantity of feed grains left over from previous crops on October 1 of this year will be smaller than the year-earlier level for the first time since 1952. Starting from a smaller than average carryover of 20 million tons ten years ago, feed grain stocks mounted steadily to reach an all-time high of 85 million tons by October 1 of last year, as shown in the accompanying chart. But by October 1 of this year, feed grains remaining from previous crops are expected to be down to 73 million tons, nearly 12 million tons, or 14 percent, less than at the same time last year.

FEED GRAIN STOCKS
as of beginning of marketing year(1)



(1) Corn and sorghum grains, October 1; oats and barley, July 1.

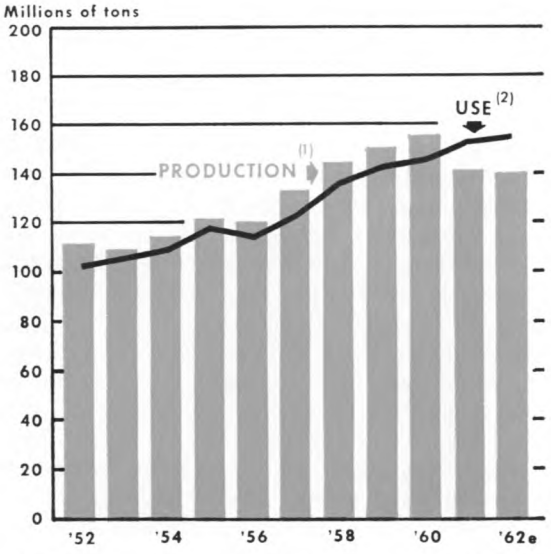
Feed grains stocks have declined this year for the first time in ten years with most of the reduction confined to the quantity held under price support.

This first break in ten years in the growth of feed grain stocks was effected mainly by a cutback in output harvested last year, aided by a subsequent increase in usage during the marketing year ended September 30, 1962 (see chart on next page). The decline in 1961 output was a result of the first year of participation in the Feed Grain Program, whereby plantings were curtailed and producers harvested 16% fewer acres than they did the year before. The effectiveness of the reduced acreage was offset only in part by continued gains in outturn per acre. Moreover, a 30-percent increase in export shipments and a 2-percent increase in domestic utilization indicated for the current crop marketing year ending on September 30 have also figured significantly in pulling stocks of feed grains down from the record level of a year ago.

A further reduction in stocks during the coming year is in prospect. First, the 1962 crop is estimated to be somewhat smaller than a year earlier. In addition, utilization will probably rise moderately during the coming year, reflecting a somewhat larger inventory of grain-consuming animals on farms now in contrast to a year ago.

The shift from inventory accumulation to inventory reduction of feed grains this year has been a favorable development from several points of consideration. Virtually all of the reduction has been confined to those stocks held subject to price support agreements, as can be noted in the first chart which shows total stocks remaining from previous crops on October 1. With feed grain holdings under price support down about 15 percent, the storage and handling expenditures of the Commodity Credit Corporation in supporting the prices of feed grains have been reduced. Moreover, the decline in feed grain inventories, together with somewhat higher average

PRODUCTION AND USE OF FEED GRAINS



(1) Production of corn for grain only, oats, barley, and sorghum grains plus small amount of imports in calendar year.
(2) Domestic utilization plus exports in crop marketing year.

For the second successive year, reduced plantings have cut production below the expected use of feed grains.

prices during the past twelve months, probably exerted some moderating influence on the expansion in output of livestock and products. Preliminary estimates of the total output of livestock and products this year indicate no gain in contrast to the gain of nearly 5 percent last year.

Expansion in Output

The consistent excess of production over utilization from 1952 through 1960 is clearly shown in the second chart. In 1961, when producers cut plantings in response to the Feed Grain Program to the extent that the harvested acreage dropped 16 percent, the total output of feed grains declined only about 10 percent, as rates of production of corn and sorghum grains advanced to new highs of 61.8 and 43.8 bushels per acre, respectively. That one-year experience serves to illustrate one of the significant developments influencing feed grain production during the past decade, namely, the marked increases that occurred in the rates of production. As shown in the following tabulation, the yield of sorghum grains more than doubled from the early 1950's to the early 1960's, while corn increased by nearly a half, and oats by about one-third.

Production Rates of Feed Grains

	Bushels per Acre		
	1952-54 Average	1960-62 (1) Average	Percent Increase
Sorghum grains	18.5	42.0	127%
Corn	40.6	59.3	46
Oats	32.8	43.4	32
Barley	28.2	31.2	11

(1) The 1962 data are based on August 1 estimates.

The phenomenal increase in output per acre of sorghum grains probably reflects the impact of the introduction of hybrid varieties. The higher rates of production of corn in recent years can be attributed in large part to increased applications of commercial fertilizers, particularly supplemental nitrogen, and the concentration of the reduced plantings on the more productive land. The gain in output per acre of oats probably reflects the combined influence of more liberal applications of fertilizer and improved seed stock. The same holds true for barley, except to a smaller degree.

Not all of the expansion in the total output of feed grains, however, can be attributed to higher rates of production; the harvested acreages of barley and sorghum grains also registered significant gains prior to 1961, as shown in the table below. These gains were offset partially by a decline in the acreage of oats for harvest. Both the total output and the harvested acreage of each of the feed grains declined with the introduction of the Feed Grain Program in 1961. A significant reduction in the harvested acreage of feed grains was achieved in conjunction with the

Soil Bank Program in 1956, but acreages had rebounded to earlier levels by 1960. A further modest reduction in the acreage of feed grains for harvest is indicated for this year.

Harvested Acreage of Feed Grains

(Selected Years)

Million Acres

	Corn	Oats	Barley	Sorghum grain	Total
1952	71.5	37.0	8.2	5.3	121.9
1954	68.7	40.6	13.4	11.7	134.4
1956	64.9	33.3	12.6	9.2	120.0
1958	63.5	31.2	14.8	16.5	126.0
1960	71.6	26.6	13.9	15.6	127.7
1961(1)	58.7	24.1	13.0	11.0	106.8
1962p(2)	57.5	23.1	12.9	11.4	104.9

(1) First year of Feed Grain Program
p Preliminary
(2) Acres for harvest.

Use of Feed Grains Also Expands

Not all the increase in production of feed grains has gone into surplus stocks by any means. The growth in utilization of feed grains during the period since 1952 has been substantial and virtually uninterrupted as shown in both the second and third charts. Feed grain utilization increased from 104 million tons in 1952 to 153 million tons in 1961, a gain of about 47 percent. A further moderate increase is indicated for the marketing year beginning October 1, 1962.

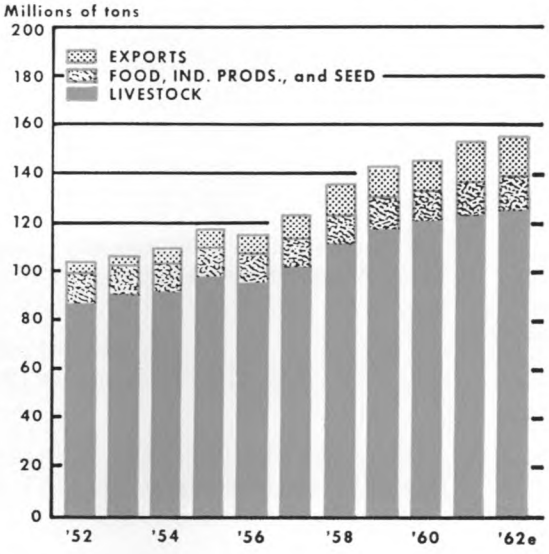
The expansion in feed grain utilization during the period 1952 to 1961 represents the sharpest period of growth in the post-war period. In fact, the only other period in the past 35 years that experienced a similar amount of expansion was during the early years of World War II. The principal factors contributing to the growth in utilization from 1952 through 1961 were a marked rise in exports and an even greater and persistent expansion in the quantity fed to livestock. The quantity of feed grains used for food, seed, and industrial products increased about 14 percent.

Exports of feed grains in 1961 were about three times the volume exported in 1952. Export shipments rose from an average of 4.5 million tons in 1952-53 to nearly 15 million tons by 1960-61, as Western European countries continued to expand their takings of U. S. feed grains.

The expansion in feed fed to livestock, however, was the major contributor to the growth in feed grain utilization. The quantity of feed grains so used increased from 87 million tons in 1952 to 123 million tons in 1961, a gain of 41 percent. A further increase is anticipated in the year beginning October 1, because of the larger inventory of grain-consuming animals on farms now as compared with a year ago.

The marked growth in feed fed to livestock during this period was associated with a sharp expansion in the output of beef and

USE OF FEED GRAINS
as of beginning of marketing year(1)



(1) Corn and sorghum grains, October 1; oats and barley, July 1.

The recent substantial growth in utilization of feed grains stems from a marked rise in exports and persistent expansion in the quantity consumed by livestock.

poultry meats. The total output of beef moved up from about 10 billion pounds in 1952 to over 15 billion pounds in 1961, a gain of about 50 percent. Pork meanwhile registered virtually no increase in output. The output of turkey meat, which was about 1 billion pounds in 1952, had increased to 1.9 billion pounds by 1961, to score an increase of about 90 percent. The increase in broiler output was even more striking. Broiler output, at 2.6 billion pounds in 1952, had soared to 6.8 billion pounds by 1961, thereby registering a gain of about 160 percent. Altogether, the gain in output of poultry meats was just slightly in excess of the 5-billion-pound increase in beef that occurred during the 1952-61 period.

Feed Grain Prices Up From Low

Feed grain prices declined steadily from 1952, when they were at 150 percent of the 1957-59 average and not far from the post-war high, to a post-war low in 1960 of 93, as shown in the following tabulation. Prices of feed grains averaged slightly higher in 1961, and thus far this year have been moderately above year-earlier levels. The outlook is for continued strength in prices in view of the support prices applicable to the 1962 crop of feed grains and the prospect of a further reduction in stocks during the marketing year that begins October 1.

Feed Grain Prices

(1957-59 = 100)

Selected Years

1952	150
1954	130
1956	116
1958	97
1960	93
1961	94

NOTES ON FEDERAL RESERVE PUBLICATIONS

Among the articles recently published in the monthly business reviews of other Federal Reserve banks are:

"Business Credit Demands—Problems of Interpretation", Federal Reserve Bank of Kansas City, July-August 1962.

"Current Issues of United States Financial Policy", statement by Alfred Hayes, President, Federal Reserve Bank of New York, September 1962.

"Current Problems Facing the United States Economy", Federal Reserve Bank of St. Louis, September 1962.

(Copies may be obtained without charge by writing to the Federal Reserve Bank named in each case.)

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