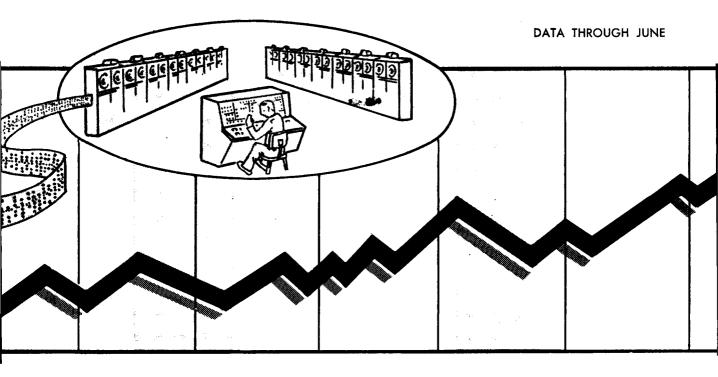
JULY 1963

Business Cycle Developments



U.S. DEPARTMENT OF COMMERCE



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Business Cycle Developments

JULY 1963

DATA THROUGH JUNE

Series ES1 No. 63-7

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Airmail delivery in the United States is available at an additional charge of \$5.25 per year.

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This report is prepared under the direction of Julius Shiskin, Chief Economic Statistician of the Eureau of the Census. His technical staff includes Feliks Tamm, Allan H. Young, and Betty Tunstall. Editorial supervision is provided by Geraldine Censky of the Statistical Reports Division.

The cooperation of the various government and private agencies which provide data for the report is gratefully acknowledged. Credit is given to these agencies in the list of series and sources on the back cover of this report.

Correspondence about technical subject matter should be addressed to the Office of the Chief Economic Statistician, Bureau of the Census, Washington, D.C. 20233.

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Preface

This report has been prepared to bring together many of the available economic indicators in convenient form for analysis and interpretation by specialists in business cycle analysis. The presentation and classification of series in this report follows the business indicators approach. The classification of series and the business cycle turning dates are those designated by the National Bureau of Economic Research (NBER) which, in recent years, has been the leader in this field of investigation. However, this publication is not to be taken as implying acceptance or endorsement by the Bureau of the Census or any other government agency of any particular approach to business cycle analysis. It is intended only to supplement other reports of the Department of Commerce that provide data for analyzing current business conditions.

The unique features are the arrangement of data according to their usual timing relations during the course of the business cycle and the inclusion of special analytical measures and historical cyclical comparisons that help in evaluating the current stage of the business cycle.

About 70 principal indicators and over 300 components are used for the different measures shown. The movements of the series are shown against the background of the expansions and contractions of the general business cycle so that "leads" and "lags" can be readily detected and unusual cyclical developments spotted. The exact number of series included for the total and important classes of series may vary from month to month because of additions of new series and revisions in the composition of indexes. Almost all of the basic data are available in published reports. A complete list of the series and the sources of data is shown on the back cover of this report. All the data shown are seasonally adjusted where seasonal variations appear to exist.

The chief merits of this report are the speed with which the data for indicators are collected, assembled, and published and the arrangement of the series for business cycle studies. Electronic computers are used for many of the computations, thus making early publication possible. Publication is scheduled for around the 20th of the month following the month of data.

New Features and Changes for This Issue

A limited number of changes are made from time to time to reflect the change from one stage of the business cycle to another, to show new findings of business cycle research and newly available economic series, or to emphasize the activity of a particular series or series group. Such changes may involve additions or deletions of series used, changes in placement in relation to other series, changes in components of indexes, etc. These changes will be listed in this section each month. The changes made in this issue are as follows:

1. Revisions, back to January 1960, are shown throughout the report for the following series: 16, 17, 21, 22, 49, 50, 52, 57, 62, 63, and 95. Revisions, back to January 1962, are shown for series 53. These changes reflect periodic revisions in national income accounts made by the Office of Business Economics.

2. The series on industrial production (series 47) and the diffusion index for this series (D47) have been revised for the period, January to December 1962, based on revisions of the Federal Reserve Board.

3. Table 6 showing the directions of change has been redesigned to include changes over 1-month and either 3- or 5-month spans, depending upon the irregularity of the series. However, the directions of change are shown for only the most recent 12 months.

4. Diffusion indexes D5, D6, and D54 shown in chart 2 and table 4 have been recomputed over a 5month span to bring out the business cycle pattern more clearly.

5. Seasonal factors for the period July to December 1963 have been included in appendix D.

6. Appendix G shows historical data for series 5, 6, and 24.

7. A series index to charts, tables and appendixes has been included to aid in finding series throughout the report.

The August issue of Business Cycle Developments is scheduled for release on August 21.

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BACKGROUND MATERIALS

Experimental work for this report was carried out in collaboration with the National Bureau of Economic Research which is responsible for much of the early research in this field. The book, "Signals of Recession and Recovery," contains an explanation of research findings helpful in interpreting current cyclical trends, a more detailed description of the indicators and measures used, and additional historical data. This book was issued as Occasional Paper 77 of the National Bureau of Economic Research, 261 Madison Avenue, New York 16, N.Y. (207 pages, price \$3). Other references, both to historical studies and current interpretations of the indicators, appear in this book.

Descriptions and Procedures

Business Cycle Series

Intensive research over many years has provided a record of the typical sequence of changes in economic processes during a business cycle; more specifically, a list of significant series that usually lead, those that usually move with, and those that usually lag behind cyclical movements in aggregate economic activity. The series have been grouped, in accordance with the NBER classification, as "leading," "roughly coincident," or "lagging" indicators. In addition, other series are included in this report for a more complete coverage of the national economy. The series are described as follows:

NBER Leading Indicators.—Around 30 series usually reach peaks or troughs before those in aggregate economic activity as measured by the roughly coincident series (see below). For this reason, they are designated as "leading" series. One group of these series pertains to activities in the labor market, another to orders and contracts, and so on.

NBER Roughly Coincident Indicators.—About 15 series are direct measures of aggregate economic activity or move roughly together with it; for example, nonagricultural employment, industrial production and retail sales. For this reason they are referred to as "roughly coincident" series.

<u>NBER Lagging Indicators.</u>—Some series, such as new plant and equipment expenditures and manufacturers' inventories, usually have reached turning points after they were reached in aggregate economic activity, and for this reason, they are designated as "lagging" series.

Other series. -Additional U.S. series with business cycle significance are also shown. Some of these series, such as change in money supply, merchandise trade balance, and cash surplus or deficit, represent important factors in the economy, but they have not qualified as indicators for various reasons, such as irregularity in timing. Finally, industrial production indexes for several countries which have important trade relations with the United States are presented.

Method of Presentation

Data are shown in this report in three general categories, as follows:

Basic data (chart 1 and table 1).—Over 50 business cycle indicators and 20 additional series with business cycle significance are included. Together they provide a broad view of current and prospective business cycle fluctuations in the economy as well as the basis for making an economic interpretation of these fluctuations.

<u>Analytical measures</u> (charts 2-3 and tables 2-6). — These are measures which aid in forming a judgment of (1) the magnitude of current changes compared to previous changes, (2) the imminence of a turning point in the business cycle, and (3) the extent of current changes in different parts of the economy. They also aid in pointing to developments in particular industries and places.

<u>Cyclical patterns</u> (charts 4-5 and tables 7-9).— The current cyclical change is compared with changes at corresponding stages of earlier cycles. These comparisons are made in different ways depending upon the phase of the business cycle.

In addition to the data shown as part of the regular report, certain appendix materials are presented. These materials include historical data, key information, and adjustment factors.

Designation of Business Cycle Turning Points

The historical business cycle turning points are those designated by the NBER. They mark the approximate date when aggregate economic activity reached its cyclical high or low levels. As a matter of general practice, a business cycle turning point will not be designated until at least 6 months after it has occurred.

Seasonal Adjustments

Official seasonally adjusted data are used in this report wherever they are available. However, for the special purposes of business cycle studies, a number of series that are not ordinarily published in seasonally adjusted form are shown on a seasonally adjusted basis in this report. These series are as follows:

- 4. Number of persons on temporary layoff, all industries
- 5. Average weekly initial claims for unemployment insurance, State programs
- 9. Construction contracts awarded for commercial and industrial buildings, floor space

- 13. Number of new business incorporations
- 14. Current liabilities of business failures
- 15. Number of business failures with liabilities of \$100,000 and over
- 17. Price per unit of labor cost index
- Profits (before taxes) per dollar of sales, all manufacturing corporations
- 30. Nonagricultural placements, all industries
- 55. Index of wholesale prices, all commodities other than farm products and foods
- 62. Index of labor cost per unit of output, total manufacturing
- 81. Index of consumer prices
- 82. Federal cash payments to the public
- 83. Federal cash receipts from the public
- 84. Federal cash surplus or deficit
- 90. Defense Department obligations, procurement
- 91. Defense Department obligations, total
- 92. Military prime contract awards to U.S. business firms
- 97. Backlog of capital appropriations, manufacturing
- 128. Japan, index of industrial production

Seasonal adjustments for these series were developed by either the Bureau of the Census or the NBER. The adjustment factors used are shown in the appendix table D, except for series 97 which is the sum of seasonally adjusted components, and series 9 which is based on unpublished source data. Seasonally adjusted data prepared by the collecting agency will be substituted for the series mentioned above whenever they are published.

MCD Moving Averages

MCD (months for cyclical dominance) is an estimate of the appropriate span over which to observe the cyclical movements in a monthly series. This span is usually longer than a single month because month-to-month changes are often dominated by erratic movements, but shorter than the frequently used 12-month span (change from the same month a year ago), and is different for different series (see appendix C for MCD values and method of computation).

MCD is the first interval of months for which the average amplitude of the cyclical factor is greater than that of the irregular factor and remains so. It is small for smooth series and large for irregular series. The differences between moving averages of the period equal to MCD are commensurate with the differences between seasonally adjusted values separated by the same MCD span; thus, the month-to-month differences in a 3month moving average are commensurate with differences in seasonally adjusted values over 3-month spans. MCD moving averages all have about the same degree of smoothness. Consequently, MCD moving averages of highly irregular series, such as business failures and Federal cash payments, will show their clyclical movements about as clearly as the seasonally adjusted data for such smooth series as industrial production and personal income.¹ MCD moving averages are shown for some series in chart 1. To provide an indication of the variation about these moving averages, seasonally adjusted data are also plotted for years beginning with 1960.

Because of advance reporting and preliminary seasonal factors, the MCD's for current data are usually larger than those computed from historical series and shown in appendix C.

Analytical Measures of Current Change

Four kinds of analytical measures are presented—rates of change, diffusion indexes, timing distributions, and direction-of-change tables. These measures aid in forming a judgment of the magnitude of current changes compared to previous changes, the imminence of a turning point in the business cycle, and the extent of current changes in different parts of the economy. They also point to developments in particular industries and places.

Rates of change.— There is considerable interest in the rate of acceleration during expansions and the rate of retardation during recessions.² For this reason, rates of change for the principal monthly and quarterly business cycle series are included in table 2 of this report. Rates of change are helpful in judging and appraising trends of acceleration or retardation in a current business cycle phase, despite the fact that the erratic nature of month-tomonth rates of change often makes it difficult to determine the significance of a change until some months after it has occurred. For series, such as unemployment and layoffs, which usually move down during expansions and up during recessions, the changes are inverted so that, in table 2, rises are shown as declines and declines as rises.

<u>Diffusion indexes</u>.— Diffusion indexes are simple summary measures of groups of economic series. They express, for a given group, the percent of the series which has risen over given intervals of time. Their turning points tend to lead the turning points of the aggregate and they measure how widespread a business change is. They vary between the limits of 100 (all components rising) and zero (all components falling). Widespread increases are often associated with rapid growth in aggregate activity, and widespread declines with sharp reductions.

The diffusion indexes in this report are grouped according to the timing classification of the NBER. For monthly series, two comparison intervals are used: 1-month intervals (January-February,

¹For a more complete description of MCD and its use in studying economic series, see <u>Business</u> <u>Cycle Indicators</u>, Geoffrey H. Moore, editor; National Bureau of Economic Research, Inc., vol. 1, ch. 18, "Statistics for Short-Term Economic Forecasting," by Julius Shiskin (Princeton University Press: 1961). ²Various terms are used to describe the phases

'Various terms are used to describe the phases of the business cycle. In this report both "contraction" and "recession" are used to describe the declining phase. No difference in meaning is intended. February-March, etc.) and 3-month intervals January-April, February-May, etc.). The indexes based on 1-month intervals are more "current" but they are also more irregular than the 3-month indexes (see chart 2). Quarterly series are compared over 1-quarter intervals and 4-quarter intervals.

Series numbers preceded by the letter "D" designate diffusion indexes. When one of these numbers corresponds to a basic indicator series number, it means that the diffusion index has been computed from components of the indicator series; for example, the diffusion index numbered "D6" is computed from components of series number 6. Diffusion indexes not computed from basic series components are assigned new numbers.

This report includes 29 diffusion indexes based on 16 indicator series (see tables 4 and 5). Seventeen of these indexes are computed by the Bureau of the Census utilizing nearly 300 components of 9 indicators (D1, D5, D6, D19, D23, D41, D47, D54, and D58). Indexes for 8 of these indicators show comparisons for components over both 3-month and 1-month spans while, for 1 indicator (D58), comparisons are over 1-month spans only. The 12 other diffusion indexes are based on 7 indicators closely related to the above 9 indicators. They include two indexes on capital appropriations (602 companies and 15 industries)-NBER indexes based on data from the National Industrial Conference Board; the Chicago Purchasing Agents Association index based on monthly reports of changes in profits (200 companies); the First National City Bank of New York index based on quarterly profit reports (700 companies); and 8 NBER diffusion indexes-actual and anticipated-for the following: Manufacturers' sales (800 companies) and new orders (400 companies), based on data from Dun and Bradstreet, Inc.; carloadings (19 commodity groups), based on data from the Association of American Railroads; and new plant and equipment expenditures (16 industries), based on data from the Office of Business Economics and the Securities and Exchange Commission.

Diffusion indexes that are based on anticipations show what proportion of business enterprises (or industries) are forecasting a rise in activity. Comparisons with indexes based on actual changes show whether there is a generally optimistic bias or a lag in recognition of actual developments.

Diffusion indexes constructed on the basis of current data are often highly irregular and require careful judgment in their use and interpretation.

<u>Timing distributions.</u>—Distributions of current "highs" appear to be helpful in appraising the evidence for a prospective business cycle turning point. Each month a timing distribution is constructed which shows the number of series reaching high values during each month of the expansion. The timing distribution is summarized by showing the number of series reaching new highs and the percent currently high for each of several recent months (see table 3). Similar distributions of "lows" will be prepared during contractions.

To provide historical perspective for interpreting the distribution of current highs, such distributions are also shown for leading and coincident series as they appear 3 months and 6 months before the peak of each of the earlier post-World War II expansions and at their peaks.

To compile timing distributions for the current cyclical phase, the data for the principal business cycle indicators are scanned each month. During a business cycle expansion, the high value for each series is recorded. (For inverted series, that is series with negative conformity to the business cycle, low values are taken during expansions and high values during contractions.) If the values for 2 or more months are equal, the latest date is taken as the high month. In selecting these values, erratic values are disregarded, although it is, of course, difficult to identify an erratic value, particularly for the current month.

The letter "H" is used in the basic data table (table 1) to identify and highlight the current high values during the expansion, and the letter "L" to identify the low values preceding the current highs. The highs designated during the current cyclical phase will not necessarily be the specific cycle peaks. Thus, as new high levels are reached during the expansion, the current highs will be moved ahead. On the other hand, lows preceding current highs are usually specific cycle troughs. Comparisons of the current timing distributions with those for periods around earlier business cycle troughs and peaks are helpful for appraising the evidence of a prospective business cycle turning point.

Interpretations of timing distributions must be made in light of the fact that a contraction following a high value reached several months ago may be the result of an erratic fluctuation and that a new high may be reached in some future month. In short, when the percent currently high falls below 50 percent for both the leading and roughly coincident series, this does not necessarily signify that a business cycle peak has occurred. It may do so, but it may also simply reflect a short reversal in the upward movement.

Direction-of-change tables.—Direction-of-change tables show directions of change ("+" for rising, "o" for unchanged, and "-" for falling) in the components used for the diffusion indexes. These tables provide a convenient view of changing business conditions and are helpful in making an economic interpretation of the movements in the more highly aggregated statistical measures. That is, they show which economic activities went up, which went down, and how long such movements have persisted. They also help to show how a recession or recovery spreads from one sector of the economy to another.

Directions of change for each index component are shown for consecutive months and, depending upon the irregularity of the series, for either 3- or 5-month spans.

Comparisons of Cyclical Patterns

In forming a judgment about the current intensity and probable ultimate character of a cyclical fluctuation, some economists find it helpful to compare the behavior of the indicator series and diffusion indexes in the current business cycle phase with their behavior during the corresponding phase of previous business cycles. These comparisons are made in different ways depending upon the phase of the business cycle.

Contractions are compared by computing changes over the span from the most recent business cycle peak to the current month and over equal spans from previous reference peaks. This type of comparison is designated as representing changes from reference peak levels and from reference peak dates.

Expansions may be compared by measuring changes from the immediately preceding peak levels. In this report the current expansion is related to the May 1960 reference peak. For earlier expansions, percentage changes are also computed from their respective reference peaks to dates which are the same number of months beyond the succeeding reference troughs as the current expansion is beyond its reference trough. This type of comparison is designated as representing changes computed from reference peak levels and from reference trough dates. Although the spans from reference trough dates are the same for each expansion, the spans from the preceding peak dates are different, depending on the length of the contractions. This type of comparison answers the question whether, and by how much, the current level of activity exceeds or falls short of the level at the preceding business cycle peak, a given number of months after the recovery began, and how the current situation compares in this respect with earlier recoveries.

Expansions also may be compared by computing changes from reference trough levels and from reference trough dates. This type of comparison measures the extent of the rise from the trough level so many months after the upswing began.

In addition to comparing cyclical fluctuations on the basis of reference dates (which are the same for all series), comparisons are made on the basis of <u>specific peak and trough dates identified for</u> <u>each series</u>. For example, the specific peak in retail sales corresponding to the May 1960 reference peak is April 1960; the specific peak in stock prices is July 1959.

Recent performance in several individual indicators is compared graphically with that in earlier business cycles. In making graphic comparisons, the reference peak or trough levels are set equal to 100, and the reference peak or trough dates are alined depending on the phase of the business cycle.

In order to make historical comparisons, it is frequently necessary to use data for a closely related series for cycles prior to the initial date covered by the series used currently. Such comparisons are, therefore, to be considered only approximate. Nearly all series have undergone change in definition, coverage, or estimation procedure since 1919. The principal cases of this sort are as follows:

- 7. New private nonfarm dwelling units started (prior to 1939: Residential building contracts, floor space)
- Number of employees in nonagricultural establishments (prior to 1929: Employment in manufacturing)
- 52. Personal income (prior to 1929: Quarterly data as published by Barger and Klein)
- 54. Sales of retail stores (prior to 1935: Department store sales)
- 62. Index of labor cost per unit of output, total manufacturing (prior to 1946: Production worker wage cost per unit).

Charts

Two types of charts are used to highlight the cyclical patterns of the business cycle indicators: Historical time series and cyclical comparisons.

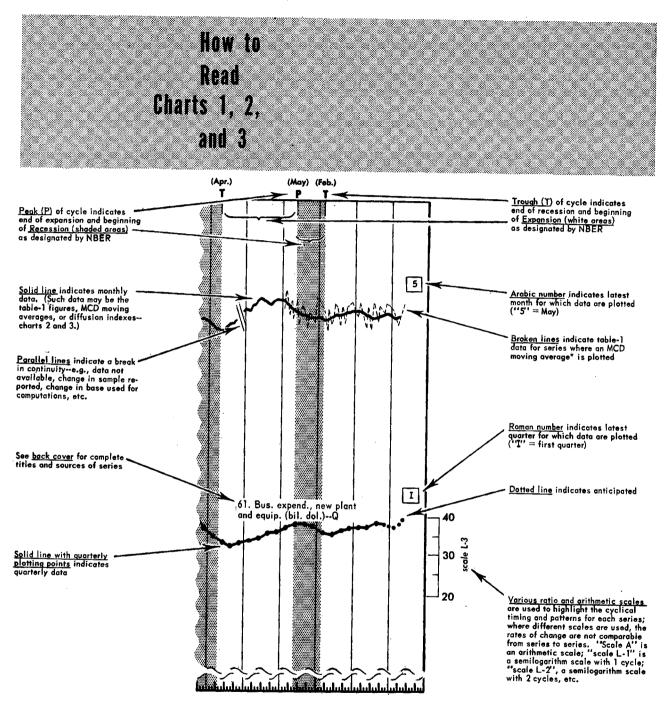
<u>Historical Time Series</u> (charts 1, 2, and 3). — These charts show the cyclical fluctuations of each series against the background of expansions and recessions in general business activity from 1948 to the current month. Shaded areas on the charts indicate periods of business cycle recession between business cycle peak dates (beginnings of shaded areas) and business cycle trough dates (ends of shaded areas). The shading for a new recession will be entered only after a trough has been designated.

Five ratio scales and several arithmetic scales are used to highlight the cyclical movements of the various series. The scale selected for each series is identified in the margin of the chart. Rates of change of various series can be compared with each other only where scales are identical. See the diagram, page 5, for additional help in using these charts.

Cyclical Comparisons (charts 4 and 5). — These charts compare the performance of each series during the current expansion or recession with that during the corresponding phase of previous business cycles. In these charts the usual date sequence followed in charts is disregarded, and instead the data are alined at a strategic point of the business cycle, either the trough or the peak. Thus these charts facilitate judgements on the vigor of a current expansion or the severity of a current recession relative to cyclical movements during the corresponding phases of previous cycles.

Two types of cyclical comparisons are made. Chart 4 compares the pattern of the current business or <u>reference cycle</u> (i.e., the cycle for aggregate economic activity) with movements over the corresponding phase of previous reference cycles. Chart 5 compares the pattern of the current <u>specific cycle</u> (i.e., the cycle for a particular series) with the movements over the corresponding phases of previous specific cycles in that series. In both charts, the trough dates are alined. In chart 4, the levels of the preceding peaks are also alined and in chart 5, the levels of the preceding troughs are also alined. See the section, "Comparisons of Cyclical Patterns", for more detailed descriptions of these comparisons.

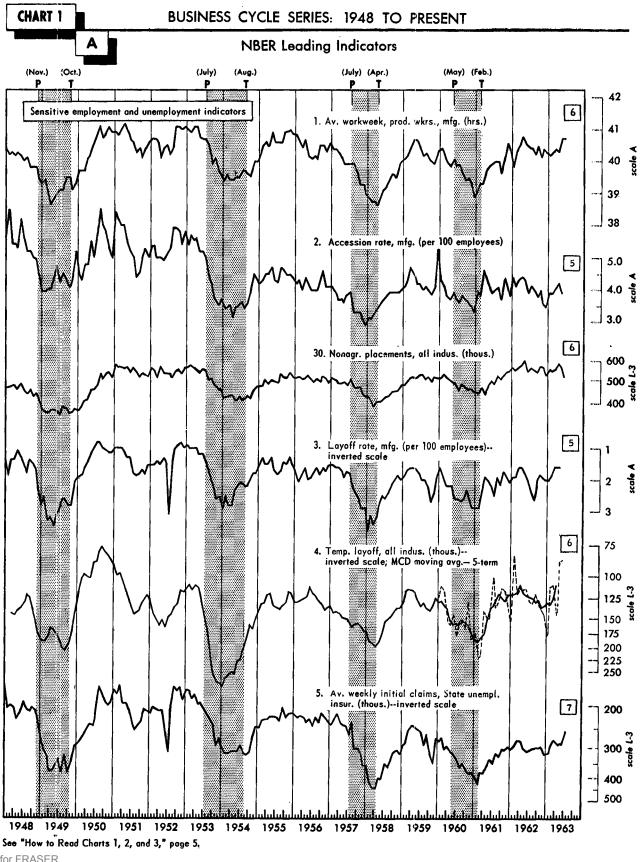
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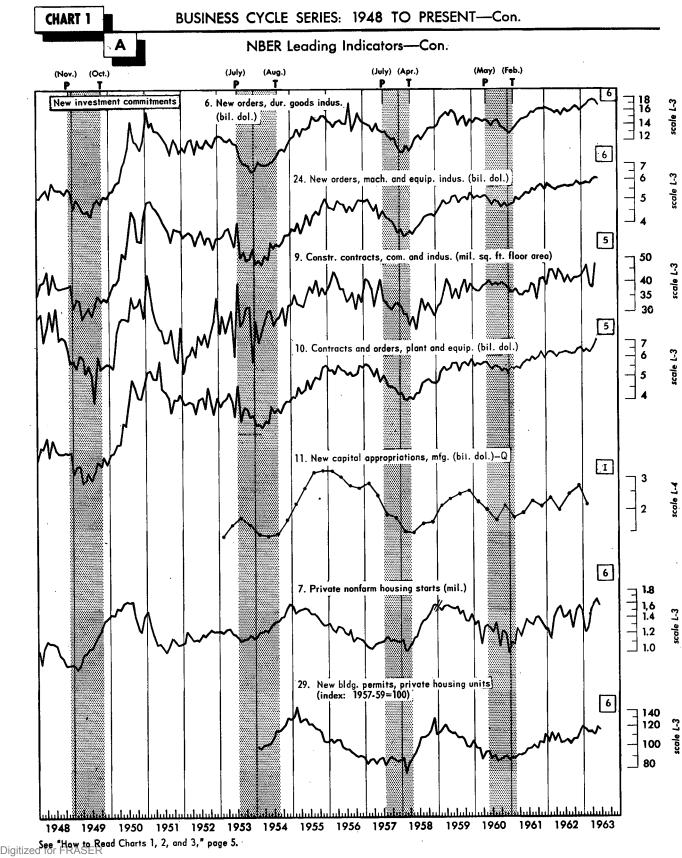
*Certain irregular series are shown in terms of their MCD moving averages. These series are noted. Such averages are plotted 2 months behind actual data for MCD 5-term moving averages. See text for description of MCD moving averages.

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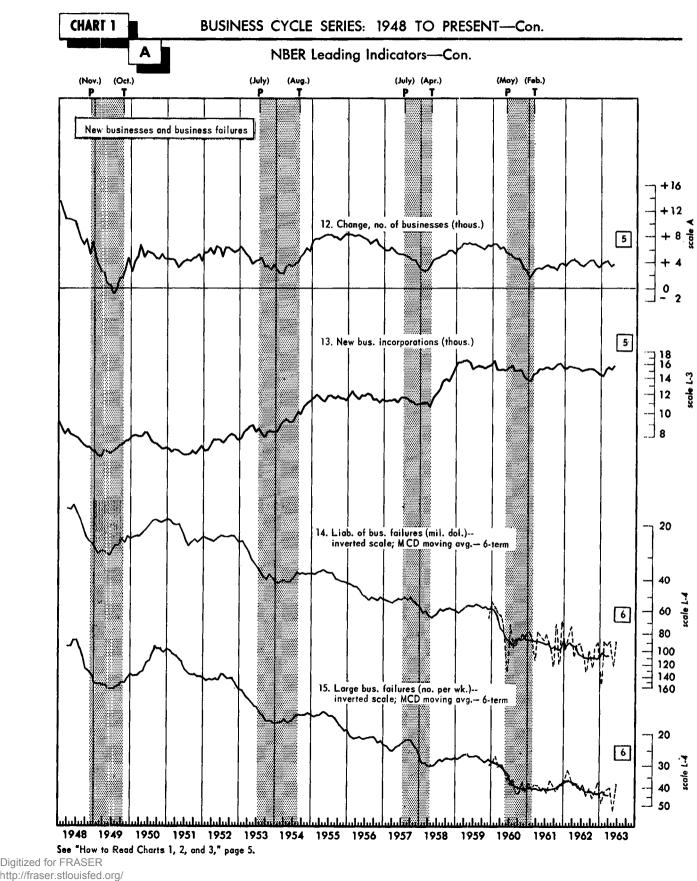
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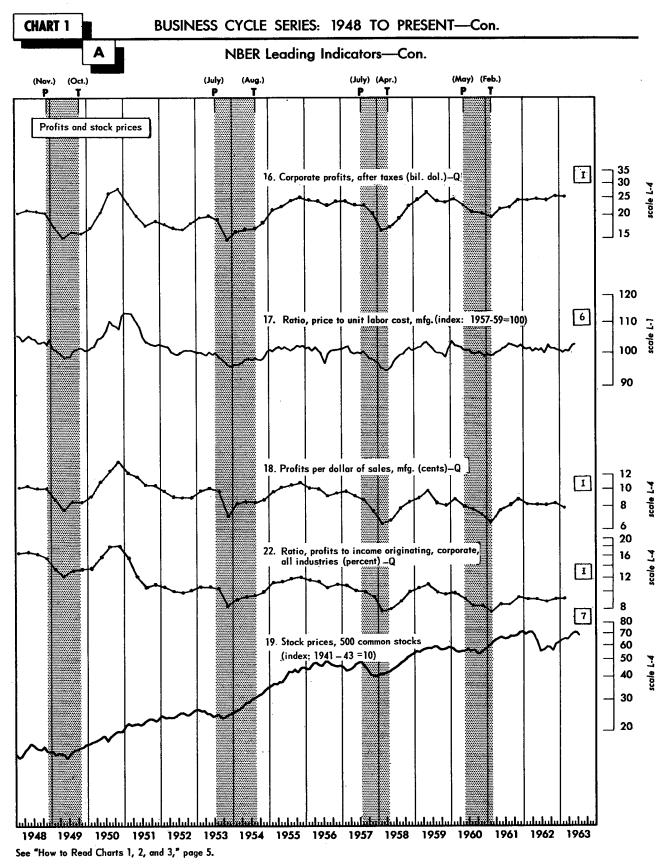
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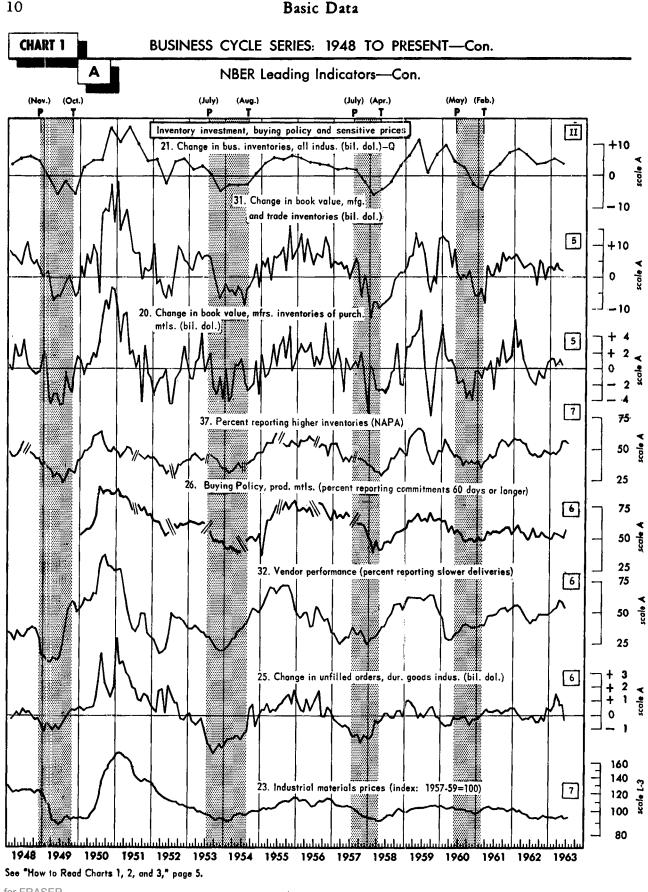
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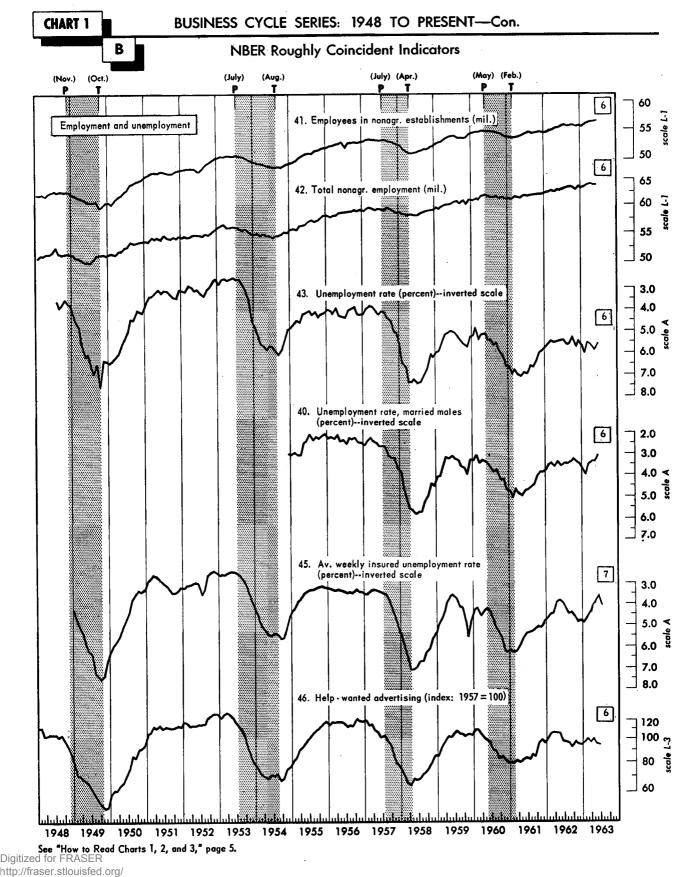


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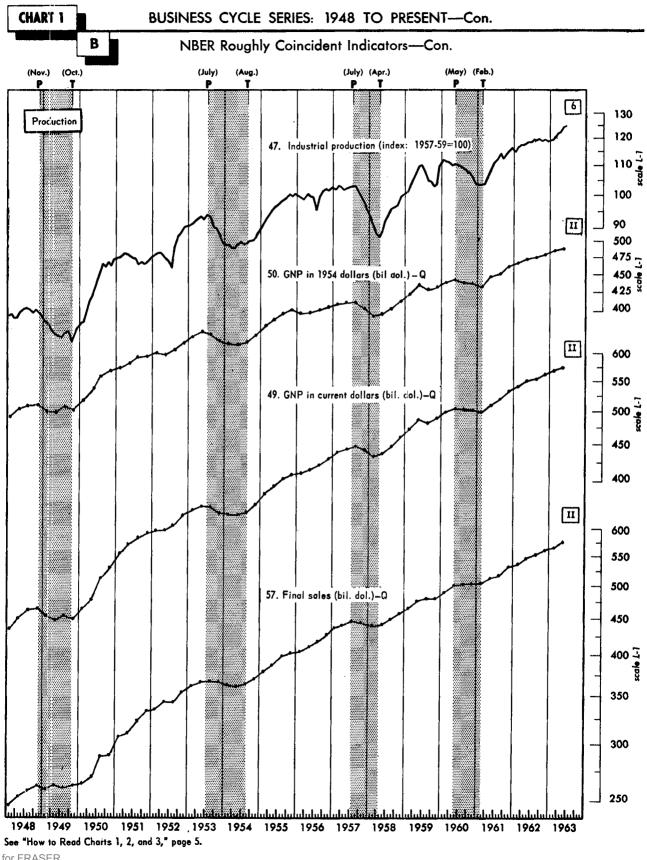


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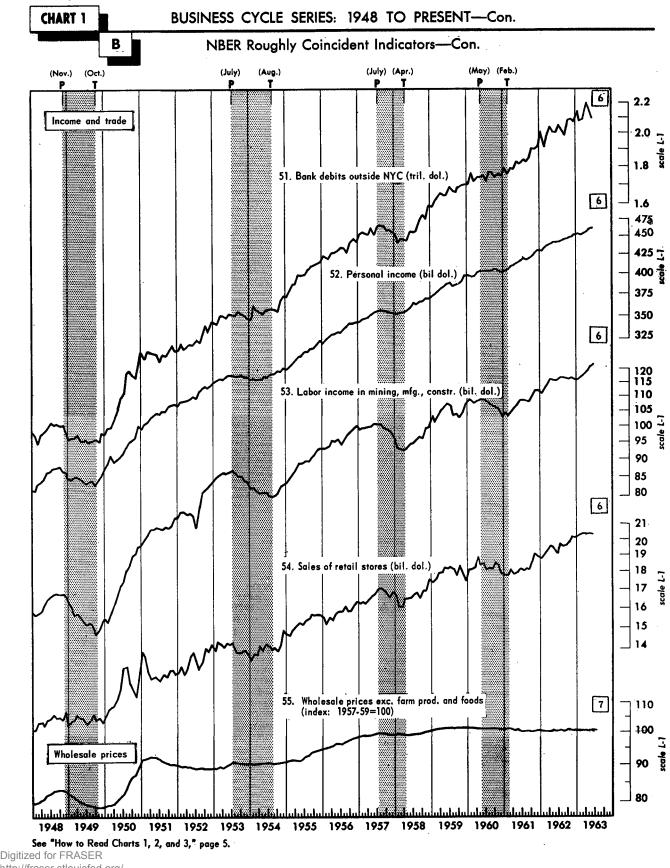


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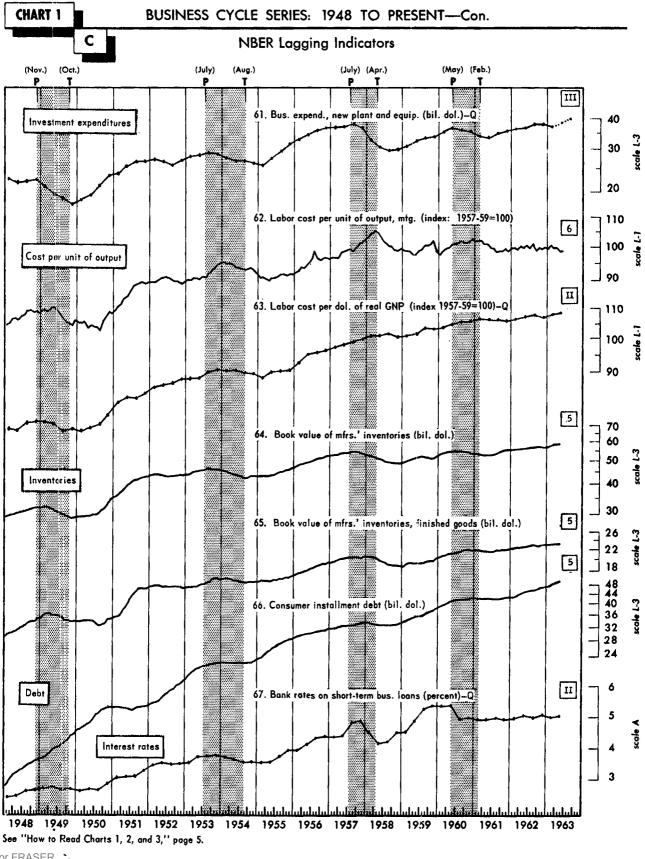
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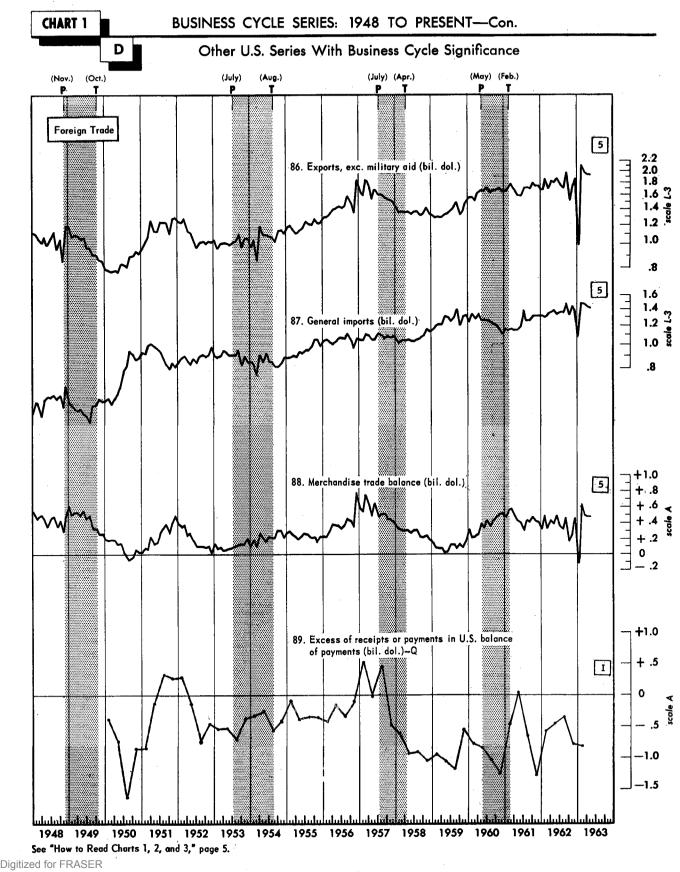
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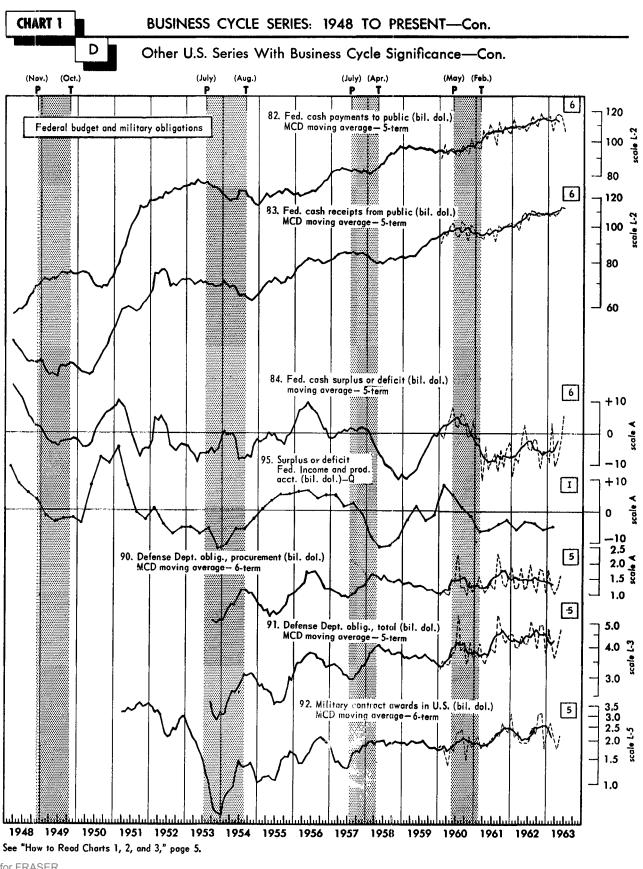
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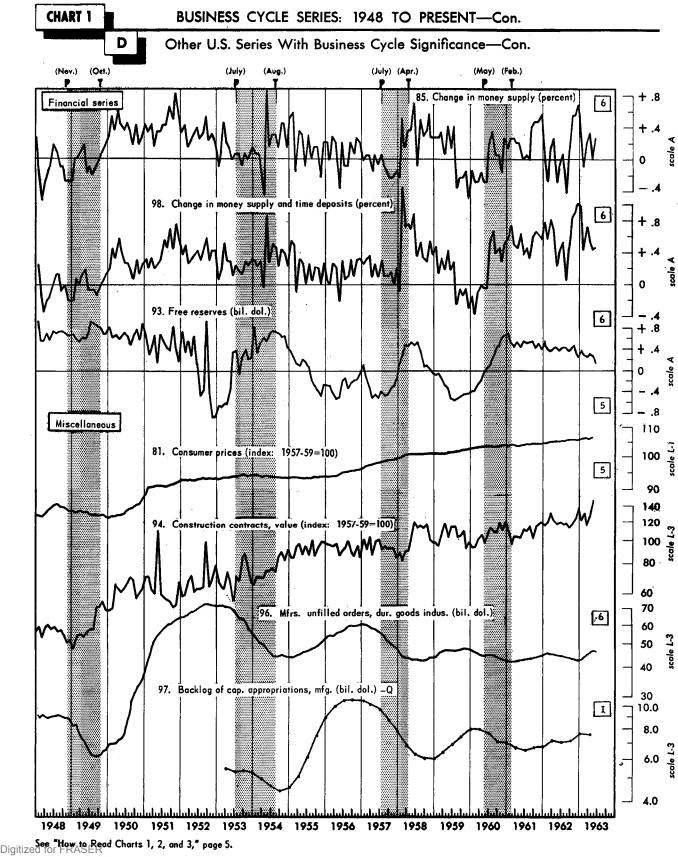
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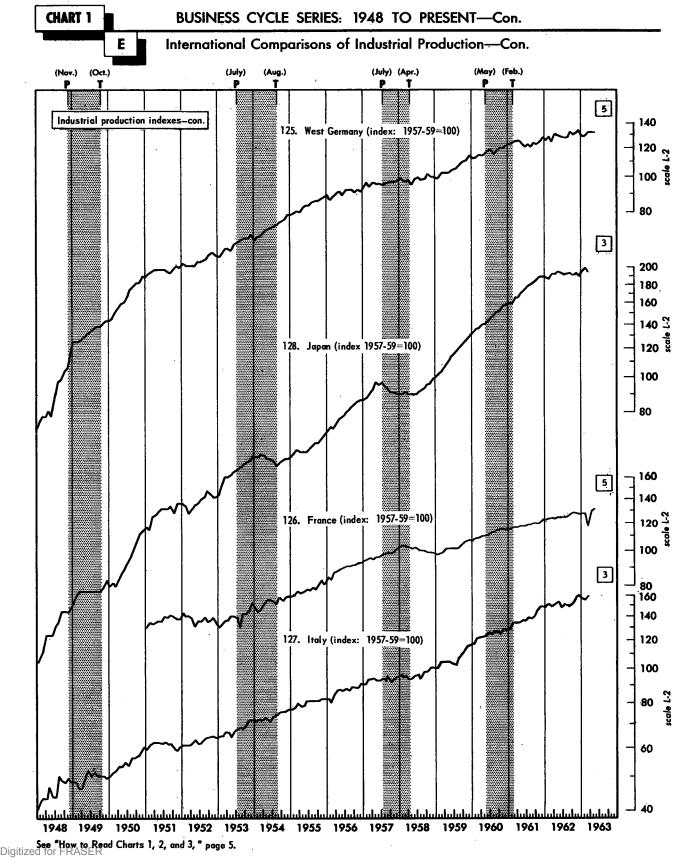


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CHART 1 BUSINESS CYCLE SERIES: 1948 TO PRESENT-Con. E International Comparisons of Industrial Production (Nov.) (Oct.) (May) (Feb.) (July) (Aug.) (July) (Apr.) P т Т D т 4 Industrial production indexes 140 120 121. OECD countries (index: 1957-59=100) ۱00 <u>ج</u> 80 sca 60 140 4 122. United Kingdom (index: 1957-59=100) 120 100 80 60 4 123. Canada (index: 1957-59=100) 120 100 ⁷⁻ 100 ²⁻ 1.80 6 140 47. United States (index: 1957-59=100) 120 **ન** 100 80 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 See "How to Read Charts 1, 2, and 3," page 5. Digitized for FRASER

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Basic Data



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Table 1.-BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1960 TO PRESENT

Series are seasonally adjusted except those that appear to contain no seasonal movement. Unadjusted series are indicated by an asterisk (*). Low values preceding current highs are indicated by () and current highs, by (H); the reverse is true for inverse series (series 3, 4, 5, 14, 15, 40, 43, and 45). Series numbers are for identification only and do not reflect series relationships or order. Complete titles and sources are shown on the back cover. The "r" indicates revised; "p", preliminary; "e", estimated; "a", anticipated; and "NA", not available.

	NBER Leading Indicators								
Year and month	1. Average workweek of production workers, manufac- turing	2. Accession rate, manu- facturing	30. Nonagri- cultural placements, all indus- tries	3. Layoff rate, manu- facturing	4. Number of persons on temporary layoff, all industries ¹	5. Avg. weekly initial claims for unemploy- ment insurance, State programs	mfrs.' new orders, dur- able goods	24. Value of mfrs.' new orders, ma- chinery and equipment industries	
	(Hours per	(Per 100	(7)	(Per 100	(7)	(779)	(747 4-7)	(7) 1-7)	
1,960	prod. wkr.)	employees)	(Thous.)	employees)	(Thous.)	(Thous.)	(Bil. dol.)	(Bil. dol.)	
January	40.4	4.3	506	1.6	122	281	14,19	~5.04	
February	40.1	4.1	535	1.9	110	271	14.80	5.14	
March	39.9	3.8	513	2.2	116	303	14.64	5.06	
April	39.8	3.7	504	2.2	156	294	14.47	5.12	
May June	40.1 39.9	3.9 3.7	494 482	2.2 2.6	160 145	316 322	14.68 14.34	5.17 5.01	
July	39.9	3.6	460	2.6	177	335	13.84	4.78	
August	39.6	3.8	488	2.7	154	363	14.41	4.96	
September	39.4	3.7	473	2.6	153	351	14.62	4.87	
October	39.5	3.6	460	2.3	166	373 385	13.74	©4.65 4.81	
November December	39.3 ©38.5	3.5 ©3.3	461 455	2.6 2.9	128 183	381	13.60 13.22	4.66	
1.961	0		,						
January	39.0	4.0	443	2.9	. 173	393	Q12.88	4.79	
February	39.3	3.8	443	©2.9	D 222	.0429	13.36	4.80	
March	39.3	H 4.6	_ 467	2.3	215	379	13.82	5.10	
April	39.7	4.4	©440	1.9	141	381	14.38	4.99	
May June	39.8 39.9	4.2 3.9	478	2.0	150	358	14.79	5.17	
July.	40.0	4.0	497 481	2.2 2.5	151 101	334 348	14.90 15.02	5.30 5.28	
August	40.0	4.1	519	ĩ.9	136	316	15.63	5.55	
September	39.6	3.7	502	2.2	127	329	15.74	5.45	
October November	40.2	4.4	527	1.7	113	304	16.07	5.59	
December	40.6 40.4	4.0 3.8	542 544	1.8 2.1	115 127	305 296	16.10 16.24	5.74 5.48	
962	40.4	5.0	244	~	1~7	2,00	10.14	9.40	
January	39.8	4.4	565	1.9	154	304	16.43	5.78	
February	40.3	4.1	550	1.9	H82	291	16.19	5.71	
March	40.5	4.3	568	1.6	118	279	16.00	5.59	
April May	₩40.8 40.6	4.4 4.3	578 11602	1.6 1.8	112 116	280 300	15.73 15.97	5.47 5.60	
June	40.5	3.9	546	2.0	110	309	15.44	5.62	
July	40.5	4.1	560	2.4	128	308	16.27	5.71	
August	40.2	4.0	551	2.6	131	303	15.91	5.60	
September	40.5 40.1	3:8 4.0	540 569	2.0 1.8	120 129	300 300	15.89 16.57	5.69 5,62	
November	40.4	3.6	563	1.0	139	298	16.34	5.85	
December	40.3	3.5	529	2.0	114	317	16.02	5.74	
1963		:							
January	40.2	3.9	558	2.0	179	316	16.71	5.75	
February March	40.3	3.9	547	1.8	112 108	295 El 200	17.09	5.89	
April	40.4 40.3	4.1 r4.2	550 582	1.6 r1.6	108 146	H 277 288	17.48 17.89	5.84 r6.01	
Мау	r40.7	p3.9	561	Hpl.6	87	287	r17.67	Mr6.16	
June	p40.7	(NA)	520	(NA)	85	288	p16.77	p6.06	
July August						² 253			
September									
October									
November									
December									

¹Beginning with April 1962, the 1960 Census is used as the benchmark for computing this series. Prior to April 1962, the 1950 Census is used as the benchmark. ²Week ended July 6, 1963.

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Table 1.--BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1960 TO PRESENT-Continued

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	NBER Leading IndicatorsContinued										
Year and month	9. Construc- tion contracts awarded for commercial and industrial buildings	10. Contracts and orders for plant and equipment	11. Newly ap- proved capital appropriations, 602 manufac- turing corpo- rations	7. New private nonfarm dwel- ling units started	29. Index of new private housing units authorized by local build- ing permits		13. Number of new busi- ness incor- porations				
1960	(Mil. sq. ft. floor space)	(B11. dol.)	(Bil. dol.)	(Ann. rate, thous.)	(1957-59=100)	(Thous.)	(Number)				
	37.32	5.56		1,302	98.3		16,561				
January February	36.93	5.69	2.24	1,366	97.9	+19	15,274				
March	36.73	5.61		1,089	88.1	•••	15,233				
April	38.73	5.72	•••	1,275	95.1	•••	15,280				
Мау		5.78	2.01	1,309	95.9	+17	15,176				
June	40.31	5.58	•••	1,264	88.5	•••	15,630				
July		5.39		1,209	91.6	•••	15,828				
August	39.38 38.96	5.58	©1.79	1,335 1,067	87.3 87.4	+14	15,114				
September	39.44	05.27	•••	1,007	89.9	•••	15,035				
November	39.44	5.39	2.11	1,206	91.4	+10	14,264				
December	38.15	5.28		© 987	D 87.1	•••	14,097				
1961					·						
January	36.21	5.53	•••	1,108	89.3	•••	@13,607				
February		5.45	1.82	1,087	89.4	©+ 6	14,570				
March	37.49	5.58	÷••	1,258	92.3	••••	14,658				
April	35.62	5.53		1,162	92.5		15,327				
May	©35. 16	5.73	1.92	1,278	93.0	+10	15,298				
June	36.73	5.90	•••	1,376	97.6 98.4	•••	15,431				
July August	36.57 39.32	6.13	2.24	1,303	101.2	+10	15,277				
September		5.97		1,397	97.4	•••	15,402				
October	33.88	6.16		1,413	103.1		16,035				
November	41.61	6.42	2.13	1,345	102.7	+10	16,149				
December	41.69	6.02	•••	1,255	111.6	•••	15,711				
1962											
January	38.99	6.34		1,247	103.9		15,279				
February	44.10	6.38	2.32	1,134	113.1	iii +ii	15,775				
March	45.19 40.87	6.31 6.11		1,407 1,521	105.3	•••	15,727				
Мау	45.39	6.27	2.00	1,566	103.2	图+12	15,363				
June	42.99	6.29	••••	1,399	104.0		14,990				
July	39.86	6.37	•••	1,447	106.1	•••	15,171				
August	42.65	6.29	2.43	1,500	102.8	+11	15,216				
September	39.90	6.24		1,261	107.3	•••	15,232				
October November	41.62 41.68	6.24 6.50	H 2.74	1,504 1,571	107.4	+11	15,121 14,892				
December	41.00	6.59		1,453	E 120.6		14,767				
1963											
January	44.94	6.36		1,220	117.3	•••	14,457				
February	46.98	6.51	p2.13	1,255	112.8	+11	15,398				
March	38.92	6.37	••••	1,510	112.9		15,604				
April May	37.87 田 47.95	r6.63	(NA)	r1,631	110.2 r120.5	(NA)	15,257 p15,739				
June		(NA)	(NA)	Hp1,663 p1,568	pl17.3	(102)	(NA)				
July	(144)	(145)	l	p1,00	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		(46)				
August											
September					1						
October	ł										
November	-										
December	<u> </u>	L	<u> </u>	1.	L		L				

Table 1,-BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1960 TO PRESENT-Continued

Series are seasonally adjusted except those that appear to contain no seasonal movement. Unadjusted series are indicated by an asterisk (*). Low values preceding current highs are indicated by () and current highs, by (); the reverse is true for inverse series (series 3, 4, 5, 14, 15, 40, 43, and 45). Series numbers are for identification only and do not reflect series relationships or order. Complete titles and sources are shown on the back cover. The "r" indicates revised; "p", preliminary; "e", estimated; "a", anticipated; and "NA", not available.

	NBER Leading IndicatorsContinued										
Year and month	liabilities	15. Business failures with liabilities of \$100,000 and over		17. Price per unit of labor cost index	18. Profits (before tax- es) per dol. sales, all mfg. corpo- rations	22. Ratio, profits to income orig- inating, cor- porate, all industries	19. Index of stock prices, 500 common stocks*	21. Change in bus. invento- ries, farm and nonfarm, after valuation ad- justment			
1960	(Mil. dol.)	(Number per week)	(Ann. rate, bil. dol.) Revised ¹	(1957-59= 100) Revised ¹	(Cents)	(Percent) Revised ¹	(1941-43=10)	(Ann. rate, bil. dol.) Revised ¹			
January	52.88	29		103.6	•••		58.03	·			
February	57.60	27	24.1	102.3	8.8	9.7	55.78	. +9.3			
March	61.57	30		101.9	•••	••••	55.02	•••			
April	63.71 76.52	30 32	22.6	101.4	8.0	9.1	55.73 55.22	+4.2			
May	©131.31	36		100.8			57.26				
June July	71.04	38	•••	100.4 100.4		•••	55.84				
August	94.66	36	20.9	99.9	7.8	8.4	56.51	+2.7			
September	86.02	.43		99.9			54.81				
October	85.98	Q 43		100.0	•••		Q53.73				
November	80.44	37	20.4	99.9	7.2	8.4	55.47	-2.3			
December	82.78	41		98.9	•••		56.80				
1961											
January	77.79	38		99.2	•••		59.72				
February	83.73	41	Q 19.2	Q98.9	D 6.6	©7.7	62.17	Q-4.3			
March	116.17	39		99.0			64.12				
April	76.88	39	•••	100.0			65.83	•••			
May	82.96	42	21.6	100.2	7.6	8.5	66.50	+1.1			
June	86.69	40	•••	100.9	•••		65.62	•••			
July	80.15	43		101.2	•••		65.44				
August	94.47	36	22.0	H102.6	7.9	8.5	67.79	+3.5			
September	126.12	39	•••	102.2	•••	•••	67.26	•••			
October	72.28	42		102.0	 III 0 6		68.00	+7.2			
November	119.93 1171.81	39 38	24.3	101.7 102.1	H8.6	₩9.3 ···	71.08 1.71.74	+7.2			
1962	<u></u>	-									
January	101.53	37	•••	101.2			69.07				
February	86.03	H 32	24.2	101.0	8.2	9.1	70.22	H+8.1			
March	74.89	36	•••	101.4		•••	70.29				
April	108.58	38	•••	100.6	•••	•••	68.05				
Мау	94.54	38	24.6	101.1	8.1	9.1	62.99	+6.5			
June	91.70	41	•••	100.7	•••	•••	55.63				
July	107.48	38		101.3	•••		56.97				
August	132.64	45	24.3	100.0	8.1	8.9	58.52	+3.6			
September October	103.73 122.39	40 46	•••	102.4	•••	•••	58.00	•••			
November	98.94	40	田25.5	101.3	8.3	9.1	60.04	+4.0			
December	90.41	37		101.3 100.9	•••	7.1	62.64				
1963				÷ .							
January	153.15	49		100.7			65.06				
February	90.04	42	25.4	100.0	7.9	9.1	65.92	+5.1			
March	93.49	41	•••	100.8	•••		65.67				
April	89.72	40		100.7		(NA)	68.76				
May	122.31 89.37	54 38	(NA)	102.0	(NA)	(NA)	70.14	+3.5			
June	16.60	ەر		102.4			70.11				
July							² 68.49				
August September											
October							l				
November											
December											
							I	L			

¹See "New Features and Changes for This Issue," page ii. ²July 18, 1963.

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	NBER Leading IndicatorsContinued											
Year and month	31. Change in book value of manufacturing and trade in- ventories, total	27. Change in book value of mfrs.' inven- tories, purchased materials		26. Buying pol- icy, production matls., percent reporting com- mitments 60 days or longer*	performance, percent reporting slower	25. Change in manufacturers' unfilled or- ders, durable goods indus- tries	23. Index of industrial materials prices*					
	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)	(Percent reporting)	(Percent reporting)	(Percent reporting)	(Bil. dol.)	(1957-59=100)					
1960	511. dot.)		reporting,	reporting	TeboLetuë)		(1997=99=100)					
January	+12.8	+4.6	48	64	44	-0.52	105.7					
February	+11.7	+1.5	58	64	30	-0.78	104.3					
March	+11.4	+0.8 +1.0	52 47	56	C 27	-0.77	102.4					
May	+3.2 +8.5	+1.0	47	61 55	28 32	-0.68	103.8					
June	+2.3	-1.6	44	57	34	-0.19	104.1 102.7					
July	-1.5	-1.0	42	54	36	-0.24	102.7					
August	+0.4	-1.2	37	50	40	-0.17	102.1					
September	-0.6	-3.2	41	49	41	-0.13	101.2					
October	+2.4	-2.4	38	50	39	Q-0.77	99.7					
November	-2.1	D-3. 4	41	50	38	-0.41	98.5					
December	-6.2	-0.4	39	© 48	38	-0.30	©96. 8					
1961												
January	-5.8	0.3	41	51	38	-0.37	97.3					
February	3.2	-1.0	©35	49	40	-0.02	99.3					
March	Q -8.7	+0.1	39	50	40	+0.02	103.1					
April	+4.1	-0.1	42	57	47	+0.46	104.1					
Мау	+0.7	+0.8	46	54	48	+0.23	H104.4					
June	+0.4	-2.2	43	. 56	48	+0.11	101.0					
July	+4.5	+1.1	46	56	49	+0.31	101.7					
August	+1.8 H+7.8	+0.2 +3.0	54 57	55	52	+0.35	102.9					
September October	+4.2	+0.5	56	57 59	55	+0.06	102.9					
November	+6.1	+0.9	52	59	55 51	+0.29 +0.34	102.3					
December	+5.0	+1.3	55	54	53	+0.55	98.9 101.0					
1962												
January	+7.6	田+5.0	H 58	57	56	+0.53	102.9					
February	+6.3	+2.2	57	H 61	56	+0.22	100.6					
March	+4.2	+2.9	57	56	55	-0.10	100.4					
April	+2.5	+1.0	55	55	48	-0.34	98.3					
Мау	+3.1	+0.2	53	49	46	-0.31	97.8					
June	+4.3	-1.0	48	52 58	42	-0.32	. 95.4					
July	+3.3	-1.5 -1.7	45 46	52	44	-0.05	94.2					
August September	-3.0 +5.7	-0.1	40	52	44	-0.57	94.5 94.0					
October	+3.8	-0.8	45	55	48	-0.18	94.9					
November	-1.9	-0.9	49	52	48	-0.52	96.4					
December	+3.1	+0.7	48	51	48	r+0.05	95.8					
1963												
January	+3.3	+1.1	46	50	50	r+0.31	95.5					
February	+1.9	+1.0	48	55	52	+0.61	95.1					
March	+4.7	+0.3	46	54	54	H +1.42	94.4					
April	r+2.8	r+1.0	49	53	H 60	r+0.64	94.5					
May	p+2.0	p+0.4	57	52	58	r+0.68	95.2					
June July	(NA)	(NA)	57 55	57	54	p-0.41	93.9 ¹ 94.1					
August			, ,,				/****					
September				[
October												
November			1		,	1						
December	-											
<u></u>			· · · · · ·	· · · · ·		·	I					

¹July 18, 1963.

Toble 1.-BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1960 TO PRESENT-Continued

Series are seasonally adjusted except those that appear to contain no seasonal movement. Unadjusted series are indicated by an asterisk (*). Low values preceding current highs are indicated by () and current highs, by (); the reverse is true for inverse series (series 3, 4, 5, 14, 15, 40, 43, and 45). Series numbers are for identification only and do not reflect series relationships or order. Complete titles and sources are shown on the back cover. The "r" indicates revised; "p", preliminary; "e", estimated; "a", anticipated; and "NA", not available.

Year and month in cu es me 1960 January February March May	1. Number f employees n nonagri- ultural stablish- ents (Thous.) 54,211	42. Total nonagricul- tural em- ployment, labor force survey ¹ (Thous.)	43. Unem- ployment rate, total ¹	40. Unem- ployment rate, mar- ried males ¹	45. Avg. weekly insured unem- ployment rate, State programs	46. Index of help-wanted advertising	47. Index of industrial production	50. Gross national product in
January February March April May	,	(Thous.)			Donne broßraum	in news- papers	production	1954 dol- lars
February March April May	54,211		(Percent)	(Percent)	(Percent)	(1957=100)	(1957-59= 100) Revised ²	(Ann. rate, bil. dol.) Revised ²
March April May		60,521	5.29	3.38	4.27	109.0	111.7	
April May	54,445	60,863	4.96	3.11	4.17	110.1	111.0	439.9
Мау	54,427	60,464	5.45	3.53	4.54	105.4	110.5	•••
•	54,702	61,144	5.21 5.18	3.35 3.42	4.26 4.19	100.3 99.7	109.7 109.9	442.1
	54,584 54,538	61,252 61,215	5.46	3.60	4.19	97.8	109.9	
June July	54,514	61,090	5.48	3.72	4.67	90.1	109.1	•••
August	54,403	60,982	5.66	3.85	5.10	89.4	108.7	440.2
September	54,301	61,114	5.60	3.80	5,38	82.6	107.8	•••
October	54,190	60,857	5.98	4.28	5.68	84.6	107.0	•••
November	53,995	_61,142	6.20	4.22	6.27	82.2	105.4	437.1
December	53,707	©60,801	6.60	4.74	C 6.33	©79 . 0	103.6	•••
1961								
January	53,581	60,980	6.68	4.78	6.15	79.9	©103.3	
February	©53,485	60,912	7.03	Q5.09	6.32	79.3	103.4	© 434.0
March	53,561	61,314	6.82	4.72	6.26	81.1	103.8	•••
April	53,663 53,894	61,111 61,091	7.01 ©7.11	4.91	5.91	79.8	105.6	443.4
May June	54,182	61,448	6.91	5.00 4.78	5.61 5.32	82.0 83.8	108.8 110.9	445.4
July	54,335	61,254	6. 96	4.76	5.29	82.6	112.0	
August	54,333	61,283	6.67	4.61	5.22	86.1	113.4	450.4
September	54,304	61,330	6.69	4.54	5.10	84.8	112.0	
October	54,385	61,476	6.42	4.12	5.04	95.9	113.5	
November	54,525	61,766	6.07	3.94	5.08	99.1	114.8	463.1
December	54,492	61,788	5.98	3.91	4.81	96.9	115.6	• • •
1962								
January	54,434	61,882	5.84	3.81	4.71	102.3	114.6	
February.	54,773	62,148	5.69	3.59	4.52	105.9	116.3	467.8
March	54,901	62,356 62,295	5.49	3.53 3.69	4.41	⊞106.3 106.1	117.3	•••
May	55,260 55,403	62,552	5.58 5.52	3.48	3.93 3.82	106.0	117.8	474.0
June	55,535	62,541	5.50	3.64	3.96	98.5	118.3 118.4	4/4.0
July	55,617	62,715	5.43	3.54	4.25	97.9	119.4	
August	55,536	63,017	5.67	3.54	4.41	97.0	119.4	475.6
September	55,583	63,074	5.63	3.43	4.38	92.8	119.8	• • •
October	55,647	63,036	H 5.34	3.35	4.55	96.8	119.2	•••
November	55,597 55,580	62,708	5.76	3.43	4.84	95.9	119.5	481.4
1963	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	63,248	5.54	3.57	4.79	e95.2	119.1	•••
January	55,536	62,988	5.77	3.81	4.84	e97.5	119.2	
February	55,730	63,245	6.09	4.04	4.69	e100.5	120.2	485.3
March	55,963	63,628	5.59	3.50	4.39	e98.5	121.3	
April	r56,191	⊞63,851	5.65	3.37	4.03	100.2	122.5	•••
May	r56,413	63,643	5.91	3.37	3.96	95.9	r124.1	He489.6
	Hp56,556	63,693	5.66	H 3.12	田 3.53	p95.6	Mp125.1	
July					³ 4.02			
August September								
October								
November						Ì		
December								

¹Beginning with April 1962, the 1960 Census is used as the benchmark for computing this series. Prior to April 1962, the 1950 Census is used as the benchmark.

²See "New Features and Changes For This Issue," page ii.

³Week ended June 29, 1963. Digitized for FRASER

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Federal Reserve Bank of St. Louis

Table 1.--BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1960 TO PRESENT-Continued

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	NBER Roughly Coincident IndicatorsContinued											
Year and month	49. Gross na- tional product in current dollars	57. Final sales (series 49 minus 21)	51. Bank debits outside NYC, 343 centers	52. Personal income	53. Labor income in mining, manu- facturing, and construction	54. Sales of retail stores	55. Index of wholesale prices ex- cept farm products and foods					
1960	(Ann. rate, bil. dol.) Revised ¹	(Ann. rate, bil. dol.) Revised ¹	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.) Revised ¹	(Ann. rate, bil. dol.) Revised ¹	(Mil. dol.)	(1957-59=100)					
January			1,692.2	395.9	108.7	18,100	101.5					
February	500.4	491.1	1,765.4	395.6	108.5	18,161	101.4					
March	•••		1,715.2	395.9	107.9	18,219	101.4					
April			1,731.2	400.8	108.3	18,860	101.4					
May June	504.1	499.9	1,731.2	402.3	108.8	18,428	101.2					
July	•••		1,714.0	403.0	108.4	18,118	101.3					
August	503.5	500.7	1,771.8	402.7	107.6	18,201	101.3					
September			1,766.5	404.4	107.0	18,104	101.1					
October	•••		1,738.0	405.2	106.9	18,543	101.2					
November	502.1	504.4	1,758.9	404.5	105.5	18,398	101.1					
December	•••		L 1,742.3	©403.2	103.7	17,887	101.0					
1961												
January			1,786.2	404.4	104.0	© 17,773	101.0					
February	© 500.4	504.7	1,755.0	405.3	© 103.3	17,786	101.1					
March	• • •		1,785.1	410.1	104.2	18,117	101.1					
May	512.5	511.4	1,781.8	411.7 414.5	106.0	17,851	100.9					
June			1,829.3 1,824.0	417.3	107.1	17,985 18,189	100.9					
July			1,839.9	420.8	108.9	18,017	100.7					
August	521.9	518.3	1,832.7	419.1	108.5	18,172	100.8					
September	•••	····	1,848.2	420.5	108.3	18,131	100.8					
October			1,904.6	424.3	110.1	18,577	100.7					
November	537.8	530.5	1,903.8 1,916.9	428.4	111.7	19,098	100.8					
1962			,									
January			2,009.7	430.1	111.3	18,898	100.8					
February	54 4.5	536.3	1,916.6	434.0	112.8	19,027	100.7					
March	•••		1,985.3	436.4	114.0	19,328	100.7					
April May	552.4	546.0	2,044.4 2,015.0	439.5 440.8	116.1	19,67 3 19,508	©100.7 100.9					
June			2,000.2	441.7	115.9	19,163	100.8					
July	•••		2,054.8	443.5	116.6	19,761	100.9					
August	556.8	553.1	2,017.0	444.6	116.8	19,645	100.8					
September	•••		1,988.5	445.5	116.7	19,693	100.9					
October November	565 2	661.2	2,080.9	447.7	116.5	19,821	100.9					
December	565.2	561.2	2,090.5	449.9 452.1	116.5	20,230 20,203	100.8					
1963	•••		2,000.9	4)2.1	110.9	20,205	100.7					
January	•••	••••	2,148.7	454.0	116.4	20,247	100.5					
February	571.8	566.6	2.086.4	452.9	117.1	20,350	100.5					
March	•••		r2,096.3	454.8	117.8	⊞ 20,365	100.5					
April	FIL- 570 0		⊞2,198.6	457.4	119.4	r20,320	100.2					
May June	He 579.0	e575.5	2,150.9 p2,105.2	460.1 1462.1	120.8 H121.3	r20,319 p20,309	100.5					
July		1	P2,107.2	402.1		p20, 509	² 100.7					
August	,						100.7					
September		1		1								
October												
November		1		1		1						
December		1		1								

 $^1\mathrm{See}$ "New Features and Changes for This Issue," page ii. $^2\mathrm{Week}$ ended July 16, 1963.

Table 1.--BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1960 TO PRESENT-Continued

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	NBER Lagging Indicators										
Year and month	61. Business expenditures on new plant and equipment, total	62. Index of labor cost per unit of output, total manufacturing	63. Index of labor cost per unit of output, total GNP	64. Book value of manufac- turers' inven- tories, all manufacturing industries	65. Book value of mfrs.' in- ventories of finished goods, all manufac- turing indus.	66. Consumer installment debt	67. Bank rates on short-term business loans, 19 cities*				
1960	(Ann. rate, bil. dol.)	(1957-59=100) Revised ¹	(1957-59=100) Revised ¹	(Bil. dol.)	(B11. dol.)	(Mil. dol.)	(Percent)				
January		97.1		53.3	20.4	38,971					
February	35.15	98.6	103.3	53.9	20.6	39,452	5.34				
March	•••	99.1		54.3	20.8	39,878					
April	26.00	99.7		54.7	21.0	40,377	5.35				
May June	36.30	100.3 100.9	104.3	55.0 55.1	21.2 21.3	40,672					
July.	•••	100.9	•••	54.9	21.3	41,013 41,299					
August	35 .90	101.4	105.2	55.0	21.4	41,508	4.97				
September	• • •	101.2	•••	54.7	21.9	41,762					
October	•••	101.2	•••	54.4	21.9	41,898					
November	35.50	101.7	105.2	54.0	21.9	42,032	4.99				
December	•••	102.2	•••	53.7	21.8	42,143					
1961											
January		101.9	•••	53.7	21.8	42,118					
February	33.85	102.1 102.0	106.0	53.6 ©53.3	21.8 21.7	42,032 41, 986	4.97				
March April	• • •	102.0	•••	53.4	21.7	41,865	•••				
Мау	©33.50	100.4	106.0	53.4	21.5	Q41,856	4.97				
June	•••	99.6		53.4	21.5	41,900	•••				
July	• • •	99.3	•••	53.5	Q 21.5	41,904					
August	34.70	© 98.1	105.8	54.0	21.7	41,959	4.99				
September	•••	98.4	•••	54.4	21.8	42,008	•••				
October November	35.40	98.5 99.1	©104.7	54.8 55.0	21.9 21.9	42,170 42,439	©4.96				
December		98.7		55.2	22.0	42,787					
1962	•••										
January		99.4		55.7	22.1	43,066	•••				
February	35.70	99.5	105.8	56.2	22.1	43,338	4.98				
March	•••	99.0	•••	56.6	22.2	43,716	•••				
April	a(***	99.9		56.7	22.2	44,209	r***				
May	36.95	99.7	106.5	56.8 56.9	22.3 22.4	44,648 45,069	5.01				
June July	• • •	100.1 99.7	•••	57.0	22.5	45,455	•••				
August	H38.35	E 101.0	107.1	57.0	22.6	45,813	4.99				
September	•••	98.9	•••	57.2	22.7	46,015					
October	•••	99.7		57.3	22.7	46,399					
November	37.95	99.5	106.6	57.2	22.8	46,980	H5.02				
December	•••	99 .9	•••	57.4	23.0	47,438	•••				
					00 c						
January February	26 05	99.4 100.1	107.1	57.5	23.0 23.0	r47,925	5.00				
March	36.95	99.0	107.1	57.7	23.2	r 48,350 r48,739	5.00				
April	•••	99.0		r 58. 1	r23.2	r49,270					
Мау	a38.40	98.4	He108.3	Hp58.4	H p23.3	Ep49,704	5.01				
June	•••	98.5		(NA)	(NA)	(NA)					
July											
August	a39.95										
September October											
November											
December			1	<i>c</i>			*				

¹See "New Features and Changes for This Issue," page ii.

Table 1.-BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1960 TO PRESENT-Continued

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	r										
	Other U.S. series with business cycle significance										
Year and month	86. Exports, excluding military aid shipments, total	eral	88. Mer- chandise trade balance (series 86 minus 87)	89. Excess, receipts(+) or payments (-) in U.S. balance of payments	eral cash payments	83. Fed- eral cash receipts from the public	84. Fed- eral cash surplus (+) or defi- cit (-)	95. Surplus (+) or def- icit (-), Federal in- come and product acct.	90. Defense Department obligations, procurement		
1960	(Mil. dol.)	(Mil.dol.)	(Mil.dol.)	(Mil. dol.)	(Ann.rate, bil.dol.)	(Ann.rate, bil.dol.)	(Ann.rate, bil.dol.)	(Ann. rate, bil. dol.) Revised ¹	(Mil. dol.)		
January February March April May June	1,561.3 1,565.7 1,518.1 1,622.2 1,659.3 1,633.8	1,246.3 1,348.0 1,289.8 1,348.6 1,269.0 1,276.5	+315.0 +217.7 +228.3 +273.6 +390.3 +357.3	-775 -831	89.9 97.8 91.9 94.9 94.4 91.9	89.9 96.6 94.2 99.8 102.9 94.8	0.0 -1.2 +2.3 +4.9 +8.5 +2.9	+8.2	937 1,104 1,020 983 1,488 1,397		
July August September October November	1,706.5 1,624.8 1,647.2 1,667.6 1,680.6	1,270.7 1,255.8 1,220.6 1,206.0 1,161.7	+435.8 +369.0 +426.6 +461.6 +518.9	-1,018 2-1,257	91.5 97.4 95.0 92.7 102.0	93.6 104.0 100.5 91.7 101.4	+2.1 +6.6 +5.5 -1.0 -0.6	+1.4 -1.2	2,204 1,256 1,256 945 1,468		
December 1961	1,645.3	1,124.8	+520.5	•••	96.3	99.5	+3.2	•••	1,096		
January. February. March. April. June. June. July. August. September. October. November. December. 1962 January.	1,622.7 1,711.6 1,750.7 1,661.5 1,585.1 1,581.9 1,688.5 1,688.9 1,678.4 1,779.8 1,779.8 1,733.1 1,724.8	1,161.4 1,149.8 1,162.9 1,152.0 1,152.9 1,173.8 1,379.3 1,253.6 1,262.0 1,300.1 1,308.5 1,314.5	+461.3 +561.8 +587.8 +509.5 +432.2 +408.1 +309.2 +435.3 +416.4 +479.7 +424.6 +410.3 +\$27.4	-472 3+31 -655 -1,274	95.5 95.4 107.4 100.6 110.9 106.5 97.7 112.7 104.1 109.8 106.5 104.3	94.2 94.1 92.6 97.0 99.8 97.7 91.2 101.0 99.2 99.5 101.3 101.7	-1.3 -1.3 -14.8 -3.6 -11.1 -8.8 -6.5 -11.7 -4.9 -10.3 -5.2 -2.6 -13.4	-6.0 -5.4 -4.0 -2.5 	1,277 1,555 1,230 1,047 1,220 1,390 1,181 2,278 1,933 1,354 1,286 1,589		
February March April May June July August September October November December 1963	1,812.1 1,674.4 1,802.6 1,782.1 1,838.3 1,728.9 1,687.3 1,943.3 1,492.8 1,695.2 1,838.9	1,315.4 1,339.3 1,363.8 1,366.4 1,342.4 1,361.8 1,364.2 1,476.4 1,318.9 1,431.7 1,371.9	+496.7 +335.1 +438.8 +395.7 +495.9 +367.1 +323.1 +466.9 +173.9 +263.5 +467.0	-585 -452 -356 -793	108.8 107.4 110.1 106.8 108.9 116.3 111.6 109.9 118.6 114.7 115.2	101.3 98.1 107.8 109.9 104.4 111.2 110.1 107.6 107.8 109.0 109.0	-7.5 -9.3 +3.1 -4.5 -5.1 -1.5 -2.3 -10.8 -5.7 -6.2	-5.6 -3.0 -3.6 -5.3	1,211 1,254 1,831 1,182 1,325 1,934 1,386 1,037 1,805 1,755 1,022		
January. February. March. April. May. June. July. July. August. September October. November. December.	982.1 2,130.6 1,990.8 1,918.1 1,900.5 (NA)	1,093.2 1,493.2 1,484.3 1,423.3 1,406.2 (NA)	-111.1 +637.4 +506.5 +494.8 +494.3 (NA)	-806 (NA)	116.7 106.5 117.0 118.0 116.2 106.7	107.7 109.8 106.9 110.1 113.9 112.2	-9.0 +3.3 -10.1 -7.9 -2.3 +5.5	-4.6 (NA)	1,732 1,228 1,023 1,275 1,594 (NA)		

¹See "New Features and Changes For This Issue," page ii. ²Includes single direct investment transactions of \$370 million. ³Includes \$650 million in special debt payments to the United States.

Table 1.--BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1960 TO PRESENT--Continued

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	Other U.S. series with business cycle significanceContinued										
Year and month	91. Defense Department obligations, total	92. Mili- tary prime contract awards to U.S. busi- ness firms	total U.S. money	98. Percent change in money sup- ply and time de- posits	93. Free reserves*	81. Index of con- sumer prices	94. Index of con- struction contracts, total value	96. Mfrs.' unfilled orders, durable goods in- dustries	97. Backlog of capital appropria- tions, man- ufacturing		
1960	(M11. dol.)	(Mil.dol.)	(Percent)	(Percent)	(Mil.dol.)	(1957-59≖ 100)	(1957-59= 100)	(Bil.dol.)	(Bil. dol.)		
January	3,234	1,770	-0.14	-0.14	-375	102.3	93	47.56	•••		
February	3,439	1,740	-0.28	-0.38	-365	102.5	93	46.77	• • •		
March	3,368	1,738	-0.28	-0.10	-219	102.6	1.00	46.00	8.05		
April	3,362 3,677	1,368	-0.14	-0.00	-194	102.9	105	45.32	• • •		
May June	3,771	1,811 1,687	-0.28 -0.28	-0.05 -0.05	-33 +37	103.0 103.1	97 108	45.13	7.74		
July	5,305	2,231	+0.21	+0.53	+120	103.1	113	44.67			
August	3,824	2,302	+0.36	+0.67	+247	103.3	109	44.50	• • •		
September	3,999	2,361	+0.07	+0.38	+414	103.2	107	44.37	7.15		
October November	3,357 4,109	1,477 2,127	+0.07 -0.14	+0.47 +0.28	+480 +614	103.5	117	43.60	•••		
December	3,583	1,797	+0.28	+0.52	+614	103.8	111 120	43.19 42.89	7.07		
1961		_,			,,				1.01		
January	3,641	1,944	+0.14	+0.56	+696	103.9	108	42.52	• • •		
February	4,065	2,153	+0.28	+0.74	+517	104.0	95	42.49	• • •		
March	3,537	1,757	+0.28	+0.51	+486	104.0	104	42.51	6.72		
April	3,381	1,910	+0.21	+0.46	+551	103.9	103	42.97	•••		
May June	3,727 3,893	1,530 1,993	+0.21 0.00	+0.64 +0.36	+453 +549	103.9 104.1	102 111	43.20	6 60		
July	3,784	2,087	+0.07	+0.45	+530	104.1	111	43.31 43.62	6.58		
August	5,344	2,232	0.00	+0.32	+537	104.4	116	43.97			
September	4,874	2,158	+0.42	+0.58	+547	104.5	103	44.03	6.68		
October November	4,296	2,651	+0.49	+0.67	+442	104.5	114	44.32	• • •		
December	4,121 4,476	2,379	+0.49 +0.55	+0.62 +0.57	+517 +419	104.5 104.5	116 119	44.66 45.21	6.83		
1962						204.9		45.22	0.05		
January	4,488	3,073	+0.14	+0.79	+555	104.7	115	45.74	• • •		
February	3,990	2,135	-0.27	+0.57	+434	104.9	119	45.96	• • •		
March	3,914	2,225	+0.14	+0.82	+382	105.1	131	45.86	7.15 .		
April May	4,402 4,126	1,885 1,808	+0.27 -0.27	+0.69 +0.21	+441	105.2	121	45.52	• • •		
June	4,019	1,808	-0.07	+0.42	+440 +391	105.4 105.4	117 120	45.22 44.90	7.06		
July	5,026	2,068	+0.07	+0.51	+440	105.5	117	44.85			
August	4,623	2,488	-0.41	+0.04	+439	105.6	118	44.28	•••		
September	3,968 4,914	2,242	+0.14	+0.46	+375	105.9	113	43.73	7.24		
November	4,938	3,089 3,154	+0.55 +0.55	+0.84 +0.91	+419 +473	105.9 105.9	117 123	43.55 43.03	• • •		
December	3,783	1,758	+0.68	+1.03	+268	105.8	138	r43.09	7.76		
1963							_				
January	4,714	2,390	+0.54	+0.98	+384	106.2	121	43.40	•••		
February.	4,050	2,674	-0.07	+0.44	r+301	106.2	130	44.01			
April	3,593 4,031	2,157 1,786	+0.20 +0.34	+0.72	+271 +313	106.3 106.2	118	45.43	7.65		
Мау	4,682	2,165	0.00	+0.52 +0.44	r+248	106.2	125 144	r46.07 r46.75	•••		
June	(NA)	(NA)	p+0.27	p+0.47	p+140	(NA)	(NA)	p46.34	(NA)		
July				-							
August											
October			1								
November											
December									`		

Table 1.-BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1960 TO PRESENT-Continued

Series are seasonally adjusted except those that appear to contain no seasonal movement. Unadjusted series are indicated by an asterisk (*). Low values preceding current highs are indicated by ① and current highs, by ④; the reverse is true for inverse series (series 3, 4, 5, 14, 15, 40, 43, and 45). Series numbers are for identification only and do not reflect series relationships or order. Complete titles and sources are shown on the back cover. The "r" indicates revised; "p", preliminary; "e", estimated; "a", anticipated; and "NA", not available.

			International comparisons of industrial production									
Year and month	121. OECD, ¹ European countries, index of industrial production	122, United Kingdom, index of industrial production	123. Canada, index of industrial production	47. United States, index of industrial production	125. West Germany, index of industrial production	126. France, index of industrial production	127. Italy, index of industrial production	128. Japan, index of industrial production				
1960	(1957-59# 100)	(1957 - 59 = 100)	(1957-59 = 100)	(1957-59= 100)	(1957-59= 100)	(1957-59= 100)	(1957-59= 100)	(1957-59= 100)				
January February March April May June July.	111 112 114 113 114 116 118	109 109 110 112 112 111 111	109 107 108 105 105 105 105	112 111 110 110 110 110 100	113 113 115 115 116 118 118	107 108 108 110 110 111 111	118 122 123 123 124 126 125	132 136 137 140 140 143 143				
August September October November December 1961	116 116 117 118 118	112 112 112 110 112	104 105 105 105 105	109 108 107 105 104	115 118 120 120 122	112 115 114 115 114	127 127 126 129 129	148 151 151 157 158				
January February March April May June July August September October November December	117 119 120 120 120 120 120 120 120 121 122 123	109 110 111 110 113 113 113 111 110 109 109	104 105 105 107 107 109 109 111 112 112 112 114 114	103 103 104 107 109 111 112 113 112 114 115 116	124 125 126 126 124 121 122 121 122 121 124 123 124 128	115 116 116 117 117 118 118 118 119 119 119 119	130 134 134 136 136 138 137 140 145 149 148	162 160 166 172 175 179 182 183 187 190 191				
1962 January February	122 124	108 110	113 115	r115 116	126 129	122 123	149 151	190 188				
March. April. May. JuneJuly. July. August. September. October. November. December. 1963	123 124 125 124 125 125 127 126 127 127	111 110 113 114 113 114 115 110 113 110	116 116 117 118 119 119 119 120 120	117 118 118 r118 119 r119 120 119 120 119	125 131 130 129 128 128 133 130 133 133	124 123 124 123 125 125 125 126 128 128 128	149 151 153 147 151 149 150 153 158 160	193 192 195 194 191 193 194 190 192 190				
January February April May June July August. September October November December	125 126 r126 128 (NA)	109 113 r114 113 (NA)	120 121 r122 123 (NA)	119 120 121 122 124 125	128 128 r132 r132 132 (NA)	127 127 117 129 131 (NA)	157 155 160 (NA)	194 199 194 (NA)				

¹Organization for Economic Cooperation and Development.

Table 2.--RECENT CHANGES FOR BUSINESS CYCLE SERIES

To facilitate interpretations of cyclical movements, those series that usually fall when general business activity rises and rise when business falls are inverted so that rises are shown as declines and declines as rises (see series 3, 4, 5, 14, 15, 40, 43, and 45). The month-to-month percent changes are calculated in the usual way but the signs are reversed; for example, if the rate decreased by 0.6 percent, the sign of this drop is reversed and shown as +0.6.

	Series		Avg.	19	62	1963						
			change, 1948- 1961 ¹	Oct. to Nov.	Nov. to Dec.	Dec. to Jan.	Jan. to Feb.	Feb. to Mar.	Mar. to Apr.	Apr. to May	May to June	June to July ²
	NBER LEADING INDICATORS											
1.	Average workweek of production											
	workers, manufacturing			+0.7	-0.2	-0.2	+0.2	+0.2	-0.2	+1.0	0.0	
	Accession rate, manufacturing			-10.0	-2.8 -6.0	+11.4	0.0	+5.1	+2.4	-7.1	NA 72	i i
	Nonagri. placements, all industries Layoff rate, manufacturing (inverted).			-5.6	-5.3	0.0		+11.1	0.0	0.0	-7.3 NA	
	Number of persons on temporary lay-			2.0	1	••••				0.0		1
	off, all industries (inverted)	do	19.4	-7.8	+18.0	-57.0	+37.4	+3.6	-35.2	+40.4	+2.3	
5.	Avg. weekly initial claims for unem-											
	ployment insurance, State (inverted).	do	7.0	+0.7	-6.4	+0.3	+6.6	+6.1	-4.0	+0.3	-0.3	+12.2
6.	Value of manufacturers' new orders,											
- 1	durable goods industries	••qo••••	5.6	-1.4	-2.0	+4.3	+2.3	+2.3	+2.3	-1.2	-5.1	
24.	Value of manufacturers' new orders,											
9.	machinery and equipment industries Construction contracts awarded for	•••do•••••	6.1	+4.1	-1.9	+0.2	+2.4	-0.8	+2.9	+2.5	-1.6	
	commercial and industrial buildings	do	12.4	+0,1	+1.9	+5.8	+4.5	-17.2	-2.7	+26.6	NA	
10.	Contracts and orders for plant and								~ • •	1.2010		
	equipment	do	6.4	+4.2	+1.4	-3.5	+2.4	-2.2	+4.1	+6.2	NA	
11.	Newly approved capital appropriations.							i				
	602 manufacturing corporations ³	do	11.2	+12.8			-22.3			NA		
7.	New private nonfarm dwelling units											
	started	do	4.1	+4.5	-7.5	-16.0	+2.9	+20.3	+8.0	+2.0	-5.7	
29.	Index of new private housing units authorized by local bldg. permits	do	3.9	+7.8	+4.1	-2.7	-3.8	+0.1		+9.3		
12.	Net change in business population,		5.7	11.0	74.1	~ ≁£•1	-2.0	+0.1	-2.4	19.5	-2.7	
	operating businesses ³ ⁴	Thous	3	0.0			0.0			NA		
13.	Number of new business incorporations.	Bercent.	3.0	-1.5	-0.8	-2.1	+6.5	+1.3	-2.2	+3.2	NA	
	Current liabilities of business	16100000		-1.7	-0.0	-** • 1	.0.9		-~.~		104	
	failures (inverted)	do	16.3	+19.2	+8.6	-69.4	+41.2	-3.8	+4.0	-36.3	+26.9	
15.	No. of business failures with liabil-											
76	ities of \$100,000 and over (inv.)	• .do		+8.7	+11.9	-32.4	+14.3	+2.4	+2.4	-35.0	+29.6	
	Corporate profits after taxes ³ Price per unit of labor cost index	do		+4.9 0.0	-0.4	-0.2	-0.4 -0.7	+0.8				
	Profits (before taxes) per dollar of	•••••••	0.7	0.0	-0.4	-0.2	-0.7	+0.8	-0.1	+1.3	+0.4	
	sales, all mfg. corporations ³	do	7.7	+2.5		•••	-4.8			NA		
22.	Ratio, profits (after taxes) to income											
		do	5.8	+2.2			0.0			NA		
19.	Index of stock prices, 500 stocks	do	2.6	+6.9	+4.3	+3.9	+1.3	-0.4	+4.7	+2.0	0.0	-2.3
21.	Change in bus. inventories, farm and	Ann.rate,										
31.	nonfarm, after val. adjustment ³ ⁴ Change in book value of mfg. and	bil.dol.	3.1	+0.4	•••	•••	+1.1	•••	•••	-1.6		
	trade inventoires, total ⁴	do	4.0	-5.7	+5.0	+0.2	-1.4	+2.8	-1.9	-0.8	NA	
20.	Change in book value of mfrs. ' inven-											
	tories, purchased materials ⁴	do	1.7	-0.1	+1.6	-0.4	-0.1	-0.7	+0.7	-0.6	NA	
37.	Purchased materials, percent report-											
	ing higher inventories	Percent	7.3	+8.9	-2.0	-4.2	+4.3	-4.2	+6.5	+16.3	0.0	-3.5
26.	Buying policy, prod. mtls., percent	•.	4 2		1.0					1.0		i
		••do••••	6.2	-5.5	-1.9	-2.0	+10.0	-1.8	-1.9	-1.9	+9.6	
32.							+4.0	+3.8	+11.1	-3.3	-6.9	
32.	Vendor performance, percent report-	do	11.3	0.0	0.01	··· 4. ~ I						
		do	11.3	0.0	0.0	+4.2						
25.	Vendor performance, percent report- ing slower deliveries Change in mfrs.' unfilled orders, durable goods industries'	B11. dol.	0.46	-0.34	+0.57	+0.26	+0.30	+0.81	-0.78	+0.04	-1.09	
25.	Vendor performance, percent report- ing slower deliveries Change in mfrs.' unfilled orders, durable goods industries ⁴										-1.09 -1.4	+0.2
25.	Vendor performance, percent report- ing slower deliveries Change in mfrs.' unfilled orders, durable goods industries'	B11. dol.	0.46	-0.34	+0.57	+0.26	+0.30	+0.81	-0.78	+0.04		+0.2
25. 23.	Vendor performance, percent report- ing slower deliveries Change in mfrs.' unfilled orders, durable goods industries ⁴ Index of industrial materials prices NBER ROUGHLY COINCIDENT INDICATORS	B11. dol.	0.46	-0.34	+0.57	+0.26	+0.30	+0.81	-0.78	+0.04		+0.2
25. 23.	Vendor performance, percent report- ing slower deliveries Change in mfrs.' unfilled orders, durable goods industries ⁴ Index of industrial materials prices	Bil. dol. Percent	0.46 2.2	-0.34	+0.57	+0.26	+0.30	+0.81	-0.78	+0.04		+0.2
25. 23. 41.	Vendor performance, percent report- ing slower deliveries Change in mfrs.' unfilled orders, durable goods industries ⁴ Index of industrial materials prices NBER ROUGHLY COINCIDENT INDICATORS Number of employees in nonagricul- tural establishments Total nonagricultural employment,	Bil. dol. Percent	0.46 2.2 0.4	-0.3 4 +1.6	+0.57 -0.6 0.0	+0.26 0.3	+0.30 -0.4 +0.3	+0.81 -0.7 +0.4	-0.78 +0.1 +0.4	+0.04 +0.7 +0.4	-1.4 +0.3	+0.2
25. 23. 41. 42.	Vendor performance, percent report- ing slower deliveries Change in mfrs.' unfilled orders, durable goods industries ⁴ Index of industrial materials prices. NBER ROUGHLY COINCIDENT INDICATORS Number of employees in nonagricul- tural establishments Total nonagricultural employment, labor force survey	Bil. dol. Percent do	0.46 2.2 0.4 0.4	-0.3 4 +1.6 -0.1 -0.5	+0.57 -0.6 0.0 +0.9	+0.26 0.3 0.1 0.4	+0.30 -0.4 +0.3 +0.4	+0.81 -0.7 +0.4 +0.6	-0.78 +0.1 +0.4 +0.4	+0.04 +0.7 +0.4 -0.3	-1.4 +0.3 +0.1	+0.2
25. 23. 41. 42. 43.	Vendor performance, percent report- ing slower deliveries Change in mfrs.' unfilled orders, durable goods industries ⁴ Index of industrial materials prices NBER ROUGHLY COINCIDENT INDICATORS Number of employees in nonagricul- tural establishments Total nonagricultural employment, labor force survey Unemployment rate, total (inverted)	B11. dol. Percent do	0.46 2.2 0.4 0.4 4.7	-0.34 +1.6 -0.1 -0.5 -7.9	+0.57 -0.6 0.0 +0.9 +3.8	+0.26 0.3 0.1 0.4 4.2	+0.30 -0.4 +0.3 +0.4 -5.5	+0.81 -0.7 +0.4 +0.6 +8.2	-0.78 +0.1 +0.4 +0.4 -1.1	+0.04 +0.7 +0.4 -0.3 -4.6	-1.4 +0.3 +0.1 +4.2	+0.2
25. 23. 41. 42. 43.	Vendor performance, percent report- ing slower deliveries Change in mfrs.' unfilled orders, durable goods industries ⁴ Index of industrial materials prices. NBER ROUGHLY COINCIDENT INDICATORS Number of employees in nonagricul- tural establishments Total nonagricultural employment, labor force survey	B11. dol. Percent do	0.46 2.2 0.4 0.4 4.7	-0.3 4 +1.6 -0.1 -0.5	+0.57 -0.6 0.0 +0.9	+0.26 0.3 0.1 0.4	+0.30 -0.4 +0.3 +0.4	+0.81 -0.7 +0.4 +0.6 +8.2	-0.78 +0.1 +0.4 +0.4	+0.04 +0.7 +0.4 -0.3	-1.4 +0.3 +0.1	+0.2

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http://fraser.stlouisfed.org/

Federal Reserve Bank of St. Louis

Table 2.--RECENT CHANGES FOR BUSINESS CYCLE SERIES--Continued

To facilitate interpretations of cyclical movements, those series that usually fall when general business activity rises and rise when business falls are inverted so that rises are shown as declines and declines as rises (see series 3, 4, 5, 14, 15, 40, 43, and 45). The month-to-month percent changes are calculated in the usual way but the signs are reversed; for example, if the rate decreased by 0.6 percent, the sign of this drop is reversed and shown as +0.6.

	Measure	Avg.	19	62				1963			
Series	of change	change, 1948- 1961 ¹	Oct. to Nov.	Nov. to Dec.	Dec. to Jan.	Jan. to Feb.	Feb. to Mar.	Mar. to Apr.	Apr. to May	May to June	June to July ²
NBER ROUGHLY COINCIDENT INDICATORS Con.											
 46. Index of help-wanted advertising in newspapers	Percent do do	3.3 1.2 1.4 1.9 1.6	-0.9 +0.3 +1.2 +1.5 +1.5	-0.7 -0.3	+2.4 +0.1 	+3.1 +0.8 +0.8 +1.2 +1.0	-2.0 +0.9	+1.7 +1.0 	-4.3 +1.3 +0.9 +1.3 +1.6	-0.3 +0.8	
 Bank debits outside NYC, 343 centers. Personal income	do do	1.6 0.7	+0.5 +0.5 +0.3	-1.1 +0.5 -0.3	+4.0 +0.4 -0.1	-2.9 -0.2 +0.6	+0.5 +0.4 +0.6	+4.9 +0.6	-2.2 +0.6 +1.2	-2.1 +0.4	-
 and construction	do	1.1 1.6 0.3	+0.3 +2.1	-0.1 -0.1	+0.2	+0.8	+0.0 +0.1	+1.4 -0.2 -0.3	+1.2 0.0 +0.3	+0.4 0.0 +0.2	0.0
NBER LAGGING INDICATORS											
 Business expenditures on new plant and equipment, total³ Endex of labor cost per unit of 	do	3.6	-1.0			-2.6	•••		^{\$} +3.9		
output, total manufacturing 63. Index of labor cost per unit of out-	do	0.7	-0.2	+0.4	-0.5	+0.7	-1.1	0.0	-0.6	+0.1	
put, total GNP ³ 64. Book value of mfrs.' inventories, all	do	1.0	-0.5	•••	•••	+0.5	•••	•••	+1.1		
manufacturing industries 65. Book value of mfrs.' inventories of	do	0.9	-0.2	+0.3	+0.2	+0.3	+0.3	+0.3	+0.5	NA	
finished goods, all mfg. industries 66. Consumer installment debt 67. Bank rates on short-term business loans, 19 cities ³		1.0 1.2 3.0	+0.4 +1.3 +0.6	+0.9 +1.0	0.0 +1.0	0.0 +0.9 -0.4	+0.9 +0.8	0.0 +1.1	+0.4 +0.9 +0.2	NA NA	
OTHER U.S. SERIES WITH BUSINESS CYCLE SIGNIFICANCE											
 86. Exports, excluding military aid shipments, total	do do Mil. dol. do	3.5	+13.6 +8.6 +89.6 -437		-20.3	+116.9 +36.6 +748.5 -13	-6.6 -0.6 -130.9	-3.7 -4.1 -11.7	-0.9 -1.2 -0.5 NA	NA NA NA	
82. Federal cash payments to the public	Percent	7.2	-3.3	+0.4	+1.3	-8.7	+9.9	+0.9	-1.5	-8.2	
 83. Federal cash receipts from the public. 84. Federal cash surplus or deficit⁴ 	do Ann.rate, bil.dol.	7.5 5.7	+1.1 +5.1	0.0 -0.5	-1.2 -2.8	+1.9 +12.3	-2.6 -13.4	+3.0 +2.2	+3.5 +5.6	-1.5 +7.8	
 95. Surplus or deficit, Federal income and product account³ ⁴ 90. Defense Dept. obligations, procurement. 91. Defense Dept. obligations, total 	Percent.	3.2 25.4 15.6	-0.5 -2.8 +0.5	-41.8 -23.4	+69.5 +24.6	+0.7 -29.1 -14.1	-16.7 -11.3	+24.6 +12.2	NA +25.0 +16.1	NA NA	
92. Military prime contract awards to U.S. business firms	do	29.2	+2.1	-44.3	+35.9	+11.9	-19.3	-17.2	+21.2	NA	
deposits ⁴ 93. Free reserves ⁴ 81. Index of consumer prices 94. Index of construct contracts, total 96. Mfrs.' unfilled orders, dur. goods 97. Backlog of cap. appropriations, mfg. ³ . 98. Change in money supply including time	do Mil. dol. Percent. do do	0.22 138 0.3 8.3 2.1 6.3	0.00 +54 0.0 +5.1 -1.2 +7.2	+0.13 -205 -0.1 +12.2 +0.1 	-0.14 +116 +0.4 -12.3 +0.7	-0.61 -83 0.0 +7.4 +1.4 -1.4	+0.27 -30 +0.1 -9.2 +3.2 	+0.14 +42 -0.1 +5.9 +1.4	-0.34 -65 +0.2 +15.2 +1.5 NA	+0.27 -108 NA NA -0.9	
deposits ⁴	do	0.19	+0.07	+0.12	-0.05	-0.54	+0.28	-0.20	-0.08	+0.03	

¹This average is based on month-to-month (or quarter-to-quarter) changes without regard to sign. The period varies among the series, beginning with the earliest date shown in chart 1 and ending on the date a revision or new seasonal adjustment made new computations feasible. ²Percentage changes cover part of this period only. ³Quarterly series; figures show change from previous quarter and are placed in middle month of quarter. Thus the figure for GNP (series 49) shown in the Oct.-Nov. column refers to the change from the 3rd quarter of 1962 to the 4th quarter of 1962. ⁴Figures are the month-to-month (quarter-to-quarter) differences in the figures shown in table 1. ⁵Anticipated. The percent change from 2nd quarter to 3rd quarter, based on anticipated data is +4.0.

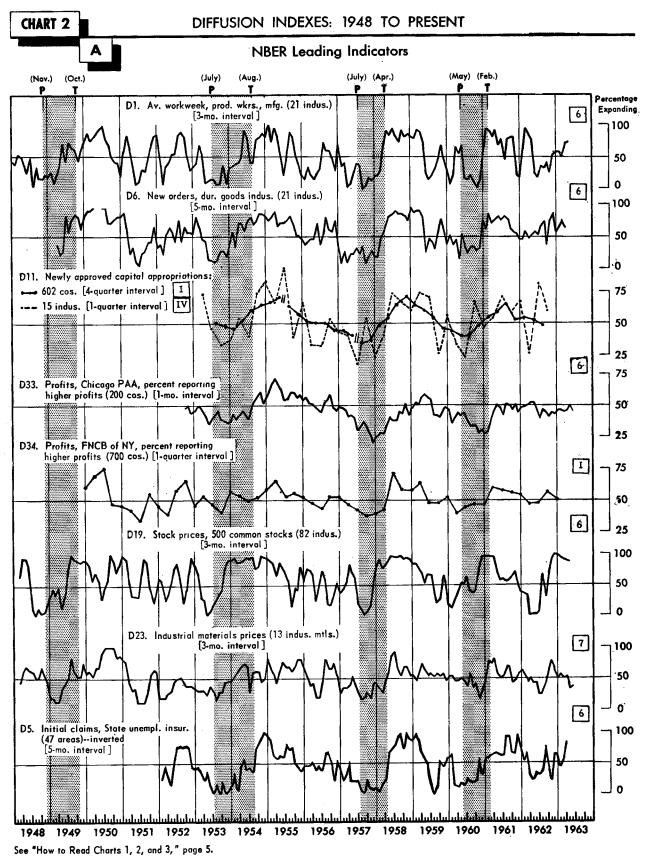
Table 3.--DISTRIBUTION OF HIGHS IN BUSINESS CYCLE INDICATORS DURING RECENT MONTHS COMPARED WITH PERIODS AROUND PREVIOUS BUSINESS CYCLE PEAKS

	N	umber of s	eries that	reached a	high befo	re benchma	rk dates	···
Number of months before benchmark date that		Business c	ycle peak		3d month	before bu	siness cyc	le peak
high was reached	Nov. 1948	July 1953	July 1957	May 1960	Aug. 1948	Apr. 1953	Apr. 1957	Feb. 1960
			NB	ER LEADING	INDICATOR	S		
8 months or more 7 months	12 1	7 1	22 	14 2	11 1	3 4	20	12 1
6 months 5 months 4 months.	···· 4 1	3	1	1 3 2	··· ··· 1	··· 2 2	1 1 	 2
3 months	•••	2	•••	1		3 1	1 	1
1 monthBenchmark month	•••	3	•••	•••	1	4	•••	2
Number of series used Percent of series high on benchmark date.	¹ 18 0	219 16	23 0	23 0	¹ 18 0	² 19 21	23 0	23
			NBER RO	UGHLY COIN	CIDENT IND	ICATORS		
8 months or more 7 months	3	1	2 	1	1 2	•••	1	1
6 months 5 months	 	1	 1 3	··· 2	•••	2	1 1	··· ··· 1
3 months 2 months	1 2	2	•••	3	•••	 1	2	•••
1 month Benchmark month	 1	3 3	 5	2 3	4	4	3 3	3 6
Number of series used Percent of series high on benchmark date.	11 9	11 27	11 45	11 27	11 36	11 36	11 27	11 55
Number of months before	6th mont	h before b	usiness cy	cle peak		Current e	xpansion	i
benchmark date that high was reached	May 1948	Jan. 1953	Jan. 1957	Nov. 1959	Mar. 1963	Apr. 1963	May 1963	June 1963
			NB	ER LEADING	INDICATOR	s		
8 months or more 7 months	6 1	2 1	17 1	4 4	14	13 	13 	9
6 months	•••	2	1	4	···	••••	 1	ן
5 months			-			וו		
4 months	2 2	4 1 2	 1 1	4 1	1 2 	1 1	 2	2
4 months 3 months 2 months 1 month Benchmark month	2 2 2 1	4 1 2 3 3	 1 1	4 2 2	1 2 2 4	 1 2 6	 2 2 5	2 2
4 months 3 months 2 months 1 month	2 2 2	4 1 2 3	 1 1 	4 1 2	1 2 2	 1 2	 2 2	2 2
4 months	2 2 1 ¹ 18	4 1 2 3 3 2 19	 1 1 1 23 4	4 2 23	1 2 4 23 17	 2 6 23 26	2 2 5 23	2 2 16
4 months	2 2 1 ¹ 18 6 1 	4 1 3 3 219 16	 1 1 23 4 NBER ROUG	4 2 23 9	1 2 4 23 17 IDENT INDI 2 	 1 2 6 23 26 CATORS 2 	2 2 5 23 22 2 2 2 2 2	2 2 16 0
4 months	2 2 2 1 ¹ 18 6	4 1 2 3 3 219 16	 1 1 23 4 NBER ROU 1 	4 2 23 9 GHLY COINC 	1 2 4 23 17 IDENT INDI	1 2 6 23 26 CATORS 2	2 2 5 23 22 23 22 23	2 2 16 0 3
4 months	2 2 2 1 ¹ 18 6	4 1 2 3 3 2 19 16	 1 1 23 4 NBER ROUG 1 	4 2 23 9 CHLY COINC 4	1 2 4 23 17 IDENT INDI 2 2	 1 2 6 23 26 CATORS 2 2 2 	2 2 5 23 22 22 2 2 2 2 2 	2 2 16 0

All quarterly series, 1 leading monthly series (series 15), and 1 roughly coincident series (series 40) are omitted from the distribution.

15 series were not available.

²2 series were not available and 2 series were omitted because their peaks were reached during the Korean War and such peaks were disregarded in this distribution.



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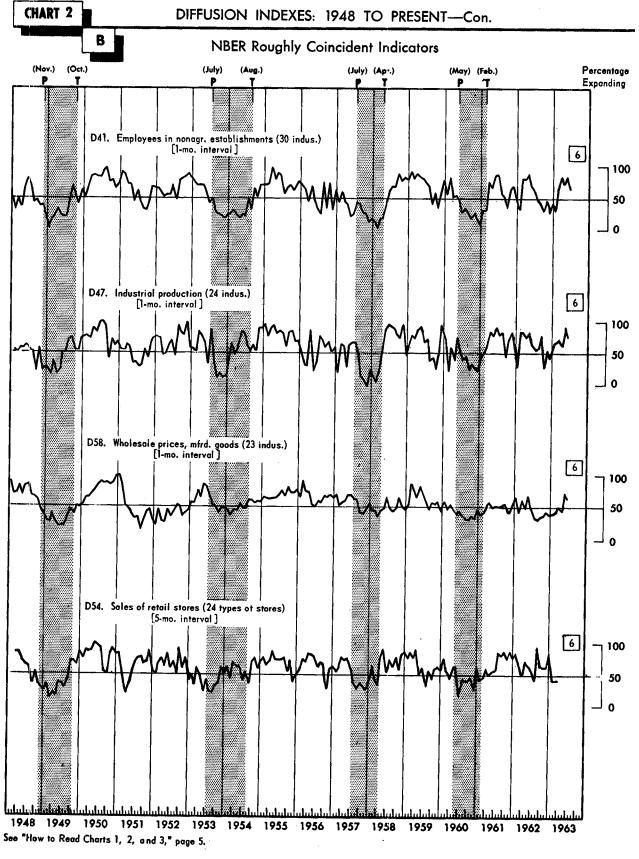
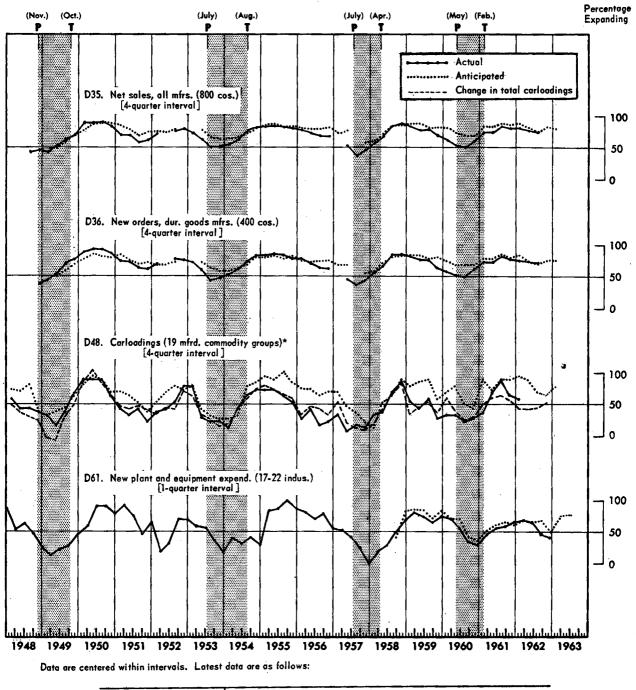


CHART 3

DIFFUSION INDEXES, ACTUAL AND ANTICIPATED: 1948 TO PRESENT



Series number and	Latest int	erval shown
date of survey	Actual	Anticipated
D35, D36 (April 1963) D48 (June 1963) D61 (May 1963)	1 st Q 1962 - 1 st Q 1963 3rd Q 1961 - 3rd Q 1962 4th Q 1962 - 1 st Q 1963	3rd Q 1962 - 3rd Q 1963 3rd Q 1962 - 3rd Q 1963 2nd Q 1963 - 3rd Q 1963

*Increase of 500,000 carloadings plotted at 100; no change at 50; decrease of 500,000 carloadings at 0.

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Toble 4 .- DIFFUSION INDEXES (PERCENT RISING) FOR 12 MAJOR ECONOMIC ACTIVITIES: JANUARY 1960 TO PRESENT

Numbers are centered within intervals; 1-month figures are placed on latest month; 3-month figures are placed on the 3d month and 5-month figures are placed on the 4th month of span; 4-quarter figures are centered in the middle quarter; 1-quarter figures are placed in the 1st month of the 2d quarter. Seasonally adjusted components are used except in indexes Dlla, D19, D23, and D33, which require no adjustment, and D34 and D58, which are adjusted only for the index. Table 6 identifies the components for most of the indexes shown. The "r" indicates revised; "p", preliminary; and "NA", not available.

			NE	ER Leading inde	xes		
Year and	Dl. Average manufac			manufacturers' durable goods	(· · · ·	y approved propriations	D33. Profits, Chicago PAA
month	(21 indu		industries (2	l industries)	a. 602 com- panies	b. 15 indus- tries	(200 companies)
	l-month interval	3-month interval	l-month interval	5-month interval ¹	4-quarter interval	l-quarter interval	l-month interval
1960							
January	21.4	31.0	28.6	38.1	l •;;	56.7	46
February	19.0	7.1	61.9	52.4	44	•••	36 40
March	35.7	21.4	14.3	38.1	•••	33.3	40
April.	38.1 78.6	66.7 54.8	57.1 54.8	45.2 16.7	40		42
May June	19.0	69.0	28.6	54.8		•••	44
July	40.5	16.7	38.1	33.3	•••	23.3	39
August.	26.2	14.3	71.4	23.8	40		34
September	19.0	23.8	33.3	33.3		•••	34
October	78.6	9.5	28.6	33.3		66.7	34
November	16.7	2.4	61.9	28.6	48	•••	28
December	7.1	14.3	28.6	33.3	••••	•••	30
1961							
January	85.7	54.8	52.4	76.2		46.7	27
February	78.6	95.2	47.6	61.9	54		31
March	69.0	90.5	78.6	85.7		•••	37
April	83.3	81.0	52.4	71.4	•••	53.3	46
May	50.0	92.9	59.5	76.2	58	•••	50
June	90.5	69.0	57.1	81.0			48
July	40.5	78.6	59.5	76.2		70.0	42
August	42.9	45.2	73.8	81.0	64	•••	51
September	38.1 69.0	78.6 81.0	57.1 57.1	78.6 61.9	•••	56 7	50
November	78.6	81.0	57.1	57.1	 52	56.7	47 50
December	38.1	21.4	28.6	54.8		•••	44
1962							
January	11.9	19.0	71.4	47.6		66.7	48
February	78.6	61.9	57.1	47.6	54		49
March	76.2	95.2	45.2	57.1		•••	50
April	92.9	85.7	50.0	47.6		26.7	52
May	26.2	76.2	42.9	52.4	52	•••	52
June	38.1	23.8	38.1	57.1			48
July	28.6	19.0	81.0	52.4		80.0	40
August	33.3 71.4	- 35.7 33.3	33.3 33.3	66.7 71.4	48	•••	46
October	7.1	42.9	71.4	38.1		60.0	45 42
November	71.4	26.2	54.8	76.2	(NA)		44
December	57.1	52.4	38.1	85.7	(145)		43
1963							
January	21.4	57.1	57.1	57.1		(NA)	46
February	88.1	57.1	61.9	66.7		·,	46
March	42.9	r50.0	57.1	76.2	i i		45 46 50
April	r35.7	r71.4	r57.1	p61.9			46
May	r85.7	p73.8	r66.7		i		50
June	p57.1	-	p28.6				46
July	1		l		l i		
September							
October			1				
			1				1
November	l l						

¹See "New Features and Changes For This Issue," page ii.

Table 4 .-- DIFFUSION INDEXES (PERCENT RISING) FOR 12 MAJOR ECONOMIC ACTIVITIES: JANUARY 1960 TO PRESENT--Continued

Numbers are centered within intervals; 1-month figures are placed on latest month; 3-month figures are placed on the 3d month and 5-month figures are placed on the 4th month of span; 4-quarter figures are centered in the middle quarter; 1-quarter figures are placed in the 1st month of the 2d quarter. Seasonally adjusted components are used except in indexes Dla, Dl9, D23, and D33, which require no adjustment, and D34 and D58, which are adjusted only for the index. Table 6 identifies the components for most of the indexes shown. The "r" indicates revised; "p", preliminary; and "NA", not available.

			NBER Lead	ling indexesCo	ontinued		
Year and month	D34. Profits, mfg., FNCB (around 700 corporations)		stock prices, on stocks ustries) ¹	D23. Index of materials (13 industris		D5. Initial unemployment State programs nearest t (47 ar	insurance, , week ended he 22nd
	l-quarter interval	l-month interval	3-month interval	l-month interval	3-month interval	l-month interval	5-month interval ²
1960							
January February March April May June July August	52 40 45 	28.5 11.2 33.5 52.4 36.5 75.9 32.9 76.5	27.1 11.8 27.6 41.2 52.4 50.6 63.5 38.8	69.2 42.3 46.2 53.8 50.0 57.7 46.2 46.2	53.8 53.8 46.2 46.2 50.0 46.2 38.5 57.7	34.0 54.8 10.6 47.9 38.3 37.2 55.3 17.0	59.6 63.8 14.9 11.7 17.0 14.9 26.6 23.4
September October November	47	15.3 23.5 89.4	36.5 42.4 76.5	42.3 23.1 46.2	34.6 42.3 15.4 30.8	68.1 42.6 36.2 53.2	20.2 21.3 57.4
December	•••	80.7	93.8	26.9	30.8	53.2	31.9
January. February. March. April. May. June. July. August. September. October. November. December. 1962 January. February. March. April. May. June. June. June. September. September. May. September. September. May. September. Septem	47 60 58 56 54 47 48 	87.0 96.3 86.0 72.6 81.1 40.2 42.1 81.1 39.6 45.7 87.8 56.1 26.2 74.4 48.2 9.1 1.2 1.2 1.2 67.7 78.0 34.8	96.3 96.3 95.1 93.9 70.7 57.3 57.9 54.9 55.5 62.2 72.6 52.4 39.6 37.8 32.9 0.0 1.2 1.2 8.5 67.1 31.1	38.5 69.2 80.8 65.4 53.8 46.2 50.0 76.9 53.8 38.5 30.8 65.4 73.1 34.6 46.2 38.5 53.8 23.1 30.8 23.1 30.8 42.3 50.0	46.2 76.9 73.1 80.8 57.7 50.0 53.8 69.2 42.3 46.2 57.7 61.5 53.8 42.3 50.0 42.3 42.3 23.1 23.1 23.1	59.6 31.9 80.9 40.4 48.9 58.5 51.1 61.7 46.8 78.7 74.5 23.4 57.4 83.0 46.8 46.8 46.8 40.4 14.9 68.1 57.4 44.7	57.4 59.6 61.7 66.0 68.1 66.0 61.7 93.6 93.6 68.1 63.8 91.5 74.5 51.1 66.0 31.9 21.3 34.0 31.9 21.3 78.7
October November December 1963	56 	6.7 98.8 84.8	72.6 90.2 98.8	57.7 69.2 37.5	65.4 79.2 62.5	46.8 72.3 27.7	48.9 22.3 63.8
January. February. March. April. May. June. June. July. August. September. October. November. December.	50 (NA)	97.6 79.3 43.8 91.2 85.0 51.9	97.6 93.8 91.2 90.0 88.0	58.3 66.7 46.2 53.8 50.0 57.7 338.5	50.0 58.3 50.0 53.8 34.6 ³ 38.5	36.2 87.2 47.9 44.7 48.9 71.3	63.8 44.7 53.2 83.0

¹The diffusion index is based on 86 components through January 1960; on 85 components, February 1960 to November 1960; on 82 components, December 1960 to February 1963; and on 80 components thereafter. 19 components and 5 composites, representing an additional 22 components, are shown in the direction-of-change table (table 6C). ²See "New Features and Changes For This Issue," page ii. Digitized for Halvs 18, 1963

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Table 4,-DIFFUSION INDEXES (PERCENT RISING) FOR 12 MAJOR ECONOMIC ACTIVITIES: JANUARY 1960 TO PRESENT-Continued

Numbers are centered within intervals: 1-month figures are placed on latest month; 3-month figures are placed on the 3d month and 5-month figures are placed on the 4th month of span; 4-quarter figures are centered in the middle quarter; 1-quarter figures are placed in the 1st month of the 2d quarter. Seasonally adjusted components are used except in indexes D11a, D19, D23, and D33, which require no adjustment, and D34 and D58, which are adjusted only for the index. Table 6 identifies the components for most of the indexes shown. The "r" indicates revised; "p", preliminary; and "NA", not available.

			NBER Roug	ghly Coincident	indexes		
Year and month	D41. Number o in nonagricul lishments (30	tural estab-	D47. Index of produc (24 indu		D54. Sales of (24 types of	-	D58. Index of wholesale prices (23 mfg. indus.)
ſ	l-month interval	3-month interval	l-month interval	3-month interval	l-month interval	5-month interval ¹	l-month interval
1960							
January	56.7	80.0	70.8	75.0	68.8	58.3	60.3
February	83.3 53.3	81.7	20.8	43.8	50.0	77.1	45.6
March	55.0	66.7 58.3	58.3 39.6	41.7 68.8	45.8	58.3 45.8	56.8 46.7
May	50.0	40.0	75.0	66.7	14.6	62.5	40.4
June	30.0	38.3	54.2	66.7	60.4	64.6	45.4
July	35.0	25.0	39.6	41.7	50.0	16.7	39.6
August	30.0	25.0	45.8	20.8	41.7	43.8	32.5
September	21.7	30.0	25.0	20.8	50.0	41.7	32.0
October	30. 0 20 . 0	23.3 15.0	33.3	16.7 12.5	62.5 37.5	41.7	36.9
December	11.7	16.7	20.8	20.8	31.2	45.8	46.7
1961			2010		5-12	~/.~	
January	33 .3	11.7	45.8	37.5	58.3	62.5	38.6
February	33.3	41.7	52.1	62.5	43.8	41.7	41.3
March	75.0	60.0	66.7	81.3	79.2	45.8	54.6
April	66.7	83.3	83.3	83.3	27.1	60.4	59.7
May	85.0	90.0	77.1	87.5	43.8	50.0	49.1
June	86.7 58.3	83.3 83.3	91.7 79.2	83.3 100.0	79.2	54.2 58.3	51.9 50.4
August	53 .3	46.7	83.3	79.2	68.8	87.5	52.1
Septembe:	36.7	50.0	45.8	79.2	33.3	81.3	55.9
October	65.0	63.3	72.9	75.0	79.2	89.6	39.0
November	70.0	68.3	83.3	87.5	66.7	77.1	39.0
December	53.3	53.3	56.3	r41.7	45.8	89.6	51.1
January	33.3	60.0	r29.2	r50.0	62.5	79.2	66.8
February	81.7	75.0	r83.3	66.7	60.4	85.4	43.5
March	81.7	91.7	r83.3	r91.7	62.5	70.8	61.1
April	90.0	88.3	r75.0	r83.3	60.4	50.0	46.7
May	70.0	80.0	r83.3	r70.8	39.6	72.9	68.6
June July	63.3 48.3	68.3	r62.5	79.2	20.8	66.7 58.3	47.6
August	40.0	55.0 25.0	r54.2 r58.3	r68.8 r79.2	83. 3 56.2	41.7	33.0 30.3
September	30.0	25.0	r79.2	r41.7	50.0	97.9	38.5
October	48.3	16.7	r29.2	r62.5	29.2	66.7	39.0
November	28.3	26.7	54.2	r45.8	85.4	62.5	43.4
1963	41.7	28.3	r41.7	r58.3	52.1	62.5	35.9
January	30.0	43.3	44 m		50.0		20.4
February	63.3	43.3 56.7	66.7 68.8	r54.2 r81.3	50.0 54.2	87.5	38.6 39.1
March	85.0	90.0	r72.9	r83.3	58.3	41.7	50.3
April	r75.0	r86.7	r62.5	r87.5	r39.6	p41.7	42.3
May	r86.7	p83.3	r91.7	p79.2	r58.3		r73.0
June	p65.0		p77.1		p41.7	1	p65.0
July August		l	ļ			l	
September						1	
October			1	1	1	1	
November							1
December							

¹See "New Features and Changes For This Issue," page ii.

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Toble 5 .-- DIFFUSION INDEXES, ACTUAL AND ANTICIPATED, FOR 4 MANUFACTURING ACTIVITIES: JANUARY 1960 TO PRESENT

Numbers are centered within intervals: 4-quarter figures are centered in the middle quarter; 1-quarter figures are placed in the 1st month of the 2d quarter. "r" indicates revised; "p", preliminary; and "NA", not available.

	D35. Net manufact (800 comp	ures	D36. New on able man (400 con	ufactu	res	(1	reight carl 9 manufactur mmodity grou	red	D61. New p equipment ex (16 indu	penditures
Year and month	4-quar interv			uarter erval			4-quarter interval		l-quar interv	
	Actual	Antici- pated	Actual		ici- ted	Actual	Antici- pated	Change in total (000)	Actual	Antici- pated
1960										
January	•••	•••							75.0	84.4
February	61	82	58	1	76	31.6	68.4	+96	•••	•••
March	•••	•••	•••	1				•••	71.9	71.9
May	53	74	51		68	31.6	78.9	-103		•••
June	•••	•••	•••		4		· · · ·	•••		
July	•••	• • •	•••		1	•••		•••	56.2	71.9
August	50	70	· 50		68	21.1	50.0	-279	••••	•••
September	•••	•••	•••		4	•••		•••	34.4	43.8
October	60	68	62	I	68	26.3	42.1	-212	34.4	43.8
December	•••				•••					•••
1961										
January			•••	1	•			•••	28.1	37.5
February	72	82	72		78	36.8	89.5	-28		
March	• • •	•••	•••		• • •					•••
April	••••	••••	••••		• • • •			•••	46.9	53.1
May	74	83	73		78	68.4	73.7	+79	••••	••••
June	•••	•••	•••		• • •	•••	••••	•••	56.2	62.5
July August	82	88	82	1	86	87.5	89.5	+125		
September				1		•••		•••		
October	•••	•••	•••		•••			•••	59.4	65.6
November	81	86	78		82	63.2	89.5	+62	•••	
December	•••	•••	•••		•••		•••	••••	•••	
1962									65.6	62.5
January	80	88	76		84	57.9	94.7	-67	65. 6	
March	•••				•••				•••	
April	•••		•••		•••	•••			68.8	68.8
May	76	80	74		74	(NA)	89.5	-96		••••
June	•••	•••	••••		•••			••••		
July	72	74	71		70		68.4	-66	65.6	65.6
August		***			•••	1		-00	•••	•••
October	•••	•••			•••	1			46.9	68.8
November	(NA)	82	(NA)		76	1	63.2	+10	•••	•••
December		•••			•••		•••		••••	
1963									40.6	50.0
January February		80			76		78.9		40.0	
March		••		1				1		
April		1		1				1	(NA)	75.0
May				1			1			
June							1	1	1	79 1
July				1		l		1		78.1
August				1		1		1		
October			1			1				
November			1			1		ł		
December			1			1	1	ŀ	1	1

								1-n	nont	h s	par	າຣ				_		Ī							3-a	ont	h s	pan	s					
			19	52								196	53							19	62								1963	;				
21 industry components	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov Nov-Dec	Apr-Jul	May-Aug	Jun-Sep	Jul-Oet	Aug-Nov	Sep-Dec	Oct-Jan	Nov-Feb	Dec-Mar	Jan-Apr	Feb-May	Mar-Jun	Apr-Jul Mav-Aug	Jun-Sep	Jul-Oct	Aug-Nov	Sep-Dec
Percent rising	29	33	71	7	71	57	21	88	43	36	86	57						2	4 19	36	33	43	26	52	57	57	50 '	71 '	74					
All manufacturing industries	0	-	+	-	+	-	-	+	+	-	+	0								• c	, -	+	-	+	-	.+	+	+	+					
DURABLE GOODS INDUSTRIES						:																												
Ordnance and accessories Lumber and wood products Furniture and fixtures. Stone, clay, and glass products Primary metal products Fabricated metal products Machinery, except electrical Electrical machinery. Transportation equipment Instruments and related products Miscellaneous manufacturing industries	+ - + 0 - 0 0	+ -	+ + + 0 - + + 1 +		+++-+++0++-	++1111+10+	- + + - 0 + 0 0 + 1	+ + + + + + + + + + + + + + + + + + + +		- 0 + + +	+ + + + + + + + + + + + + + + + + + + +	0 - 0 0 0 + + + - + -							- + + +		+ + + + + + + + + + + + + + + + + + + +	0 1 + 1 + + 1 0 + 1 1	+ + + -	++01+++1110	++0-+000-++	- o + + + + - o +	+ + +	+ + + + + o o	+++++++-					
NONDURABLE GOODS INDUSTRIES Food and kindred products Tobacco manufactures Textile mill products Apparel and allied products Paper and allied products Printing and publishing Chemicals and allied products Petroleum and coal products Rubber products Leather and leather products		+ 0 0 0 0	++0++00+++		++++++	+ + + 0 + + + + + +		+ - + + + + - + 0	++++0++ = + 0	+ + + - +	+ + + + + + +	++++-+-+							+		-+	++-00++		0 0 0 + + 0 +	+ 0 + + 0 - + -	+ - + + - + + - + -	0 - + + - + + + o +	+ + + + + + + + + + + + + + + + + + + +	+ + + - + + 0 + - +					

A.--(D1) Average Workweek of Production Workers, Manufacturing

+ = rising; o = unchanged; - = falling. Series components are seasonally adjusted by issuing agency before the direction of change is determined.

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							_	1-1	non	th	spa	ns														5-m	ontl	ı sp	ans						
			19	62								19	63								196	2		T					19	963					
21 industry components	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Feb-Jul	Mar-Aug	Apr-Sep	May-Oct	Jun-Nov	Jul-Dec	Aug-Jan	Sep-Feb	Oct-Mar	Nov-Apr	Dec-May Ten-Tun	יין אסור-טעון דיין דיין	Mar-Aug	Apr-Sep	May-Oct	Jun-Nov	Jul-Dec
Percent rising	81	33	33	71	55	38	57	62	57	57	67	29							52	57	52	67	71	38	76	86	57	67	76 6	2					
All durable goods industries ¹	+	-	-	+	-	-	+	+	+	+	-	-							+	-	+	+	+	-	+	+	+	+	+	+					
Iron and steel Primary nonferrous metals Other primary metals Electrical generator apparatus*. Radio, television, and equipment Other electrical equipment* Motor vehicles Motor vehicle parts Aircraft Other transportation equipment* Stone, clay, and glass products Metalworking machinery* Special industrial machinery*	- + - + + + - + + + + + + + + + + + + +	-	+-+++-+	+++-+-+-+-+-+-	+ + _ + + + + + _	+ + + + + + + - +	+++++++++++++++++++++++++++++++++++++++	++++++++++++	+++ + - + - + + + + + + + + + + + + + +	+ - + + + - + + + + + -	+ + + + + + + + +	-+ + - +							+-++-+	1+11++1 1++++++	+ + + + + + +	* + + + + - + + +	+ - + + + - + + + + + -		++++++ + + + +	+ + + ` + + + + + + + + + + + + + + + +	++++-	+++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++	-+++-++					
Engines and turbines*	- + + + +	-	- - + -	+ + + + + + +	-++ +0 ++++++		+ + + + +	- + + - + - +	+++-++-	+ - + +	+ + - + + - +	-+-+-+		-					+ + + + - +	-+++-+	-+-+++	+ + + + -	- + + + + + + +	117111	+ - + - + + +	++++++	- + + +	+ + - + - +	+ + + + +	-+-+ +++++++++++++++++++++++++++++++++					

B.--(D6) Value of Manufacturers' New Orders, Durable Goods Industries

+ = rising; o = unchanged; - = falling. Series components are seasonally adjusted by issuing agency before the direction of change is determined. *Denotes machinery and equipment industries that comprise series 24.

¹Includes durable goods industries not available separately.

Analytical Measures

								1-D	ont	h s	pan	ıs														3 - ¤	ont	h s	рап	s						
			196	52		Τ						190	63								196	52								196	53					_
24 industry components ¹	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Apr-Jul	May-Aug	Jun-Sep	Jul-Oct	Aug-Nov	Sep-Dec	Oct-Jan	Nov-Feb	Dec-Mar	Jan-Apr	Feb-May	Mar-Jun	Apr-Jul	May-Aug	Jun-Sep	100-Tur	Aug-Nov	201-100
Percent rising ²	68	78	35	7	99	85	98 '	79	44	91	85	52					_		1	8	67	31	73	90	99	98	94	91	90	88					•	
500 stock prices	+	+	-	-	+	+	+	+	-	+	+	0							-	-	+	-	+	+	+	+	+	+	+	+						
Mining and smelting. Coal, bituminous. Food composite. Tobacco (cigarette manufacturing). Textile weavers. Paper. Publishing. Chemicals. Drugs. Oil composite. Building materials composite. Steel. Machinery composite. Office and business equipment. Electric household appliances.	+ - + - + - + - + - + + + + - + + + + + + - + + - + + + + - + + - + + + + + + + + + + + + + +	++	- + -		+++++++ +++++++++++++++++++++++++++++++	+ + + + + + + + + + + + + + + + + + + +	+++++++++++++++++++++++++++++++++++++++	+++-+++++++++++	NA + - + + + + - + - + - +	NA++++++++++++++++++++++++++++++++++++	NA + + + + + + + + + + + + + + + + + + +	NA++++-++++++									_ + + _ + _ + + _ + + +	-++	+++++++++++++++++++++++++++++++++++++	+ + + + + + + + + + + + + + + + + + + +	+++++++++++++++++++++++++++++++++++++++	* + + + + + + + + + + + + + + + + + +	NA + + + + + - + + + + + + + + + + + + +	NA++++++++++++++++++++++++++++++++++++	N+++++++++++++++++++++++++++++++++++++	NA++ ++++++++++++++++++++++++++++++++++						
Electronics Automobiles Radio and television broadcasters Telephone companies Electric companies Natural gas distributors Retail stores composite Life insurance	+ + +	+ + + + + + + + +	+ + + - + + + +		+ + + + + + + +	++++++++	+ + + + + + + +	-+++-++	+++++	++++++++	+ + + + + + + + +	++++++								- +	+ + + + + + + +	+++-+-+	+ + + + + + + +	+ + + + + + + +	+ + + + + + + +	+ + + + + + + +	+ + + + + + + + +	+ + + + + + + + + + + + + + + + + + + +	+ + + + + + + +	+ + + + + + + + +						

C.--(D19) Index of Stock Prices, 500 Common Stocks

+ = rising; o = unchanged; - = falling. Series components are not seasonally adjusted. NA = Not available.

The 24 components shown here include 19 of the more important industries and 5 composites representing an additional 22 of the industries used in computing the diffusion index. ²Based on 82 industries, July 1962 to February 1963, and on 80 industries thereafter.

42

Table 6.-DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JULY 1962 TO PRESENT -- Continued

		_					1-r	nont	th a	spar	າຣ														3-n	ימסו	İh ε	spar	ns					
		19	52								196	З								196	2								196	3				
13 industrial materials components	Jun-Jul Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul ¹	Jul-Aug	Aug-Sep	Sep-Oct	Uct-Nov	Nov-Dec	Apr-Jul	May-Aug	Jun-Sep	Jul-Oct	Aug-Nov	Sep-Dec	Oct-Jan	Nov-Feb	Dec-Mar	Jan-Apr	Feb-May	Mar-Jun	Apr-Jul ¹	May-Aug	Jun-Sep	100-TDC	Sep-Dec
Percent rising	31 42	50	58	69 3	38	58	67	46	54	50	58 :	38						42	23 :	23	42	65 ·	79	62	50	58	50	54	35	38				
All industrial materials	_ +	-	+	+	-	-	-	-	+	÷	-	÷						-	-	-	+	÷	+	+	-	-	-	+	-	-				
Copper scrap (lb.) Lead scrap (lb.) Steel scrap (ton) Tin (lb.)	l - a	0	+	+ '	·	° + .	+	-	_	-	+	+						1011	- - + -	- - + -	- +	+ + - +	+++++++	+ + + + +	+ + + -	+ + -	+ - + -	+ - + +	+ +	- + - +				
Zinc (lb.) Burlap (yd.). Cotton (lb.), 15 market average Print cloth (yd.), average Wool tops (lb.).	 + -	· + · -	+ 0 -	+ 1 - +	NA + +	NA + +	NA + +	+ +	+ 0	+ 0	-	- +						0 + + + +	-	2	0 0	+ ! - -	AN + +	NA + +	- + +	NA + +	+ +	0 - + + -	+	+ - + -				
Hides (lb.) Rosin (100 lb.) Rubber (lb.) Tallow (lb.).	0 0 - 1	0	o	-	-	1011	+ 0 - +	- o - +	0 0 +	- 0 - +	- 0+ +	o +						1011	1011	1011	+ 0 + +	+ - + + +	- - + +			- 0 - +	- 0 +	- 0 - +	- 0 +	- - +				

D.--(D23) Index of Industrial Materials Prices

+ = rising; o = unchanged; - = falling. Series components are not seasonally adjusted. NA = Not available. ¹Data for July 18, 1963. Analytical Measures

1962 1962 1011-Aug 1063 1064 1064 1064 1065 1066 1066 1066 1067 1066 1067 1066 1067 1066 1067 1066 1067 1066 1067 1067 1067 1067 1067 1067 1067 1067 1067 1067 1067 1067 1067 1067 1067 1067 1067 1068 1069 1069 1067 1068 1069 1069 1069 1069 1069 1069 1069 1069 1069								1-month		spans	5									ĺ			5-month	oth	spans	BDS					
26 area components 9 Percent rising. 6 47 labor market areas1 00KTHEAST REGION Buffalow NOKTHEAST REGION Buffalow NOKTHEAST REGION Puttsburgh** NOKTHEAST REGION Puttsburgh** NOKTHEAST REGION Povidence** NOKTH ACTION Povidence** NOKTH ACTION Povidence** NOKTH REGION Povidence** NOKTH REGION Povidence** SOUTH REGION Povidence** SOUTH REGION Chicago Columbus Deletrst SOUTH REGION Millanepolis SOUTH REGION Millanes Columbus Baltimore SOUTH REGION Millanes South REGION Balitime South REGION Balitime South REGION <				196	_						1963	~						F.	1962							1 ម	1963				
Percent rising 6 47 labor market areas1 NOKTHEAST REOION Boston NOKTHEAST REOION Boston NOKTHEAST REOION Baston NOKTHEAST REOION Buffalo* NOKTHEAST REOION Pritabelphia* NOKTH CENTRAL REGION Pritabelphia* NOKTH CENTRAL REGION Providence** NOKTH CENTRAL REGION Providence** South CENTRAL REGION Providence** South CENTRAL REGION Providence** NORTH CENTRAL REGION Columbus Columbus Detroit Columbus Detroit Columbus Columbus South REGION Milvause City Milvause Dolumbus South REGION Milvause City Dolumbus South REGION Milvause South Region Stattas South Region <tdo< th=""><th>26 area cc</th><th></th><th></th><th></th><th></th><th>Nov-Dec</th><th></th><th></th><th></th><th></th><th></th><th></th><th>də2-3uA</th><th>100-dəS</th><th>voN-750</th><th>Nov-Dec</th><th>Feb-Jul</th><th>SuA-TAM</th><th>Apr-Sep fo0-vam</th><th>vov-nut</th><th>Jul-Dec</th><th>nst-3uA</th><th>deT-qeZ</th><th>Cet-Mar</th><th>Dec-May</th><th>Jen-Jun Dec-May</th><th>Feb-Jul</th><th>SUA-TAM</th><th>Apr-Sep</th><th>May-Oct</th><th>lul-Nov Jun-Nov</th></tdo<>	26 area cc					Nov-Dec							də2-3uA	100-dəS	voN-750	Nov-Dec	Feb-Jul	SuA-TAM	Apr-Sep fo0-vam	vov-nut	Jul-Dec	nst-3uA	de T-qe Z	Cet-Mar	Dec-May	Jen-Jun Dec-May	Feb-Jul	SUA-TAM	Apr-Sep	May-Oct	lul-Nov Jun-Nov
47 labor market areas ¹ . NOKTHEAST REGION Boston. Buffalo*. Newark. Newark. Philadelphia*. Philadelphia*. Providence**. NORTH CENTRAL REGION Philadelphia*. Providence**. NORTH CENTRAL REGION Chicamo NORTH CENTRAL REGION Chicamo (Cincinneti). Cincinneti. North CENTRAL REGION Chicamo (Cincinneti). Columbus	nt rising			45			36			67	12		4				213	34 3	32 38	62 8	49	22 6	64 6	64 4	45 53	3 83]	1		1
NORTHEAST REGION Beston Buffalo* Newark Philadelphia* Providence** Providence** Providence** Providence** Providence** Providence** Providence** North EECION Chicago Contimeti Columbus Colu	bor market aı	•••••					I				+						ι	i	1	+	I	t	+	+.	+	+					
Boston. Buffalo*. Buffalo*. Newark. New York. Prisburgh** Providence**. Providence**. Providence**. Providence**. Providence**. Notese Cincimati. Cincimati. Cincimati. Cincimati. Cincimati. Cincimati. Cincimati. Cincimati. Cincimati. Cincimati. Conumous Cincimati. Cincimati. Columbus Cincimati. Columbus Cincimati. Columbus Cincimati. Columbus Cincimati. Columbus Cincimati. Columbus Cincimati. Columbus Cincimati. Columbus Cincimati. Columbus Cincimati. Columbus Columb	NORTHEAL	ST RECION																													
Chicago. Chicago. Claveland. Columbus Columbus Columbus Milwaukee Mineapolis SOUTH REGION Atlanta SoUTH REGION Atlanta South REGION Atlanta Baltimore	bie*. bie*. dwrth cent			11+++++1			+++++++++++++++++++++++++++++++++++++++	+++++++	1+1+1+1+	+ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$	++++++								+ + + + + +	+ + + + + +	++ + + + + + +	+ + +	+ + + + + ! + +	+ + + + + + + + + + + + + + + + + + + +	· · · + · · + + +	+ + + + + + + + + +					
Chicago. Cincimmati. Cincimmati. Claveland. Columbus. Patroit. Malwaukee. Minespolis. Kansas City. Kansas City. Sourh REGION Atlanta. St. Louis. Sourh REGION Atlanta. Baltimore. Baltimore. Baltimore. Baltimore. Baltimore. Baltimore. Cos Angeles. Baltimore. Baltimg: o = unchanged; + = falling. Becaus Cos Angeles. Cos Angeles. Balting: o = unchanged; + = falling. Becaus ted to show a comparable activity pattern. The seaust the Bureau of the Census befor the to show a comparable activity battern. Seaust by Bureau of the Census befor the to show a comparable activity battern.	NED TITION																														
Atlanta. Baltimore. Dallas. Bouston. Korstand. Korstand. Pos Angeles. Net land. Pos Angeles. Pos Francisco. Seatta. - fising; o = unchanged; + = falling. Becaus ted to show a comparable activity pattern. The ted to show a comparable activity pattern. The ted to show a comparable activity battern. The ted to show a comparable activity pattern. The ted to show a comparable activity battern.	L. Ly by Sourth			+ 1 1 + + 1 1 1 1 +			. + + 1 + + 1 1 1 1	++++ ++++	* * * * * * * * * * * * * * * * * * *	++++++++++	+ + + + + + + + +						++++	1+1++++11	+ 1 + 1 + + 1 1 + + 1	* * * * * * * * * * *	+++1111++1	1 1 1 1 + 1 1 1 + 1	+++!!!!!++	1+++ +++ ++	1 + + + + + + + + + + + + + + + + + + +	++++ +++ + ++++					
<pre>Ballas. Dallas. Dallas. Dorf Angeles. VEST REGION For Angeles. Son Francisco. Seattle. S</pre>		•		•			+	+	+	+	+						I.				1	1	+	+		•					
Los Angeles	WEST			+ 1 +							+ + +						+ + + +	1 + 1	+ +	+ 1 1	+ + + +	+ 1 1	+ + +	+ + +	• + +	1 + + 1 + +					
ecause The before	es			11++			11+1				+ 1 0 1						+ + + + + + + + + + + + + + + + + + + +	++++	+ + + +	++++	1 + 1 +				1111	+++ 1					
**Designated by Bureau of Employment Security as an area of substantial (6 percent or more) and persistent unemployment ¹ The percent rising is based on 47 labor market areas. Directions of change are shown separately for only the largest	; o = unchang a a comparabl ted by the Bu i by Bureau c i by Bureau c i trising is	<pre>ged; + = falling. Becau le activity pattern. Th rreau of the Census befo if Employment Security a if Employment Security a if Employment Security a </pre>	se th re th s an (s an (is so ection e din area area	bries of s of s Dire	che che on c ubst ubst ctic	mally of ct anti anti anti	f ris all (all (ch ch	ses i show i is nem for pr	when n fo det ploy erce erce	e short	hera he v fred t (6 br m or m	Dei bei bei sef	usines endir rcent) and parate	ling d p.	s activity fails and falls when busin g nearest the 22d of the month. Serie or more) in June 1963. Apersistent unemployment in June 1963. My for only the largest 26.	activity fails and nearest the 22d of r more) in June 196; rrsistent unemployme v for only the large	y f th in iyu	alls e 2% func the	19 19 19 19	i fall f the 63. gest 2	falls when the month. i. int in June st 26.	s when month. n June 6.	1 20 A	busines Series 1963.	S S	s rises, it is components are	ses, men	ts at	it is are	sin- sea-

E.--(DS) Initial Claims for Unemployment Insurance, State Programs

Table 6--DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JULY 1962 TO PRESENT--Continued

Digitized for FRASER http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis

		1-month spans	3-month spans
	1962	1963	1962 1963
30 industry components	Jun-Jul Jul-Aug Aug-Sep Sep-Oct Oct-Nov Nov-Dec	wov-Lec Dec-Jan Jan-Feb Feb-Mar Mar-Apr Apr-May May-Jun Jun-Jul Jun-Aug Aug-Sep Sep-Oct Sep-Oct Nov-Dec	APT-JUL JUU-Sep JUL-Oct JUL-Cct Aug-Nov Sep-Dec Oct-Jan Nov-Feb Dec-Mar Jan-Apr Jan-Apr Mar-JUL Mar-JUL Mar-JUL Mar-JUL Mar-JUL Mar-JUC Jul-Oct Aug-Nov Sep-Dec
Percent rising	48 40 30 48 28 42	42 30 63 85 75 87 65	68 55 25 25 17 27 28 43 57 90 87 83
All nonagricultural establishments	+ - + + - 0	0 - + + + + +	+ + + + + 0 - + + + + +
Ordnance and accessories	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Printing and publishing Chemicals and allied products Petroleum and coal products Rubber products Leather and leather products Mining Contract construction Transportation and public utilities Wholesale trade Retail trade Finance, insurance, real estate Service Federal government State and local government	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	+ + 0 + +	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

F.--(D41) Number of Employees in Nonagricultural Establishments

+ = rising; o = unchanged; - = falling. Series components are seasonally adjusted by issuing agency before the direction of change is determined.

Analytical Measures

4		1-month spans	3-month spans
	1962	1963	1962 1963
24 industry components	Int-nut 3uA -Iut GeS- 3 uA 7:0 -GeS 7:0 -GeS 1:0 -VoV 0:1 -VoV	рес-леп јеп-гер Гер-Маг Маг-Арт Маг-Арт Маг-Арт Лап-Лал Лап-Лал Сост-Nov Сост-Nov Сост-Nov Сост-Nov	Арт-Jul Мау-Анб Мау-Анб Мау-Анб Анб-067 Анб-067 Анб-067 Анб-067 Анб-067 Арт-Jul Арт- Ар
Percent rising ¹	54 58 79 29 54 42	67 69 73 62 92 77	79 69 79 42 62 46 58 54 81 83 88 79
All industrial production	+ + + + +	+ + + + +	+ + + + 0 1 + 1 + + +
DURABLE GOODS			
Primary and fabricated metals Primary metal products	: ; + ; ; + ; + ; +	:+ :+ :+ :+ :1	: + + + + + + + + + + + + + + + + + + +
Fabricated metal products	; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	+ : : : : : : : : : : : : : : : : : : :	+ + + + + + + + + + + + + + + + + + + +
Machinery, except electrical	• • • • • • • • •	+ + + + + + + +	
Transportation equipment	+ + - + - + - +	- + - - + - - + - - 1 - - 1 -	+ + + + + + + + + + + + + + + + + + + +
Clay. Flass and related products	+ : + : + : + : + :	+ + + + + + + + + + + + + + + + + + + +	+ + + + + + O I + + +
	+ + + +	+ + + + + + + + + + + + + + + + + + + +	
Lumber and products	+ : + : + : + : + :	AM + - + + -	
Furniture and fixtures	+ + + + + + + +	; 1 4 ; + 4 ; + 4 ; + 4	
NONDURABLE COODS	 - 	-	- - - - -
		+	+ + :
Textile mill products	• • • • •	+++++++++++++++++++++++++++++++++++++++	
Apparel products	+ + + + + + + + + + + + + + + + + + +	NA NA NA NA NA NA	+ + + + + + + + + + + + + + + + + + +
Paper and printing.		: .	
Paper and products	* + + +	AN + + + +	+ + + + + + + + + + + + + + + + + + +
Chemicals betroleum and rubber	• : : : : : : : : : : : : : : : : : : :	+ + +	
Chemicals and products	0 + + +		
Petroleum products	+ + 1 + + < 1 + + < 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 +	+ + + WA	
Foods, beverages, and tobacco			g + - : - : - :
Food and beverages	+ + • • • • +	W + - + - +	+ + + +
Tobacco products	• + • + •	A	WW WV - + - + - + - + - + - + - + - + - + -
MINERALS			
Coal	+ - + - + - + -	+ + + + + - 1	+ + + + + + + + + + + + + + + + +
Wruge VIL and Datural gas		- - + - +	
Stone and earth minerals.	· • • • • • • • • • • • • • • • • • • •	+ + + + + + + + + + + + + + + + + + + +	+ + +
+ ≖ rising; o ≡ unchanged; - ≈ falling. Serie NA = Not available.	ries components are	seasonally adjusted by issuing agency before the direction of	y before the direction of change is determined.

G.--(D47) Index of Industrial Production

Table 6.-Diffection OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JULY 1962 TO PRESENT-Continued

Digitized for FRASER http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis

Analytical Measures

¹The direction of change is shown for industry groups where actual data for separate industries are not available; however, estimates for each industry are used to compute the percent rising. The percent rising is based on 24 industry components.

Table 6.-DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JULY 1962 TO PRESENT--Continued

H.--(D54) Sales of Retail Stores

								1-	mon	th	spai	ns			_											5-m	onth	sp	ans					
			196	52								19	63								196	52							1	963				
24 retail store components	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Feb-Jul	Mar-Aug	Apr-Sep	May-Oct	Jun-Nov	Jul-Dec	Aug-Jan	Sep-Feb	Oct-Mar	Nov-Apr	Dec-May	Feb-Jun	Mar-Aug	Apr-Sep	May-Oct	von-nuc
Percent rising	83	56	50	29	85	52	50	54	58	40	58	42							73	67	58	42	98	67	62	62	88	42 .	42 1	2				
All retail sales	+	-	+	+	+	-	+	÷	+	-	0	-							.+	+	+	+	+	+	+	+	+	+	+	+				
Grocery stores	+ - + + +	-	+ + +	+ + -	+ + + + + +	+ + +	+ + + + + -	- 0 + + + +	+ + + - + -	+ + + + - +	0+-++-	+ + 0 0 + +							+ + + + +	+ + - + + + + +	+ -+++ -++	+ + +	+ 0+ + + + + +	++10++1+	+ - + + + -	+ + + 0	+ + + + + +	+ + + + + + +	-++-++-	- + - + + - + + +				
Women's apparel stores. Family apparel stores. Shoe stores. Furniture stores. Appliance and radio stores. Building material dealers. Hardware stores. Farm equipment dealers.	+++++++++++++++++++++++++++++++++++++++	0,+ + - +	+ + + - + +	- + +	+ + + + + + + +	+ + + - + +	- + +	0 - + + +	+ - + + + + + +		++00+++-	-+ 0 + -							+ - + - + + -	+ + + + - +	+ + + - + +	+ + +	+ + + + + + + +	+ + 1 + 1 + 1 +	-+-++-++	-++ +-+ o-+	+ + + + + + + +	+	+	+				
Motor vehicle dealers Tire and battery dealers Gasoline stations Drug and proprietary stores Jewelry stores Liquor stores Other durable goods stores Other nondurable goods stores	- - + + +	- + - 0 + -		+ - + +	-+ 0++++++	- + + - + +	+ - + - + + +	+ + + - + +	1 + 1 1 0 0 + 1	+ - 0 + - +	+ o + + +	1 + 1 1 0 1 + 1							+ - + 0 + +	+ - + + +	+ + +	+ - + + + +	+ + + + + + + +	+ + + + + + +	+ + + - + - + +	+ - + + + + +	-++++++	+ - + - + - + -	+ + + +	+ + - + + -				

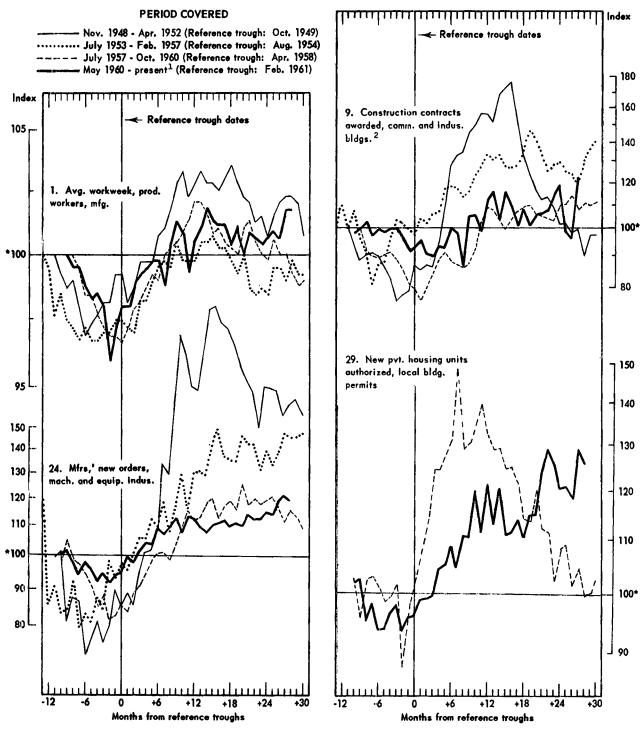
+ = rising; o = unchanged; - = falling. Series components are seasonally adjusted by the Bureau of the Census before the direction of change is determined. Analytical Measures



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COMPARISONS OF REFERENCE CYCLE PATTERNS

Percent of reference peak levels measured from the reference peak date preceding the trough of each of 4 recent business cycles to 30 months after the trough of each cycle.



*Reference peak level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the reference peak is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the reference peak month is set at "100". For quarterly series, the reference peak quarter is set at "100". MCD numbers are shown in appendix C.

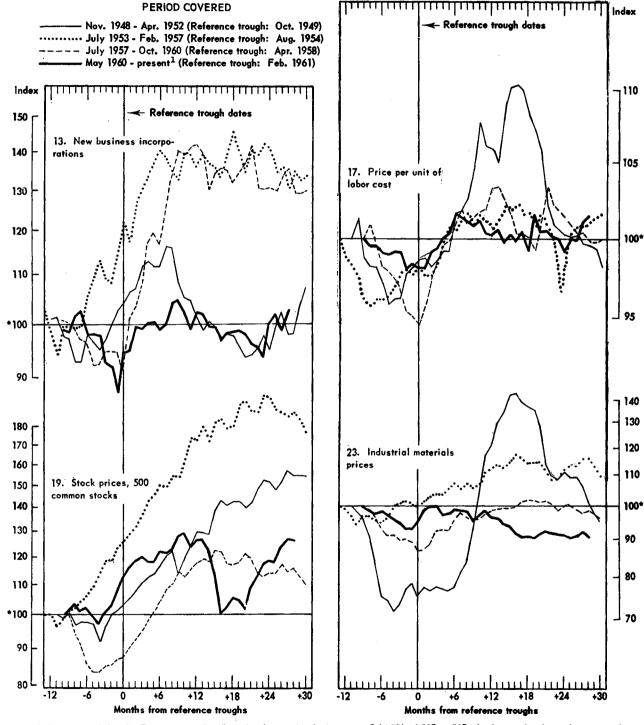
¹See table 1 for latest month in current period. Percent changes for this month and the comparable months of previous expansions are shown in table 7.

Digitized for FR²For the 1949, 1954, and 1958 cycles a 3-term moving average is shown.



COMPARISONS OF REFERENCE CYCLE PATTERNS--Con.

Percent of reference peak levels measured from the reference peak date preceding the trough of each of 4 recent business cycles to 30 months after the trough of each cycle.



*Reference peak level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the reference peak is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the reference peak month is set at "100". For quarterly series, the reference peak quarter is set at "100". MCD numbers are shown in appendix C.

¹See table 1 for latest month in current period. Percent changes for this month and the comparable months of previous expansions are shown in table 7.

CHART 4

COMPARISONS OF REFERENCE CYCLE PATTERNS -- Con.

Percent of reference peak levels measured from the reference peak date preceding the trough of each of 4 recent business cycles to 30 months after the trough of each cycle.

140

120

100*

80

60

40 ل

120

115

110

105

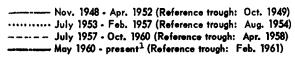
100*

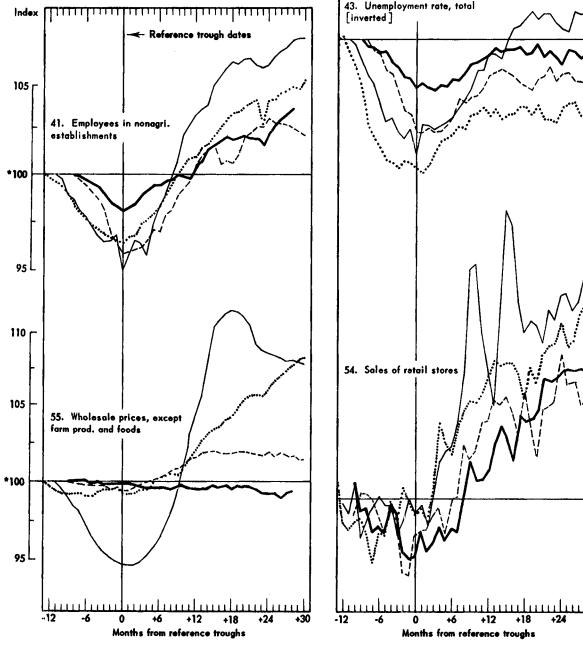
J 95

+30

\prec Reference trough dates

PERIOD COVERED





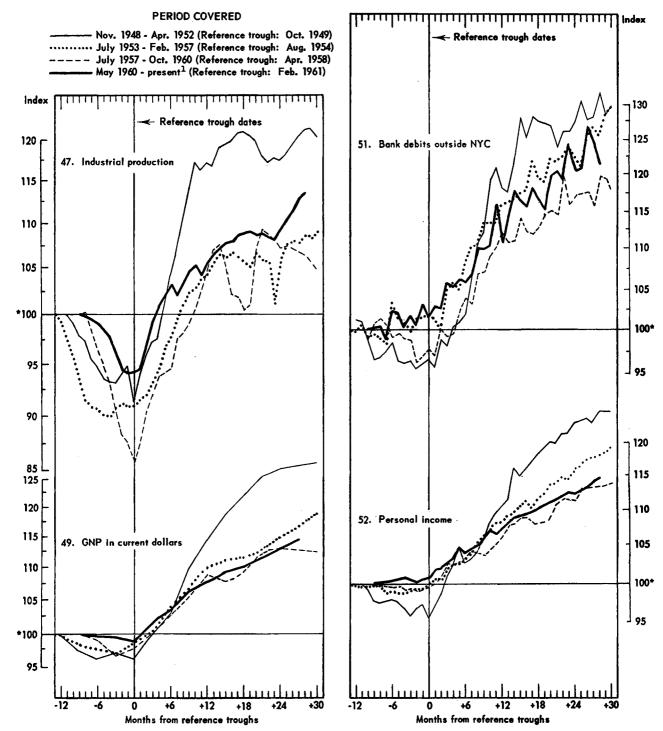
*Reference peak level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the reference peak is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the reference peak month is set at "100". For quarterly series, the reference peak quarter is set at "100". MCD numbers are shown in appendix C.

¹See table 1 for latest month in current period. Percent changes for this month and the comparable months of previous expansions are shown in table 7.



COMPARISONS OF REFERENCE CYCLE PATTERNS -- Con.

Percent of reference peak levels measured from the reference peak date preceding the trough of each of 4 recent business cycles to 30 months after the trough of each cycle.



*Reference peak level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the reference peak is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the reference peak month is set at "100". For quarterly series, the reference peak quarter is set at "100". MCD numbers are shown in appendix C.

¹See table 1 for latest month in current period. Percent changes for this month and the comparable months of previous expansions are shown in table 7. Digitized for FRASER

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CHART 4

COMPARISONS OF REFERENCE CYCLE PATTERNS--Con.

Percent of reference peak levels measured from the reference peak date preceding the trough of each of 4 recent business cycles to 30 months after the trough of each cycle.

111111111111

62. Wage and salary cost

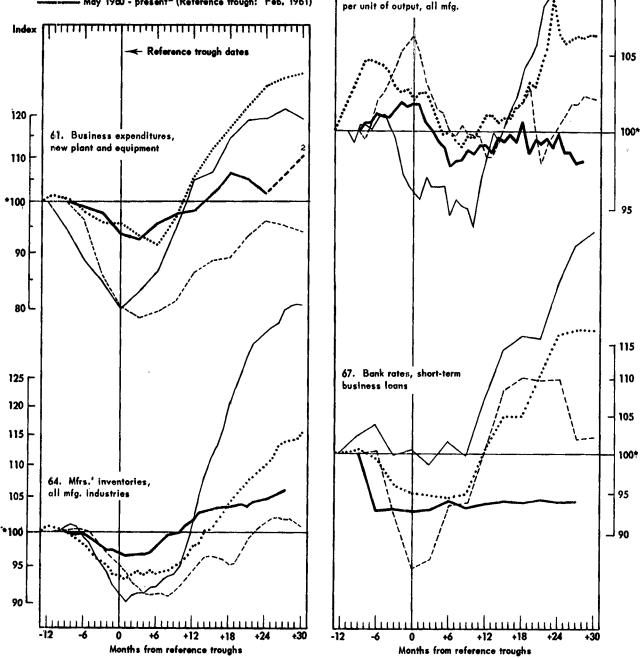
Reference trough dates

Index

110

PERIOD COVERED

------ Nov. 1948 - Apr. 1952 (Reference trough: Oct. 1949) ------ July 1953 - Feb. 1957 (Reference trough: Aug. 1954) ----- July 1957 - Oct. 1960 (Reference trough: Apr. 1958) ----- May 1960 - present¹ (Reference trough: Feb. 1961)



*Reference peak level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the reference peak is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the reference peak month is set at "100". For quarterly series, the reference peak quarter is set at "100". MCD numbers are shown in appendix C.

²See table 1 for latest month in current period. Percent changes for this month and the comparable months of previous expansions are shown in table 7.

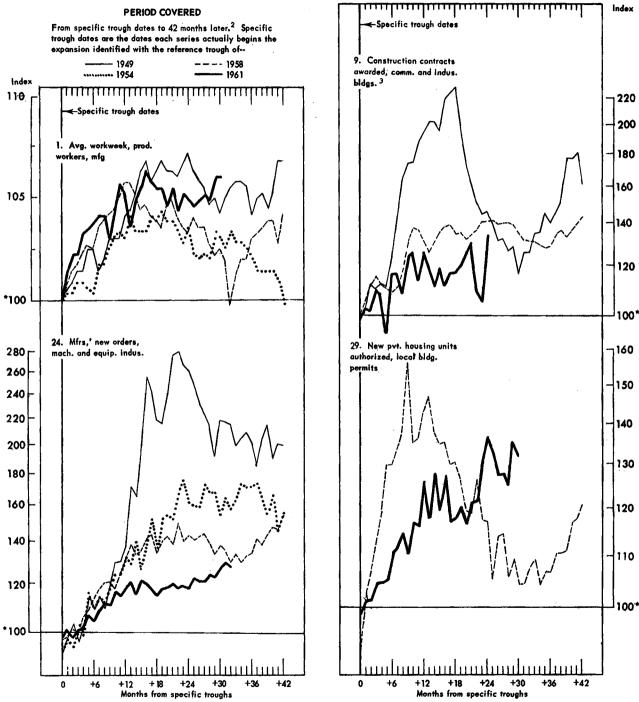
shown in table 7. Digitized for FBASER http://fraser.stlouised.org

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COMPARISONS OF SPECIFIC CYCLE PATTERNS -- Con.

Percent of specific trough levels of selected series compared for 4 business expansions. Period begins with the specific trough date¹ of each series for each expansion.



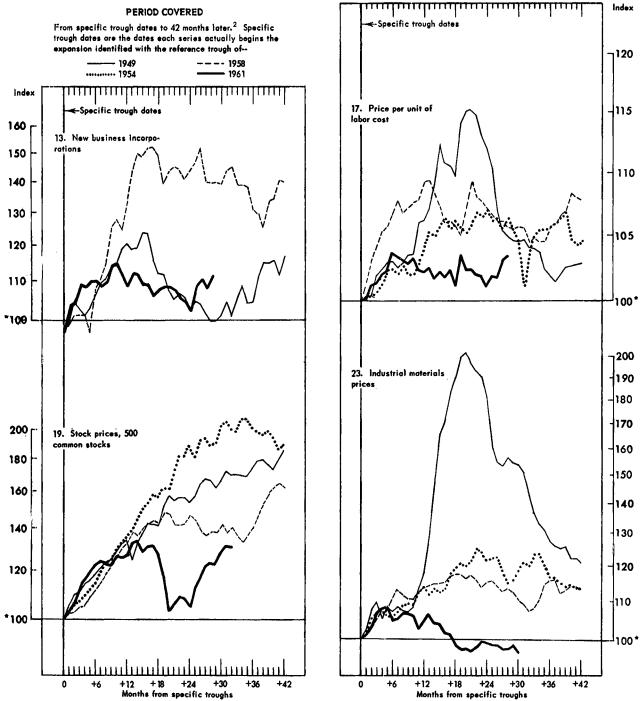
*Specific trough level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the specific trough is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the specific trough month is set at "100". For quarterly series, the specific trough quarter is set at "100". MCD values are shown in appendix C.

¹See appendix B far specific dates, ²See table 1 for latest month in current period. Percent changes for this month and comparable months after the specific troughs of previous expansions are shown in table 9. ³For the current cycle, changes are based on the low (L) shown in table 1. For the 1949 and 1958 cycles, a 3-term moving average is shown.



COMPARISONS OF SPECIFIC CYCLE PATTERNS--Con.

Percent of specific trough levels of selected series compared for 4 business expansions. Period begins with the specific trough date¹ of each series for each expansion.

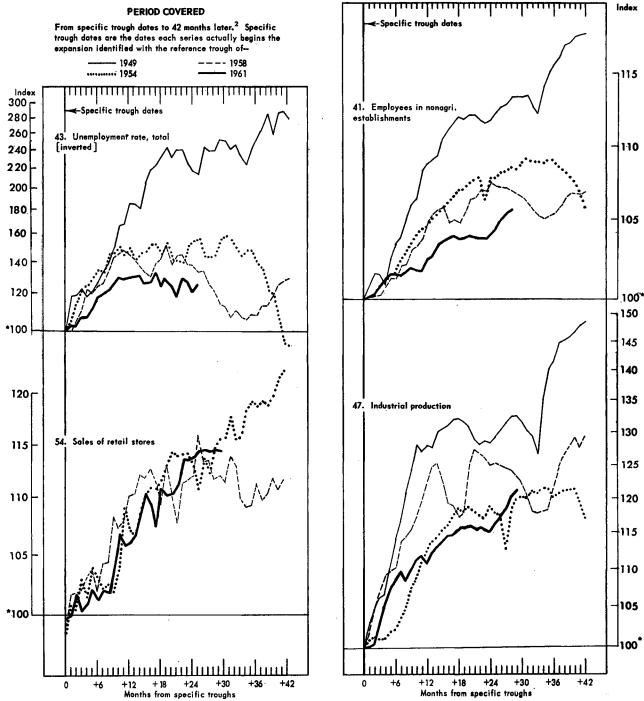


*Specific trough level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the specific trough is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the specific trough month is set at "100". For quarterly series, the specific trough quarter is set at "100". MCD values are shown in appendix C.

at "100". MCD values are shown in appendix C. ¹See appendix B for specific dates. ²See table 1 for latest month in current period. Percent changes for this month and comparable months after the specific troughs of previous expansions are shown in table 9.

COMPARISONS OF SPECIFIC CYCLE PATTERNS--Con.

Percent of specific trough levels of selected series compared for 4 business expansions. Period begins with the specific trough date¹ of each series for each expansion.

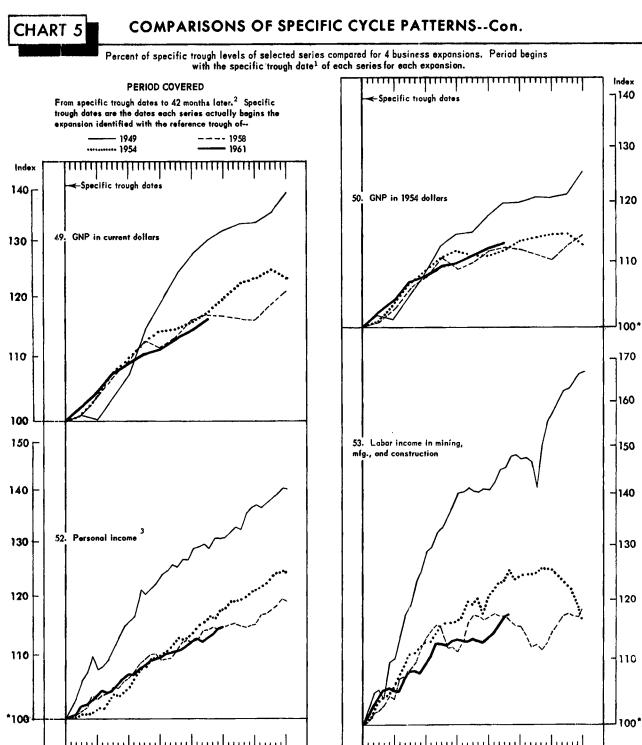


*Specific trough level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the specific trough is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the specific trough month is set at "100". For quarterly series, the specific trough quarter is set at "100". MCD volues are shown in appendix C.

¹See appendix B for specific dates. ²See table 1 for latest month in current period. Percent changes for this month and comparable months after the specific troughs of previous expansions are shown in table 9.

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CHART 5



*Specific trough level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the specific trough is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the specific trough month is set at "100". For quarterly series, the specific trough quarter is set at "100". MCD values are shown in appendix C.

0

+6

+12

+18

+30

+36

+24

Months from specific troughs

+42

¹See appendix B for specific dates. ²See table 1 for latest month in current period. Percent changes for this month and comparable months after the specific troughs of previous expansions are shown in table 9. ³For the current cycle, changes are based on the low (L) shown in table 1.

0

+12

+6

+ 18

+24

Months from specific troughs

+30

+36

+42

Table 7 .- PERCENT OF REFERENCE PEAK LEVELS AS MEASURED AT DESIGNATED MONTHS AFTER THE REFERENCE TROUGH DATES IN THE 9 MOST RECENT EXPANSIONS

For series with a "months for cyclical dominance" (MCD) of "1" or "2" (series 1, 17, 19, 23, 41, 43, 47, 52, 55, 62, 64, and 66), the figure for the reference peak month is used as the base. For series with an MCD of "3" or more (series 2, 3, 6, 7, 9, 13, 14, 24, 29, 51, and 54), the average of the 3 months centered on the reference peak month is used as the base. The base for quarterly series (series 16, 49, 50, 61, and 67) is the reference peak quarter. See also MCD footnote to appendix C.

Selected series	Months after refer-	Per	cent of	f refere	ence per begi	ak prion		erence	expans	lon
Selected series	ence trough ¹	July 1921	July 1924	Nov. 1927	Mar. 1933	June 1938	Oct. 1949	Aug. 1954	Apr. 1958	Feb. 1961
NBER LEADING INDICATORS										
 Average workweek of production workers, manufacturing Accession rate, manufacturing Layoff rate, manufacturing (inverted) Value of manufacturers' new orders, durable 	28 27 27	NA 48.3 17.5	96.6 39.3 49.2	93.4 55.9 42.7	73.6 40.2 39.4	97.0 128.0 96.8	102.3 113.3 122.2	99.8 84.2 82.4	99.2 98.2 73.1	101.5 102.6 143.8
goods industries 7. New private nonfarm dwelling units started 9. Construction contracts awarded for commer-	28 28	151.2 178.1	115.2 125.4	65.7 41.4	47.7 37.8	176.2 179.5	146.7 137.8	130.7 98.2	109.7 117.3	115.7 122.2
cial and industrial bldgs., floor space ²	27	35.2	111.2	79.4	21.0	121.3	99.0	118.5	110.2	121.6
 Number of new business incorporations Current liabilities of bus. failures (inv.). Corporate profits after taxes (Q) Price per unit of labor cost index Index of stock prices, 500 common stocks Index of industrial materials prices Undex of industrial materials prices 	27 28 24 28 28 28	69.7 15.7 76.0 NA 93.7 58.7	98.7 133.6 101.9 NA 152.1 82.2	101.7 65.2 105.7 NA 183.9 84.8	66.2 221.3 20.6 NA 35.4 169.7	82.2 109.9 115.1 NA 66.0 91.9	97.7 134.3 91.6 99.7 155.3 101.6	130.6 72.7 114.3 101.2 191.2 116.7	135.6 51.4 100.0 99.8 116.5 98.4	102.5 101.3 112.4 101.6 127.0 90.2
24. Value of manufacturers' new orders, machin- ery and equipment industries	28	NA	NA	NA	NA	NA	160.3	146.1	115.5	118.8
29. Index of new private housing units author- ized by local building permits	28	NA	NA	NA	NA	NA	NA	NA	99 .3	125.9
NBER ROUGHLY COINCIDENT INDICATORS										
 Number of employees in nonagricultural establishments	28 28 28 27 27 28 28 28 28 28	88.0 NA 104.5 NA 93.7 NA 109.7 64.5	96.1 NA 106.1 115.8 116.6 110.7 107.8 92.3	95.8 NA 100.0 107.4 110.2 109.3 106.4 100.0 89.1	83.4 NA 73.8 66.2 81.6 56.0 68.8 75.7 85.1	104.1 91.6 109.2 108.9 NA 107.1 107.4 109.7 95.5	107.5 117.7 120.9 128.2 117.6 131.4 124.7 117.8 108.1	104.8 61.7 108.8 116.6 103.7 125.7 117.9 115.2 108.0	112.3 107.1	103.6 91.5 113.8 114.9 110.7 121.4 114.9 109.3 99.5
NBER LAGGING INDICATORS										
 61. Business expenditures on new plant and equipment, total (Q):³ a b 62. Index of labor cost per unit of output, total membraturing 	24 30 28	60.2 54.9	103.4 100.9	87.0	37.2 44.0	92.4 131.5	119.3 119.4	127.7 131.3	96.2 94.0	101.8
total manufacturing	28 27 27	84.4 NA NA	93.0 NA NA	90.9 NA NA	85.0 74.4 71.6	100.0 105.9 131.3	109.7 137.2 174.6	106.2 114.7 142.1		98.2 106.2 122.4
19 cities (Q)	27	90.9	92.8	111.9	60.6	95.5	130.7	117.4	102.9	93.6

NA Not available.

¹Based on period from February 1961 (current trough) to latest month for which data are available.

²Except for 1961, charges are computed in a 3-term moving average of the seasonally adjusted series. ³Comparisons are made for this series on the basis of (a) the period 24 months after the February 1961 trough (actual expenditures) and (b) the period 30 months after the same period (anticipated expenditures for 3d quarter 1963).

Table 8 .-- PERCENT CHANGE FROM REFERENCE TROUGH LEVELS AS MEASURED AT DESIGNATED MONTHS AFTER THE REFERENCE TROUGH DATES IN THE 9 MOST RECENT EXPANSIONS

For series with a "months for cyclical dominance" (MCD) of "1" or "2" (series 1, 17, 19, 23, 41, 43, 47, 52, 55, 62, 64, and 66), the figure for the reference trough month is used as the base. For series with an MCD of "3" or more (series 2, 3, 6, 7, 9, 13, 14, 24, 29, 51, and 54), the average of the 3 months centered on the reference trough month is used as the base. The base for quarterly series (series 16, 49, 50, 61, and 67) is the reference trough month is used as the base. quarter. See also MCD footnote to appendix C.

	Months after	P	ercent	change		ference nning in		of exp	ansion	
Selected series	refer- ence trough ¹	July 1921	July 1924	Nov: 1927	Mar. 1933	June 1938	Oct. 1949	Aug. 1954	Apr. 1958	Feb. 1961
NBER LEADING INDICATORS										
 Average workweek of production workers, manufacturing	28 27 27 28 28 27 27 27 28 24 28 28 28 28 28 28 28 28 28	+6.6 NA NA +114.1 +81.9 +29.1 -3.7 -7.1 NA +26.6 +40.1 NA NA	+5.7 +82.9 +58.7 +35.2 +60.2 +33.3 +48.3 +89.3 NA +46.1 -2.0 NA	-60.2 -8.5 -2.0	-1.0 +24.2 +148.3 +150.3 +75.2 -16.5 +168.1 NA NA +70.9	+42.2 +95.2 +193.2	+3.0 +27.6 +82.2 +58.7 -4.3 +14.7 -6.5 +14.5 +17.1 +10 +49.5 +35.3 +82.2 NA	+16.0 +27.5 +40.6 -17.8 +22.3 +10.6 -23.7 +34.1 +3.0 +51.1 +16.7 +53.1	+5.9 +20.5 +28.1 +22.4 +40.2 +42.0 -31.7 +32.2 +5.5 +33.5 +13.2 +37.8	+3.6 -4.9 +68.8 +25.6 +36.2 +30.5 +10.2 +3.6 +32.3 +3.5 +12.8 -5.4 +23.7 +29.9
NBER ROUGHLY COINCIDENT INDICATORS	20	145	NA				104	-26.1	-2.5	+29.9
 Number of employees in nonagricultural establishments	28 28 28 27 27 28 28 28 28 28	+27.7 NA +53.3 +24.0 +24.1 +20.9 +31.3 +14.6 +2.3	+10.7 NA +30.0 +18.8 +16.1 +20.3 +11.2 +9.9 +1.0	-0.2 NA +8.2 +7.0 +7.7 +0.6 +3.9 0.0 4.2	+31.3 +13.3 +46.8 +39.8 +33.9	+63.1 +61.4 +23.7 NA +28.2 +20.6 +32.6	+13.2 +140.2 +32.1 +32.7 +19.3 +36.9 +30.3 +18.2 +13.8	+8.5 +39.7 +19.7 +18.8 +12.0 +23.7 +18.2 +16.1 +8.9		+24.2 +21.0 +15.7 +12.8 +18.6 +14.0
NBER LAGGING INDICATORS										
 Business expenditures on new plant and equipment, total (Q):³ Business expenditures on new plant and equipment, total (Q):³ Business of labor cost per unit of output, total manufacturing	24 30 28 27 27 27	+75.3 +59.9 -6.2 NA NA -15.7	+48.2 +44.6 -9.6 NA NA +5.8		+117.1 +156.4 +15.9 +25.5 +49.7 -22.2	-3.6 +11.8 +40.8	+49.1 +49.2 +14.1 +50.0 +40.7 +30.2	+33.6 +37.4 +4.0 +21.7 +37.5 +23.0	+19.7 +17.1 -3.8 +6.6 +25.5 +19.2	+9.2 +18.0 -3.5 +9.0 +18.8 +0.8

NA Not available.

¹Based on period from February 1961 (current trough) to latest month for which data are available.

²Except for 1961, changes are computed in a 3-term moving average of the seasonally adjusted series. ³Comparisons are made for this series on the basis of (a) the period 24 months after the February 1961 trough (actual expenditures) and (b) the period 30 months after the same period (anticipated expenditures for 3d quarter 1963).

Table 9.--PERCENT OF SPECIFIC PEAK LEVELS AND PERCENT CHANGE FROM SPECIFIC TROUGH LEVELS AS MEASURED AT DESIGNATED MONTHS AFTER THE SPECIFIC TROUGH DATES IN THE 9 MOST RECENT EXPANSIONS

For series with a "months for cyclical dominance" (MCD) of "1" or "2" (series 1, 17, 19, 23, 41, 43, 47, 52, and 53). the figure for the specific peak (trough) month is used as the base. For series with an MCD of "3" or more (series 9, 13, 24, 29, and 54), the average of the 3 months centered on the specific peak (trough) month is used as the base. The base for quarterly series (series 49 and 50) is the specific peak (trough) quarter. See also MCD footnote to appendix C.

Selected series	Months after spe- cific trough ¹	July 1921	July 1924	Nov. 1927	Mar. 1933	June 1938	Oct. 1949	Aug. 1954	Apr. 1958	Feb. 1961
NBER LEADING INDICATORS		Per	cent of			k prior in year		erence	expansio	on .
 Average workweek of production workers, manufacturing Construction contracts awarded for commer- 	30	NA	95.0	86.4	73.2	92.7	NSC	98.5	96.3	100.0
cial and industrial bldgs., floor space ² 13. Number of new business incorporations 17. Price per unit of labor cost index 19. Index of stock prices, 500 common stocks 23. Index of industrial materials prices	24 28 28 32 30	41.8 78.2 NA 89.4 59.9	101.6 97.1 NA 128.4 75.1	96.4 108.1 NA NSC 46.2	17.0 67.4 NA 28.7 171.9	109.0 50.4 NA 58.1 88.3	45.6 58.7 97.5 141.2 103.2	NSC NSC 89.9 177.8 61.8	96.0 126.7 97.4 115.8 87.5	³ 124.4 95.5 98.8 117.4 88.7
 Value of manufacturers' new orders, machinery and equipment industries Index of new private housing units author- 	32	NA	NA	NA	NA	NA	161.8	93.8	95.4	118.1
ized by local building permits	30	NA	NA	NA	NA	NA	NA	NA	64.5	98.1
NBER ROUGHLY COINCIDENT INDICATORS										
 Mumber of employees in nonagricultural establishments	28 25 29 27 27 30 28 29	88.0 NA 106.8 NA NA NA 99.0	96.0 NA 106.1 NSC NSC 108.2 NA NSC	93.2 NA 100.0 NSC NSC 110.8 NA NSC	83.4 NA 67.2 66.2 79.6 70.6 59.6 75.7	77.0 109.2 103.7 NA 107.2	107.4 101.1 119.3 125.5 116.5 123.9 129.4 NSC	104.8 66.2 107.8 114.2 107.2 116.3 115.7 111.8	68.4 105.2 112.4 107.6 113.3	103.4 87.6 112.0 114.9 110.7 3114.0 111.5 109.8
NBER LEADING INDICATORS		Perc	ent cha			lfic tro inning i			re fere	ence
 Average workweek of production workers, manufacturing 	30	+13.1	+4.8	-9.8	-1.9	+10.8	+3.9	+2.8	+2.3	+5.7
 9. Construction contracts awarded for commercial and industrial bldgs., floor space² 13. Number of new business incorporations 17. Price per unit of labor cost index 19. Index of stock prices, 500 common stocks 23. Index of industrial materials prices 24. Value of manufacturers' new orders, machinery and equipment industries 29. Index of new private housing units authorized by local building permits 	24 28 32 30 32 30	+102.3 +12.1 NA +31.8 +47.1 NA NA	+61.9 +29.9 NA +50.8 +1.9 NA NA	+24.9 +17.9 NA NSC -35.3 NA NA	+75.8 +8.1 NA +88.3 +79.4 NA NA	+140.0 -36.8 NA +6.5 +42.7 NA NA	+46.5 -0.8 +4.9 +70.0 +53.1 +115.0 NA	NSC NSC +6.2 +100.0 +18.4 +57.1 NA	+40.4 +39.2 +5.5 +40.1 +10.5 +28.7 +4.4	³ +33.8 +11.7 +3.5 +30.5 -3.0 +26.8
NBER ROUGHLY COINCIDENT INDICATORS					ļ			1	ļ	
 Number of employees in nonagricultural establishments	28 25 29 27 27 30 28 29	+27.7 NA +56.7 NA +31.6 NA +31.6	+10.7 NA +30.0 NSC NSC +12.3 NA NSC	-1.6 NA +8.2 NSC NSC +13.7 NA NSC	+21.9 +41.1 +46.4 +31.3 +18.2 +43.5 +67.6 +33.9	+40.4 +65.1 +23.7 NA +22.7	+13.2 +115.6 +32.4 +30.2 +19.3 +30.6 +48.1 NSC	+8.5 +55.7 +19.8 +17.3 +11.3 +17.7 +25.3 +15.6	+6.9 +31.8 +22.8 +16.4 +12.5 +14.6 +16.3 +12.2	+5.7 +25.6 +21.1 +15.7 +12.8 3+14.6 +17.4 +14.0

NA Not available. NSC No specific cycle related to reference dates.

¹Based on period from most recent specific trough of each series to the latest month for which data are available. The number is the same for each expansion. Specific trough and peak dates are shown in appendix B. ²Except for 1961, changes are computed in a 3-term moving average of the seasonally adjusted series.

³Since no specific trough or peak has been designated, figures are based on the low (L) shown in table 1 and the high preceding that low.

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Appendixes

Appendix A.--BUSINESS CYCLE REFERENCE DATES AND DURATION OF EXPANSIONS AND CONTRACTIONS IN THE UNITED STATES: 1854 TO 1961

<u></u>			Duration	in months	
Busin	ess cycle	Contraction	Expansion	Cyc	Le
refere	nce dates	(trough from pre- vious peak)	(trough to peak)	Trough from previous trough	Peak from previous peak
Trough	Peak				
December 1854 December 1858 June 1861 December 1867 December 1870 March 1879	June 1857 October 1860 April 1865 June 1869 October 1873 March 1882	xxx 18 8 <u>32</u> 18 65	30 22 46 18 34 36	xxx 48 30 <u>78</u> 36 99	2000 40 50 52 101
May 1885 April 1888 May 1891 June 1894 June 1897 December 1900	March 1887 July 1890 January 1893 December 1895 June 1899 September 1902	38 13 10 17 18 18	22 27 20 18 24 21	74 35 37 37 36 42	60 40 30 35 42 39
August 1904 June 1908 January 1912 December 1914 March 1919 July 1921	May 1907 January 1910 January 1913 August 1918 January 1920 May 1923	23 13 24 23 <u>7</u> 18	33 19 12 44 10 22	44 46 43 35 <u>51</u> 28	56 32 36 <u>67</u> 17 40
July 1924 November 1927 March 1933 June 1938 October 1945 October 1949	October 1926 August 1929 May 1937 February 1945 November 1948 July 1953	14 13 43 13 <u>8</u> 11	27 21 50 <u>80</u> 37 45	36 40 64 63 <u>88</u> 48	41 34 93 <u>93</u> 45 <u>56</u>
August 1954 April 1 958 Febru ary 1961	July 1957 May 1960	<u>13</u> 9 9	35 25	<u>58</u> 44 34	48 34
10 cycles, 1919	s: -1961 -1961 1961	19 15 10	30 35 36	49 50 46	149 254 346
8 cycles, 1919-	cycles: -1961 1961 1961	20 16 10	26 28 32	45 45 42	446 548 641

NOTE: Underscored figures are the wartime expansions (Civil War, World Wars I and II, and Korean War), the postwar contractions, and the full cycles that include the wartime expansions.

¹25 cycles, 1857-1960. ²9 cycles, 1920-1960. ³3 cycles, 1948-1960 ⁴21 cycles, 1857-1960. ⁵7 cycles, 1920-1960. ⁶2 cycles, 1948-1960.

Source: National Bureau of Economic Research.

Appendixes

Appendix B .-- SPECIFIC TROUGH AND PEAK DATES FOR SELECTED BUSINESS INDICATORS

Specific trough and peak dates are the actual dates that each series reaches its trough and peak. Reference dates are those dates designated as the trough or peak of business activity as a whole. This table shows, for selected leading and coincident series, the specific dates related to reference dates in 9 recent business cycles.

Selected series		Specific	trough d	ates for	reference	expansio	ns beginn	ing in	
Derected Series	Feb. 1961	Apr. 1958	Aug. 1954	Oct. 1949	June 1938	Mar. 1933	Nov. 1927	July 1924	July 1921
NEER LEADING INDICATORS								1	
 Average workweek of production workers, manufacturing Construction contracts awarded for 	Dec.'60	Apr.'58	Apr.'54	Apr.'49	Jan.'38	Jul.'32	Apr.'28	Jul.'24	Feb.'21
commercial and industrial bldgs 13. Number of new business incorpo-	NSC	Jun. '58	NSC	Aug.'49	Sep.'38	Oct.'32	Sep. 127	Jul.'24	Mar.'21
rations 17. Price per unit of labor cost index.	Jan.'61 Feb.'61	Nov.'57 Apr.'58	NSC Dec.' 5 3	Feb.'49 May '49	Sep.'39 NA	Dec.'34 NA	Dec.'26 NA	Jun.'24 NA	Jan.'21 NA
 Index of stock prices, 500 stocks. Index of industrial mat. prices 	Oct.'60 Dec.'60	Dec.'57 Apr.'58	Sep.'53 Feb.'54	Jun. '49 Jun. '49	Apr.'38 Jun.'38	Jun.'32 Jul.'32	NSC Aug.'28	Oct. 123 Jun. 124	Aug.'21 Jul.'21
 Value of mfrs.' new orders, ma- chinery and equipment industries. Index of new private housing units 	0et.'60	Feb.'58	Jan.'54	Apr.'49	NA	NA.	NA	NA	NA
authorized by local bldg. permits.	Dec.'60	Feb.'58	NA	NA	NA	NA	NA	NA	NA
NBER ROUGHLY COINCIDENT INDICATORS									
41. Number of employees in nonagricul- tural establishments	Feb.'61	Apr.'58	Aug.'54	Oct.'49	Jun.'38	Mar.'33	Jan. '28	Jul.'24	Jul.'21
43. Unemployment rate, total (inverted)	May '61	Jul.'58	Sep. '54	Oct.'49	Jun.'38	May '33	NA	NA	NA.
47. Index of industrial production	Jan.'61	Apr. 158	Apr. '54	Oct. '49	May '38	Jul.'32	Nov . '27	Jul. 124	Apr. 21
49. GNP in current dollars (Q) 50. GNP in 1954 dollars (Q)	lstQ'61 1stQ'61	lstQ'58 1stQ'58	2ndQ' 54 2ndQ' 54	2ndQ'49 2ndQ'49	2ndQ'38 1stQ'38	lstQ'33 3rdQ'32	NSC NGC	NSC NSC	4thQ'21 NA
52. Personal income	NSC	Feb. '58	Mar. '54	Oct. 49	May '38	Mar.'33	4thQ'26	2nd Q' 24	2n Q'21
53. Labor income in mining, manufac-				a		Mar. 100]
turing and construction 54. Sales of retail stores	Feb.'61 Jan.'61	Apr.'58 Mar.'58	Aug. '54 Jan. '54	Oct.'49 NSC	Jun.'38 May '38	Mar.'33 Mar.'33	NA NSC	NA NSC	Mar.'22
Selected series		Specific	peak dat	es f or re	ference c	ontractio	ns beginn	ing in	
	May 1960	July 1957	July 19 53	Nov. 1948	May 1937	Aug. 1929	Oct. 1926	May 1923	Jan. 1920
NBER LEADING INDICATORS									
1. Average workweek of production workers, manufacturing	May 159	Nov.'55	Apr.'53	NSC	Dec.'36	Oct. 129	Nov.125	Nov.122	NA
9. Construction contracts awarded for commercial and industrial bldgs	NSC	Man 166	NGO	No. 116					
13. Number of new business incorpo-		Mar.'56	NSC	Mar.'46	Jul.'37	Jan. 129	Sep.'25	Aug.'22	Dec.'19
13. Number of new business incorpo- rations	Apr.'59	Feb.'56	NSC	Jul.'46	Dec.'36	Jan. '29	Oct.'25	Apr. 23	Dec.'19
rations 17. Price per unit of labor cost index.	Apr.'59 May '59	Feb.'56 Dec.'55	NSC Feb.'51	Jul.'46 Jan.'48	Dec.'36 NA	Jan.'29 NA	Oct.'25 NA	Apr. 23 NA	Dec.'19 NA
rations 17. Price per unit of labor cost index. 19. Index of stock prices, 500 stocks. 23. Index of industrial mat. prices	Apr.'59	Feb.'56	NSC	Jul.'46	Dec.'36	Jan. '29	Oct.'25	Apr. 23	Dec.'19
 rations	Apr.'59 May '59 Jul.'59 Nov.'59 Dec.'59	Feb.'56 Dec.'55 Jul.'56 Dec.'55 Nov.'56	NSC Feb.'51 Jan.'53	Jul.'46 Jan.'48 Jun.'48 Jan.'48 Apr.'48	Dec.'36 NA Feb.'37 Mar.'37 NA	Jan.'29 NA Sep.'29 Mar.'29 NA	Oct.'25 NA NSC Nov.'25 NA	Apr.'23 NA Mar.'23	Dec.'19 NA Jul.'19
 rations 17. Prive per unit of labor cost index. 19. Index of stock prices, 500 stocks 23. Index of industrial mat. prices 24. Value of mfrs.' new orders, ma- chinery and equipment industries 29. Index of new private housing units authorized by local bldg. permits. 	Apr.'59 May '59 Jul.'59 Nov.'59 Dec.'59	Feb.'56 Dec.'55 Jul.'56 Dec.'55	NSC Feb.'51 Jan.'53 Feb.'51	Jul.'46 Jan.'48 Jun.'48 Jan.'48	Dec.'36 NA Feb.'37 Mar.'37	Jan.'29 NA Sep.'29 Mar.'29	Oct.'25 NA NSC Nov.'25	Apr.'23 NA Mar.'23 Mar.'23	Dec.'19 NA Jul.'19 Apr.'20
 retions	Apr.'59 May '59 Jul.'59 Nov.'59 Dec.'59	Feb.'56 Dec.'55 Jul.'56 Dec.'55 Nov.'56	NSC Feb.'51 Jan.'53 Feb.'51 Feb.'51	Jul.'46 Jan.'48 Jun.'48 Jan.'48 Apr.'48	Dec.'36 NA Feb.'37 Mar.'37 NA	Jan.'29 NA Sep.'29 Mar.'29 NA	Oct.'25 NA NSC Nov.'25 NA	Apr. '23 NA Mar. '23 Mar. '23 NA	Dec.'19 NA Jul.'19 Apr.'20 NA
 retions	Apr.'59 May '59 Jul.'59 Nov.'59 Dec.'59 Nov.'58 Apr.'60	Feb.'56 Dec.'55 Jul.'56 Dec.'55 Nov.'56	NSC Feb.'51 Jan.'53 Feb.'51 Feb.'51	Jul.'46 Jan.'48 Jun.'48 Jan.'48 Apr.'48 NA Jul.'48	Dec.'36 NA Feb.'37 Mar.'37 NA	Jan.'29 NA Sep.'29 Mar.'29 NA	Oct.'25 NA NSC Nov.'25 NA	Apr. '23 NA Mar. '23 Mar. '23 NA	Dec.'19 NA Jul.'19 Apr.'20 NA
 rations	Apr.'59 May '59 Jul.'59 Nov.'59 Dec.'59 Nov.'58 Apr.'60 Feb.'60	Feb.'55 Jul.'56 Dec.'55 Nov.'56 Feb.'55 Mar.'57 Mar.'57	NSC Feb.'51 Jan.'53 Feb.'51 Feb.'51 NA May '53 Jun.'53	Jul.'46 Jan.'48 Jun.'48 Jan.'48 Apr.'48 NA Jul.'48 Jan.'48	Dec.'36 NA Feb.'37 Mar.'37 NA NA Jul.'37 Jul.'37	Jan. '29 NA Sep. '29 Mar.'29 NA NA Aug.'29 NA	Oct.'25 NA NSC Nov.'25 NA NA Jan.'26 NA	Apr.'23 NA Mar.'23 NA NA NA Jul.'23 NA	Dee.'19 NA Jul.'19 Apr.'20 NA NA Jan.'20 NA
 retions	Apr.'59 May '59 Jul.'59 Nov.'59 Dec.'59 Nov.'58 Apr.'60 Feb.'60 Jan.'60	Feb.'56 Dec.'55 Jul.'56 Dec.'55 Nov.'56 Feb.'55 Mar.'57 Feb.'57	NSC Feb.'51 Jan.'53 Feb.'51 Feb.'51 NA May '53 Jun.'53 Jul.'53	Jul.'46 Jan.'48 Jun.'48 Jan.'48 Apr.'48 NA Jul.'48 Jan.'48 Jul.'48	Dec.'36 NA Feb.'37 Mar.'37 NA NA Jul.'37 Jul.'37 May '37	Jan.'29 NA Sep.'29 Mar.'29 NA NA Aug.'29 NA Jul.'29	Oct.'25 NA NSC Nov.'25 NA NA Jan.'26 NA Mar.'27	Apr.'23 NA Mar.'23 Mar.'23 NA NA Jul.'23 NA May '23	Dec.'19 NA Jul.'19 Apr.'20 NA NA Jan.'20 NA Feb.'20
 retions	Apr.'59 May '59 Jul.'59 Nov.'59 Dec.'59 Nov.'58 Apr.'60 Jan.'60 Jan.'60	Feb.'56 Dec.'55 Jul.'56 Dec.'55 Nov.'56 Feb.'55 Mar.'57 Mar.'57 Feb.'57 3rdQ'57	NSC Feb.'51 Jan.'53 Feb.'51 Feb.'51 NA May '53 Jun.'53 Jul.'53 2ndQ'53	Jul.'46 Jan.'48 Jun.'48 Apr.'48 NA Jul.'48 Jan.'48 Jan.'48 Jul.'48 4thQ'48	Dec.'36 NA Feb.'37 Mar.'37 NA NA Jul.'37 Jul.'37 May '37 3rdQ'37	Jan. '29 NA Sep. '29 Mar. '29 NA NA Aug. '29 NA Jul. '29 Jul. '29 Jul. '29	Oct.'25 NA NSC Nov.'25 NA Jan.'26 NA Mar.'27 NSC	Apr.'23 NA Mar.'23 NA NA Jul.'23 NA May '23 NSC	Dec.'19 NA Jul.'19 Apr.'20 NA NA Jan.'20 NA Feb.'20 NA
 rations	Apr.'59 May '59 Jul.'59 Nov.'59 Dec.'59 Nov.'58 Apr.'60 Jan.'60 Jan.'60	Feb.'56 Dec.'55 Jul.'56 Dec.'55 Nov.'56 Feb.'55 Mar.'57 Feb.'57	NSC Feb.'51 Jan.'53 Feb.'51 Feb.'51 NA May '53 Jun.'53 Jul.'53	Jul.'46 Jan.'48 Jun.'48 Jan.'48 Apr.'48 NA Jul.'48 Jan.'48 Jul.'48	Dec.'36 NA Feb.'37 Mar.'37 NA NA Jul.'37 Jul.'37 May '37	Jan.'29 NA Sep.'29 Mar.'29 NA NA Aug.'29 NA Jul.'29	Oct.'25 NA NSC Nov.'25 NA NA Jan.'26 NA Mar.'27	Apr.'23 NA Mar.'23 Mar.'23 NA NA Jul.'23 NA May '23	Dec.'19 NA Jul.'19 Apr.'20 NA NA Jan.'20 NA Feb.'20
 rations	Apr.'59 May '59 Jul.'59 Nov.'59 Dec.'59 Nov.'58 Apr.'60 Feb.'60 Jan.'60 2ndQ'60 2ndQ'60 NSC	Feb.'56 Dec.'55 Jul.'56 Dec.'55 Nov.'56 Feb.'55 Mar.'57 Feb.'57 Srdq'57 3rdq'57	NSC Feb.'51 Jan.'53 Feb.'51 NA May '53 Jun.'53 Jun.'53 Jul.'53 2ndQ'53	Jul.'46 Jan.'48 Jun.'48 Jan.'48 Apr.'48 NA Jul.'48 Jan.'48 Jul.'48 4thQ'48 4thQ'48	Dec.'36 NA Feb.'37 Mar.'37 NA NA Jul.'37 Jul.'37 May '37 3rdQ'37 3rdQ'37	Jan.'29 NA Sep.'29 Mar.'29 NA NA Jul.'29 Jul.'29 JrdQ'29 JrdQ'29	Oct.'25 NA NSC Nov.'25 NA NA Jan.'26 NA Mar.'27 NSC	Apr. '23 NA Mar. '23 Mar. '23 NA NA Jul. '23 NA May '23 NSC NSC	Dee.'19 NA Jul.'19 Apr.'20 NA Jan.'20 NA Feb.'20 NA NA

NA not available. NSC No specific cycle related to reference dates.

Appendix materials retain their original alphabetical designations. Therefore, when appendixes are dropped from an issue, the continuity is interrupted.

"Appendix C.—Average Percentage Changes and Related Measures for Monthly and Quarterly Business Cycle Series", not included in this issue, appeared in the June 1963 issue.

Appendix D.--CURRENT SEASONAL ADJUSTMENT FACTORS FOR BUSINESS CYCLE SERIES ADJUSTED BY BUREAU OF THE CENSUS OR NBER (NOVEMBER 1962 TO DECEMBER 1963)

	Domina -	19	962						1	963					
	Series	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
4.	Number of persons on temporary														
5.	layoff, all industries Av. weekly initial claims for	83.4	102.6	121.0	116.2	97.5	82.2	92.2	83.8	99.9	140.7	89.7	88.4	81.9	102.7
	unemploy. insurance. State	104.8	132.5	140.7	109.1	97.3	94.3	82.7	82.6	103.0	85.5	77.7	90.9	105.0	132.5
13.	No. of new business incorp. ¹	86.8	94.3	120.0	91.0	104.2	106.8	106.7	96.8	103.5	93.8	88.3		82.5	
	Cur. liabilities of bus. failures.	99.9	89.9	105.1	105.2	107.5	112.3	96.7	96.4	84.7	111.7	92.8		100.2	
	No. of bus. failures with lia-														
	bilities of \$100,000 and over	96.0	.88.6	111.3	113.6	116.8	110.4	94.9	105.5	89.3	95.9	89.6	88.7	96.0	88.5
17.	Price per unit of labor cost					· ·									
	index	101.1	98.1	98.6	100.6	100.9	100.5	100.0	101.0	95.4	99.3	101.8	103.4	101.2	98.1
18.	Profits (before taxes) per dol.							1							
	of sales, all mfg. corp. ²	98.8	•••		97.9	•••	• • •	106.1			97.4	120.6		98.8	•••
	Nonagri. placements, all indus	94.7	82.0	82.3	77.4	90.2	99.8	109.0	110.9	103.3	116.7	120.6	113.2	95.0	81.8
37.	Purchased materials, percent re-														
	porting higher inventories	96.2	98.8	109.0	108.5	110.6	109.4	102.1	96.1	93.9	91.6	91.9	92.5	96.1	98.9
55.	Index of wholesale prices, exc.											1			
	farm products and foods	99.9	100.0	100.2	100.1	100.1	100.2	100.0	99.9	99.9	99.8	99.9	99.8	99.9	100.0
62.	Index of labor cost per unit of														
	output, total manufacturing	98.8	101.7	101.9	99.7	99.5	99.8	100.0	98.9	104.7	100.4	98.2	96.5	98.8	101.7
81.	Index of consumer prices	100.1	100.0	99.8	99.9	99.9	100.0	99.8	99.9	100.0	99.9	100.2	100.1	100.1	100.0
	Federal cash payments to public	104.8	98.3	90.8	98.9	92.3	98.9	103.2	106.0	95.6	114.4	93.8	102.8	105.2	98.3
83.	Federal cash receipts from pub	102.3	105.1									124.4			
	Defense Department obligations														
	procurement	96.0	117.4	76.9	91.6	132.2	81.2	69.2	192.7	77.9	78.1	97.1	89.2	96.0	117.4
91.	Defense Dept. oblig., total		105.0			117.7		84.7					95.4		105.0
	Military prime contract awards														
	to U.S. business firms	72.9	108.5	89.5	79.7	125.3	93.2	92.8	216.4	68.0	72.9	92.7	90.4	72.9	108.5
128.	Japan, index of industrial pro-							l	I .	1					
	duction	99. 6	103.2	94.3	100.3	109.1	99.4	100.2	100.4	98.8	96.5	98.6	99.8	99.6	103.2

These data are not published by the source agency in seasonally adjusted form. Seasonal adjustments were made by the Bureau of the Census or the National Bureau of Economic Research, Inc. Seasonally adjusted data prepared by the source agency will be substituted whenever they are published.

¹Factors are a combination of seasonal and trading day factors.

²Quarterly series; figures are placed in middle month of quarter.

Appendix E.--SUMMARY DESCRIPTION OF X-9 AND X-10 VERSIONS OF THE CENSUS METHOD II SEASONAL ADJUSTMENT PROGRAM

Introduction

Two versions of the Census Method II seasonal adjustment program have been used to compute the new seasonal factors shown in appendix D. These versions, designated X-9 and X-10 (Experimental Programs 9 and 10), replaced, in February 1962, the method described in "Electronic Computers and Business Indicators," NBER Occasional Paper No. 57, and the X-3 version described in "Tests and Revisions of Bureau of the Census Methods of Seasonal Adjustments," Census Technical Paper No. 5. (The X-3 program had been used for about 2 years as the standard program prior to February 1962.) The X-9 program incorporates several changes from the original method and is recommended for general use for a wide range of series. The X-10 program incorporates the changes in X-9 plus a major departure from earlier versions of Method II. This major change in X-10 is the selection of the seasonal factor curve for each month on the basis of an estimate of the size of the irregular component for that month relative to the amount of moving seasonality present in an estimate of the seasonal factor. The selection of curves available for each month includes a 3-, 3x3-, 3x9-, and 3x15-term moving average and a horizontal straight line. This is in contrast to the original and X-9 methods of treating all months the same, either with the use of a 3x3 or 3x5 moving average.

These programs are available for several different electronic computers. Detailed specifications and additional information can be obtained by writing to the Office of the Chief Economic Statistician, Bureau of the Census, Washington 25, D.C.

Description of the X-9 Program

The changes from the original program included in X-9 are listed below:

(1) In the original version of Method II described in Occasional Paper No. 57 and X-3, "the six missing SI ratios at the beginning of the series are supplied by extending the first available ratios for the corresponding months back to the initial month of the series. The six missing ratios at the end are supplied similarly" (Occasional Paper No. 57, step 6d). In the new programs the missing values are not supplied until after the seasonal factors have been computed. They are then supplied by extending (i.e., repeating) the first available seasonal factor back to the initial month and similarly for the last available factor at the end of the series. The effect of this change is to reduce the weight given the end SI ratios in the computation of the preliminary seasonal factors.

(2) Extremes are replaced by averaging the two preceding and two following ratios, instead of averaging the extreme with the preceding and following values. This revision completely eliminates SI ratios defined as extreme from the computations of the seasonal factors (included in X-3).

(3) The 5-term moving average, used in computing the sigma control limits, is extended by repeating the last moving-average value instead of repeating the average of the last two ratios and taking the moving average. This revision improves the prospects that extreme values at the end of series will be identified as such.

(4) The method of centering or forcing the seasonal factors to add to 1200 for the calendar year has been replaced with a moving centering device which makes the seasonal factors add as closely as possible to 1200 for any 12-month period. The centering is done after the computation of a 3- or 5-term moving average for each month. Following the centering, a 3-term moving average is applied to each month. In the original version and X-3, the ratios were centered before before moving averages were computed for each month.

(5) Less weight is given to the ratios for end years in the computation of the seasonals. To extend the 3x5 moving average, the end four ratios instead of the end two are averaged to obtain additional SI ratios (included in X-3). To extend the 3x3 moving average, the end three ratios, instead of the end two, are averaged to obtain additional SI ratios.

Description of the X-10 Program

The X-10 program includes the first four changes listed above for the X-9. In addition, for each month, the curve to measure the seasonal factor is selected on the basis of an estimate of the size of the irregular component relative to the amount of change in the seasonal factor. This estimate of the relative amount of irregular to changing seasonality is designated the moving seasonality ratio. Moving seasonality ratios are calculated as follows: First, a 7-term moving average of the SI ratios is computed for each month and taken as an estimate of the seasonal factor; this 7-term moving average is divided into the SI ratios and the resultant series is taken as an estimate of the irregular series. Next, the average year-to-year per-cent change without regard to sign is computed in the 7term moving average and in the irregular series. Then, the average change in the estimate of the irregular to the average change in the estimate of the seasonal is calculated. This is the moving seasonality ratio. A moving average is then chosen for each month on the basis of this ratio as is shown in the table below. In constructing this table, the parameters have been chosen to select a curve which reduces the year-to-year percentage change in the residual irregular remaining in the estimate of the seasonal to about one-half the year-to-year parcentage change in the seasonal.1

Moving season- ality ratio	Average of SI ratios for seasonal factor curve
0 to 1.49	3-term moving average
1.50 to 2.49	3x3-term moving average
2.50 to 4.49	3x5-term moving average
4.50 to 6.49	3x9-term moving average
6.50 to 8.49	3x15-term moving average
8.50 and over	All ratios (stable)

In the actual computations, the moving seasonality ratio selects from 1-, 3-, 5-, 9-, 15-term moving average and an average of all the ratios. After a selection is made and the appropriate moving average is calculated, a moving centering device is employed to make each 12-month period add as close to 1200 as possible. Finally, further smoothing of the data for each month is carried out by a 3-term moving average.

It has been possible thus far to conduct only a limited amount of testing of the X-10 program and for this reason especially careful review of such adjustments is required. In some cases the original Method II or other approaches will give similar or perhaps better results. The Bureau of the Census is continuing research intended to improve seasonal adjustment techniques and will provide new variants of the general method as is warranted from the evidence. The results of our experimental work will be reported in detail as soon as feasible.

¹The variable seasonal factor technique was developed by Dr. Stephen N. Marris, Head of the Statistics Division of the Organisation for Economic Cooperation and Development, and is described in <u>Seasonal Adjustment on Electronic Computers</u>, pp. 257-309 (OECD, Paris, 1961. Copies can be obtained from the regional office: Organisation for European Economic Cooperation, 1346 Connecticut Avenue, N.W., Washington, D.C., price \$9.50.) The Bureau of the Census and the OECD have cooperated in further theoretical and empirical development of this technique since completion of the OECD paper, and the X-10 program differs slightly from that in the original description.

Appendixes

Appendix F.--PERCENT CHANGE FOR SELECTED SERIES OVER CONTRACTION AND EXPANSION PERIODS OF BUSINESS CYCLES: 1920 TO 1961

	Pe	rcent chan	ge: Refe	rence pea	k to refer	ence troug	h	43. Une	mployment	rate
Contractions: Reference peak to reference trough	41. Em- ployees in non- agri. es- tablish- ments	47. Index of indus- trial produc- tion		49. GNP in cur- rent dollars (Q) ¹	51. Bank debits outside NYC	52. Per- sonal income	54. Re- tail sales	Change in rate, peak to trough	Rate at peak	Rate at trough
Jan. 1920-July 1921 May 1923-July 1924 Oct. 1926-Nov. 1927 Aug. 1929-Mar. 1933 May 1937-June 1938	NA NA -31.6 -10.4	-31.6 -18.0 -5.9 -51.8 -31.7	NA -0.3 +2.3 -28.0 -8.9	-19.7 -2.3 +0.4 -49.6 -11.9	-22.5 -3.1 +8.7 -61.9 -16.5	-21.9 0.0 +0.9 -50.8 -10.9	-4.3 -1.9 0.0 -43.5 -14.1	² +7.9 ² +2.3 ² +2.2 +25.4 +8.8	² 4.0 ² 3.2 ² 1.9 ³ 0.0 11.2	² 11.9 ² 5.5 ² 4.1 25.4 20.0
Feb. 1945-Oct. 1945 ⁴ Nov 1948-Oct. 1949 July 1953-Aug 1954 ⁵ July 1957-Apr. 1958 May 1960-Feb. 1961	-7.8 -5.1 -3.4 -4.1 -2.0	-31.4 -8.5 -9.1 -14.1 -5.9	NA -1.4 -3.0 -3.8 -1.8	-10.9 -3.3 -1.8 -2.5 -0.7	-1.0 -4.0 +1.6 -3.1 +2.4	-4.0 -4.3 -0.2 -0.3 +0.7	+8.7 -0.3 -0.8 -3.4 -3.5	+2.2 +3.6 +3.4 +3.2 +1.8	1.1 \$4.0 2.6 4.2 5.2	3.3 7.6 6.0 7.4 7.0
Median: ⁶ All contractions	-5.7	-16.0	-2.4	-2.9	-3.1	-2.2	-2.6	+3.3	3.6	7.2
Excluding postwar con- tractions 4 contractions since	-6.5	-16.0	-2.6	-2.9	-3.6	-2.3	-3.4	+3.4	4.0	7.5
1948	-3.8	-8.8	-2.4	-2.2	-0.8	-0.2	-2.1	+3.3	4.1	7.2
	Pe	rcent chan	ge: Refe	rence tro	ugh to ref	erence pea	k	43. Une	mployment	rate
Expansions: Reference trough to reference peak	41 Em- ployees in non- agri. es- tablish- ments	47. Index of indus- trial produc- tion		49 GNP in cur- rent dollars (Q) ¹	51. Bank debits outside NYC	52. Per- sonal income	54. Re- tail sales	Change in rate, trough to peak	Rate at trough	Rate at peak
July 1921-May 1923 July 1924-Oct. 1926 Nov. 1927-Aug. 1929 Mar. 1933-May 1937 June 1938-Feb. 1945 ⁴	NA NA +40.2 +45.9	+64.2 +30.4 +24.1 +119.9 +183.3	NA +12.4 +12.6 +42.1 NA	+25.1 +14.7 +13.3 +73.9 +169.6	+23.5 +18.9 +20.4 +78.4 +131.7	+29.6 +13.2 +12.2 +76.3 +157.3	+15.7 +9.9 +3.6 +63.1 +103.3	² -8.7 ² -3.6 ² -0.9 -14.2 -18.9	² 11.9 ² 5.5 ² 4.1 25.4 20.0	² 3.2 ² 1.9 ² ³ 3.2 11.2 1.1
Oct. 1945-Nov. 1948 Oct. 1949-July 1953 ⁵ Aug. 1954-July 1957 Apr. 1958-May 1960	+17.2 +17.7 +8.9 +7.2	+21.9 +50.0 +19.7 +25.2	+3.3 +27.4 +13.5 +11.9	+34.9 +43.5 +23.8 +15.3	+51.5 +49.3 +28.6 +21.2	+28.5 +41.5 +22.8 +13.6	+62.0 +26.3 +20.4 +13.5	+0.3 -5.0 -1.8 -2.2	3.3 7.6 6.0 7.4	³ 3.6 2.6 4.2 5.2
Median: ⁶ All expansions Excluding wartime ex- pansions	+17.4	+35.2	+12.8	+27.9	+33.8	+27.0	+20.8	-3.6 -2.5	7.0 6.3	3.3
4 expansions since 1945	+13.0	+23.5	+12.7	+29.4	+39.0	+25.6	+23.4	-2.0	6.7	3.9

For series with a "months for cyclical dominance" (MCD) of "1" or "2" (series 41, 43, 47, and 52), the figure for the reference peak (trough) month is used as the base. For series with an MCD of "3" or more (series 51 and 54), the average of the 3 months centered on the reference peak (trough) month is used as the base. The base for quarterly series (series 49 and 50) is the reference peak (trough) quarter. See also MCD footnote to appendix C.

¹The most recent quarterly reference dates are as follows: 2d quarter 1958 (trough); 2d quarter 1960 (peak); and 1st quarter 1961 (trough). For earlier dates, see Business Cycle Indicators (NBER), vol. 1, p. 670.

²Based on average for the calendar year.

³Differs from figure for same date in expansion (contraction) part of table because of change in series used. ⁴World War II contraction or expansion period.

⁵Korean War contraction or expansion period. ⁶The median is an average of the middle 2 or 3 items.

Source: National Bureau of Economic Research, Inc.

Appendixes

Appendix G .-- HISTORICAL DATA FOR SELECTED SERIES

Series are in one of the following categories: (1) Those that are new to the report, (2) those that have been revised historically, and (3) those for which historical data have not previously been shown. See table 1 for later data.

Ye a r	Jan.	Feb.	Mar.	Apr.	May	Jun e	July	Aug.	Sept.	Oct.	Nov.	Dec.
		5. Ave	erage week	ly initia	l claims	for unemp	loyment i	nsurance,	State pro	ograms (T	hous.)*	
1948	166	206	201	210	239	219	194	202	218	203	211	234
1949	285	305	333	379	377	359	340	385	320	386	344	298
1950	294	288	276	263	250	252	223	170	182	194	200	197
1951	174	181	166	199	199	209	236	254	242	234	210	213
1952	221	201	209	219	213	242	315	207	168	175	169	190
1953	175	177	188	179	198	195	207	229	238	251	298	280
1954	303	318	320	313	313	314	294	319	322	315	276	253
1955	256	240	228	228	222	222	223	233	204	224	215	214
1956	218	226	221	223	236	227	245	224	236	214	223	230
1957	242	225	219	239	244	246	267	235	305	302	320	355
1958	354	407	436	438	400	410	350	363	338	314	311	320
1959	292	284	258	244	246	258	264	291	271	311	351	275
1960	281	271	303	294	316	322	335	363	351	373	385	381
		6.	. Value of	' manufact	urers' n	ew orders,	durable	goods ind	ustries (Bil. dol.)*	
1948	7.08	7.08	7.49	7.62	6.92	8.18	7.62	7.57	7.57	7.31	7.68	7 47
1949	6.33	6.91	6.74	6.22	6.14	6.24	5.87	6.67	6.99	6.62	7.15	7.04
1950	7.47	7.51	8.08	8.20	9.43	10.08	11.44	14.26	12.04	11.85	11.02	12.17
1951	15.92	13.76	14.36	13.14	13.18	12.60	12.13	11.69	10.50	12.25	11.71	10.70
1952	11.41	10.98	12.03	12.15	10.52	12.17	11.41	11.32	12.23	11.72	11.31	12.45
1953	12.62	12.49	12.04	11.91	12.24	11.74	11.62	10.02	9.64	9.62	9.42	8.93
1954	9.10	9.84	9.53	9.45	9.51	9.74	9.82	10.26	10.94	11.10	10.86	11.78
1955	12.40	12.51	13.54	12.49	13.56	13.44	13.76	15.11	14.53	14.51	15.29	15.25
1956	14.45	14.37	13.77	14.47	14.65	14.09	14.09	17.34	13.04	14.31	15.78	14.54
1957	14.18	14.10	13.85	13.23	14.12	13.25	13.00	13.16	12.52	12.15	12.36	11.40
1958	10.70	10.69	11.49 15.32	10.83	11.42	12.24	12.51	12.18	12.86	13.53	19.57	13.67
1959 1960	13.90 14.19	14.92 14.80	14.64	15.80 14.47	15.24 14.68	16.13 14.34	15.49 13.84	13.97	14.75 14.62	15.10 13.74	13.72 13.60	14.77
		24. Valu	le of manu	facturers	new ord	lers, mach	inery and	equipmen	t industr	ies (Bil.	dol.)*	L
1948 ¹	2.04	2.28	2.31	2.58	2.09	2.50	2.20	2.17	2.20	2.21	2.23	2.27
1949	1.79	1.95	1.92	1.62	1.72	1.81	1.68	1.80	2.01	1.90	1.99	1.92
1950	2.10	2.26	2.27	2.37	3.00	2.89	3.53	4.48	4.21	3.82	3.77	4.27
1951	4.87	4.93	4.66	4.59	4.37	4.08	3.91	3.75	3.36	3.82	3.79	3.77
1952	3.48	3.59	3.66	3.54	3.25	3.56	3.77	3.30	3.50	3.49	3.14	3.49
1953	3.48	3.50	3.77	3.84	3.52	3.20	4.02	2.88	3.08	2.80	2.85	3.12
1954	2.69	2.82	2.72	2.96	2.85	3.32	3.14	3.28	3.22	3.38	3.57	3.57
1955	3.79	3.71	4.02	3.64	3.96	4.39	3.92	4.38	4.44	4.36	4.78	5.03
1956	4.64	4.58	4.56	4.98	4.83	4.81	4.43	4.72	4.52	4.70	5.00	4.92
1957	4.92	4.99	4.70	4.44	4.79	4.18	4.49	4.21	4.16	4.02	3.86	3.63
1958	3.78	3.51	3.55	3.66	3.59	3.80	3.90	4.06	4.23	4.32	4.34	4.23
1959	4.46 5.04	4.73 5.14	4.97 5.06	4.80 5.12	4.85 5.17	5.11	5.16 4.78	4.85	5.02 4.87	5.12 4.65	4.99 4.81	5.37 4.66
1960	1.04	2.14	2.00	٦.14)+11	1 ,.01	4./0	4.70	4.07	4. 07	M+01.	4.00
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*Data are seasonally adjusted. ¹Excludes "other transportation equipment." 1948 data have been linked to data for the later period by dividing each month by 96.7, the ratio of 1949 data excluding other transportation equipment to that including that component.

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¹See back cover for series titles and sources. Digitizmésés finâteates issue in which data are shown. http://fraser.stlouisfed.org/

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(Numbers shown are page numbers)

¹See back cover for series titles and sources.

²Page number shown is for the June 1963 issue.

TITLES AND SOURCES OF PRINCIPAL BUSINESS CYCLE SERIES AND DIFFUSION INDEXES

The numbers assigned to the series are for identification purposes only and do not necessarily reflect series relationships or order. "M" indicates monthly series and "Q" indicates quarterly series. Data apply to the whole period except for series designated by "EOM" or "EOQ". "EOM" indicates that data are for the end of the month and "EOQ" indicates that data are for the end of the quarter. The general classification of series follows the approach of the National Bureau of Economic Research. The series preceded by an asterisk (*) were included in the 1960 NBER list of 26 indicators.

30 NBER LEADING INDICATORS

- *1. Average workweek of production workers, manufacturing (M).--Department of Labor, Bureau of Labor Statistics
- *2. Accession rate, manufacturing (M).--Department of Labor, Bureau of Labor Statistics
- *3. Layoff rate, manufacturing (M).--Department of Labor, Bureau of Labor Statistics
- Number of persons on temporary layoff, all industries (M).--Department of Labor, Bureau of Labor Statistics; seasonal adjustment by Bureau of the Census
- Average weekly initial claims for unemployment insurance, State programs (M).--Department of Labor, Bureau of Employment Security; seasonal adjustment by Bureau of the Census
- *6. Value of manufacturers' new orders, durable goods industries (M).--Department of Commerce, Bureau of the Census and Office of Business Economics
- *7. New private nonfarm dwelling units started (M).--Department of Commerce, Bureau of the Census
- *9. Construction contracts awarded for commercial and industrial buildings, floor space (M).--F. W. Dodge Corporation; seasonal adjustment by Bureau of the Census and National Bureau of Economic Research, Inc.
- 10. Contracts and orders for plant and equipment (M).-.Department Commerce, Office of Business Economics, and F. W. Dodge Corporation; seasonal adjustment by Bureau of the Census and National Bureau of Economic Research, Inc.
- Newly approved capital appropriations, 602 manufacturing corporations (Q)...National Industrial Conference Board; component industries are seasonally adjusted by National Bureau of Economic Research, Inc., and added to obtain seasonally adjusted total
- *12. Net change in the business population, operating businesses (EOQ).--Department of Commerce, Office of Business Economics
- 13. Number of new business incorporations (M)...Dun and Bradstreet, Inc.; seasonal adjustment by Bureau of the Census and National Bureau of Economic Research, Inc.
- *14. Current liabilities of business failures (M).--Dun and Bradstreet, Inc.; seasonal adjustment by Bureau of the Census and National Bureau of Economic Research, Inc.
- 15. Number of business foilures with liabilities of \$100,000 and over (M).--Dun and Bradstreet, Inc.; seasonal adjustment by Bureau of the Census and National Bureau of Economic Research, Inc.
- * 16. Corporate profits after taxes (Q).--Department of Commerce, Office of Business Economics
- 17. Price per unit of labor cost index-ratia, wholesale prices of manufactured goods index to index of compensation of employees (sum of wages, salaries, and supplements to wages and salaries) per unit of output (M)...Department of Commerce, Office of Business Economics; Department of Labor, Bureau Labor Statistics; and Board of Governors of the Federal Reserve System; seasonal adjustment by Bureau of the Census
- Profits (before taxes) per dollar of sales, all manufacturing corporations (Q).-Federal Trade Commission and Securities and Exchange Commission; seasonal adjustment by Bureau of the Census
- * 19. Index of stock prices, 500 common stocks (M).--Standard and Poor's Corporation; no seasonal adjustment
- 20. Change in book value of manufacturers' inventories, purchased materials (EOM).--Department of Commerce, Office of Business Economics
- *21. Change in business inventories, farm and nonfarm, after valuation adjustment (GNP component) (Q).-Department of Commerce, Office of Business Economics
- 22. Ratio of profits (after taxes) to income originating, corporate, all industries (Q).--Department of Commerce, Office of Business Economics
- *23. Index of industrial materials prices (M).--Department of Labor, Bureau of Labor Statistics; no seasonal adjustment
- 24. Value of manufacturers' new orders, machinery and equipment industries (M).--Department of Commerce, Bureau of the Census, from special tabulations of the Office of Business Economics
- 25. Change in manufacturers' unfilled orders, durable goods industries (EOM).--Department of Commerce, Office of Business Economics
- 26. Buying policy--production materials, percent reporting commitments 60 days or longer (M).--National Association of Purchasing Agents; no seasonal adjustment

- 29. Index of new private housing units authorized by local building permits (M).--Department of Commerce, Bureau of the Census
- 30. Nonagricultural placements, all industries (M).-Department of Labor, Bureau of Employment Security; seasonal adjustment by Bureau of the Census
- Change in book value of manufacturing and trade inventories, total (EOM).--Department of Commerce, Office of Business Economics
- 32. Vendor performance, percent reporting slower deliveries (M).--Chicago Purchasing Agents Association; no seasonal adjustment
- 37. Purchased materials, percent reporting higher inventories (M). --National Association of Purchasing Agents; seasonal adjustment by Bureau of the Census

15 NBER ROUGHLY COINCIDENT INDICATORS

- Unemployment rate, married males, spouse present (M),--Department of Labor, Bureau of Labor Statistics
- *41. Number of employees in nonagricultural establishments (M).--Department of Labor, Bureau of Labor Statistics
- 42. Total nonagricultural employment, labor force survey (M).--Department of Labor, Bureau of Labor Statistics, and Department of Commerce, Bureau of the Census
- *43. Unemployment rate, total (M).--Department of Labor, Bureau of Labor Statistics, and Department of Commerce, Bureau of the Census
- 45. Average weekly insured unemployment rate, State programs (M).-Department of Labor, Bureau of Employment Security
- 46. Index of help-wonted advertising in newspapers (M).--National Industrial Conference Board and B. K. Davis and Bro. Advertising Service
- *47. Index of industrial production (M).--Board of Governors of the Federal Reserve System
- *49. Gross national product in current dollars (Q).--Department of Commerce, Office of Business Economics
- *50. Gross national product in 1954 dollars (Q).--Department of Commerce, Office of Business Economics
- *51. Bank debits autside New York City, 343 centers (M).--Board of Governors of the Federal Reserve System
- *52 Personal income (M).--Department of Commerce, Office of Business Economics
- 53. Labor income in mining, manufacturing, and construction (M).--Department of Commerce, Office of Business Economics
- *54. Soles of retoil stores (M).--Department of Commerce, Bureau of the Census and Office of Business Economics
- *55. Index of wholesale prices, all commodities, other than farm products and foods (M).--Department of Labor, Bureau of Labor Statistics; seasonal adjustment by Bureau of the Census
- Final sales (series 49 minus series 21) (Q).--Department of merce, Office of Business Economics

7 NBER LAGGING INDICATORS

- *61. Business expenditures on new plant and equipment, total (Q).--Department of Commerce, Office of Business Economics; and the Securities and Exchange Commission
- *62. Index of labor cost per unit of output, total manufacturingratio, index of compensation of employees in manufacturing (the sum of wages and solaries and supplements to wages and salaries) to index of industrial production, manufacturing (M).-Department of Commerce, Office of Business Economics, and the Board of Governors of the Federal Reserve System; seasonal adjustment by Bureau of the Census
- 63. Index of labor cost per unit of autput, total gross national product (ratio of compensation of employees to GNP in 1954 dollars) (Q).--Department of Commerce, Office of Business Economics
- *64. Book value of manufacturers' inventories, all manufacturing industries (EOM).--Department of Commerce, Office of Business Economics
- 65. Book value of manufacturers' inventories of finished goods, all manufacturing industries (EOM).--Department of Commerce, Office of Business Economics
- *66. Consumer installment debt (EOM).--Board of Governors of the Federal Reserve System. FRS seasonally adjusted net change added to seasonally adjusted figure for previous month to obtain current figure (NBER seasonally adjusted data through January 1955 used as base).
- *67. Bank rates on short-term business loans, 19 cities (Q).--Board of Governors of the Federal Reserve System; no seasonal adjustment

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OFFICIAL BUSINESS

TITLES AND SOURCES OF PRINCIPAL BUSINESS CYCLE SERIES AND DIFFUSION INDEXES -- Con.

18 OTHER U.S. SERIES WITH BUSINESS CYCLE SIGNIFICANCE

- Index of consumer prices (M).--Department of Labor, Bureau of Lubor Statistics; seasonal adjustment by Bureau of the Census
- 82. Federal cash payments to the public (M).--Treasury Department, Bureau of Accounts, and Executive Office of the President, Bureau of the Budget. Monthly seasonal adjustments by the Bureau of the Census do not equal quarterly totals of the official seasonally adjusted series because of differences in the method of seasonal adjustment.
- 83. Federal cosh receipts from the public (M). --Treasury Department, Bureau of Accounts, and Executive Office of the President, Bureau of the Budget. Monthly seasonal adjustments by the Bureau of the Census do not equal quatterly totals of the official seasonally adjusted series because of differences in the method of seasonal adjustment.
- 84. Federal cosh surplus or deficit (M)...Treasury Department, Bureau of Accounts, and Executive Office of the President, Bureau of the Budget. Monthly seasonal adjustments by the Bureau of the Census do not equal quarterly totals of the official seasonally adjusted series because of differences in the method of seasonal adjustment.
- Percent change in total U.S. money supply (demand deposits plus currency) (M).-- Board of Governors of the Federal Re-System
- 86. Exports, excluding military aid shipments, total (M).--Department of Commerce, Bureau of the Census
- 87. General imports, total (M).--Department of Commerce, Bureau of the Census
- Merchandise trade balance (series 86 minus series 87) (M).--Department of Commerce, Bureau of the Census
- Excess of receipts or payments in U.S. balance of payments (Q)...Department of Commerce, Office of Business Economics
- 90. Defense Department obligations, procurement (M), --Department of Defense, Fiscal Analysis Division; seasonal adjustment by Bureau of the Census
- Defense Department obligations, total (M). --Department of Defense, Fiscal Analysis Division; seasonal adjustment by Bureau of the Census
- 92. Military prime contract awards, U.S. business firms (M).--Department of Defense, Directorate for Statistical Services; seasonal adjustment by Bureau of the Census
- 93. Free reserves (member bonk excess reserves minus borrowings) (M).--Board of Governors of the Federal Reserve System; no seasonal adjustment
- 94. Index of construction contracts, total value (M).--F. W. Dodge Corporation
- 95. Surplus or deficit, Federal income and product account (Q).--Department of Commerce, Office of Business Economics
- Manufacturers' unfilled orders, durable goods industries (EOM). Department of Commerce, Office of Business Economics

- 97. Backlog of capital appropriations, manufacturing (Q)...National Industrial Conference Board; component industries are seasonally acjusted by National Bureau of Economic Research, Inc., and added to obtain seasonally adjusted total
- Percent change in total U.S. money supply (demand deposits and currency) and commercial bank time deposits (M),--Board of Governors of the Federal Reserve System

7 INTERNATIONAL COMPARISONS OF INDUSTRIAL PRODUCTION

- 121. Organization for Economic Cooperation and Development, European Countries, index of industrial production (M).--Organtion for Economic Cooperation and Development
- 122. United Kingdom, index of industrial production (M).--Organtion for Economic Cooperation and Development
- tion for Economic Cooperation and Development 123. Canada, index of industrial production (M).--Dominion Bureau of Statistics, Ottawa
- 125. West Germony, index of industrial production (M).--Organization for Economic Cooperation and Development
- 126. France, index of industrial production (M).--Organization for Economic Cooperation and Development
- 127. Italy, index of industrial production (M).-Organization for Economic Cooperation and Development
- 128. Japan, Index of industrial production (M).--The Bank of Japan, Statistics Department; seasonal adjustment by Bureau of the Census
 - ... United States, index of industrial production (M).--See series 47.

DIFFUSION INDEXES

The "D" preceding a number indicates a diffusion index. Diffusion indexes and corresponding business cycle series bear the same number and are obtained from the same sources. See sources above for D1, D5, D6, D1, D19, D23, D41, D47, D54, and D61. Sources for other diffusion indexes are as follows:

- D33. Profits, Chicago PAA (M).--Purchasing Agents Association of Chicago; no seasonal adjustment
- D34. Profits, Manufacturing, FNCB (Q).--First National City Bank of New York; no seasonal adjustment of series components. Diffusion indexes are seasonally adjusted by National Bureau of Economic Research, Inc.
- D35. Net soles, total monufactures (Q).--Dun and Bradstreet, Inc.; no seasonal adjustment
- D36. New orders, durable manufactures (Q).--Dun and Bradstreet, Inc.; no seasonal adjustment
- D48. Freight corloadings (Q).--Association of American Railroads; no seasonal adjustment
- D58. Wholesale prices, manufacturing (M).--Department of Labor, Bureau of Labor Statistics; no seasonal adjustment of series components. Diffusion indexes are seasonally adjusted by Nationa: Bureau of Economic Research, Inc.