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ECONOMIC REVIEW

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DIFFUSION INDEXES AND ECONOMIC ACTIVITY

The Federal Reserve Bank of Cleveland, in connection with its responsibilities in the area of monetary policy, is concerned with national business and financial conditions and keeps closely attuned to regional developments. Manufacturing is generally regarded as exercising a pivotal role in determining the pace and direction of overall economic activity in the Fourth District, because manufacturing in this region is dominated by durable goods industries. Historically, production and employment in durable goods industries—in the Fourth District as well as in the nation—have been more volatile than in nondurable goods industries.

One means used by this Bank to keep abreast of actual and anticipated developments in the area's manufacturing sector is a regular monthly survey of manufacturers. The results of the survey were first brought to the attention of the general public in the fall of 1969.¹ Since then, there have been various refinements of the survey returns, including a new format for the monthly release beginning January 1971, and some investigation concerning the reliability of the survey. This article describes the nature and results of the survey and discusses certain analytical tools some economists use to evaluate current and prospective business conditions.

¹See "The Monthly Survey of Fourth District Manufacturers—An Early Warning Signal," *Economic Commentary*, Federal Reserve Bank of Cleveland, October 27, 1969.

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Nature of the Survey. The Federal Reserve Bank of Cleveland, with the cooperation of many executives and economists of manufacturing firms in the Fourth District, began its monthly survey of manufacturers in the summer of 1964. Because current information on many aspects of industrial activity at the regional level is limited or not available at all, a number of key manufacturing series were selected to be included in the survey.² For eight items, survey participants report whether their firms experienced an increase, no change, or a decrease from the previous month (after allowance for normal seasonal variation) and what they anticipate for the month ahead.

The number of participants in the survey has varied, with the range of 75 to 100 being the representative sample over the time period of the survey. In general, the composition of the survey has consistently reflected the structure of manufacturing in the Fourth District; that is, roughly three-fourths of the participants are engaged in durable goods manufacturing; the remainder of the respondents are in nondurable goods manufacturing. Individual replies to the survey, although confidential, are combined into convenient summary measures called diffusion indexes. Some background material on the nature of diffusion indexes will, therefore, help to interpret the results of the Fourth District monthly survey of manufacturers.

Nature of Diffusion Indexes. Business analysts have long recognized that economic time series do not all move uniformly at any given stage of the business cycle. Some series may have reached a

peak and started to decline, while other series are still rising or experiencing plateau-like movements. Similarly, mixed short-run trends are generally found among groups of industries, among firms in any particular industry, and among components of an individual series.

Given the crosscurrents in the nature of economic activity, it is extremely useful to know whether the forces of expansion or contraction are predominant. Diffusion indexes attempt to depict the pervasiveness of increases and decreases in economic series over various time spans. Actually, a diffusion index is not an index at all. It is, instead, a measure of the percentage of: (a) a collection of time series that are expanding over a given period; or (b) the components of an aggregate time series expanding over a given period; or (c) the firms in an industry that are experiencing increases in some economic variable over a given period.³ The periods generally used range from one to twelve months (or four quarters). Since month-to-month, or quarter-to-quarter changes are often irregular, the use of longer spans in computing diffusion indexes avoids emphasis on erratic movements and reveals cyclical elements more clearly. A six-month span diffusion index, for example, shows what is happening *over* successive six-month intervals, but does not reveal monthly movements *within* the intervals. For that reason, both one-month span and longer span diffusion indexes are often used simultaneously.

³Examples of a, b, and c, respectively, include the Conference Board diffusion index of 20 economic time series, the U. S. Department of Commerce diffusion index of industrial production for 24 industries, and the First National City Bank of New York diffusion index of about 1,000 manufacturing corporations reporting higher profits. See the monthly publication, *Business Conditions Digest*, U. S. Department of Commerce, for additional examples of diffusion indexes.

A diffusion index is similar to a rate of change, except that a diffusion index fluctuates between 100 percent (all components expanding) and zero (all components declining). A diffusion index at the 50 percent level implies no change in the aggregate series.⁴ There are two reasons why a diffusion index merely *implies* a certain behavior of the aggregate series. First, each component of an aggregate series is typically given equal weight in constructing a diffusion index, although there may be wide disparities in the relative importance of the individual components. Second, in computing the diffusion index, generally no attempt is made to distinguish between differences in the magnitudes of change in the component items. Thus, a diffusion index at, for example, the 80 percent level may imply a 10-percent rate of increase in the aggregate series at one time and a 5-percent increase at another time.

⁴In computing a diffusion index, one-half of the percentage of components showing no change is added to the percentage of components expanding. Thus, for a given aggregate series, if 30 percent of the components are rising, 40 percent are unchanged, and 30 percent are falling, the value of the diffusion index would be 50 percent. The technique cited above, and used in this article, is the most conventional method of computing a diffusion index. Other techniques include the net diffusion index (percent increasing minus percent decreasing, which gives a possible range of -100 percent to +100 percent, with zero implying no change in the aggregate series) and the cumulative net diffusion index (percent increasing minus percent decreasing—cumulated over time, which gives a possible range of -100 percent to infinity, with the contour of the cumulative net diffusion index resembling the contour of the aggregate series). For illustrations of the three types of diffusion indexes, and for additional technical information, see Arthur F. Burns, "New Facts on Business Cycles" and Geoffrey H. Moore, "Diffusion Indexes, Rates of Change, and Forecasting," in *Business Cycle Indicators*, Vol. I, "Contributions to the Analysis of Current Business Conditions" (Princeton: National Bureau of Economic Research, 1961).

Despite this limitation, diffusion indexes have a reasonably good record of foreshadowing turning points in the corresponding aggregate series. In other words, the proportion of expanding components in an aggregate series is at a maximum *before* the aggregate series reaches its peak; conversely, the proportion of declining components in an aggregate series is at a maximum *before* the aggregate series reaches its trough.

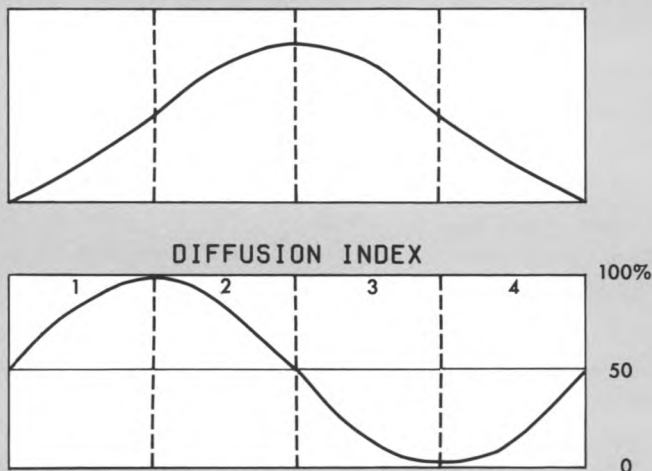
The forecasting properties of a hypothetical diffusion index are shown in Chart 1. (An actual diffusion index, of course, does not trace out such smooth, symmetrical curves.) A diffusion index can be subdivided into four stages, each of which corresponds to a certain behavior of the aggregate series. Accordingly, both the *level* and the *direction of change* in a diffusion index are important considerations. Starting from an arbitrary 50 percent level, the first stage of a diffusion index indicates that more and more of the components are expanding over a given time period. When the majority of the components are expanding; that is, the diffusion index reaches its peak, the implication is that the *rate of increase* in the aggregate series has also reached a peak.

During the second stage of a diffusion index, as some of the components start to decline, the rate of increase in the aggregate begins to slow down (although the aggregate series continues to rise). When the diffusion index returns to the 50 percent level (at the end of stage II), the aggregate series reaches a peak; that is, the rate of change has declined to zero.

The third stage of a diffusion index indicates that declining components of an aggregate series are outnumbering increasing components, which implies that the aggregate series has begun to decline. The rate of decrease gathers momentum as more of the components move into declining

CHART 1.

PROPERTIES OF A DIFFUSION INDEX
AGGREGATE SERIES



<u>Stage</u>	<u>a diffusion index that is</u>	<u>implies that the aggregate series is</u>
1	rising (50% — 100%)	increasing at an increasing rate
2	falling (100%- 50%)	increasing at a decreasing rate
3	falling (50% - 0)	declining at an increasing rate
4	rising (0 - 50%)	declining at a decreasing rate

SOURCE: FEDERAL RESERVE BANK OF CLEVELAND

phases. When the majority of components are declining; that is, the diffusion index is at its lowest point, the implication is that the *rate of decline* in the aggregate series is at a maximum.

As the diffusion index moves into its fourth stage, the rate of decline in the aggregate series begins to slow. The end of the fourth stage of the diffusion index implies a trough for the aggregate series. A further rise in the diffusion index, above the 50 percent level, is indicative of an upturn in the aggregate series.

The four different stages of a hypothetical

diffusion index can be approximated by the performance of an actual diffusion index and its corresponding aggregate series. Chart 2 shows the index of industrial production and its six-month span diffusion index, based on 24 industries included in the index of industrial production.⁵

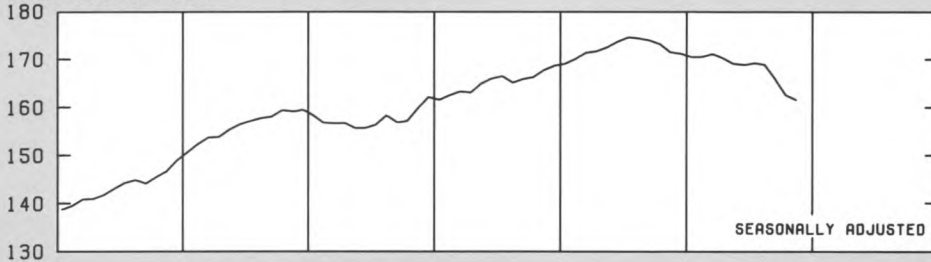
⁵Although *Business Conditions Digest* centers monthly plots of diffusion indexes in the middle of the periods over which changes are measured, an equally acceptable procedure of plotting diffusion indexes and rates of change on the terminal months of the span is used in this article.

CHART 2.

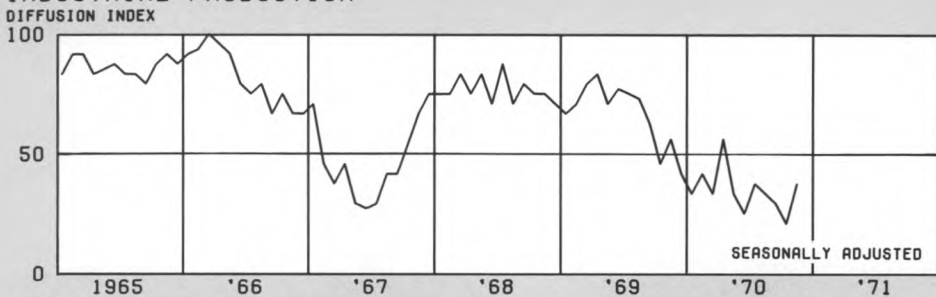
INDEX OF INDUSTRIAL PRODUCTION AND 6-MONTH SPAN DIFFUSION INDEX OF INDUSTRIAL PRODUCTION - 24 INDUSTRIES

INDUSTRIAL PRODUCTION

INDEX: 1957-59 = 100



INDUSTRIAL PRODUCTION DIFFUSION INDEX



LAST ENTRY: 11/70

SOURCES: U.S. DEPARTMENT OF COMMERCE AND BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

The table lists rates of change in industrial production during periods that correspond to different stages of the diffusion index.

Stage I of the diffusion index underscores the accelerating phase of industrial production from late 1965 to early 1966. As the diffusion index rose to 100 percent, the rate of increase in industrial production almost tripled between the two six-month periods ending in September 1965 and March 1966 (see table). The accelerated increase in industrial production partly reflected a sharp upswing in the output of defense industries

(associated with the escalation of military activities in Southeast Asia) that was superimposed on a capital goods spending boom. After March 1966, the rate of increase in industrial production began to subside, as gains in output among the 24 industries became less pervasive (stage II). When the diffusion index dropped below 50 percent (stage III), industrial production entered into a declining phase that began in early 1967. The upturn in the diffusion index (stage IV) signaled the bottoming of the decline in industrial production. Finally, movement of the diffusion index

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Diffusion Index of Industrial Production* Changes in Industrial Production over Related Periods 1965-1968

Diffusion Index Stage	Six-month Span Diffusion Index (terminal month of span)†	Seasonally Adjusted Percent Change in Industrial Production
I	79.2% (9/65)	+ 2.3%
	100.0% (3/66)	+ 6.7
II	100.0% (3/66)	+ 6.7
	70.8% (1/67)	+ 0.7
III	70.8% (1/67)	+0.7
	27.1% (6/67)	-2.4
IV	27.1% (6/67)	-2.4
	41.7% (9/67)	+ 0.1
I	41.7% (9/67)	+ 0.1
	83.3% (3/68)	+ 4.1

* 24 industries.

† Dates in parentheses refer to terminal months of six-month spans over which changes in industrial production are measured.

Sources: U. S. Department of Commerce and Board of Governors of the Federal Reserve System

into stage I during late 1967 coincided with the recovery in industrial production.

Diffusion indexes can provide useful information about the current and prospective behavior of an aggregate series (particularly if the aggregate series itself cannot be measured in a practical way—as is the case with many economic series at the regional level). Using the concepts just described, this article focuses on the diffusion indexes of Fourth District manufacturing activity and their reliability, as reflected by rates of change in counterpart national series. The actual rates of change in Fourth District manufacturing series, of course, can only be inferred from the behavior of the diffusion indexes.

Composite Indexes. As mentioned earlier, a selected sample of manufacturers reports to the Federal Reserve Bank of Cleveland each month on

eight items relating to manufacturing activity: new orders, shipments, backlogs, inventories, delivery time, employment, hours, and prices paid. Diffusion indexes for each of those items were constructed, and the results were consolidated into a composite diffusion index (see Chart 3). Superimposed on the composite diffusion index of Fourth District manufacturing activity is the national composite index of 12 leading indicators, prior to trend adjustment.⁶

Although the composite index of 12 leading indicators is not a diffusion index, it has properties that resemble those of a diffusion index; that is, peaks and troughs in the composite leading index tend to be reached before peaks and troughs in general business activity. A downturn in the composite index of leading indicators preceded each post-World War II recession or period of business slowdown that did not qualify as a recession, and an upturn in the leading indicators preceded or accompanied each recovery from a recession or a leveling in business activity.⁷

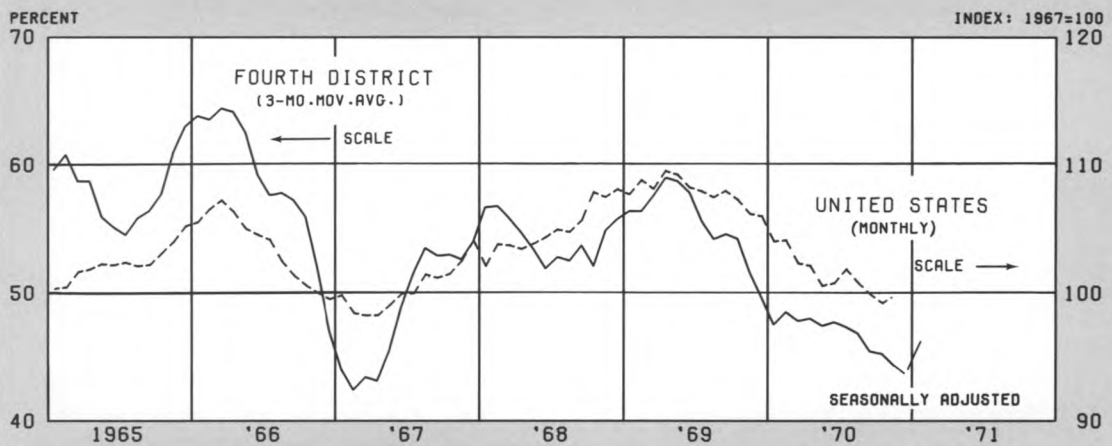
The generally good record of the national composite leading index in foreshadowing changes in overall business activity can be taken as a crude

⁶The composite index of 12 leading indicators, prior to trend adjustment, has a relatively flat trend and is adjusted upward (by 0.35 percent per month) so that its trend is equal to that of the national composite index of 5 coincident indicators. For further details on the composite index of 12 leading indicators, see "Leading Indicators of Economic Activity," *Economic Commentary*, Federal Reserve Bank of Cleveland, August 10, 1970, and the references cited therein.

⁷For an analysis of the correlation between changes in the composite index of leading indicators and subsequent changes in gross national product, see Geoffrey H. Moore, "Forecasting Short-Term Economic Change," *Journal of the American Statistical Association*, March 1969, Vol. 64.

CHART 3.

COMPOSITE DIFFUSION INDEX OF FOURTH DISTRICT MANUFACTURING ACTIVITY AND COMPOSITE INDEX OF 12 LEADING INDICATORS, PRIOR TO TREND ADJUSTMENT (UNITED STATES)



LAST ENTRY: 1/7; 11/70

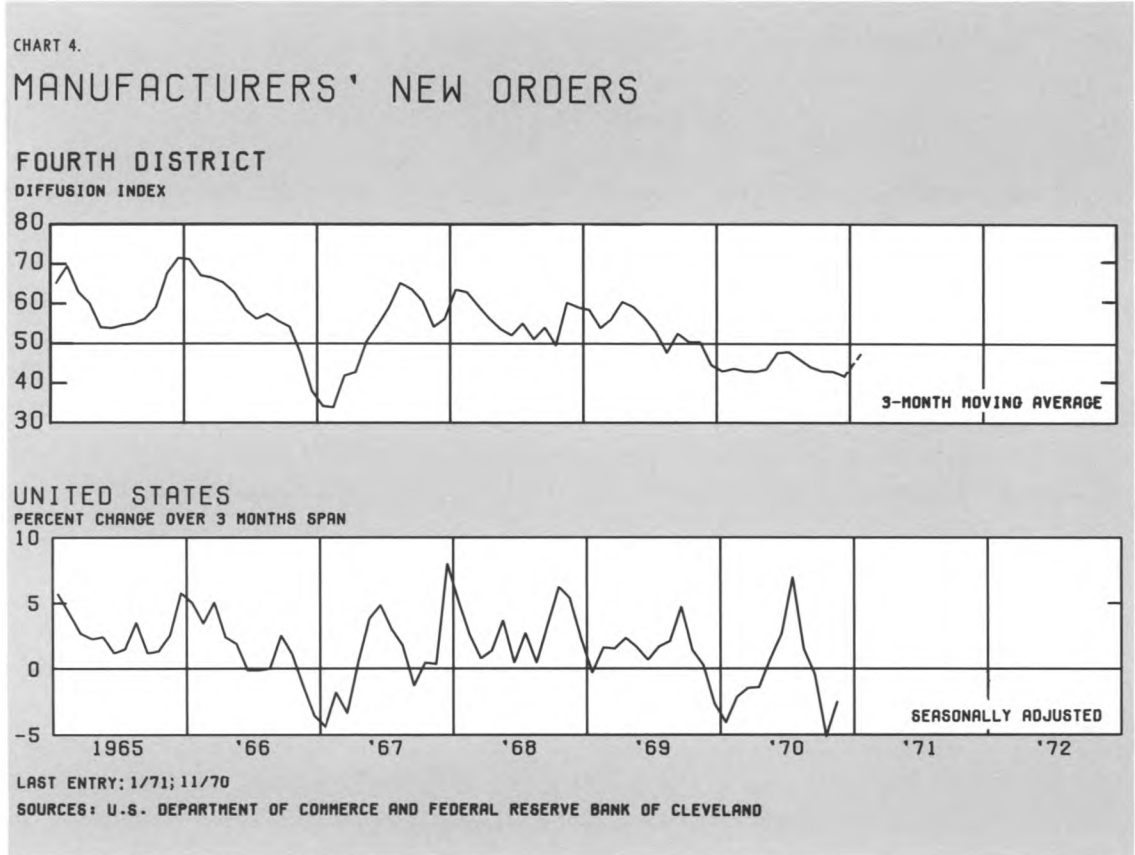
SOURCES: U.S. DEPARTMENT OF COMMERCE AND FEDERAL RESERVE BANK OF CLEVELAND

benchmark against which to judge the reliability of the composite diffusion index of Fourth District manufacturing activity. Although the scales of the two series in Chart 3 are different, short-run contours and turning points are similar. During the subcycle of 1966-1967, for example, both composite indexes reached their peaks in March 1966. The trough of the Fourth District's composite index was realized in February 1967, while the trough of the national index came one month later. During the subcycle of 1969-1970, both the Fourth District and the national indexes reached their peaks in April 1969.

Evaluating the Survey. The primary purpose of

this Bank's monthly survey is to gauge the actual performance of selected indicators of manufacturing activity in the Fourth District and to keep abreast of manufacturers' anticipations, or more generally, the trend of business sentiment. Subordinate purposes of the survey are to gain some insight on the behavior of national counterparts of the items included in the survey.

Generally, there is no feasible way to measure how accurately the Fourth District diffusion indexes reflect the behavior of the corresponding aggregate series. Apart from partial coverage of manufacturing employment and hours in the Fourth District, data on the items in the survey do



not exist. National data are, therefore, taken as the reference points to judge the reliability of the survey results.

The Fourth District diffusion indexes are evaluated on the basis of how well they conform to the contours traced by rates of change in counterpart national series. The higher the level of the diffusion index, the greater the implied rate of change in the corresponding aggregate series for the Fourth District (and the greater should be the rate of change in the national series). Timing is also an important criterion. When the diffusion index falls below the 50 percent level, one would expect to see the national series begin a declining

phase. Conversely, when the diffusion index is recovering and moves above the 50 percent level, the national series should also begin to recover. Of course, the Fourth District diffusion indexes should not always be expected to mirror the national series, mainly because there is a larger proportion of durable goods industries in the Fourth District than in the nation as a whole.

Among the items discussed and shown in the charts, some diffusion indexes and rates of change are inherently smoother than others. All display irregular month-to-month movements. For the sake of consistency, each Fourth District diffusion index is smoothed by a three-month moving

average, and the rate of change in each national series is computed over three-month spans.⁸

Among the eight items being evaluated, new orders is a fairly smooth series. The correspondence between the Fourth District diffusion index of new orders and the national rate of change in new orders tends to be good. For example, during the 1965-early 1966 buildup in new orders, both series peaked in December 1965 (see Chart 4). When the Fourth District diffusion index fell below 50 percent in November 1966, manufacturers' new orders in the United States began to decline significantly at the same time. Troughs in the national rate of change and the Fourth District diffusion index, occurred in January and February 1967, respectively. The auto strike in the fall of 1967 temporarily interrupted the recovery in new orders that lasted until 1969. The Fourth District diffusion index peaked in April 1969, and a sustained movement below the 50 percent level began in December 1969. Meanwhile, the 1969 peak in the national rate of change in new orders was reached in September; the declining phase also began in December.

The diffusion index of manufacturers' shipments in the Fourth District tends to be the most erratic of the eight survey items. Nevertheless, the broad contours of the Fourth District diffusion index seem to be in accordance with the alternating phases of strength and weakness in United States manufacturers' shipments. Specifically, the Fourth District diffusion index suggests an acceleration in shipments during late 1965-early 1966, a deterioration beginning in late 1966, recovery

beginning in the spring of 1967 and continuing until the spring of 1969, followed by a gradual tapering in the rate of increase, and finally a decline beginning in late 1969 (see Chart 5). The moderate recovery in shipments during the summer of 1970 reflected the rebound in many industries following the end of the teamsters' strike, while the subsequent decline can be traced to the recent auto strike and softening in the capital goods sector.

Manufacturers' backlogs (also called unfilled orders) serve as a buffer between new orders and shipments. When the flow of new orders exceeds the volume of shipments, backlogs accumulate; conversely, when shipments begin to exceed new orders, backlogs are drawn down. Business analysts pay close attention to the behavior of backlogs as an indicator of demand pressures on human or physical resource utilization. The change in backlogs in durable goods manufacturing industries, where most backlogs exist, is also an officially recognized leading indicator. As shown in Chart 6, there is a close correspondence between the Fourth District diffusion index of backlogs and the national rate of change in backlogs. The two series have similar contours and turning points during the subcycles of 1966-1967 and 1969-1970.

The Fourth District diffusion index of manufacturers' inventories does not conform as well as backlogs to the national counterpart series. There is, however, some similarity between inventory fluctuations in the Fourth District and in the nation. One major exception is that the extremely high rate of inventory accumulation by United States manufacturers in 1966 was not fully reflected in the Fourth District diffusion index (see Chart 7). In the nation, the well-publicized inventory adjustment of 1967 involved a sharp

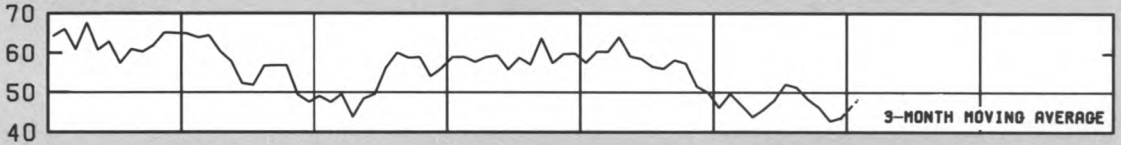
⁸For the national series, month-to-month percent changes were also computed, placed on a three-month moving average, and compared with the percent changes over three-month spans. The results, in terms of short-run contours, are very similar.

CHART 5.

MANUFACTURERS' SHIPMENTS

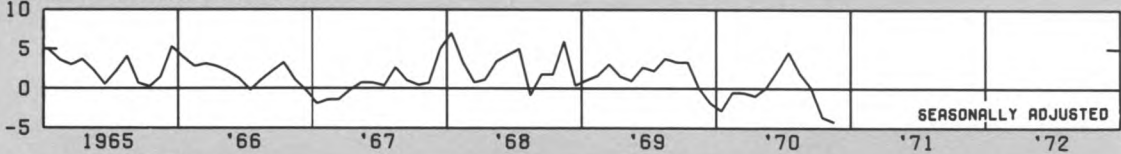
FOURTH DISTRICT

DIFFUSION INDEX



UNITED STATES

PERCENT CHANGE OVER 3 MONTHS SPAN



LAST ENTRY: 1/71; 11/70

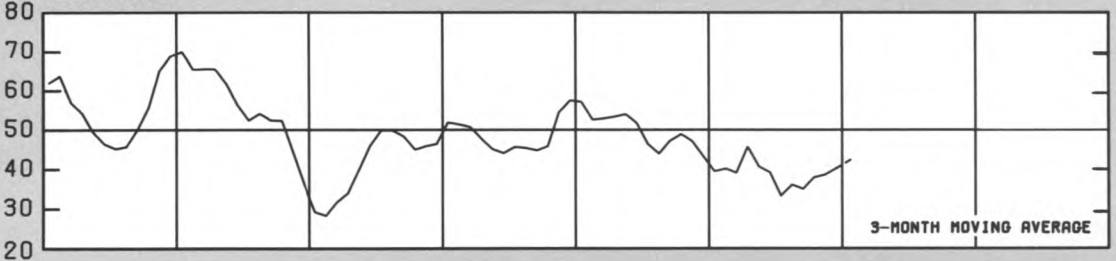
SOURCES: U.S. DEPARTMENT OF COMMERCE AND FEDERAL RESERVE BANK OF CLEVELAND

CHART 6.

MANUFACTURERS' BACKLOGS

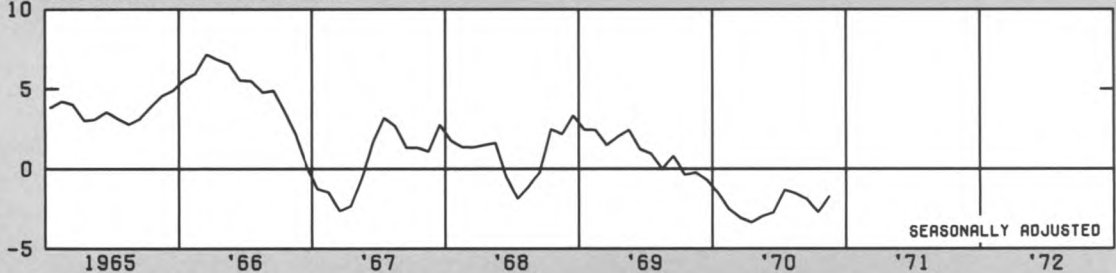
FOURTH DISTRICT

DIFFUSION INDEX



UNITED STATES

PERCENT CHANGE OVER 3 MONTHS SPAN



LAST ENTRY: 1/71; 11/70

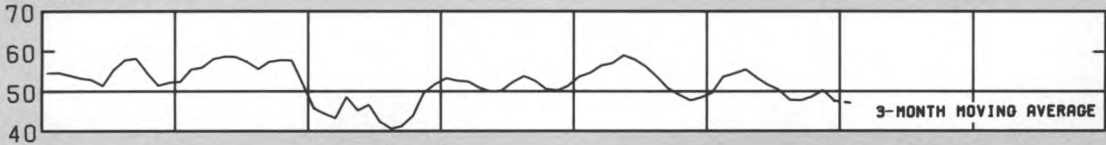
SOURCES: U.S. DEPARTMENT OF COMMERCE AND FEDERAL RESERVE BANK OF CLEVELAND

CHART 7.

MANUFACTURERS' INVENTORIES

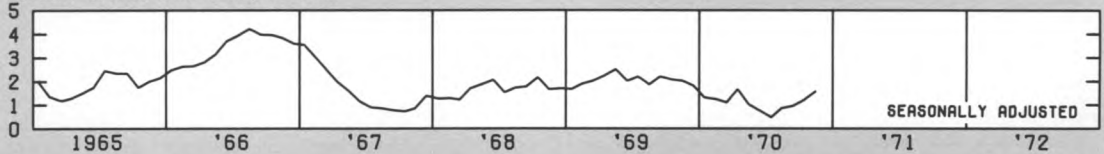
FOURTH DISTRICT

DIFFUSION INDEX



UNITED STATES

PERCENT CHANGE OVER 3 MONTHS SPAN



LAST ENTRY: 1/71; 11/70

SOURCES: U.S. DEPARTMENT OF COMMERCE AND FEDERAL RESERVE BANK OF CLEVELAND

reduction in the rate of increase in manufacturers' inventories, based on book value. (In view of the inflation occurring at that time, the physical volume of manufacturers' inventories probably declined.) In the Fourth District, by contrast, the diffusion index fell below 50 percent in January 1967 and remained below that level until late in the year, thus implying a reduction in inventories.

Delivery time, or vendor performance, is an indicator of the time between placement of new orders and actual delivery. Increases in delivery time usually are symptomatic of tight labor markets and pressures on physical resources, as suggested by high capacity utilization rates or a rising backlog—shipments ratio. Because there is no national series on delivery time, vendor performance reported by firms in the Chicago area was selected as the benchmark for gauging the

accuracy of the Fourth District series.⁹ Conformity between the two series is generally good, except that the amplitude of delivery time is larger in Chicago than in the Fourth District (see Chart 8).

For manufacturing employment, there is an excellent relationship between the Fourth District diffusion index and the rate of change in the national data. The survey accurately depicted the two declining phases of manufacturing employment during the 1965-1970 period, the first beginning in early 1967 and the second beginning in late 1969 (see Chart 9).

⁹"Vendor performance, percent of companies reporting slower deliveries," from the Purchasing Management Association of Chicago, is shown as a diffusion index in *Business Conditions Digest* and is classified as a leading indicator.

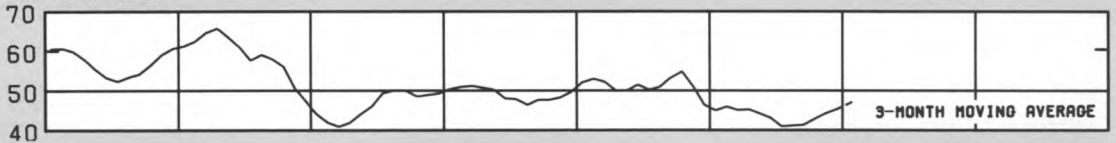
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CHART 8.

DELIVERY TIME

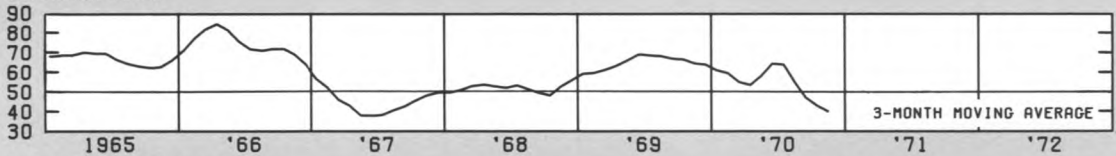
FOURTH DISTRICT

DIFFUSION INDEX



CHICAGO PURCHASING AGENTS

DIFFUSION INDEX



LAST ENTRY: 1/71; 11/70

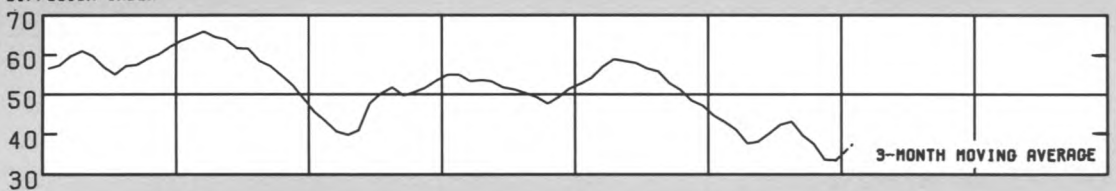
SOURCES: FEDERAL RESERVE BANK OF CLEVELAND AND PURCHASING MANAGEMENT ASSOCIATION OF CHICAGO

CHART 9.

EMPLOYMENT IN MANUFACTURING

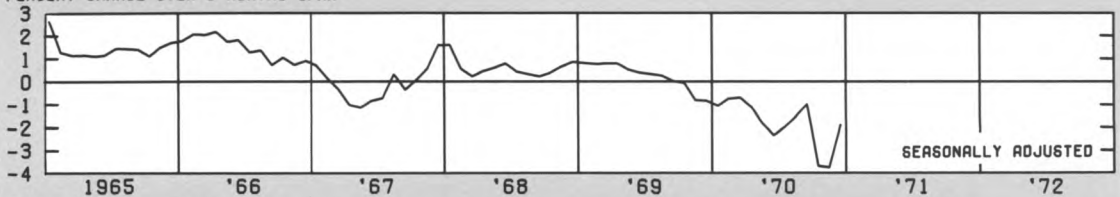
FOURTH DISTRICT

DIFFUSION INDEX



UNITED STATES

PERCENT CHANGE OVER 3 MONTHS SPAN



LAST ENTRY: 1/71; 12/70

SOURCES: U.S. DEPARTMENT OF LABOR AND FEDERAL RESERVE BANK OF CLEVELAND

The contour of the Fourth District diffusion index of the workweek is similar to that of manufacturing employment. The correspondence between the Fourth District and the national series on the workweek, however, is less precise than for employment. In the United States, the rate of change in the workweek is more volatile than the rate of change in employment, because employers customarily make their short-run adjustments to production by changes in the workweek rather than in employment. Accordingly, the average workweek of production workers in manufacturing is an official leading indicator, and the rate of change in the workweek precedes movements in the workweek itself. For example, in the United States, the average workweek reached a post-World War II high in March 1966, three months after the peak in the rate of change. In the Fourth District, the monthly survey of manufacturers reflected a rapid rise and a high level in hours during late 1965-early 1966 and the cutbacks that began in late 1966 (see Chart 10). The survey also indicated another downward phase in the workweek beginning in late 1969.

The two price series shown in Chart 11 have a strikingly close correspondence, despite some conceptual differences. For the Fourth District, the diffusion index refers to prices paid by manufacturers for materials and parts; the national series shows the rate of change in wholesale prices of industrial commodities and is based on prices charged for materials and finished producers' and consumers' products. (Often the Bureau of Labor Statistics must resort to using list prices rather than actual transactions prices.)

From their longstanding period of relative stability, industrial wholesale prices began to rise noticeably in 1964, and the rise gained significant momentum in late 1965-early 1966. The Fourth

District survey clearly revealed the dramatic upswing in prices at that time. Following a temporary easing in the rate of inflation from mid-1966 to early 1967, industrial prices moved progressively toward higher rates of increase. There were, of course, brief periods during recent years when the rate of increase in industrial prices eased for a few months at a time. But those lulls were followed by renewed bursts of strength.

Summary. The nature of economic activity is such that at any given time, some economic series, industries, and firms are likely to be registering increases, others are showing no change, and others are declining. An analytical tool, called a diffusion index, has been devised that shows the dispersion of changes that are occurring. Diffusion indexes can be used to infer the behavior of certain aggregate series that may be difficult, if not virtually impossible, to measure at the regional level. This Bank's monthly survey of manufacturers uses diffusion indexes to help describe the pace and direction of key economic variables in the Fourth District's manufacturing sector.

The charts demonstrate that the monthly survey of Fourth District manufacturers has generally reflected changing phases of manufacturing activity during the past six years. The major value of the survey is that it provides this Bank, in addition to the survey participants and other interested parties, with timely information concerning the trend of actual and anticipated regional business conditions. The survey was exceptionally helpful in late 1966, when the signs suggested a rapid deterioration in business conditions.

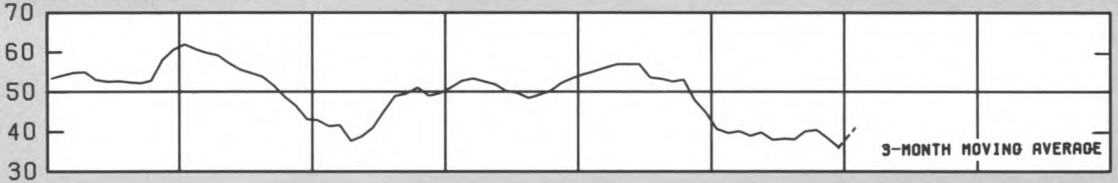
More recently, the survey provided this Bank with some evidence of the slowdown in manufacturing activity in the Fourth District by the latter

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CHART 10.

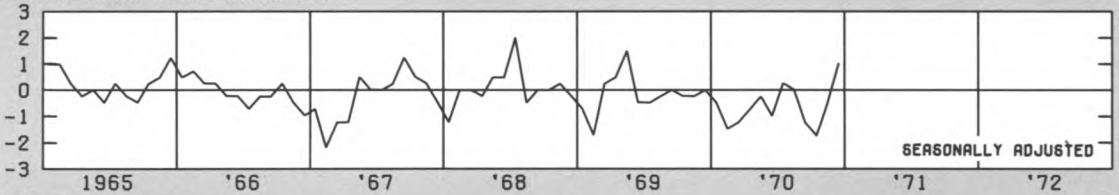
HOURS IN MANUFACTURING

FOURTH DISTRICT
DIFFUSION INDEX



UNITED STATES

PERCENT CHANGE OVER 3 MONTHS SPAN



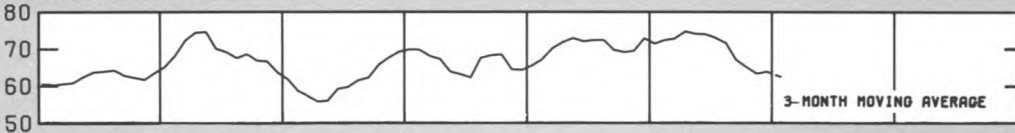
LAST ENTRY: 1/71; 12/70

SOURCES: U.S. DEPARTMENT OF LABOR AND FEDERAL RESERVE BANK OF CLEVELAND

CHART 11.

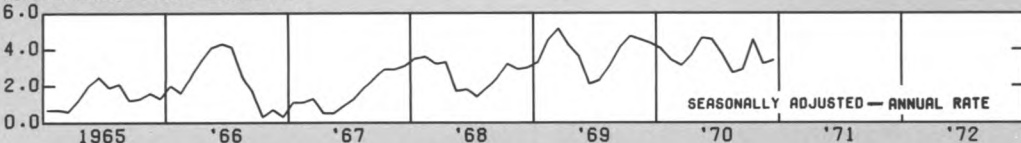
PRICES PAID BY FOURTH DISTRICT MANUFACTURERS AND INDUSTRIAL WHOLESALSA PRICES, UNITED STATES

FOURTH DISTRICT
DIFFUSION INDEX



UNITED STATES

PERCENT CHANGE OVER 3 MONTHS SPAN



LAST ENTRY: 1/71; 12/70

SOURCES: U.S. DEPARTMENT OF LABOR AND FEDERAL RESERVE BANK OF CLEVELAND

half of 1969. The survey also supported the view that inflation remained a matter of serious concern in 1970 even though restrictive public economic policies had been pursued during the previous year. The survey also revealed the adverse effects of reductions in manufacturing output on employ-

ment beginning in late 1969 and continuing through 1970. Based on historical experience, the survey of Fourth District manufacturers should provide some advance indications of the extent to which recovery in the manufacturing sector unfolds during the months ahead.

Future monthly releases of the Survey of Fourth District Manufacturers may be obtained from the Research Department, Federal Reserve Bank of Cleveland, P. O. Box 6387, Cleveland, Ohio 44101.



FEDERAL LAWS REGULATING BANK MERGERS AND THE ACQUISITION OF BANKS BY REGISTERED BANK HOLDING COMPANIES

The postwar trend in banking toward increased concentration of financial resources in large branch bank organizations or large bank holding companies has generated legislation designed to preserve competition in banking. The authority to administer Federal laws concerned with bank mergers was divided among the three Federal bank regulatory agencies and each one was granted a substantial amount of autonomy. The wording of the law was sufficiently general to permit a significant degree of flexibility in its interpretation and administration. As a result, no consistently uniform set of specific guidelines defining unwarranted or illegal bank mergers has emerged at the agency level. The Department of Justice has developed quantitative structural guidelines to assist in determining whether or not to oppose mergers between direct competitors (i.e., horizontal mergers). The banking agencies have used additional criteria to take account of the performance aspects of banks in markets as well as the competitive aspects. The most common index of the competitiveness of banking markets used by the supervisory authorities, the Department of Justice, and the courts is the concentration ratio, or the share of total commercial bank deposits of all banks in a market accounted for by a few of the largest banks in that market.

The Federal laws related to the expansion of registered bank holding companies were written in the same general manner. However, the Federal Reserve System was granted exclusive jurisdiction over cases involving the acquisition of banks by registered bank holding companies. To date, the Supreme Court has not handed down any decisions under these laws.

This article traces the development of Federal laws regulating the acquisition of banks by other banks or by registered bank holding companies. Major legal points resulting from some important test cases decided by the Supreme Court are also discussed.

THE SHERMAN AND CLAYTON ACTS

The *Sherman Act of 1890* and the *Clayton Act of 1914* are the cornerstones of Federal antitrust legislation. The Sherman Act prohibits combinations in actual and unreasonable restraint of trade, whereas Section 7 of the Clayton Act prohibits transactions or acquisitions in prospective restraint of trade as well as those resulting in actual restraint of trade or substantial lessening of competition. Neither act was used extensively to prevent bank mergers before 1963. The Sherman Act has been considered inapplicable to all but the most serious restraints of trade. Section

TABLE I
Development of Bank Merger Legislation

National Banking Act of 1918

This act required the advance approval of the Comptroller of the Currency before two or more banks could merge under the charter of a national bank.

Federal Deposit Insurance Act of 1950

This legislation divided authority to approve or deny certain mergers involving two or more insured banks among the three Federal bank regulatory agencies. No specific regulatory standards were set forth.

Bank Merger Act of 1960

This act for the first time made all bank mergers involving insured banks subject to the jurisdiction of one of the three Federal agencies. Furthermore, it contained specific regulatory standards unlike previous legislation. These standards were almost identical to those incorporated in the Bank Holding Company Act of 1956, and both acts were equally ambiguous regarding the relative weights to be attached to each of the three groups of factors.

This act made mandatory advisory reports evaluating the competitive factors from the banking agencies not having jurisdiction over the particular merger and the Department of Justice. The question of the applicability of the antitrust laws to bank mergers was left open.

Bank Merger Act of 1966

This legislation was enacted for the same purpose as the Bank Holding Company Act of 1966. It dealt with the issue of the applicability of the antitrust laws to bank acquisitions by merger in identical language.

It appeared to give a free hand to the Department of Justice in challenging bank mergers by requiring a 30-day waiting period after an approval by a Federal bank agency during which the Government could organize its case.

11 of the Clayton Act granted the Board of Governors of the Federal Reserve System the authority to enforce the compliance of banks with Section 7.

The applicability of the Clayton Act to bank mergers was greatly limited, however, since the original Section 7 applied only to consolidations and mergers accomplished by stock acquisition. Since provisions of Federal law prohibit member banks of the Federal Reserve System, with few exceptions, from directly purchasing corporate stocks, most mergers are accomplished by an acquisition of assets and assumption of liabilities or an exchange of stock. In effect, before 1960, bank mergers were subject to control almost exclusively through state laws that provided for regulation by a state agent or agency according to varying standards.

**BANK MERGER LEGISLATION
PRIOR TO 1960**

The earliest Federal laws relating specifically to bank mergers assigned regulatory duties to the various Federal banking agencies without setting forth any specific standards for the exercise of their authority (see Table I). For example, the agencies were not explicitly granted permission to consider the probable effects of the acquisition of a bank upon competition. The *National Banking Act of 1918* required the advance approval of the Comptroller of the Currency before two or more banks could merge under the charter of a national bank. Section 18(c) of the *Federal Deposit Insurance Act of 1950* provided that before an insured bank could merge with another insured bank, prior written consent would have to be obtained from the Comptroller of the Currency if the resulting bank was to be a national bank, the Board of Governors of the Federal Reserve System if the

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resulting bank was to be a state member bank, or the Federal Deposit Insurance Corporation (FDIC) if the resulting bank was to be a nonmember insured bank.¹ Again, no specific regulatory standards were set forth. A more serious shortcoming of the Federal Deposit Insurance Act was a provision that made the approval of these agencies unnecessary unless the capital stock and surplus of the resulting bank was less than the aggregate capital stock and aggregate surplus of the participating banks. This provision appears to reflect a traditional concern of bank regulators with the adequacy of a bank's capital to protect its depositors from losses arising out of shrinkages in asset values. The majority of bank mergers, in which the capital stock of the resulting bank *equals* the aggregate capital stock of the participating banks, were exempted from Federal control.

HOLDING COMPANY LEGISLATION PRIOR TO 1960

The *Banking Act of 1933* (Glass-Steagall Act) granted the Board of Governors limited powers to regulate bank holding companies controlling the majority of the stock of at least one Federal Reserve System member bank (see Table II). Supervisory powers over such an organization's financial policies (e.g., the setting of certain reserve requirements) were intended to protect the bank's depositors, and the Banking Act of 1933 did not set forth guidelines for regulating the formation or expansion of bank holding companies.

¹In the Fourth District states of Kentucky, Ohio, and Pennsylvania, the approval of the state banking department is also required if the merger involves two state chartered banks. West Virginia is the only Fourth District state that does not permit branch banking.

The *Bank Holding Company Act of 1956* (BHCA) represented the first significant attempt by Congress to subject the formation and expansion of bank holding companies to Federal regulation. It required a holding company to register with the Board of Governors if it owned 25 percent or more of the stock of each of two or more banks. The act gave the Board of Governors the authority to approve or deny applications for the formation of new registered bank holding companies as well as applications for acquisitions of additional banks by existing bank holding companies.

Unlike the previous legislation that unsuccessfully attempted to regulate bank mergers, this act listed specific factors that the Federal Reserve System was to consider when evaluating a proposed acquisition of a bank. These factors were: (1) the financial history and condition of the bank holding company and bank concerned; (2) their earnings prospects; (3) the character of their management; (4) the convenience and needs of the communities to be served; and (5) the preservation of competition in the banking industry. The first three factors pertained to the organization's solvency, asset condition, capital, and operations, thus continuing the underlying concern for depositors reflected in the Banking Act of 1933. The last two factors represented a significant departure from earlier legislation. The lawmakers concerned with the competitive health of the banking industry appeared to recognize for the first time that the acquisition of a bank also involved equally important nonsafety oriented considerations, such as competitive effects, the possible introduction of new services at the acquired bank, and changes in its lending behavior and pricing policies. The safety of bank deposits,

TABLE II
Development of Federal Multiple Bank
Holding Company Legislation

Banking Act of 1933

This legislation granted the Federal Reserve Board limited powers to regulate certain bank holding companies. In cases in which the Board had jurisdiction, it was authorized to examine the holding company and its subsidiaries, to set certain reserve requirements and to supervise other financial policies in the interest of protecting depositors. The Board had no authority to control holding company expansion and prevent any possible adverse competitive effects.

Bank Holding Company Act of 1956

This act represented the first comprehensive bank holding company control legislation. Its major objectives were to control the formation and expansion of registered bank holding companies (defined as owning 25 percent or more of the stock of each of two or more banks) and require divestment of their non-banking interests. Unlike the Banking Act of 1933, the 1956 law covered nonmember banks. The Board of Governors was required to consider three groups of factors in deciding whether to approve of holding company activities:

1. "Banking factors" pertaining to the company's solvency, earnings prospects, and management
2. Convenience and needs considerations or the probable social benefits resulting from the transaction
3. The prevention of excessive concentration of economic power in bank holding companies

The Bank Holding Company Act of 1966

This legislation was enacted primarily to clarify Congressional intent with respect to the relative

importance of factors (2) and (3) of the criteria for approval contained within the Bank Holding Company Act of 1956. The Board was directed not to approve:

1. Any acquisition...which would result in a monopoly, or which would be in furtherance of any combination or conspiracy to monopolize or attempt to monopolize the business of banking in any part of the United States, or
2. Any other proposed acquisition...whose effect in any section of the county may be substantially to lessen competition, or tend to create a monopoly, or which in any manner would be in restraint of trade, unless it finds that the anticompetitive effects of the proposed transaction are clearly outweighed in the public interest by the probable effect of the transaction in meeting the convenience and needs of the community to be served.

The first section of the amendment tightened the prior law; under the 1956 act, any tendency toward monopoly was merely one of the competitive factors to be weighed along with other considerations. The second section provided an exception to the strict application of antitrust laws in determining the legality of holding company expansions. However, its wording would seem to indicate that Congress intended any exceptions to be rare, although the specific conditions governing whether the acquisition could still be considered in the public interest, despite substantially adverse competitive effects, were not specified in the statute.

Like the Bank Holding Company Act of 1956, the 1966 act did not apply to one bank holding companies.

although not diminished in importance, was no longer to be the sole consideration.

RECENT BANK MERGER AND
HOLDING COMPANY LEGISLATION

During the late 1940's and throughout the 1950's, when the pace of bank merger activity was accelerating, two basically different approaches to

solving the problem of regulating bank merger activity emerged from Congressional debate. Congressmen who were inclined to view the competitive effects of a bank merger as the key issue involved generally favored reliance on anti-trust laws to preserve competition. This group advocated amending Section 7 of the Clayton Act to make all bank mergers subject to the joint

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regulation of the Attorney General and the Board of Governors. Proponents of the second approach ("public utility approach") argued that banking was already a highly regulated industry and, therefore, deserving of special treatment under the antitrust laws and that any anticompetitive effects of a merger could be compensated for by the several banking factors involved and the probable extent to which the public's banking needs would be better met. They advocated amending the banking laws to require the prior approval of all mergers by the Federal banking agencies.

The *Bank Merger Act of 1960*, which amended Section 18(c) of the Federal Deposit Insurance Act, represented a partial victory for the advocates of the public utility approach. This amendment eliminated a serious obstacle to Federal regulation of bank mergers by making all bank mergers involving insured banks subject to the jurisdiction of one of the three Federal agencies, whether or not the capital and surplus of the resulting bank was less than the aggregate capital and surplus of the participating banks. The act also represented a significant departure from past legislation regulating bank mergers, since it listed criteria (basically the same as in the BHCA) to be used in evaluating applications for bank mergers. Neither act clearly stated the relative weights to be assigned to the banking factors (first three criteria listed in discussion of BHCA of 1956), the convenience and needs factors, or the adverse competitive effects, if any, resulting from the acquisition of a bank. This ambiguity of the BHCA of 1956 and the Bank Merger Act of 1960 was somewhat resolved by amendments to both acts six years later.

The Bank Merger Act of 1960 appeared to vest final authority to rule on all insured bank mergers in the Federal banking agencies. The Attorney

General and the banking agencies not having jurisdiction over a bank merger received the opportunity to render an advisory opinion on the competitive factors to the agency with responsibility for approving or disapproving the merger. The agency with jurisdiction over the case was not obliged, however, to base its recommendation on this advice. The Bank Merger Act omitted any reference to whether the Attorney General could make an antitrust attack on the merger if his advice on the degree of adversity of the competitive effects did not prevail. Such a course of action was at least not barred by the Bank Merger Act.

The issue of the applicability of the antitrust laws to bank mergers was settled in the courts (see Table III). The Supreme Court in the Philadelphia Bank Case (1963)² and the Lexington Bank Case (1964)³ ruled that bank mergers approved by Federal banking agencies could be challenged under antitrust laws. In the former case, the court held that the proposed merger of two large Philadelphia banks, which would have resulted in a single bank controlling 36 percent of bank deposits in the four-county area of Philadelphia, was of a sufficiently anticompetitive nature as to be in violation of Section 7 of the Clayton Act. In the Lexington case, the court ruled that the Sherman Act also applied to bank mergers.

The *Bank Merger Act of 1966*, an amendment to the Bank Merger Act of 1960, was enacted in 1966 to reconcile differences in interpretation between the courts, which emphasized the

²United States v. Philadelphia National Bank, *et. al.*, 210 F. Supp 348 (1962); 83 S. Ct. 1715 (1963).

³United States v. First National Bank & Trust Company of Lexington, *et. al.*, 208 F. Supp. 457 (1962); 84 S. Ct. 1033 (1964).

TABLE III

Key Supreme Court Decisions in Bank Merger Cases

Philadelphia Bank Case (1963)

The Supreme Court declared bank mergers to be subject to the provisions of the Clayton Act. A merger violating the antitrust laws could not be upheld on the basis of convenience and needs considerations.

Lexington Bank Case (1964)

The Supreme Court ruled that bank mergers were to be subject to the provisions of the Sherman Act.

Provident Bank Case and First City Bank Case (1967)

The Supreme Court, in a single opinion, ruled that the Department of Justice need only challenge a bank merger on the grounds of a violation of the antitrust laws. Furthermore, the decisions of the regulatory agencies were not to be binding on the courts. The defendant banks, in seeking to justify an anticompetitive merger, were assigned the responsibility of showing that the convenience and needs considerations of the merger outweighed its anticompetitive effects.

Third National Bank Case (1968)

The Supreme Court ruled that a public interest defense of an anticompetitive merger would not be considered valid unless the defendants were able to prove that the gain expected from the merger could not reasonably be attained through other means.

Phillipsburg Bank Case (1970)

The Supreme Court ruled that mergers involving two directly competing banks, regardless of how small they are, may violate the antitrust laws.

monopoly or attempt to achieve that end in banking in any section of the country. However, if the proposed merger was likely to result in a substantial reduction of competition, but not one of monopolistic proportions, the agencies could recommend approval under certain circumstances. Approval would be justified if the anticompetitive effects were "clearly outweighed in the public interest by the probable effect of the transaction in meeting the convenience and needs of the community to be served." In bank merger cases involving less than substantially adverse competitive effects, the convenience and needs factors still had to outweigh any anticompetitive effects to warrant an approval. A merger's overall effect upon competition was to be evaluated in determining whether possible beneficial effects in some product markets could offset detrimental effects in others.⁴ The agencies were directed to continue consideration of the traditional "banking factors" in all cases.

In 1966, the Bank Holding Company Act of 1956 was similarly revised. In both amended acts, Congress affirmed the applicability of antitrust laws to bank mergers, but also softened their impact by providing for possible exceptions. A 30-day waiting period was required in the event of an approval during which the Department of Justice may sue to prevent the proposed merger or acquisition. Both the 1960 and 1966 Bank Merger Acts required advisory reports on the competitive factors from the banking agencies without jurisdiction over the merger and the Justice Depart-

⁴A merger, for example, might increase competition for large business loans while diminishing it for small loans. Furthermore, merging banks could argue that their combined size would permit them to enter new banking markets by offering additional services (e.g., trust services).

competitive factors, and the regulatory agencies, which attached relatively greater weight to the banking and convenience and needs factors than the courts. The amended Bank Merger Act assigned greater importance to the competitive factors than the original act. Congress made liberal use of language found in the Sherman and Clayton Acts. The responsible agency was directed not to approve any merger proposal that would result in a

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ment. Furthermore, the Department of Justice and the courts were directed to apply the same standards to bank mergers as did the bank supervisory agencies.

Until very recently, Federal legislation regulating the formation and expansion of bank holding companies has applied only to multiple-bank holding companies. In general, these bank holding companies were prohibited under the BHCA of 1956 from engaging in any business other than banking and managing banks. The nonbanking subsidiaries of *one-bank* holding companies were exempt from Federal regulation under both the BHCA of 1956 and the 1966 amendment to the act. At the end of 1970, the President signed into law a bill that extends Federal regulation to corporations and others owning 25 percent or more of one bank.⁵ This legislation gives the Federal Reserve Board a substantial amount of discretion in exercising its authority to regulate one-bank holding companies.

JUDICIAL INTERPRETATION OF THE BANK MERGER ACT OF 1966

The Provident Bank Case (1967)⁶ and First City Bank Case (1967)⁷ were the first cases to come before the Supreme Court under the Bank Merger Act of 1966. The Comptroller of the Currency approved both of these mergers. In the former case, the merging banks accounted for 14 percent of the commercial bank deposits in a

⁵See "Pending Federal Legislation Concerning One-Bank Holding Companies," *Economic Commentary*, Federal Reserve Bank of Cleveland, August 31, 1970.

⁶*United States v. Provident National Bank, et. al.*, 262 F. Supp. 297 (1966); 87 S. Ct. 1088 (1967).

⁷*United States v. First City National Bank of Houston, et. al.*, Supp. 397 (1966); S. Ct. 1088 (1967).

market (comprising a four-county area) in which the five largest commercial banks controlled 71 percent of the deposits. In the latter case, the combined market share of the merging banks, the largest and sixth largest banks in Houston, was estimated to be 32 percent of bank deposits in Harris County, where the five largest banks accounted for 66 percent of the deposits.

In both cases, Federal district courts had dismissed the complaints of the Department of Justice. They were appealed to the Supreme Court and decided on March 27, 1967, in a single opinion reversing the district courts. In its decision, the Supreme Court answered two major procedural questions. The court asserted that the Department of Justice need only challenge a bank merger on the grounds of a violation of the antitrust laws. The Department of Justice was not required to prove a violation of the Bank Merger Act of 1966. However, the court also recognized that the Bank Merger Act of 1966 provided a public interest exception that might legalize mergers which, if judged solely on a competitive basis, would otherwise be illegal. It ruled that the burden of proof to establish that the anticompetitive effects of a merger were outweighed by convenience and needs considerations rested with the defendant banks. Furthermore, the Supreme Court supported the contention of the Department of Justice that the opinion of the Comptroller of the Currency or any banking regulatory agency was not binding on the courts. The courts, which had primary jurisdiction over bank merger cases, were to make a fresh review of all the evidence presented in a case.

The Crocker-Anglo Citizens Bank Case (1967)⁸ involved a merger between the fifth and seventh

⁸*United States v. Crocker-Anglo National Bank, et. al.*, 263 F. Supp. 125 (1966); 277 F. Supp. 133 (1967).

largest banks in California. One bank operated primarily in northern California (San Francisco Bay area) and the other operated in southern California (metropolitan Los Angeles). However, the two banks had offices in Ventura County, which is adjacent to Los Angeles. A California district court found that the defendant banks were not in actual competition with each other. Furthermore, the court rejected the contention of the Department of Justice that the merger would have eliminated potential competition between the two banks, a possibility permitted by California's statewide branching laws. The district court based its decision upholding the merger partly on the grounds that the Crocker-Anglo National Bank would be in a stronger position to compete with the largest bank in the state after the merger that would make it the fourth largest bank. The Department of Justice did not appeal the decision.

One of the landmark Supreme Court decisions in the enforcement history of the Bank Merger Act of 1966 was handed down in the Third National Bank Case (1968).⁹ The case involved a merger between the second and fourth largest banks in Nashville (Davidson County), Tennessee. The merged bank would have held slightly less than 40 percent of the commercial bank deposits in Davidson County in which, before the merger, the three largest banks controlled 93 percent of the bank deposits. The merging banks were direct competitors. A Tennessee district court had approved of the merger, reasoning that the Nashville Bank and Trust Company, the bank to be acquired, was not a vigorous competitor and would not likely become one in the future. Since this bank's share of Nashville's banking business

had been slowly declining since 1960, the court held that merging it would have no adverse effect upon competition. The district court termed this bank a stagnant or "floundering bank" rather than a failing one.

The Supreme Court, in reversing the district court's decision, reaffirmed its earlier decisions in the Provident Bank Case and the First City Bank Case. In its decision, the court made it clear that both the regulatory agencies and reviewing courts should give suitable weight to the convenience and needs considerations to determine the overall effect upon the public interest of a bank merger. The court clarified and extended the position it had adopted in earlier cases concerning the burden of proving that a particular anticompetitive merger could still be in the public interest and, therefore, be exempt from antitrust laws. The court directed the party (defendants) seeking to justify this exception to be specific in describing and defining the value of the benefits of the merger. The convenience and needs factors specifically mentioned in the decision were greater lending capacity, providing an expanded range of banking services to the community, and solving the problem of weak management. More significantly, the court required the defendants to show that the gains expected from the merger could not reasonably be attained through other means. The case was sent back to the district court to reconsider the applicability of the Bank Merger Act of 1966.

The most recent major Supreme Court decision involving a bank merger was handed down in the Phillipsburg National Bank Case (1970).¹⁰ The

⁹United States v. Third National Bank of Nashville, *et. al.*, 260 F. Supp. 869 (1966); 88 S. Ct. 882 (1968).

¹⁰United States v. Phillipsburg National Bank and Trust Company, *et. al.*, 306 F Supp. 645 (1969); 90 S. Ct. 2035 (1970).

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proposed merger was between the third and fifth largest banks located in the two city area of Phillipsburg, New Jersey, and Easton, Pennsylvania (the two cities are situated directly opposite each other on the Delaware River). Although both banks operate offices only in Phillipsburg, the Supreme Court defined the relevant geographic market to include both cities because of their close proximity. Phillipsburg has only one other bank, which is smaller than either of the two involved in the merger. The merged bank would have controlled approximately 23 percent of the total commercial bank deposits in the two city area in which the two largest banks held 56 percent of the bank deposits. The deposit size of the banks attempting to merge (each one is under \$30,000,000) was significantly smaller than that of any of the banks involved in preceding cases in which a bank merger had been contested before the Supreme Court. Nevertheless, the banks were direct competitors, with main offices located across the street from each other.

A New Jersey district court had ruled in favor of the merger, which had been approved by the Comptroller of the Currency, asserting that it would have no measurable anticompetitive effect. The other two bank regulatory agencies and the Department of Justice had reported that the merger would have a significantly harmful effect on commercial banking competition in the relevant geographic market that they defined as the Phillipsburg-Easton area. This disagreement regarding the competitive effects of the merger stemmed from the much wider conception adopted by the Comptroller of the Currency (and later by the district court) of the relevant geographic and product markets in which the two banks competed. The Comptroller of the Currency

and the court defined the geographic market to include most of the Lehigh Valley (Phillipsburg-Easton accounted for only one quarter of this defined market area), in which more than 30 commercial banks were located and also evaluated competition from a number of nonbank financial institutions in that area. The Department of Justice had considered only commercial banking as the relevant product market.

The Supreme Court, in reversing the decision of the district court, ruled that the antitrust standards were as applicable to mergers involving directly competing small banks as they were to those in which large banks directly competed with each other. In reaching its decision, the court adopted the relatively narrow conception of the geographic and product market held by the Department of Justice. The court emphasized the preponderance of small deposit and loan accounts at both banks involved in the merger to indicate the narrow geographic scope of their competitive influence. The court reasoned that small bank customers are generally more likely than larger ones to establish their banking connections primarily on the basis of convenience. The Supreme Court also rejected the district court's assertion that competition should be analyzed in piecemeal fashion, on the basis of each of the submarkets (e.g., time and savings deposits, real estate loans) in which a bank competed, at times with nonbank financial institutions. The Supreme Court ruled that commercial banks, were unique in providing a wide variety of financial products and services and, therefore, were the only relevant financial institutions that should be included in the analysis of competition. The court concluded that the merger would have substantially lessened competition in the two city market area and would be in violation of the Clayton Act.

In returning the case to the district court for further consideration, the Supreme Court directed the lower court to reconsider the convenience and needs factors in the relevant geographic market (Phillipsburg-Easton). The district court had originally assessed these factors just in Phillipsburg. The district court was also directed to examine the adequacy of the attempts by the two banks to cope with their loan, trust, and personnel problems by methods other than merger.

Concluding Comments. On the basis of an analysis of the bank merger cases that have come before the Supreme Court since the passage of the Bank Merger Act of 1966, it would appear that no substantial changes in the legal interpretation of bank mergers could be attributed to the 1966 act. Basically, this act fused the Bank Merger Act with the Clayton Act.

Although the Bank Merger Act of 1966 was somewhat more explicit than the one passed in 1960, it still left a number of basic questions unanswered. For instance, the issue of the validity of employing the standard of changes in market concentration in assessing the competitive effects of all mergers was not settled.¹¹ In fact, no direct reference was made to any specific factors to be used in evaluating the competitive effects. Furthermore, the law did not facilitate a determination of

the overall competitive effects of a merger, since it did not contain standards that could be used to evaluate the relative importance of each of a bank's product markets. Another major source of ambiguity in the law concerned the degree to which a merger's probable benefits had to exceed its potentially harmful anticompetitive effects to justify an approval. Although the banking factors were listed in the BHCA of 1956 and both the 1960 and 1966 Merger Acts, the specific factors relating to the convenience and needs of the community to be served by the merged bank were not spelled out in detail.

The Supreme Court has continued to apply the usual Clayton Act standards of competition to bank mergers and has also continued to rely heavily upon statistical guidelines such as concentration ratios and numbers of firms in a market in measuring the anticompetitive results. It has also continued to rely on commercial banking as the only relevant line of commerce or product market by which to appraise bank mergers, excluding nonbank financial institutions from consideration. To date, the court has not sustained a convenience and needs defense in a single case. However, the court has indicated its willingness to accept a public interest defense if the defendants can show that any benefits clearly outweigh any adverse competitive effects and that these benefits are not attainable through any feasible alternative to merger. The court has traditionally evaluated the importance of the individual convenience and needs factors (e.g., greater lending limits, provision of trust services) according to the extent of unfulfilled need for them in the acquired bank's market.

¹¹The degree of competition in markets may be influenced by factors other than market structure. For example, the elimination of an aggressive bank would have a stronger anticompetitive effect than the elimination of a more passive competitor. A merger in a small town involving a weak bank that had been unable to compete successfully might substantially increase market concentration without appreciably reducing competition.



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