## MARCH 1962

# Business Cycle Developments 

## U.S. DEPARTMENT OF COMMERCE

Series ES1 No.62-3

Subscription price is $\$ 4$ a year ( $\$ 1$ additional for foreign maling). Single issues are 40 cents.
Airmail delivery in the United States is available at an additional charge of $\$ 5.25$ per year.
Make checks payable to the Superintendent of Documents. Send to U.S. Government Printing Office, Washington 25, D.C., or to any U.S. Department of Commerce Field Office. See list helow.

# U. S. DEPARTMENT OF COMMERCE Luther H. Hodges, Secretary 

bureau of the census

Richard M. Scammon, Director
A. ROSS ECKLER, Deputy Director

HOWARD C. GRIEVES, Assistant Director
CONFAD TAEUBER, Assistant Director
MORFIS H. HANSEN, Assistant Director for Research and Development
CHARLES B. LAWRENCE, JR., Assistant Director for Operations
WALTER L. KEHRES, Assistant Director for Administration
CALVERT L. DEDRICK, Chief, International Statistical Programs Office
A. W. vUN STRUVE, Public Information Officer

Office of Chief Economic Statistician JULIUS SHISKIN, Chief

[^0]Albuquerque, N. Mex.
U.S. Courthouse

Atlanta 3. Ga.
4th F1. Yome Savings
Bank Bldg.
75 Fors ythe St., N. W.
Boston 10. Mass.
Room 230
80 Federal Street
Buffalo 3, N. Y.
504 Federal BIdg.
117 Ellicott St.
Charleston 4, S. C. Sergeant Jasper I3ldgr. West End Broad St.
Cheyenne, Wyo.
207 Majestic Bldg.
16th and Capitol Ave.
Chicago 6, 111.
Room 1302
226 West Jackson Blvd.
Cincinnati 2, Ohio 809 Fifth Third Sank IIldg. 36 E. Fourth St.

## U. S. DEPARTMENT OF COMMERCE FIELD OFFICES

## Cleveland 1, Ohio

Federal Reserve Bank Bldg.
E. 6th St., and Superior Ave.

Dallas 1, Tex.
3-104, Merchandise Mart
500 S. Ervay St.
Denver 2 , Colo.
142 New Custom House
19th and Stout Sts.
Detroit 26, Mich.
438 Federal Bldg.
230 W. Fort St.
Greensboro, N. C. 407 U.S. Post Of fice Bldg.
Honolulu 13, Hawaii
202 International Savings Bidg. 1022 Bethel St.
Houston 2, Tex. 610 Scanlon Bldg. 405 Main St.
Jacksonville 1, Fla. 425 Federal Bldg. 311 W. Monroe St.
Kansas City 6, Mo.
Foom 2011 911 Walnut St.

Los Angeles 15, Calif.
450 Western Pacific Bldg. 1031 S. Broadway
Memphis 3, Tenn. 212 Falls Bldg. 22 N. Front St.
Miami 32, Fla. 408 Ains ley Fldg. 14 NE First Ave.
Minneapolis 1 , Minn. 304 Federal Bldg. 110 S . Fourth St.
New Orleans 12, La. 333 St. Charles Ave.
New York 1, N. Y. Empire State Fidg.
Philadelphia 7, Pa. Jefferson Bldg. 1015 Chestnut St.
Phoenix 25, Ariz. New Federal Bldg. 230 N. First Ave.
Pittsburgh 22, Pa. 1030 Park Bldg. 355 Fifth St.

Portland 4, Oreg.
217 Old U.S. Courthouse 520 SW Morrison St.

Reno, Nev. 1479 Wells Ave.

Richmond 19, Va. Parcel Post Bldg. 11 th and Main Sts.

St. Louis 3, Mo. 2511 Federal Bldg. 1520 Market St.

Salt Lake City 1, Utah 222 SW Temple St.

San Francisco 11, Calif. 419 Customhouse 555 Battery St.
Savannah, Ga. 235 U.S. Courthouse and Post Office Rldg. 125-29 Bull St.
Seattle 4, Wash. 809 Federal Office Bldg. 909 First Ave.

## CONTENTS

Page
Important Features and Changes for This Issue ..... ii
Introduction ..... 1
Organization and Content of the Report ..... 1
Descriptions and Procedures ..... 1
How to Read the Time Series Charts ..... 4
Basic Data
Chart 1. -Business Cycle Series: 1948 to Present:
A. NBER Leading Indicators ..... 5
B. NBER Roughly Coincident Indicators ..... 10
C. NBER Lagging Indicators ..... 13
D. Other U.S. Series With Business Cycle Significance ..... 14
E. International Comparisons of Industrial Production ..... 17
Table 1. - Basic Data for Business Cycle Series: January 1959 to Present ..... 19
Analytical Measures
Table 2. - Percentage Changes for Principal Monthly and Quarterly Series Over 1-Year Period. . ..... 29
Table 3. -Distribution of Highs in Business Cycle Indicators During Selected Months of the 1961 Expansion and Percent Currently High for Corresponding Months of 1961 and Previous Expansions ..... 31
Chart 2. -Diffusion Indexes: 1948 to Present:
A. NBER Leading Indicators ..... 32
B. NBER Roughly Coincident Indicators ..... 33
Table 4. -Diffusion Indexes (Percent Rising) Over Specified Intervals for 12 Major Economic Activities: October 1958 to Present ..... 34
Chart 3. -Diffusion Indexes -Actual and Anticipated: 1948 to Present ..... 37
Table 5. -Diffusion Indexes, Actual and Anticipated, Over Specified Intervals for 4 Manufac- turing Activities: October 1958 to Present ..... 38
Table 6. -Direction of Change in Series Components Over Specified Time Spans and Percent of Series Rising: July 1959 to Present:
A. (Dl) Average Workweek of Production Workers, Manufacturing (21 Industries) ..... 39
B. (D6) Value of Manufacturers' New Orders, Durable Goods Industries (21 Industries) ..... 40
C. (D19) Index of Stock Prices, 500 Common Stocks (24 Industries) ..... 41
D. (D23) Index of Industrial Materials Prices (13 Industrial Materials) ..... 42
E. (D5) Average Weekly Initial Claims for Unemployment Insurance, State Programs (26 Areas) ..... 43
F. (D41) Number of Employees in Nonagricultural Establishments ( 30 Industries) ..... 44
G. (D47) Index of Industrial Production ( 25 Industries) ..... 45
H. (D54) Sales of Retail Stores (24 Types of Stores) ..... 46
Cyclical Patterns
Chart 4. -Comparisons of Reference Cycle Patterns ..... 47
Chart 5.-Comparisons of Specific Cycle Patterns ..... 51
Table 7.-Percent of Reference Peak Levels as Measured at Designated Months After the Reference Trough Dates in the 9 Most Recent Expansions, for Selected Series. ..... 55
Table 8. -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 Selected Series ..... 56
Appendix
Table A. - Business Cycle Reference Dates and Duration of Expansions and Contractions in the United States: 1854 to 1961 ..... 57
Table B. -"Spécific" Trough and Peak Dates for Selected Business Indicators ..... 58
Table C. - Average Percentage Changes and Related Measures for 55 Monthly and 9 Quarterly Business Cycle Series. ..... 59
Table D. -Seasonal Adjustment Factors, May 1961 to June 1962, for Business Cycle Series Adjusted by Bureau of the Census or NBER ..... 61
Summary Description of X-9 and X-10 Versions of the Census Method II Seasonal Adjustment Program ..... 62
For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

## IMPORTANT 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. Series 55 (wholesale prices), series 81 (consumer prices), and series 94 (construction contracts) have been revised back to 1948 because of a change in the index base. The new base is $1957-59=100$. For series 81 , a new seasonal adjustment has been made by the X-9 program (see page 62) and new factors are shown in table D .
2. The seasonal adjustment of series 86,87 , and 88 on foreign trade have been revised back to January 1960.
3. Series 50 on gross national product in 1954 dollars has been added to tables 7 and 8. "Specific" dates for this series have been added to appendix table B.
4. The revision of series 51 on bank debits has now been carried back to 1948.
5. The measures shown in appendix table $C$ have been revised for series 1 , $2,3,41$, and 81 .

## BACKGROUND MATERIALS

Experimental work for this report was carried out in collaboration with the NBER which is responsible for much of the early research in this field. The paper, '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 paper was issued as Occasional Paper 77 of the National Bureau of Economic Research, 261 Madis on Avenue, New York 16, N.Y. (207 pages, price \$3).
ii

# Business Cycle Developments 

## introduction

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.

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 about the 20th of the month following the month of data.

About 70 principal indicators and over $300 \mathrm{com}-$ ponents 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.

## ORGANIZATION AND CONTENT OF THE REPORT

Three types of data are shown in this report. They are 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.

Analytical measures (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.

Cyclical patterns (charts 4-5 and tables 7-8).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 info:mmation, and adjustment factors.

## DESCRIPTIONS AND PROCEDURES

## Business Cycle Series

The three major groups of series are those with a fairly consistent timing relation to the business cycle. They are grouped, in accordance with the NBER classification, as "leading," "roughly coincident," or "lagging" indicators. Additional series are also included 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 or retail sales. For this reason they are referred to as "roughly coincident" series.

NBER Lagging Indicators. - 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. - About 20 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.

## 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. 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
18. Profits (before taxes) per dollar of sales, all manufacturing corporations
25. Change in manufacturers' unfilled orders, durable goods industries
30. Nonagricultural placements, all industries
45. Average weekly insured unemployment, State programs
55. Index of wholesale prices, all commodities other than farm products and foods
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
125. West Germany, index of industrial production 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 $D$. These factors result from two new versions ( $X-9$ and $X-10$ ) of the Census Method II seasonal adjustment program (see appendix, page 62). Seasonally adjusted data prepared by the collecting agency will be substituted for the series mentioned above whenever they are published.

## Designation of Business Cyele Turning Points

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

## Charts

Time series line charts (charts 1-3) are used to show the cyclical timing and pattern of each series. Since various ratio and arithmetic scales are used, rates of change are not comparable except for those series having the same scale. See the diagram, page 4 , for additional help in using the charts.

Shaded areas on the charts indicate periods of business cycle contraction between reference dates
for peaks ("P"-beginnings of shaded areas) and troughs ("T" -ends of shaded areas). The shading for a recession period will be entered only after a trough has been designated.

## Analytical Measures of Current Change

Four kinds of analytical measures are pre-sented-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. 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.

Diffusion indexes.-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 wide spread 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: l-month intervals (January-February, February-March, etc.) and 3-month intervals Janu-ary-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 l-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 ( $200 \mathrm{com}-$ panies); the First National City Bank of New York index based on quarterly profit reports ( 600 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.

Timing distributions.-Distributions of current "highs" and "lows" appear to be helpful in identifying a turning point in the business cycle promptly after it occurs. Each month a timing distribution is constructed which shows the number of series reaching high (low) values during each of the recent expansion (contraction) months. The timing distribution is summarized by showing the number of series reaching new highs (lows) and the percent currently high (low) for each of several recent months (see table 3).

To compile timing distributions, the data for each of the 50 business cycle indicators over the period of the current cyclical phase are scanned each month. During a business cycle contraction, the low value for each series is identified; during an expansion, the high value is identified. For inverted series, that is, series with negative conformity to the business cycle, high values are taken during contraction and low values during expansion. If the values for 2 or more months are equal, the latest date is taken as the low (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 " $L$ " is used in the basic data table (table l) to identify and highlight the current low values during contraction and the letter " H ", to identify current high values during expansion: In addition, the se symbols are used to identify the low values preceding current highs and high values preceding current lows. These identifications facilitate an economic interpretation of the timing
distribution since they show the months in which economic activities reached their lows or highs.

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, " 0 " for unchanged, and "-" for falling) in the components used for the diffusion indexes. The se 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.

## Comparisons of Cyclical Patterns

In forming a judgmentabout 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 frorn 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 specific peak and trough dates identified for each series. 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 indi.. cators is compared graphically with that in earlies: 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 permanent nonfarm dwelling units started (prior to 1939: Residential building contracts, floor space)
41. 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 wage and salary cost per unit of output, total manufacturing (prior to 1946: Production worker wage cost per unit. Supplements to wages and salaries, which are a part of total labor cost, are not included).

HOW TO READ THE TIME SERIES CHARTS (CHARTS 1-3)




## CHART 1 BUSINESS CYCLE SERIES: 1948 TO PRESENT.-Con.




A NBER Leading Indicators.-Con.


See "How to Read the Time Series Charts," page 4.


See "How to Read the Time Series Charts," page 4.



CHART 1 BUSINESS CYCLE SERIES: 1948 TO PRESENT--Con.

- B


See "How to Read the Time Series Charts," page 4.



D




D


## CHART 1 BUSINESS CYCLE SERIES: 1948 TO PRESENT--Con.




See "How to Read the Time Series Charts," page 4.

## CHART 1 BUSINESS CYCLE SERIES: 1948 TO PRESENT--Con.




Table 1．－－BASIC DATA FOR BUSINESS CYCLE SERIES：JANUARY 1959 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（L）and current highs are indicated by $⿴ 囗 十 ⿴ 囗 十 ⺝ 丶$ the reverse is true for inverted series（series 3，4，5，14，15，43，44，45）．Series numbers are for identification purposes only and do not reflect series relationships or order．Sources are shown in＂Complete Titles and Sources of Principal Business Cycle Series and Diffusion Indexes＂on the back cover．＂r＂Revised．＂p＂Preliminary．

| Year and month | NBER Leading Indicators |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1．Average workweek， production workers， manufacturing | 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 | 5．Average weokly initial claims for un－ employment in－ surance，State programs | 6．Value of manufac－ turers＇new orders，dur－ able goods industries |
| 1959 | （Hours per prod．wkr．） | （Per 100 employees） | （Thous．） | $\begin{aligned} & \text { (Per } 100 \\ & \text { employees) } \end{aligned}$ | （Thous．） | （Thous．） | （Bil．dol．） |
| January．．． | 40.1 | 4.1 | 478 | 1.9 | 120 | 292 | 13.90 |
| February．．．． | 40.2 | 4.3 | 490 | 1.7 | 119 | 284 | 14.92 |
| March．．．．． | 40.4 | 4.7 | 509 | 1.6 | 113 | 258 | 15.32 |
| April．．． | 40.7 | 4.5 | 516 | 1.6 | 101 | 24.4 | 15.80 |
| May．．．．．． | 40.7 | 4.2 | 512 | 1.6 | 116 | 246 | 15.24 |
| June．．．．．．． | 40.5 | 4.2 | 523 | 1.8 | 121 | 258 | 16.13 |
| July．．．．．．． | 40.2 | 4.0 | 527 | 2.0 | 125 | 264 | 15.49 |
| August．．．．． | 40.3 | 4.1 | 501 | 2.0 | 155 | 291 | 13.97 |
| September．． | 40.1 | 4.0 | 516 | 2.2 | 150 | 271 | 14.75 |
| October．．．．． | 40.0 | 3.8 | 492 | 2.7 | 93 | 311 | 15.10 |
| November． | 39.9 | 4.1 | 512 | 2.4 | 159 | 351 | 13.72 |
| December．．．． | 40.3 | 5.3 | 510 | 1.9 | 138 | 275 | 14.77 |
| 1960 |  |  |  |  |  |  |  |
| January．．． | 40.4 | 4.3 | 506 | 1.6 | 122 | 281 | 14.19 |
| February． | 40.1 | 4.1 | 535 | 1.9 | 110 | 271 | 14.80 |
| March．．．．． | 39.9 | 3.8 | 513 | 2.2 | 116 | 303 | 14.64 |
| April．．． | 39.8 | 3.7 | 504 | 2.2 | 156 | 294 | 14.47 |
| May．．．．．．． | 40.1 | 3.9 | 494 | 2.2 | 160 | 316 | 14.68 |
| June．．．．．．．． | 39.9 | 3.7 | 482 | 2.6 | 145 | 322 | 14.34 |
| July．．．．．．． | 39.9 | 3.6 | 460 | 2.6 | 177 | 335 | 13.84 |
| August．．．．．． | 39.6 | 3.8 | 488 | 2.7 | 154 | 363 | 14.41 |
| September．． | 39.4 | 3.7 | 473 | 2.6 | 153 | 351 | 14.62 |
| October．．．． | 39.5 | 3.6 | 460 | 2.3 | 166 | 373 | 13.74 |
| November． | 39.3 | 3.5 | 475 | 2.6 | 128 | 385 | 13.60 |
| December $\qquad$ <br> 1961 | （L） 38.5 | （L）3．3 | 444 | 2.9 | 179 | 381 | 13.22 |
| January．．． | 39.0 | 4.0 | 443 | 2.9 | 193 | 393 | （L） 12.88 |
| February． | 39.3 | 3.8 | 444 | （c） 2.9 | （ㄴ） 220 | （L） 429 | 13.36 |
| March．．．． | 39.3 | ［田 4.6 | 474 | 2.3 | 215 | 371 | 13.82 |
| April．．．． | 39.7 | 4.4 | （L） 433 | 1.9 | 137 | 370 | 14.38 |
| May．．．．．．． | 39.8 | 4.2 | 481 | 2.0 | 15.1 | 357 | 14.80 |
| June．．．．．．．． | 39.9 | 3.9 | 494 | 2.2 | 147 | 331 | 14.92 |
| July．．．．．．． | 40.0 | 4.0 | 470 | 2.5 | 99 | 351 | 15.03 |
| August．．．．．． | 40.0 | 4.1 | 529 | 1.9 | 138 | 315 | 15.65 |
| September．．． | 39.6 | 3.7 | 491 | 2.2 | 123 | 329 | 15.76 |
| October．．．．． | 40.2 | 4.4 | 530 | ［⿴囗十⺀⿺𠃊⿻丷木） 1.7 | 111 | 307 | 16.08 |
| November．．． | i\＃ 40.6 | 4.0 | 565 | 1.8 | 111 | 307 | 16.13 |
| December．．．． | 40.4 | r3．8 | 526 | r2．1 | 123 | 305 | r16．24 |
| 1962 |  |  |  |  |  |  |  |
| January．．．． | r39．8 | p4．1 | 田568 | pl． 8 | 177 | 312 | ［⿴囗 r 16.55 |
| February．．． | p40．3 | （NA） | 548 | （NA） |  | 田 285 | p15．98 |
| March．．．．．．． |  |  |  |  |  | ${ }^{1} 290$ |  |
| May．．．．．．．．．． |  |  |  |  |  |  |  |
| June．．．．．．．．． |  |  |  |  |  |  |  |

${ }^{1}$ Week ended March 10， 1962.

Table 1.--BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1959 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 ( $\square$ ) and current highs are indicated by $[\mathbb{H}$; the reverse is true for inverted series (series 3, 4, 5, 14, 15, 43, 44, 45). Series numbers are for identification purposes only and do not reflect series relationships or order. Sources are shown in "Complete Titles and Sources of Principal Business Cycle Series and Diffusion Indexes" on the back cover. "r" Revised. "p" Preliminary.


Table 1．－－BASIC DATA FOR BUSINESS CYCLE SERIES：JANUARY 1959 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（L）and current highs are indicated by $\mathbb{M}$ ； the reverse is true for inverted series（series 3，4，5，14，15，43，44，45）．．Series numbers are for identification purposes only and do not reflect series relationships or order．Sources are show in＂Complete Titles and Sources of Principal Business Cycle Series and Diffusion Indexes＂on the back cover．＂r＂Revised．＂p＂Preliminary．

| Year and month | NBER Leading Indicators－－Continued |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 12．Net change in business population， operating businesses | 13．Number of new business incorpora－ tions | 14．Current liabilities of business failures | 15．Business failures with lia－ bilities of $\$ 100,000$ and over | 16．Corpor－ ate profits after taxes | ```17. Price per unit of labor cost index``` | 18．Profits （before tax－ es）per dol． sales，all mfg．corpo－ rations | 19．Index of stock prices， 500 common stocks＊ |
| 1959 | （Thous．） | （Number） | （Mil．dol．） | $\begin{gathered} \text { (Number per } \\ \text { week) } \end{gathered}$ | $\begin{aligned} & \text { (Ann. rate } \\ & \text { Bil. dol.) } \end{aligned}$ | $(1947-49=100)$ | （Cents） | （1941－43－10） |
| January．．． | +20+20 | 16，346 | 68.75 | 29 |  | 102.8 |  | 55.62 |
| February．．． |  | 16，255 | 53.26 | 27 | 23.4 | 1.03 .7 | 8.9 | 54.77 |
| March．．．．．．． |  | 16，548 | 60.23 | 25 |  | 103.3 |  | 56.15 |
| April．．．．．． |  | 16，604 | 63.08 | 26 |  | 105.1 |  | 57.10 |
| May．．．．．．．．． |  | 16，296 | 48.96 | 27 | 26.1 | 106.1 | 9.8 | 57.96 |
| June．．．．．．．． |  | 15，204 | 51.25 | 22 |  | 105.4 |  | 57.46 |
| July．．．．．．． | +20+15 | 15，658 | 54.47 | 27 |  | 104.4 |  | 59.74 |
| August．．．．．．． |  | 15，813 | 54.50 | 32 | 22.7 | 104.2 | 8.4 | 59.40 |
| September．．． |  | 15，728 | 61.51 | 25 |  | 103.1 |  | 57.05 |
| October．．．．． |  | 15，383 | 55.98 | 24 |  | 102.6 |  | 57.00 |
| November．．．． |  | 15，695 | 56.01 | 29 | 22.7 | 101.4 | 8.1 | 57.23 |
| December．．． $1960$ |  | 15，959 | 64.04 | 30 |  | 104.2 |  | 59.06 |
| January．．．．． | ＋20 | 16，561 | 52.88 | 29 |  | 105.0 |  | 58.03 |
| February．．．． |  | 15，274 | 57.60 | 27 | 24.2 | 104.3 | 8.8 | 55.78 |
| March．．．．．．． |  | 15，233 | 61.57 | 29 |  | 104.2 |  | 55.02 |
| April．．．．．．． | ＋20 | 15，280 | 63.71 | 28 |  | 103.8 |  | 55.73 |
| May．．．．．．．．． |  | 15，176 | 76.52 | 32 | 23.3 | 1.03 .9 | 8.0 | 55.22 |
| June．．．．．．．．． |  | 15，630 | （L） 131.31 | 36 |  | 103.7 |  | 57.26 |
| July．．．．．． | ＋15 | 15，828 | 71.04 | 40 |  | 104.5 |  | 55.84 |
| August．．．． |  | 15，114 | 94.66 | 35 | 21.7 | 104.5 | 7.8 | 56.51 |
| September．．． |  | 15，111 | 86.02 | 43 |  | 102.7 |  | 54.81 |
| October．．．．． | （L）+5 | 15，240 | 85.98 | （c） 46 |  | 102.7 |  | （c）53．73 |
| November．．．． |  | 14，281 | 80.44 82.78 | 37 42 | 21.4 | 102.4 | 7.3 | 55.47 56.80 |
| 1961 |  |  |  |  |  |  |  |  |
| January．．．．． | ＋10 | （L）13，492 | 80.16 | 38 |  | 101.9 |  | 59.72 |
| February．．．． |  | 14，601 | 84.45 | 42 | （L） 20.0 | 101.7 | （L） 6.6 | 62.17 |
| March．．．．．．． |  | 14，658 | 111.36 | 40 |  | （ 101.5 |  | 64.12 |
| April．．．．．．． | ＋15 | 15，327 | 79.07 | 39 |  | 102.1 |  | 65.83 |
| May．．．．．．．．．． |  | 15，225 | 84.09 | 41 | 22.8 | 103.1 | 7.6 | 66.50 |
| June．．．．．．．． |  | 15，342 | 87.05 | 41 |  | 103.1 |  | 65.62 |
| July．．．．．．．． | 田＋15 | 15，539 | 80.52 | 41 |  | 104．6 |  |  |
| August．．．．．．． |  | 15，213 | 99.41 | 35 | H 23.8 | ［田105．8 | ［ 7.9 | 67.79 67.26 |
| September．．． October．．．． |  | 15,419 ⿴囗十⿴囗十 16，286 | 124.11 74.04 | 40 |  | 104.2 104.6 |  | 67.26 68.00 |
| November．． | ＋10 | 16，149 | 112.36 | 39 | （NA） | 104.4 | （NA） | 71.08 |
| December．．．． |  | r15，818 | 田68．94 | 38 |  | 105.2 |  | ㄸ－H］ 71.75 |
| 1962 |  | $\begin{aligned} & 15,124 \\ & 15,809 \end{aligned}$ | $\begin{array}{r} \mathrm{rlO} .72 \\ 87.36 \end{array}$ | $\begin{array}{r} 37 \\ \text { H } 32 \end{array}$ |  |  |  |  |
| January．．．．． | （ NA ） |  |  |  |  | r105．0 |  | 69.07 |
| February．．．． |  |  |  |  |  | p104．6 |  | 70.22 171.06 |
| April．．．．．．． |  |  |  |  |  |  |  |  |
| May．．．．．．． |  |  |  |  |  |  |  |  |
| June．．．．．．．．． |  |  |  |  |  |  |  |  |

${ }^{1}$ March 15， 1962.

Table 1..-BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1959 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 ( $D$ and current highs are indicated by $H$ the reverse is true for inverted series (series 3, 4, 5, 14, 15, 43, 44, 45). Series numbers are for identification purposes only and do not reflect series relationships or order. Sources are shown in "Complete Titles and Sources of Principal Business Cycle Series and Diffusion Indexes" on the back cover. "r" Revised. "p" Preliminary.

${ }^{1}$ March 15, 1962.

Table I.--BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1959 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 (L) and current highs are indicated by $\square$ the reverse is true for inverted series (series 3, 4, 5, 14, 15, 43, 44, 45). . Series numbers are for identification purposes only and do not reflect series relationships or order. Sources are shown in "Complete Titles and Sources of Principal Business Cycle Series and Diffusion Indexes" on the back cover. "r" Revised. "p" Preliminary.

| Year and month | NBER Roughly Coincident Indicators |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 41. Number of employees in nonagricultural establishments | 42. Total nonagricultural employment, labor force survey | 43. Unemployment rate, total | 44. Number of unemployed persons 14 yrs old and over | 45. Average weekly insured unemployment, State programs | 46. Index of help-wanted advertising in newspapers | 47. Index of industrial production | 50. Gross national product in 1954 dollars |
| 1959 | (Thous.) | (Thous.) | (Percent) | (Thous.) | (Thous. persons) | (1957-100) | (1957-100) | $\begin{aligned} & \text { (Ann. rate } \\ & \text { Bil. dol.) } \end{aligned}$ |
| January... | 52,446 | 59,016 | 5.97 | 4,130 | 1,887 | 84.9 | 100.3 |  |
| February. | 52,612 | 58,974 | 5.91 | 4,071 | 1,799 | 91.9 | 101.9 | 422.1 |
| March. . . . | 52,843 | 59,337 | 5.63 | 3,896 | 1,670 | 96.7 | 103.6 |  |
| April... | 53,328 | 59,520 | 5.23 | 3,625 | 1,603 | 102.8 | 106.6 |  |
| May.... | 53,606 | 59,668 | 5.09 | 3,530 | 1,505 | 102.0 | 109.2 | 434.4 |
| June... | 53,779 | 59,752 | 5.04 | 3,486 | 1,473 | 105.6 | 109.6 |  |
| July.... | 53,879 | 60,108 | 5.15 | 3,570 | 1,503 | 108.8 | 107.6 |  |
| August.... | 53,357 | 60,103 | 5.32 | 3,696 | 1,578 | 105.5 | 103.6 | 426.6 |
| September. | 53,413 | 59,925 | 5.56 | 3,858 | 1,579 | 105.1 | 103.2 |  |
| October... | 53,353 | 60,225 | 5.72 | 3.988 | 1,716 | 103.2 | 102.0 |  |
| November. . | 53,622 | 59,741 | 5.77 | 4,009 | 1,959 | 104.8 | 102.6 | 430.7 |
| December.. | 54,116 | 60,465 | 5.41 | 3,783 | 1,705 | 103.5 | 108.8 |  |
| 1260 |  |  |  |  |  |  |  |  |
| January... | 54,211 | 60,436 | 5.29 | 3,696 | 1,649 | 109.0 | 111.1 |  |
| February.. | 54,445 | 60,875 | 4.91 | 3,436 | 1,606 | 110.1 | 109.6 | 441.0 |
| March... | 54,427 | 60,488 | 5.38 | 3.746 | 1,753 | 105.4 | 109.1 |  |
| April. | 54,702 | 61,132 | 5.17 | 3,644 | 1,730 | 100.3 | 108.7 |  |
| May... | 54,584 | 61,371 | 5.14 | 3,628 | 1,752 | 99.7 | 109.7 | 443.4 |
| June... | 54,538 | 61,293 | 5.44 | 3,850 | 1,844 | 97.8 | 109.4 |  |
| July.... | 54,514 | 61,133 | 5.44 | 3,847 | 1,938 | 90.1 | 109.4 |  |
| August. . | 54,403 | 61,035 | 5.75 | 4,073 | 2,041 | 89.4 | 108.3 | 440.2 |
| September. | 54,301 | 60,996 | 5.70 | 4,051 | 2,119 | 82.6 | 106.1 |  |
| October.. | 54,190 | 60,758 | 6.14 | 4,349 | 2,196 | 84.6 | 106.1 |  |
| November. | 53,995 | 61,210 | 6.18 | 4,411 | 2,357 | 82.2 | 104.5 | 438.4 |
| December. . | 53,707 | (L) 60,635 | 6.65 | 4,738 | 2,435 | (L) 79.0 | 103.0 |  |
| 1961 |  |  |  |  |  |  |  |  |
| January.... | 53,581 | 60,852 | 6.65 | 4,761 | 2,462 | 79.9 | 102.3 |  |
| February... | (c) 53,485 | 60,922 | 6.91 | 4,968 | (c) 2,514 | 79.3 | (ㄴ) 102.1 | (L) 433.2 |
| March. | 53,561 | 61,274 | 6.76 | 4,874 | 2,498 | 81.1 | 102.6 |  |
| April..... | 53,663 | 61,101 | 6.93 | 4,950 | 2,474 | 79.8 | 105.6 |  |
| May.... | 53,894 | 61,234 | (L) 7.02 | (ㄴ) 5,019 | 2,432 | 82.0 | 108.3 | 445.5 |
| June... | 54,182 | 61,543 | 6.86 | 4,936 | 2,318 | 83.8 | 110.4 |  |
| July.... | 54,335 | 61,371 | 6.87 | 4,923 | 2,242 | 82.6 | 112.0 |  |
| August.. | 54,333 | 61,417 | 6.81 | 4,887 | 2,118 | 86.1 | 113.0 | 451.8 |
| September. | 54,304 | 61,188 | 6.86 | 4,867 | 2,041 | 84.8 | 111.0 |  |
| October.. | 54,385 | 61,369 | 6.66 | 4,762 | 1,932 | 95.9 | 112.8 |  |
| November. | 54,525 | 61,840 | 6.11 | 4,370 | 1,893 | 99.1 | rl14.1 | 田464.6 |
| December. | r54,492 | 61,618 | 6.00 | 4,274 | 1,840 | 96.9 | Tr114.9 |  |
| 1962 |  |  |  |  |  |  |  |  |
| January.... |  | [61,690 | [ 5.82 | 4,159 174,008 | 1,873 W1,785 | 99.4 田 106.0 | $\begin{aligned} & \text { rl13.8 } \\ & \text { p114.8 } \end{aligned}$ | (NA) |
| March... | [1] P54,693 | [17) 62,206 |  | [H4,008 | -1,791 |  |  | ( A ) |
| April....... |  |  |  |  |  |  |  |  |
| May......... |  |  |  |  |  |  |  |  |
| June....... |  |  |  |  |  |  |  |  |

${ }^{1}$ Week ended March 3, 1962.

## Table 1.--BASIC DATA FOR BUSINESS CYCI-E SERIES: JANUARY 1959 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 (L) and current highs are indicated by $[\square$; the reverse ts true for inverted series (series 3, 4, 5, 14, 15, 43, 44, 45). Series numbers are for identification purposes only and do not reflect series relationships or order. Sources are show in "Complete Titles and Sources of Principal Business Cycle Series and Diffusion Indexes" on the back cover. "x" Revised. "p" Preliminary.


[^1]Table 1.--BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1959 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 (L) and current highs are indicated by $\left[\begin{array}{ll}(1)\end{array}\right.$ the reverse is true for inverted series (series 3, 4, 5, 14, 15, 43, 44, 45). Series numbers are for identification purposes only and do not reflect series relationships or order. Sources are shown in "Complete Titles and Sources of Principal Business Cycle Series and Diffusion Indexes" on the back cover. "r" Revised. "p" Preliminary.


[^2]Table 1..-BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1959 TO PRESENT--Continued
Serles 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 (L) and current highs are indicated by $\mathbb{H}$; the reverse is true for inverted series (series 3, 4, 5, 14, 15, 43, 44, 45). Series numbers are for identification purposes only and do not reflect series relationships or order. Sources are shown in "Complete Titles and Sources of Principal Bubiness Cycie Series and Diffusion Indexes" on the back cover. "r" Revised. "p" Preliminary.

| Year and month | Other U.S. series with business cycle significance |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 86. Exports, excluding military aid shipments, total | 87. General imports, total | 88. Merchandise trade balance (series 86 minus 87) | 89. Excess, receipts ( ${ }^{+}$) or payments (-) in U.S. balance of payments | 82. Federal cash payments to the public | 83. Federal cash receipts from the public | 84. Federal cash surplus or deficit | 95. Surplus ( + ) or deficit(-), Federal income and product account |
| 1959 | (Mil. dol.) <br> Revised ${ }^{1}$ | $\begin{aligned} & \text { (Mil. dol.) } \\ & \text { Revised } \end{aligned}$ | $\left\lvert\, \begin{aligned} & \text { (Mil. dol. } \\ & \text { Revised } \end{aligned}\right.$ | (Mil. dol.) | $\begin{aligned} & \text { (Ann. rate } \\ & \text { Bil. dol.) } \end{aligned}$ | $\begin{aligned} & \text { (Ann. rate } \\ & \text { Bil. dol.) } \end{aligned}$ | $\begin{gathered} \text { (Ann. rate } \\ \text { Bil. dol.) } \end{gathered}$ | $\begin{gathered} \text { (Ann. rate } \\ \text { Bil. dol.) } \end{gathered}$ |
| January... | 1,318.5 | 1,164.6 | +153.9 |  | 100.0 | 81.5 | -18.5 |  |
| February... | 1,292.1 | 1,194.5 | +97.6 | r-841 | 96.0 | 84.9 | -11.1 | -2.7 |
| March...... | 1,300.9 | 1,213.5 | +87.4 |  | 92.7 | 76.8 | -15.9 |  |
| April.... | 1,296.8 | 1,210.3 | +86.5 |  | 96.4 | 87.2 | -9.2 |  |
| May........ | 1,326.6 | 1,31.2.9 | +13.7 | ${ }^{2} \mathrm{r}-1,061$ | 95.1 | 86.0 | -9.1 | +0.5 |
| June....... | 1,345.9 | 1,311.7 | +34.2 |  | 96.2 | 81.2 | -15.0 |  |
| July...... | 1,394.6 | 1,251.1 | +143.5 |  | 97.0 | 89.4 | -7.6 |  |
| August..... | 1,429.2 | 1,298.3 | +130.7 | r-1,173 | 96.2 | 92.4 | -3.8 | -2.5 |
| September. | 1,498.8 | 1,407.9 | +90.9 |  | 93.2 | 95.7 | +2.5 |  |
| October.. | 1,335.2 | 1,200.5 | +134.7 |  | 92.9 | 88.3 | -4.6 |  |
| November. - | 1,380.7 | 1,298.6 | +82.1 | r-668 | 99.9 | 96.6 | -3.3 | -2.4 |
| December. 1960 | 1,497.2 | 1,333.2 | +164.0 |  | 91.2 | 98.8 | +7.6 |  |
| January... | 1,561.3 | 1,213.0 | +348.3 |  | 89.9 | 89.9 | 0.0 |  |
| February. | 1,565.7 | 1,307.2 | +258.5 | -620 | 97.8 | 96.6 | -1.2 | +6.5 |
| March. . . . | 1,518.1 | 1,260.7 | +257.4 |  | 91.9 | 94.2 | +2.3 |  |
| April.... | 1,622.2 | 1,314.6 | +307.6 |  | 94.9 | 99.8 | $+4.9$ |  |
| May. ........ | 1,659.3 | 1,242.3 | +417.0 | -763 | 94.4 | 102.9 | +8.5 | +4.5 |
| June........ | 1,633.8 | 1,252.3 | +381.5 |  | 91.9 | 94.8 | +2.9 |  |
| July...... | 1,706.5 | 1,235.2 | +471.3 |  | 91.5 | 93.6 | +2.1 |  |
| August.... | 1,624.8 | 1,227.0 | +397.8 | -1,112 | 97.4 | 104.0 | +6.6 | +1.4 |
| September. | 1,647.2 | 1,187.9 | +459.3 |  | 95.0 | 100.5 | +5.5 |  |
| October.. | 1,667.6 | 1,178.1 | +489.5 |  | 92.7 | 91.7 | -1.0 |  |
| November... | 1,680.6 | 1,125.5 | +555.1 | ${ }^{3}-1,434$ | 102.3 | 103.3 | +1.0 | +0.4 |
| December.... $1961$ | 1,645.3 | 1,108.6 | +536.7 |  | 96.0 | 100.4 | +4.4 |  |
| January... | 1,646.1 | 1,150.9 | +495.2 |  | 96.8 | 93.1 | -3.7 |  |
| February. . | 1,736.4 | 1,146.1 | +590.3 | r-344 | 95.4 | 93.2 | -2.2 | -5.5 |
| March. | 1,711.1 | 1,158.4 | +552.7 |  | 107.2 | 89.1 | -18.1 |  |
| April. | 1,658.3 | 1,159.0 | +499.3 |  | 101.3 | 98.8 | -2.5 |  |
| Msy. . . . . . | 1,577.0 | 1,155.2 | +421.8 | ${ }^{4} \mathrm{r}+156$ | 110.1 | 101.5 | -8.6 | $-4.3$ |
| June....... | 1,594.9 | 1,177.2 | +417.7 |  | 105.4 | 95.2 | -10.2 |  |
| July.... | 1,668.0 | 1,366.4 | +301.6 |  | r97.5 | r90.3 | r-7.2 |  |
| August.... | 1,659.7 | 1,261.3 | +398.4 | r-777 | r114.0 | r104.0 | -10.0 | -3.1 |
| September. | 1,667.8 | 1,280.3 | +387.5 |  | r101. 8 | r100.8 | -1.0 |  |
| October. | 1,772.9 | 1,322.4 | +450.5 |  | 111.1 | r99.1 | r-12.0 |  |
| November. . . | 1,716.3 | 1,310.7 | $+405.6$ | r-1,489 | r107. 3 | r103.9 | r-3.4 | (NA) |
| December.... $1962$ | 1,719.2 | 1,296.5 | +422.7 |  | r103.8 | r102.8 | -1.0 |  |
| January..... |  |  |  | (NA) |  |  |  |  |
| February... | (NA) | (NA) | (NA) |  | 107.5 | 98.9 | -8.6 |  |
| April....... |  |  |  |  |  |  |  |  |
| May. . . . . . . . |  |  |  |  |  |  |  |  |
| June......... |  |  |  |  |  |  |  |  |

${ }^{1}$ See "Important Features and Changes For This Issue," page ii.
${ }^{2}$ Excludes U.S. subscription to International Monetary Fund of $\$ 1,375$ million in gold and securities.
${ }^{3}$ Includes singie direct investment transactions of $\$ 370$ million.
${ }^{4}$ Includes $\$ 650$ million in special debt payments to the Uaited States.

Table 1.--BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1959 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 ( $L$ and current highs are indicated by $~(4)$ the reverse is true for inverted series (series 3, 4, 5, 14, 15, 43, 44, 45). Series numbers are for identification purposes only and do not reflect series relationships or order. Sources are shown in "Complete Titles and Sources of Principal Business Cycle Series and Diffusion Indexes" on the back cover. "r" Revised. "p" Preliminary.

| Year and month | Other U.S. series with business cycle significance--Continued |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 90. Defense Department obligations, procurement | 91. Defense Department obligations, total. | 92. Military prime contract awards to U.S. business firms | 85. Percent change in total U.S. money supply | 93. Free reserves* | 81. Index of consumer prices | 94. Index of construction contracts, total value |
| 1959 | (Mil. dol.) | (Mil. dol.) | (Mil. dol.) | (Percent) | (Mil. dol.) | $\begin{gathered} (1957-59=100) \\ \text { Revised } \end{gathered}$ | $\begin{gathered} (1957-59=100) \\ \text { Revised }^{1} \end{gathered}$ |
| January. . . | 1,330 | 3,538 | 1,465 | +0.28 | -60 | 101.0 | 98 |
| February... | 1,362 | 3,601 | 1,916 | +0.28 | -48 | 101.0 | 95 |
| March..... | 1,371 | 3,739 | 1,772 | +0.28 | -140 | 100.9 | 110 |
| April..... | 1,398 | 3,620 | 1,762 | +0.14 | -259 | 101.0 | 118 |
| May. . . . . . . | 1,381 | 3,569 | 1,513 | +0.28 | -319 | 101.2 | 103 |
| June....... | 1,425 | 3.863 | 1,905 | +0.14 | -513 | 101.4 | 114 |
| July....... | 1,202 | 3,729 | 2,249 | +0.35 | -557 | 101.6 | 115 |
| August..... | 870 | 3,263 | 1,986 | -0.35 | -535 | 101.7 | 102 |
| September, | 1,319 | 3,906 | 1,931 | 0.00 | -493 | 101.9 | 106 |
| October.... | 1,517 | 3,802 | 2,123 | -0.28 | -459 | 102.2 | 110 |
| November. . . | 1,124 | 3,608 | 2,289 | -0.14 | -433 | 102.2 | 92 |
| December... | 929 | 3,160 | 1,320 | -0.49 | -424 | 102.3 | 97 |
| 1960 |  |  |  |  |  |  |  |
| January... | 937 | 3,234 | 1,770 | -0.14 | -361 | 102.3 | 93 |
| February... | 1,104 | 3,439 | 1,740 | -0.21 | -361 | 102.5 | 93 |
| March. . . . . | 1,020 | 3,368 | 1,738 | -0.28 | -219 | 102.6 | 100 |
| April..... | -983 | 3,362 | 1,368 | -0.07 | -194 | 102.9 | 105 |
| May. . . . . . . | 1,373 | 3,677 | 1,811 | -0.43 | -33 | 103.0 | 97 |
| June...... | 1,265 | 3,742 | 1,687 | -0.36 | $+41$ | 103.1 | 108 |
| July....... | 2,866 | 5.305 | 2,231 | +0.14 | $+120$ | 103.1 | 113 |
| August..... | 1,230 | 3,824 | 2,302 | +0.07 | $+247$ | 103.3 | 109 |
| September. . | 1,206 | 3,926 | 2,361 | +0.50 | $+414$ | 103.2 | 107 |
| October.... | 998 | 3,299 | 1,477 | +0.14 | $+489$ | 103.5 | 117 |
| November. . | 1,559 | 4,109 | 2,127 | -0.28 | $+614$ | 103.6 | 111 |
| December... | 1,239 | 3,671 | 1,797 | +0.14 | $+682$ | 103.8 | 120 |
| 1961 |  |  |  |  |  |  |  |
| January.... | 1,306 | 3,621 | 1,944 | +0.14 | +696 | 103.9 | 108 |
| February... | 1,476 | 3,976 | 2,153 | +0.43 | +517 | 104.0 | 95 |
| March..... | 1,163 | 3,552 | 1,774 | +0.21 | $+476$ | 104.1 | 104 |
| April...... | 1,089 | 3,449 | 1,882 | +0.35 | +562 | 103.9 | 103 |
| May. . . . . . . | 1,117 | 3.600 | 1,501 | 0.00 | $+453$ | 104.0 | 102 |
| June....... | 1,196 | 3,648 | 1,888 | +0.07 | +549 | 104.0 | 111 |
| July.... | 1,671 | 4,314 | 2,066 | -0.07 | +530 | 104.3 | 110 |
| August...... | 2,237 | 5,344 | 2,389 | -0.14 | +537 | 104.4 | 116 |
| September.. | 1,864 | 4,785 | 2,127 | $+0.85$ | +552 | 104.5 | 103 |
| October.... | 1,436 | 4,191 | 2,847 | +0.49 | +442 | 104.4 | 114 |
| November. . . | 1,372 | 4,121 | 2,500 | $+0.28$ | $+509$ | 104.4 | 116 |
| December.. | 1,891 | 4,681 | 2,153 | +0.56 | $+425$ | 104.4 | 119 |
| 1962 |  |  |  |  |  |  |  |
| January. . . . | $\begin{array}{r} 1,912 \\ (\mathrm{NA}) \end{array}$ | $\begin{array}{r} 4,449 \\ (\mathrm{NA}) \end{array}$ | (NA) | -0.21$p-0.07$ | p+424 | $\begin{array}{r} 104.6 \\ (\mathrm{NA}) \end{array}$ | 115(NA) |
| February.... |  |  |  |  |  |  |  |
| April........ |  |  |  |  |  |  |  |
| May. . . . . . . . |  |  |  |  |  |  |  |
| June......... |  |  |  |  |  |  |  |

${ }^{1}$ See "Important Features and Changes For This Issue," page ii.

## Table 1.--BASIC DATA FOR BUSINESS CYCL_E SERIES: JANUARY 1959 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 (L) and current highs are indicated by $\mathbb{H}$; the reverse $1 . s$ true for inverted serles (series 3, 4, 5, 14, 15, 43, 44, 45). . Series numbers are for identification purposes only and do not reflect series relationships or order. Sources are shown in "Complete Titles and Sources of Principal Business Cycle Series and Diffusion Indexes" on the back cover. "r" Revised. "p" Preliminary.

| Year and month | International comparisons of industrial production |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { 121. OECD }{ }^{1} \\ & \text { countriss } \\ & \text { index of } \\ & \text { industrial } \\ & \text { production } \end{aligned}$ | 122. United <br> Kingdom, index of industrial production | 123. Canada, index of industrial production | 4'7. 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 |
|  | (1953=100) | (1953:=100) | (1957=100) | (1957=100) | (1953=100) | (1953=100) | (1953=100) | (1955=100) |
| 1959 (10) |  |  |  |  |  |  |  |  |
| January..... | 134 | 115 | 104 | 100 | 151 | 149 | 148 | 157 |
| February.... | 136 | 115 | 105 | 102 | 154 | 152 | 154 | 160 |
| March. ...... | 139 | 117 | 105 | 104 | 158 | 152 | 154 | 162 |
| April....... | 139 | 118 | 108 | 107 | 158 | 156 | 153 | 168 |
| May......... | 139 | 118 | 107 | 109 | 158 | 157 | 154 | 173 |
| June........ | 141 | 120 | 108 | 110 | 160 | 159 | 152 | 178 |
| July........ | 141 | 121 | 107 | 108 | 161 | 159 | 151 | 181 |
| August...... | 143 | 122 | 106 | 104 | 164 | 154 | 158 | 184 |
| September... | 145 | 124 | 108 | 103 | 167 | 160 | 161 | 188 |
| October..... | 147 | 126 | 110 | 102 | 169 | 163 | 165 | 192 |
| November.... | 150 | 126 | 108 | 103 | 170 | 168 | 171 | 196 |
| December.... | 153 | 128 | 109 | 109 | 175 | 175 | 173 | 202 |
| 1960 |  |  |  |  |  |  |  |  |
| January..... | 151 | 128 | 111 | 111 | 173 | 170 | 172 | 205 |
| February.... | 152 | 128 | 110 | 110 | 174 | 166 | 178 | 211 |
| March. ...... | 155 | 129 | 111 | 109 | 177 | 167 | 180 | 212 |
| April....... | 154 | 131 | 108 | 109 | 176 | 170 | 179 | 218 |
| May......... | 155 | 131 | 108 | 110 | 178 | 169 | 181 | 218 |
| June......... | 157 | 130 | 108 | 109 | 180 | 174 | 184 | 222 |
| July......... | 156 | 130 | 106 | 110 | 178 | 175 | 182 | 225 |
| August...... | 157 | 131 | 107 | 108 | 180 | 177 | 186 | 229 |
| September... | 158 | 131 | 108 | 107 | 184 | 180 | 185 | 234 |
| October..... | 158 | 131 | 108 | 106 | 182 | 180 | 184 | 235 |
| November. . . | 159 | 129 | 107 | 105 | 185 | 183 | 188 | 243 |
| December.... | 160 | 131 | 107 | 103 | 186 | 181 | 188 | 245 |
| 1961 |  |  |  |  |  |  |  |  |
| January..... | 160 | 129 | 107 | 102 | 193 | 179 | 190 | 248 |
| February.... | 162 | 130 | 107 | 102 | 192 | 179 | 197 | 248 |
| March. . | 163 | 130 | 107 | 103 | 192 | 180 | 194 | 257 |
| April....... | 162 | 132 | 109 | 106 | 187 | 180 | 194 | 257 |
| May......... | 162 | 131 | 109 | 108 | 191 | 182 | 195 | 266 |
| June........ | 164 | 133 | 111 | 110 | 192 | 183 | 197 | 271 |
| July......... | 162 | 134 | 111 | 112 | 186 | 184 |  | 277 |
| August...... | 163 | 133 | 113 | 113 | 190 | 184 | 197 | 282 |
| September... | 162 | 131 | 114 | 111 | 187 | 185 | 200 | 284 |
| October..... November. | r165 | r127 | 114 | 113 | 194 | 188 | 206 | 290 |
| November.... | $r 165$ 165 | r128 127 | 1116 1.16 | 1114 | 192 | 190 | ( 213 | 294 |
| 1962 |  |  |  |  |  |  |  |  |
| January.... | (NA) | ( NA ) | (NA) | 114 | 196 | 193 |  | ( NA ) |
| March....... |  |  |  | 115 | (NA) | (NA) |  |  |
| April....... |  |  |  |  |  |  |  |  |
| May.......... |  |  |  |  |  |  |  |  |
| Јиnе......... |  |  |  |  |  |  |  |  |

[^3]Table 2.--PERCENTAGE CHANGES FOR PRINCIPAL MONTHLY AND QUARTERLY SERIES OVER I-YEAR PERIOD
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, 5, 14, 43, and 45). The month-to-month percentage changes are calculated in the usual way, but the signs are reversed to facilitate interpretations of the cyclical movements; for example, if the rate decreased by 0.6 percent, the sign of this drop is reversed and shown as +0.6 .

| Selected monthly series | Monthly percent changes |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1961 |  |  |  |  |  |  |  |  | 1962 |  |  |
|  | Mar. to Apr. | Apr. <br> to <br> May | May to June | June to July | $\begin{aligned} & \text { July } \\ & \text { to } \\ & \text { Aug. } \end{aligned}$ | Aug . to Sept. | Sept to Oct. | Oct. to Nov. | Nov. to Dec. | $\begin{gathered} \text { Dec. } \\ \text { to } \\ \text { Jan. } \end{gathered}$ | $\begin{aligned} & \text { Jan. } \\ & \text { to } \\ & \text { Feb. } \end{aligned}$ | Feb. to Mar. ${ }^{1}$ |
| NBER LEADING INDICATORS |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Average workweek of production workers, manufacturing. | $\pm 1.0$ | +0.3 | +0.3 | +0.2 | 0.0 | -1.0 | +1. 5 | +1.0 | -0.5 | -1.5 | +1.3 |  |
| 2. Accession rate, manufacturing. ............... | $-4.3$ | -4.5 | -7.1 | +2.6 | +2.5 | -9.8 | $+18.9$ | -9.1 | -5.0 | $+7.9$ | NA |  |
| 30. Nonagricultural placements, all industries.. | -8.6 | +11.1 | +2.7 | $-4.9$ | $+12.6$ | $-7.2$ | +7.9 | +6.6 | -6.9 | +8.0 | -3.5 |  |
| 3. Layoff rate, manufacturing (inverted)....... 5. Average weekly initial claims for unemploy- | 17.4 | -5.3 | -10.0 | -13.6 | $+24.0$ | -15.8 | +22.7 | -5.9 | -16.7 | +14.3 | NA |  |
| 5. Average weekly initial claims for unemployment insurance, State programs (inverted).. | +0.3 | +3.5 | +7.3 | $-6.0$ | +10.3 | -4.4 | +6.7 | 0.0 | +0.7 | -2.3 | +8.7 | -1.8 |
| 6. Value of manufacturers' new orders, durable good industries....................................... | $+4.1$ | +2.9 | +0.8 | +0.7 | $+4.1$ | +0.7 | +2.0 | +0.3 | +0.7 | +1.9 | -3.4 |  |
| 24. Value of manufacturers' new orders, machinery and equipment industries.................. | -2.2 | +3.8 | +2.7 | -0.4 | $+5.3$ | -1.6 | +2.6 | +2.8 | -5.4 | +6.8 | -5.8 |  |
| 9. Construction contracts awarded for commercial and industrial bldgs., floor space.... | $-8.0$ | $+2.3$ | $+4.0$ | -4.4 | +11.6 | -3.6 | -12.9 | +26.3 | -1.6 | -9.2 | NA |  |
| 7. New private permanent nonfarm dwelling units started. | -9.4 | +10.9 | +6.5 | -2.4 | -1.3 | +4.9 | +2.9 | -5.4 | -5.3 | -1.9 | -10.3 |  |
| 29. Index of new private housing units authorized by local building permits.............. | +0.2 | +0.5 | +5.0 | +0.8 | +2.8 | -3.6 | +6.0 | -0.7 | +8.6 | -5.9 | 10.3 +9.2 |  |
| 13. Number of new business incorporations....... | $+4.6$ | -0.7 | +0.8 | +1.3 | $-2.1$ | +1.4 | +5.6 | -0.8 | $-2.0$ | -4.4 | +4.5 |  |
| 14. Current liabilities of business failures (inverted). ............................................ | 29.0 | -6.3 | -3.5 | $\pm 7.5$ | -23.5 | -24.8 | +40.3 | -51.8 | +38.6 | -51.9 | +16.6 |  |
| 17. Price per unit of labor cost index. | +0.6 | +1.0 | 0.0 | +1.5 | +1.1 | -1.5 | +0.4 | -0.2 | +0.8 | +0.2 | -0.4 |  |
| 19. Index of stock prices, 500 common stocks.... | +2.7 | +1.0 | -1.3 | -0.3 | +3.6 | -0.8 | +1.1 | +4.5 | +0.9 | $-3.7$ | +1.7 | $+1.2$ |
| 32. Vendor performance, percent reporting slower deliveries. | +17.5 | +2.1 | 0.0 | +2.1 | +6.1 | +5.8 | 0.0 | $-7.3$ | +3.9 | +5.7 | 0.0 |  |
| 23. Index of industrial materials prices. | +1.0 | +0.3 | -3.2 | +0.7 | +1.2 | -0.1 | -0.5 | $-3.3$ | +2.0 | +1.9 | -2.2 | +0.3 |
| NBER ROUGHLY COINCIDENT INDICATORS |  |  |  |  |  |  |  |  |  |  |  |  |
| 41. Number of employees in nonagricultural establishments............................. | +0.2 | +0.4 | +0.5 | +0.3 | 0.0 | -0.1 | +0.1 | +0.3 | -0.1 | -0.1 | +0.5 |  |
| 42. Total nonagricultural employment, labor force survey. | -0.3 | +0.2 | +0.5 | -0.3 | +0.1 | -0.4 | +0.3 | 0.3 +0.8 | -0.1 -0.4 | -0.1 +0.1 | 0.5 +0.8 |  |
| 43. Unemployment rate, total (inverted)......... | -2.5 | -1.3 | +2.3 | -0.1 | +0.9 | -0.7 | $+2.9$ | +8.3 | +1.8 | $+3.0$ | +4.1 |  |
| 45. Average weekly insured unemployment, State programs (inverted)................................ | +1.0 | $+1.7$ | +4.7 | +3.3 | +5.5 | +3.6 | +5.3 | $+2.0$ | +2.8 | -1.8 | +4.7 | -0.3 |
| 46. Index of help-wanted advertising in newspapers. | -1.6 | +2.8 | +2.2 | -1.4 | +4.2 | -1.5 | +13.1 | +3.3 | -2.2 | +2.6 | +6.6 |  |
| 47. Index of industrial production.............. | +2.9 | +2.6 | +1.9 | +1.4 | +0.9 | -1.8 | $+1.6$ | +1.2 | +0.7 | -1.0 | +0.9 |  |
| 51. Bank debits outside NYC, 343 centers......... | -0.2 | +2.7 | -0.3 | +0.9 | -0.4 | +0.8 | +3.1 | 0.0 | +0.7 | +4.9 | -4.7 |  |
| 52. Personal Income................................ | $+1.1$ | +0.8 | $+1.0$ | +0.3 | +0.2 | +0.4 | +1.0 | +1.0 | +0.6 | -0.4 | +0.6 |  |
| 53. Labor income in mining, manufacturing, and construction. | +2.5 | +1. 3 | +2.0 | +0.3 | -0.4 | -0.1 | $+1.0$ | +1.4 | -0.2 | -1.2 | +1.5 |  |
| 54. Sales of retail stores........................... | -1. 5 | +0.8 | +1.1 | -1.0 | +0.9 | -0.2 | $+2.5$ | +2.8 | -1.4 | +0.2 | +0.3 |  |
| 55. Index of wholesale prices, all commodities other than farm products and foods......... | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | +0.1 | -0.2 | +0.2 | +0.1 | -0.1 | -0.1 | -0.2 |
| NBER LAGGING INDICATORS |  |  |  |  |  |  |  |  |  |  |  |  |
| 62. Index of wage and salary cost per unit of output, total manufacturing................... | -0.9 | -1.4 | -0.3 | -1.3 | -0.9 | +1.6 | -0.6 | +0.3 | -0.5 | +0.3 | +0.2 |  |
| 64. Book value of manufacturers' inventories, all manufacturing industries. | +0.2 | 0.0 | 0.0 | +0.2 | +0.9 | +0.7 | +0.7 | +0.4 | +0.4 | +0.9 | NA |  |
| 65. Book value of manufacturers ${ }^{\prime}$ inventories of finished goods, all manufacturing indus.... | 0.0 | -0.9 | 0.0 | 0.0 | +0.9 | +0.5 | +0.5 | 0.0 | +0.5 | +0.9 | NA |  |
| 66. Consumer instalment debt, end of month..... | -0.3 | 0.0 | 0.0 | -0.1 | +0.1 | 0.0 | +0.4 | +0.7 | +0.6 | +0.5 | NA |  |

See footnote at end of table.

## Table 2.--PERCENTAGE CHANGES FOR PRINCIPAL MONTHLY AND QUARTERLY SERIES OVER 1-YEAR PERIOD.-Continued

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


[^4]Table 3... DISTRIBUTION OF HIGHS IN BUSINESS CYCLE INDICATORS DURING SELECTED MONTHS OF THE 1961 EXPANSION AND PERCENT CURRENTLY HIGH FOR CORRESPONDING MONTHS OF 1961 AND PREVIOUS EXPANSIONS

| Year and month | Month of 1961 expansion |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { July } 1961 \\ & \text { (5th mo.) } \end{aligned}$ | $\begin{aligned} & \text { Aug. } 1961 \\ & \text { (6th mo.) } \end{aligned}$ | Sept. 1961 (7th mo.) | Oct. 1961 <br> (8th mo.) | $\begin{aligned} & \text { Nov. } 1961 \\ & \text { (9th mo.) } \end{aligned}$ | Dec. 1961 (10th mo.) | $\begin{aligned} & \text { Jan. } 1962 \\ & (11 \mathrm{th} \text { mo. }) \end{aligned}$ | Feb. 1962 (12th mo.) |
| NBER LEADING INDICATORS |  |  |  |  |  |  |  |  |
| January 1961.................. | $\ldots$ | $\ldots$ | $\ldots$ | $\cdots$ | $\cdots$ | ... | $\cdots$ | $\ldots$ |
| February.. | - | ... | ... | $\cdots$ | $\cdots$ | $\cdots$ | i | $\cdots$ |
| March... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | $\cdots$ |
| April. | 3 | 2 | 1 | $\cdots$ | -•• | $\cdots$ | $\cdots$ | $\cdots$ |
| May..... | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| June......................... | 5 | ... | ... | -. | ... | $\cdots$ | $\cdots$ | . |
| July.... | 11 | 5 | 3 | 2 | 2 | 2 | 1 | . |
| August.... |  | 13 | 11 | 3 | 2 | 1 | 1 | 1 |
| September..... |  |  | 5 | 2 | 2 | 2 | 1 | ; |
| October...................... |  |  |  | 13 | 5 | 3 | 2 | 1 |
| December...... |  |  |  |  |  | 6 | 5 | 2 |
| January 1962................ |  |  |  |  |  |  | 6 | 4 |
| Series with no high. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total series used.... | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 16 |
| NBER ROUGHLY COINCIDENT IND ICATORS |  |  |  |  |  |  |  |  |
| January 1961.................. | ... | $\cdots$ | $\cdots$ | ... | ... | $\cdots$ | $\cdots$ | ... |
| February ....................... | ... | ... | $\ldots$ | ... | $\ldots$ | ... | $\ldots$ | $\ldots$ |
| March..................... | ... | ... | $\ldots$ | $\ldots$ | ... | ... | $\cdots$ | ... |
| April......................... | ... | ... | ... | ... | ... | ... | ... | ... |
| May ............ | - | i | i | $\cdots$ | ... | ... | ... | - |
| June............ | 4 | 2 | 2 | 1 | ... | ... | . $\cdot$ | $\cdots$ |
| July.. | 6 | 3 | 2 | $\cdots$ | $\cdots$ | $\cdots$ | ... | . $\cdot$ |
| August...................... |  | 5 | 3 | 1 | ... | $\ldots$ | ... | ... |
| September...................... |  |  | 3 | $\stackrel{\square}{8}$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |
| October. <br> November $\qquad$ |  |  |  | 8 | $\begin{array}{r} 1 \\ 10 \\ \hline \end{array}$ | $\cdots$ | $\cdots$ | $\cdots$ |
| December.................... |  |  |  |  |  | 6 | 4 | 2 |
| January 1962.................. |  |  |  |  |  |  | 3 | 1 |
| February..................... |  |  |  |  |  |  |  | 7 |
| Series with no high... | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| Total series used........... | 11 | il | 11 | 11 | 11 | 11 | 11 | 11 |


| Expansion period | Percent of series reaching their highs in corresponding months of 1961 and previous expansions |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (5th mo.) | (6th mo.) | (7th mo.) | (8th mo.) | (9th mo.) | (10th mo.) | (11th mo.) | (12th mo.) |
| NBER LEADING INDICATORS |  |  |  |  |  |  |  |  |
| 1961- | 50 | 59 | 23 | 59 | 41 | 27 | 27 | 38 |
| 1958-60. | 77 | 77 | 73 | 36 | 59 | 64 | 64 | 68 |
| 1954-57. | 76 | 52 | 62 | 29 | 43 | 29 | 38 | 48 |
| 1949-53.. | 55 | 60 | 90 | 50 | 70 | 85 | 30 | 20 |
| NBER ROUGHLY COINCIDENT INDICATORS |  |  |  |  |  |  |  |  |
| 1961-. | 55 | 45 | 27 | 73 | 91 | 55 | 27 | 64 |
| 1958-60. | 91 | 82 | 91 | 73 | 73 | 91 | 100 | 100 |
| 1954-57. | 73 | 91 | 82 | 91 | 91 | 91 | 91 | 91 |
| 1949-53...................... | 91 | 91 | 91 | 91 | 100 | 91 | 73 | 82 |

NOTE: All quarterly series, 2 leading monthly series (series 7 and 15 ), and 1 roughly coincident monthly series (series 44) are omitted.

A NBER Leading I ndicators


## CHART 2 DIFFUSION INDEXES: 1948 TO PRESENT.-Con.




Numbers are centered within intervals: l-month figures are placed on latest month; 3-month figures are centered on the middle month; 4-quarter figures are centered in the middle quarter; l-quarter figures are placed in lst month of $2 d$ quarter. Seasonally adjusted components are used except in indexes D1la, D19, D23, and D33, which require no adjustment, and D34 and D58, which are adjusted directly. Table 6 identifies' the components for most of the indexes shown.


Table 4.--DIFFUSION INDEXES (PERCENT RISING) OVER SPECIFIED INTERVALS FOR 12 MAJOR ECONOMIC ACTIVITIES: OCTOBER 1958 TO PRESENT-Continued

Numbers are centered within intervals: 1-month figures are placed on latest month; 3-month figures are centered on the middle month; 4-quarter figures are centered in the middle quarter; l-quarter figures are placed in lst month of $2 d$ 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 directly. Table 6 identifies the components for most of the indexes showm.

${ }^{1}$ The diffusion index is based on 86 components through January 1960; on 85 components, February 1960 to November 1960, and on 82 components thereafter. 19 components and 5 composites representing an additional 22 components are shown in the direction-of-change table (table 6C).

2March 15, 1962.

Table 4.--DIFFUSION INDEXES (PERCENT RISING) OVER SPECIFIED INTERVALS FOR 12 MAJOR ECONOMIC ACTIVITIES: OCTOBER 1958 TO PRESENT-Continued

Numbers are centered within intervals: l-month figures are placed on latest month; 3-month figures are centered on the middle month; 4-quarter figures are centered in the middje quarter; l-quarter figures are placed in lst month of 2d quarter. Seasonally adjusted components are used except in indexes D1la, D19, D23, and D33, which require no adjustment, and D34 and D58, which are adjusted directly. Table 6 identifies the components for most of the indexes shown.


## CHART 3 <br> DIFFUSION INDEXES, ACTUAL AND ANTICIPATED: 1948 TO PRESENT



Table 5.-DIFFUSION INDEXES, ACTUAL AND ANTICIPATED, OVER SPECIFIED INTERVALS FOR 4 MANUFACTURING ACTIVITIES: OCTOBER 1958 TO PRESENT

Numbers are centered within intervals: 4-quarter figures are centered in the middle quarter; l-quarter figures are placed in lst month of 2 d quarter


A．．－（DI）Average Workweek of Production Workers，Manufacturing（21 Industries）

| Series components | 3－month spans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1959 |  |  |  |  |  | 1960 |  |  |  |  |  |  |  |  |  |  |  | 1961 |  |  |  |  |  |  |  |  |  |  |  | 1962 |  |  |  |  |  |
|  | 7 7 1 4 4 4 | 号 | 足 | ＋ |  | 0 0 0 1 0 0 0 0 | 5 0 0 0 0 0 0 | 这 | 域 | 台 | 家 | c | 7 7 1 6 4 | com |  | + <br> 0 <br> 0 <br> 1 <br> -3 <br> 3 | d $\sum_{1}^{1}$ 0 4 4 | 0 0 0 1 0 0 0 0 | 噪 |  |  | 魚 |  | 䂞 | 苇 |  | 0 <br> 0 <br> 0 <br> 0 <br> 1 <br> 3 | 苍 | $\begin{aligned} & \stackrel{\rightharpoonup}{0} \\ & \sum_{1}^{1} \\ & 60 \\ & \frac{0}{4} \end{aligned}$ | $\left\lvert\, \begin{gathered} 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 0 \\ 0 \\ 0 \end{gathered}\right.$ | ¢ | 0 <br> 0 <br> 0 <br> 1 <br> 0 <br> 0 <br> 0 <br> 2 | 易 | 参 | － |  |
| Percent rising． | $261421314869$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 145595908193697945798181 $-0+++\quad+\quad+\quad+\quad+$ |  |  |  |  |  |  |  |  |  |  |  | 2624 |  |  |  |  |  |
| All manufacturing industries |  |  |  |  |  |  | ＋＋－－ 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | －－ |  |  |  |  |  |
| DURABLE GOODS INDUSTRIES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ordnance and accessories | － | － |  | ＋ | $+$ | $+$ | － | － | － | 0 | ＋ | － | ＋ | 0 | ＋ | － | － | － | － | － | ＋ | ＋ | $\bigcirc$ | $\bigcirc$ | － | ＋ | ＋ | ＋ | ＋ | $+$ | － | － |  |  |  |  |
| Lumber and wood products | $+$ | － | － | － | ＋ | ＋ | ＋ | － | － | － | $\bigcirc$ | ＋ | － | － | － | － | － | － | $+$ | ＋ | ＋ | － | $+$ | ＋ | $+$ | ＋ | － | ＋ | $\bigcirc$ | － | － | ＋ |  |  |  |  |
| Furniture and fixtures． | ＋ | － | － | － | 0 | $+$ | ＋ | － | － | $\pm$ | ＋ | ＋ | － | － | － | － | － | － | － | － | ＋ | $t$ | ＋ | ＋ | $+$ | ＋ | $+$ | ＋ | ＋ | $+$ | － | － |  |  |  |  |
| Stone，clay，and glass products | － | － | － | － | － | ＋ | － | ＋ | － | ＋ | － | ＋ | $+$ | 0 | － | － | － | － | － | － | ＋ | $+$ | ＋ | ＋ | ＋ | ＋ | ＋ | － | － | － | － | － |  |  |  |  |
| Primary metal products．． | － | － | － | ＋ | － | $+$ | ＋ | $+$ | － | － | － | － | － | － | － | － | － | － | － | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | 0 | $+$ | $+$ | ＋ | ＋ |  |  |  |  |
| Fabricated metal products | － | － | － | － | － | ＋ | ＋ | ＋ | $\bigcirc$ | － | － | － | ＋ | － | － | － | － | － | － | － | ＋ | ＋ | ＋ | ＋ | $+$ | ＋ | － | 0 | ＋ | ＋ | － | － |  |  |  |  |
| Machinery，except electrical | － | － | － | － | ＋ | $+$ | － | － | － | － | ＋ | － | ＋ | － | － | － | － | － | － | － | $+$ | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | $+$ | － | ＋ |  |  |  |  |
| Electrical machinery． | － | － | － | ＋ | － | ＋ | － | － | － | － | － | － | ＋ | － | － | ＋ | － | － | － | ＋ | ＋ | ＋ | － | ＋ | － | ＋ | － | ＋ | ＋ | ＋ | － | － |  |  |  |  |
| Transportation equipment． | － | － | － | － | － | － | $+$ | ＋ | ＋ | － | － | － | ＋ | － | － | ＋ | ＋ | － | － | － | ＋ | ＋ | ＋ | ＋ | $+$ | 0 | － | ＋ | $+$ | $+$ | $+$ | － |  |  |  |  |
| Instruments and related products | $\pm$ | $+$ | － | － | － | ＋ | － | － | － | － | ＋ | － | ＋ | － | － | － | － | － | － | ＋ | ＋ | $+$ | $+$ | ＋ | 0 | $+$ | $+$ | ＋ | ＋ | $+$ | － | 0 |  |  |  |  |
| Miscellaneous manufacturing industries | － | $\bigcirc$ | $\bigcirc$ | － | － | $+$ | － | － | － | － | $\bigcirc$ | － | ＋ | － | － | － | － | － | － | ＋ | $+$ | ＋ | － | ＋ | ＋ | ＋ | $\bigcirc$ | $+$ | ＋ | $+$ | － | － |  |  |  |  |
| NONDURABLE GOODS INDUSTRIES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Food and kindred products | － | － | － | ＋ | ＋ | $+$ | ＋ | － | － | － | ＋ | $\bigcirc$ | ＋ | － | ＋ | ＋ | － | － | － | $+$ | ＋ | ＋ | $+$ | ＋ | ＋ | － | － | ＋ | － | － | － | － |  |  |  |  |
| Tobacco manufactures． | ＋ | ＋ | $+$ | － | － | － | － | － | － | － | ＋ | ＋ | － | － | 0 | ＋ | ＋ | － | － | ＋ | ＋ | ＋ | 0 | ＋ | － | ＋ | ＋ | ＋ | － | － | － | ＋ |  |  |  |  |
| Textile mill products． | － | － | － | － | － | $+$ | ＋ | ＋ | － | － | $+$ | $+$ | － | － | － | － | － | － | － | ＋ | $+$ | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | $+$ | － | － |  |  |  |  |
| Apparel and allied products | － | － | － | － | ＋ | $+$ | $+$ | － | － | － | ＋ | $+$ | ＋ | － | － | － | － | － | － | 0 | ＋ | ＋ | $+$ | － | $\bigcirc$ | ＋ | － | 0 | $+$ | ＋ | － | － |  |  |  |  |
| Paper and allied products | － | － | － | － | $\bigcirc$ | 0 | － | － | － | － | $+$ | ＋ | $\bigcirc$ | － | － | － | － | － | － | ＋ | ＋ | ＋ | ＋ | $+$ | ＋ | ＋ | － | 0 | ＋ | $+$ | － | － |  |  |  |  |
| Printing and publishing． | － | － | $+$ | － | ＋ | $+$ | ＋ | $\bigcirc$ | － | － | $+$ | $\bigcirc$ | ＋ | － | － | － | － | － | － | － | $+$ | $+$ | － | $+$ | － | ＋ | － | － | ＋ | ＋ | $\bigcirc$ | $\bigcirc$ |  |  |  |  |
| Chemicals and allied products | － | － | ＋ | $+$ | ＋ | － | － | － | － | $+$ | $+$ | ＋ | － | － | － | － | － | － | － | 0 | $+$ | ＋ | 0 | $+$ | ＋ | ＋ | － | ＋ | $+$ | ＋ | － | － |  |  |  |  |
| Petroleum and coal products． | $+$ | 0 | ＋ | ＋ | ＋ | － | － | － | － | ＋ | ＋ | ＋ | ＋ | 0 | 0 | ＋ | － | 0 | ＋ | － | － | － | ＋ | ＋ | ＋ | － | － | ＋ | ＋ | ＋ | $+$ | － |  |  |  |  |
| Rubber products． | － | － | － | － | － | － | $\bigcirc$ | ＋ | － | － | － | － | ＋ | － | － | － | － | － | － | $\bigcirc$ | $+$ | $+$ | ＋ | ＋ | － | － | ＋ | ＋ | ＋ | ＋ | ＋ | － |  |  |  |  |
| Leather and leather products | － | － | － | － | ＋ | － | 0 | － | － | － | $+$ | ＋ | ＋ | ＋ | － | － | － | － | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | 0 | － | － | 0 | ＋ | ＋ | ＋ | － |  |  |  |  |

＋＝rising；o＝unchanged；－＝falling．
NOTE：Series components are seasonally adjusted before the direction of change is determined．
Toble 6．．－DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING：JULY 1959 TO PRESENT－Continued

| Series components | 3－month spans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1959 |  |  |  |  |  | 1960 |  |  |  |  |  |  |  |  |  |  |  | 1961 |  |  |  |  |  |  |  |  |  |  |  | 1962 |  |  |  |  |  |
|  | 7 7 0 0 0 4 | 边 | 0 0 0 1 7 $\square$ $\square$ | ＋ | $\begin{aligned} & 8 \\ & 0 \\ & 1 \\ & 00 \\ & 0 \\ & \hline 4 \end{aligned}$ | $\begin{gathered} 0 \\ 0 \\ \vdots \\ 1 \\ \Phi \\ \hline \\ \hline \end{gathered}$ | çay | 0 0 0 1 1 0 0 0 | 宸 | 号 | 家 |  | 考 |  | 号 | 莡 | 号 | 0 <br> 8 <br> 8 <br> 1 <br> $\vdots$ <br>  <br> 0 <br> 0 | c｜ | 0 <br> 0 <br> 0 <br> 1 <br> 1 <br> 0 <br> 0 <br> 0 | 4 <br> a <br> $\vdots$ <br> 1 <br> 0 <br> 8 |  | 䫆 | 㶨 |  | con | 命 | +3 0 1 1 7 7 | 8 0 1 1 0 0 0 4 | 0 <br> 8 <br> 1 <br> 1 <br> 0 <br> 0 <br> 8 | 哭 | 0 <br> 0 <br> 1 <br> 1 <br> 1 <br> 0 <br> 0 | 4 $\sum_{1}^{0}$ $\vdots$ d | 袞 |  |  |
| Percent rising | 573133435767 |  |  |  |  |  |  | 52572 | 2948 |  | 843 | 350 | 29 | 52 | 385 | 52 | 2636 |  |  | 333390768162677667626243 |  |  |  |  |  |  |  |  |  |  | 5757 |  |  |  |  |  |
| All durable goods industries ${ }^{1}$ ． |  |  | － |  |  |  | － |  |  |  |  |  |  |  |  |  |  |  | － |  |  |  | ＋ | ＋ |  | ＋ | ＋ | ＋ | $+$ | ＋ | $+$ | － |  |  |  |  |
| Iron and steel |  |  | － | － | ＋ |  | ＋ | － | － | － | － | ＋ | $+$ | ＋ | ＋ | － | － | － | － | － | $+$ | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | － | － | $+$ | ＋ |  |  |  |  |  |
| Primary nonferrous metals | － | － | － | ＋ | ＋ | ＋ | ＋ | ＋ | － | － | － | ＋ | － | $+$ | － | $+$ | － | － | － | － | $+$ | ＋ | $+$ | $+$ | － | $+$ | － | － | － | ＋ | $+$ |  |  |  |  |  |
| Other primary metals． | － | － | － | － | － | $+$ | － | － | － | － | － | － | － | － | － | ＋ | － | － | － | － | ＋ | ＋ | $+$ | $+$ | $+$ | ＋ | $+$ | ＋ | $+$ | － | $+$ |  |  |  |  |  |
| Electrical generator appartus | － | ＋ | － | ＋ | － | ＋ | － | $+$ | － | － | ＋ | ＋ | ＋ | － | ＋ | － | $+$ | $\sim$ | ＋ | － | $+$ | ＋ | － | － | － | ＋ | $+$ | ＋ | $+$ | － | － | － |  |  |  |  |
| Radio，television，and equipmen | ＋ | ＋ | $+$ | ＋ | $+$ | － | $+$ | ＋ | ＋ | － | － | ＋ | － | ＋ | $+$ | ＋ | － | ＋ | － | － | － | $+$ | ＋ | － | $+$ | $+$ | ＋ | $+$ | $+$ | － | ＋ |  |  |  |  |  |
| Other electrical equipment | ＋ | － | ＋ | － | $+$ | － | － | － | ＋ | ＋ | $+$ | ＿ | － | ＋ | － | $+$ | － | $\bigcirc$ | ＋ | ＋ | － | $+$ | $+$ | $+$ | － | － | $+$ | $+$ | $+$ | － | $+$ |  |  |  |  |  |
| Motor vehicles．．． | ＋ | － | － | $+$ | － | － | － | ＋ | ＋ | $+$ | － | － | － | － | ＋ | ＋ | － | － | － | － | $+$ | $+$ | $+$ | $+$ | ＋ | － | － | $+$ | $+$ | $+$ | － |  |  |  |  |  |
| Motor vehicle parts | － | － | － | － | － | － | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | － | － | － | － |  |  | － | － | ＋ | ＋ | ＋ | ＋ | － | － | － | ＋ | $+$ | $+$ | ＋ |  |  |  |  |  |
| Aircraft． | － | － | $\pm$ | － | $+$ | － | － | $+$ | ＋ | － | ＋ | － | ＋ | $+$ | $+$ | － | － | － | $+$ | $\dagger$ | $\dagger$ | ＋ | － | － | － | $+$ | ＋ | － | － | － | － |  |  |  |  |  |
| Other transportation equipment． | ＋ | ＋ | － | － | － | ＋ | $+$ | ＋ | $+$ | ＋ | － | － | － | － | － | ＋ | － | $+$ | － | ＋ | $+$ | ＋ | ＋ | － | ＋ | ＋ | ＋ | － | － | － | ＋ |  |  |  |  |  |
| Stone，clay，and glass products | ＋ | － | － | － | － | $+$ | $+$ | $+$ | － | － | － | $+$ | － | ＋ | ＋ | $+$ | － | － | － | － | $+$ | $+$ | ＋ | $+$ | $+$ | ＋ | ＋ | $+$ | ＋ | $+$ | － |  |  |  |  |  |
| Metalworking machinery． | ＋ | － | － | － | $+$ | ＋ | ＋ | ＋ | － | ＋ | － | － | － | ＋ | － | ＋ | ＋ | ＋ | $+$ | － | $+$ | $+$ | $+$ | $+$ | ＋ | $+$ | ＋ | $+$ | $+$ | － | － |  |  |  |  |  |
| Special industry machinery | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | － | － | － | ＋ | ＋ | ＋ | － | － | － | － | 0 | － | － | － | ＋ | ＋ | $+$ | ＋ | － | ＋ | － | ＋ | $\cdots$ | － |  |  |  |  |  |  |
| General industrial machinery | $+$ | － | ＋ | － | $+$ | ＋ | ＋ | － | － | － | ＋ | $+$ | － | － | － | － | ＋ | － | － | － | ＋ | $+$ | － | － | ＋ | ＋ | $+$ | $+$ | ＋ | ＋ | $+$ |  |  |  |  |  |
| Engines and turbines | － | $+$ | － | $+$ | － | ＋ | － | － | － | ＋ | － | $+$ | － | － | － | $+$ |  |  | － | ＋ |  | － | ＋ | － |  | ＋ |  | $\bigcirc$ | － | － | － |  |  |  |  |  |
| Agricultural implements | － | － | － | － | ＋ | ＋ | － | ＋ | － | － | ＿ | － | ＋ | ＋ | ＋ | － | $+$ | ＋ | $+$ | － | $+$ | － | ＋ | － | － | － | $+$ | ＋ | $+$ | － | － |  |  |  |  |  |
| Construction machinery | － | － | － | － | ＋ | ＋ | ＋ | ＋ | － | － | － | － | ＋ | ＋ | － | ＿ | － | － | ＋ | $+$ | ＋ | ＿ | － | － | ＋ | ＋ | ＋ | 0 | ＋ | － | － |  |  |  |  |  |
| Office machines． | ＋ | ＋ | ＋ | $+$ | $+$ | ＋ | ＋ | － | － | － | ＋ | 0 | $+$ | － | － | ＋ | － | ＋ | ＋ | $+$ | ＋ | － | $+$ | $+$ | ＋ | $+$ | － | － | － | $+$ |  |  |  |  |  |  |
| Household appliances | ＋ | － | － | － | － | － | ＋ | － | － | ＋ | ＋ | － | － | ＋ | ＋ | ＋ | － | － | － | － | $+$ | － | ＋ | ＋ | $+$ | ＋ | ＋ | － | － | － |  |  |  |  |  |  |
| Other machinery． | ＋ | － | $+$ | $+$ | － | － | － | $+$ | － | ＋ | － | － | － | － | － | － | $+$ | ＋ | ＋ | ＋ | $+$ | ＋ | ＋ | $+$ | ＋ | － | － | ＋ | ＋ | ＋ | $+$ |  |  |  |  |  |
| Other fabricated metal products | ＋ | 0 | － | － | $+$ | ＋ | － | － | － | $+$ | ＋ | ＋ | － | ＋ | － | － | － | － | $+$ | － | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | － | － | $+$ | ＋ | ＋ |  |  |  |  |  |

[^5]C.-(D19) Index of Stock Prices, 500 Common Stocks ( 24 Industries)

$+=$ rising; $0=$ unchanged; - falling.
NOTE: Series components are not seasonally adjusted.
${ }^{1}$ Based on 86 industries through January 1960; on 85 industries, February 1960 to November 1960; and on 82 industries thereafter. 19 of the more important industries are show in this direction-of-change table. The food, oil, building materials, machinery, and retail composites represent an additional 22 industries which are included in the percent rising.

D．－．（D23）Index of Industrial Materials Prices（13 Industrial Materials）

| Series components | 3－month spans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1959 |  |  |  |  | 1960 |  |  |  |  |  |  |  |  |  | 1961 |  |  |  |  |  |  |  |  | 1962 |  |  |  |
|  | 䂞 | 毞 | ［｜c｜c | 䢒 |  | 辱 | （100 |  |  | ［5 | 考 | 等 | 道 | 号 |  <br> 0 <br> 0 <br> 1 <br> 0 <br> 0 <br> 0 | 域 | （1） | 参 | 姩 | 否 |  | － | ＋ |  | ｜l｜l｜ |  | 告 | 宕 |
| Percent rising．．．．．．．．．．． | $+++++-1$ |  |  |  |  | $-\quad-\quad-\quad+\quad-\quad-\quad-\quad-$ |  |  |  |  |  |  |  |  |  | 31 | 677 ++ | 73 + | $+\quad+$ |  |  | $+$ | ＋－－ |  | 586258 |  |  |  |
| Copper scrap（lb．）． |  | － | －＋ | ＋ |  | ＋ | － | － | － |  | ＋ | ＋ | ＋ |  |  |  |  |  |  |  |  |  | － | － |  | ＋ |  |  |
| Lead scrap（lb．） |  |  | ＋－ | － | － | － | － | － | ＋ | ＋ | － | － | － | － | － | － | －＋ | ＋ | ＋ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | － | －－ | － | －－ |  |  |
| Steel scrap（ton） |  | ＋＋ | ＋＋ | ＋ | ＋ | － | － | $\bar{\square}$ | － |  | － | $+$ | ＋ | － |  | ＋ | ＋＋ | $+$ | ＋ | ＋ | －+ |  | ＋ | －－ | $+$ | ＋ |  |  |
| ${ }_{\text {Tinc }}$（lin．） |  |  | － 0 | $+$ | － |  | $+$ |  |  | ＋ | ＋ | ＋ | ＋ | ＋ |  | － | －＋ | $+$ | ＋ | ＋ | ＋＋ | ＋ | ＋ | ＋－ | ＋ | － |  |  |
| Burlap（yd．）． |  | －－＋＋＋ |  |  |  | $+$ | ＋ |  | ${ }_{+}^{+}$ | ${ }_{+}^{\circ}$ |  | － | ${ }_{+}^{\circ}+$ |  | ＋ | ＋ | ＋ |  | $\bigcirc$ | － | $\bigcirc$ |  | $\stackrel{+}{+}$ | $\stackrel{+}{+}+$ | $+$ | ＋+ |  |  |
| Cotton（lb．）， 14 market average |  |  |  |  |  | ＋ | ＋ |  |  |  |  | － |  |  |  | － |  | ＋ | ＋ | ＋ |  |  | ＋ |  | － | ＋＋ |  |  |
| Print cloth（yd．），average． | $\begin{array}{lllll} - & - & - & - & 0 \\ + & + & + & + & + \\ + & + & + & - & - \end{array}$ |  |  |  |  | ＋ | ＋ | － | － | － | ＋ | － | － | － | － | － | － | $\bigcirc$ | ＋ | $\bigcirc$ | －＋ | ＋ | ＋ | － 0 | $\bigcirc$ | $\bigcirc$ |  |  |
| Wool tops（lb．）．．．．．． Hides（1b．）．．．．．．．．． | $+++---1$ |  |  |  |  |  | ＋ |  | － | － |  | － | ＋＋ |  |  |  | ＋＋ |  | $+$ | $+$ | ＋＋ |  | $+$ | ＋＋ |  | －＋ |  |  |
| Rosin（ 100 lb ．$)$ ． | $\begin{array}{lllll} + & + & - & - \\ + & - & - & - \end{array}$ |  |  |  |  | ＋ | ＋ | ＋ | ＋ | ＋ | － | ＋ | ＋＋ | ＋ | － | － | － | － | － | － | － | － | ＋ | $\bigcirc$ |  | － 0 |  |  |
| Rubber（1b．）． | $\begin{aligned} & + \\ & + \\ & + \\ & - \\ & +\end{aligned}++_{+}^{+}+$ |  |  |  |  | － | － | － | － | ＋ | ＋ | － | －－ | － | － | － | － | ＋ | ＋ | － | － | ＋ | － | －－ | － | ＋＋ |  |  |
| Tallow（lb．）．．．．．．．．．．．．．．．． |  |  |  |  |  | － | － | ＋ | ＋ | － | － | － | ＋＋ | ＋ | － | ＋ | ＋＋ | $+$ | $+$ | － | －－ | － | － | －＋ | ＋ | ＋＋ |  |  |

Table 6.--DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JULY 1959 TO PRESENT-Continued
E.-(D5) Average Weekly Initial Claims for Unemployment Insurance, State Programs (26 Areas)

_ = rising; $0=$ unchanged; $+=$ falling. (Because this series usually rises when general business activity falls and falls when business rises, it is inverted to show a comparable activity pattern.) $\mathrm{NA}=$ not available.

NOTE: Series components are seasonally adjusted by the Bureau of the Census before the direction of change is determined.
*Denotes areas of substantial unemployment ( 6 percent or more) in February 1962 as designated by BES.
**Denotes areas of substantial ( 6 percent or more) and persistent unemployment in February 1962 as designated by BES
${ }^{1}$ The percent rising is based on 47 labor market areas. Directions of change are shown for only the largest 26.

## F.--(D41) Number of Employees in Nonagricultural Establishments ( 30 industries)


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

Table 6.--DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JULY 1959 TO PRESENT-Continued
G.--(D47) Index of Industrial Production (25 Industries)


[^6]

| Series components | 3－month spans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1959 |  |  |  |  |  | 1960 |  |  |  |  |  |  |  |  |  |  |  | 1961 |  |  |  |  |  |  |  |  |  |  |  | 1962 |  |  |  |  |  |
|  | 翟 | 30 3 4 10 | 合 |  | 号 | $\begin{gathered} 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 0 \\ \infty \end{gathered}$ | 9 9 $\sim$ 1 1 0 0 0 | $\begin{gathered} 0 \\ 0 \\ 1 \\ 1 \\ 0 \\ 0 \\ 0 \end{gathered}$ |  | ¢ 呆 号 号 | 害 |  | 翟 | $\begin{aligned} & 00 \\ & 3 \\ & 3 \\ & 1 \\ & 1 \\ & 5 \\ & 20 \end{aligned}$ | $\begin{gathered} 0_{4} \\ \Phi \\ 0 \\ 1 \\ \underset{\sim}{9} \\ \hline \end{gathered}$ | ＋ | $\begin{aligned} & 6 \\ & 0 \\ & 20 \\ & 30 \\ & 20 \\ & 4 \end{aligned}$ |  | c｜ | $\begin{array}{\|c} 0 \\ 0 \\ 0 \\ 5 \\ 1 \\ 0 \\ 0 \\ z \end{array}$ | $\begin{gathered} B_{1} \\ \frac{9}{2} \\ d \\ 0 \\ 0 \end{gathered}$ | 云 |  |  |  | $\begin{gathered} 80 \\ \overbrace{1}^{2} \\ 1 \\ p \\ \frac{a}{2} \end{gathered}$ | $\begin{aligned} & \text { م } \\ & 0 \\ & \text { 山 } \\ & \text { 号 } \end{aligned}$ | $\begin{gathered} + \\ 0 \\ 0 \\ 1 \\ 7 \\ 7 \end{gathered}$ |  | $\begin{gathered} 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 0 \\ 0 \end{gathered}$ | c | $\begin{gathered} 0 \\ 0 \\ 6=1 \\ 5 \\ 0 \\ 0 \\ z \end{gathered}$ | 劲 | 会 | － | 5 <br> 7 <br> 7 <br> 4 |
| Percent rising | 672950466254 |  |  |  |  |  | $58 \quad 38 \quad 48795462214642464644$ |  |  |  |  |  |  |  |  |  |  |  | $42 \quad 4073 \quad 485854718335757190$ |  |  |  |  |  |  |  |  |  |  |  | 7148 |  |  |  |  |  |
| All retail sales | ＋ |  |  |  |  |  | － | ＋ |  | ＋ |  |  |  |  |  |  |  |  | － |  | ＋ |  | ＋ | ＋ |  | ＋ | － | ＋ | ＋ | $+$ |  |  |  |  |  |  |
| Grocery stores | － | － |  | $+$ |  | ＋ | ＋ | $+$ |  | ＋ |  |  | ＋ |  | － |  | ＋ |  | ＋ |  | ＋ |  | ＋ | ＋ |  | $+$ | 0 | $+$ | ＋ | ＋ |  |  |  |  |  |  |
| Other food store | $+$ | $+$ | ＋ | － | ＋ | $+$ | － | － | － | － | － | ＋ | ＋ | － | － | － | ＋ | － | － | $+$ | $+$ | $+$ | － | － | ＋ | ＋ | － | － | － | － |  |  |  |  |  |  |
| Eating places | ＋ | － | ＋ | ＋ | $+$ | ＋ | $+$ | － | － | ＋ | $+$ | ＋ | － | － | － | － | $+$ | ＋ | － | － | ＋ | $+$ | $+$ | － | － | － | ＋ | $+$ | $+$ | $+$ |  | $+$ |  |  |  |  |
| Department stores | $+$ | $+$ | － | － | － | ＋ | $+$ | － | － | ＋ | － | $+$ | － | $+$ | 0 | $+$ | － | ＋ | － | $+$ | 0 | ＋ | － | ＋ | $+$ | $+$ | ＋ | － | ＋ | ＋ |  |  |  |  |  |  |
| Mail－order stores | － | － | $+$ | ＋ | $+$ | $+$ | － | － | － | $+$ | $+$ | － | － | $+$ | $+$ | ＋ | ＋ | ＋ | － | － | ＋ | $+$ | $+$ | － | － | $+$ | － | $+$ | ＋ | ＋ |  |  |  |  |  |  |
| Variety stores． | $+$ | － | ＋ | － | $+$ | ＋ | ＋ | － | － | ＋ | ＋ | ＋ | － | $+$ | － | － | － | － | ＋ | ＋ | ＋ | － | $+$ | $+$ | ＋ | $+$ | － | $+$ | $+$ | ＋ |  |  |  |  |  |  |
| Other general stores | － | － | － | － | － | ＋ | $+$ | $+$ | ＋ | $+$ | － | － | － | ＋ | ＋ | ＋ | － | － | $+$ | ＋ | ＋ | － | － | － | ＋ | $+$ | － | $+$ | ＋ | ＋ |  |  |  |  |  |  |
| Men＇s wear stores | $+$ | － | － | － | － | $+$ | $+$ | $+$ |  | － | － | － | － | ＋ | － | ＋ | － | － | ＋ |  | $+$ | － | ＋ | ＋ | ＋ | ＋ | － | ＋ | － | － |  |  |  |  |  |  |
| Women＇s apparel stores |  | － | $\bigcirc$ | － |  | ＋ | ＋ | ＋ | － | － | － | ＋ | － | ＋ | ＋ | － | － | － | － | － | ＋ | － | － | － | ＋ | ＋ | － | $+$ | ＋ | ＋ |  |  |  |  |  |  |
| Family apparel stores | $+$ | － | 0 | － | $+$ | ＋ | $+$ | － | ＋ | ＋ | ＋ | － | － | ＋ | － | － | ＋ | ＋ | ＋ | － | ＋ | － | $+$ | － | ＋ | $+$ | － | ＋ | ＋ | ＋ |  |  |  |  |  |  |
| Shoe stores． | $+$ | － | ＋ | － | $+$ | － | $+$ | $+$ | ＋ | $+$ | － | － | － | ＋ | ＋ | － | － | － | $+$ | $+$ | ＋ | 0 | － | － | ＋ | ＋ | － | ＋ | － | $+$ |  |  |  |  |  |  |
| Furniture stores | － | － | － | － | － | － | － | － | － | ＋ | － | ＋ | － | － | ＋ | ＋ | － | － | － | － | － | ＋ | $+$ | ＋ | $+$ | ＋ | ＋ | － | － | ＋ |  |  |  |  |  |  |
| Appliance and radio stores | $+$ | ＋ | ＋ | ＋ | － | － | － | － | － | － | － | － | － | － | － | － | － | － | ＋ | ＋ | ＋ | $+$ | － | － | － | ＋ | ＋ | $+$ | － | $+$ |  |  |  |  |  |  |
| Building material dealers | － | － | － | － | － | $+$ | － | － | － | ＋ | － | ＋ | － | － | － | － | － | － | － | － | $+$ | － | － | － | $+$ | ＋ | － | $+$ | $+$ | $+$ |  |  |  |  |  |  |
| Hardware stores | － | － | － | － | － | － | $+$ | ＋ | $+$ | ＋ | $+$ | $+$ | － | － | － |  | － | － | $+$ | ＋ | ＋ | － | － | － | － | ＋ | － | － | － | ＋ |  |  |  |  |  |  |
| Farm equipment dealers |  | $+$ | ＋ | ＋ |  | － |  | － | － | $+$ | $+$ | ＋ | $+$ | － | ＋ | $+$ | $+$ | $+$ | － | － | － | － | － | $+$ | ＋ | ＋ | － | ＋ | ＋ | $+$ |  |  |  |  |  |  |
| Motor vehicle dealers | ＋ | － | － | ＋ | － | － | － | $+$ | ＋ | $+$ | － | － | － | － | － | ＋ | ＋ | － | － | － | ＋ | ＋ | ＋ | $+$ | － | － | $+$ | $+$ | ＋ | $+$ |  |  |  |  |  |  |
| Tire and battery dealers | － | － | ＋ | ＋ | ＋ | － | ＋ | － | － | ＋ | $+$ | ＋ | － | － | － | － | ＋ | ＋ | － | ＋ | － | ＋ | ＋ | ＋ | ＋ | $+$ | ＋ | $+$ | ＋ | $+$ |  |  |  |  |  |  |
| Gasoline stations． | ＋ | $+$ | ＋ | $+$ | ＋ | $+$ | ＋ | － | ＋ | $+$ | ＋ | ＋ | － | ＋ | ＋ | $+$ | $\bigcirc$ | ＋ | － | ＋ | － | $+$ | $+$ | ＋ | ＋ | $+$ | $+$ | $+$ | ＋ | $+$ |  |  |  |  |  |  |
| Drug and proprietary stores | ＋ | ＋ | $+$ | ＋ | $+$ | － | ＋ | $+$ | 0 | － | － | ＋ | ＋ | ＋ | ＋ | $+$ | ＋ | ＋ | － | － | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | － | － | $+$ | $+$ |  |  |  |  |  |  |
| Jewelry stores． | $+$ | － | － | $+$ | $+$ | ＋ | － | － | ＋ | ＋ | ＋ | － | － | － | $\bigcirc$ | － | － | － | ＋ | － | － | － | $+$ | － | $+$ | － | － | ＋ | ＋ | ＋ |  |  |  |  |  |  |
| Liquor stores | ＋ | ＋ | － | － | ＋ | － | $+$ | ＋ | $+$ | ＋ | ＋ | $+$ | ＋ | $+$ | － | － | 0 | － | ＋ | － | ＋ | － | － | ＋ | － | $+$ | － | $+$ | ＋ | $+$ |  |  |  |  |  |  |
| Other durable goods stores | － | － | $+$ | $+$ | $+$ | － | － | － | － | ＋ | ＋ | ＋ | － | － | $+$ | $+$ | ＋ | － | － | － | ＋ | ＋ | ＋ | $+$ | ＋ | ＋ | $+$ | $+$ | $+$ | － |  |  |  |  |  |  |
| Other nondurable goods stores | $+$ |  | － |  | － |  | － | － | ＋ | ＋ | $+$ | － | － | － | － | － | － |  | － | － | － | － | ＋ | ＋ | － | － | － | － | － | ＋ |  | ＋ |  |  |  |  |

$+=$ rising； 0 ＝unchanged；$-=$ falling．
NOTE
Series components are seasonally adusted by the Bureau of the Census before the direction of change is determined．

## CHART 4 COMPARISONS OF REFERENCE CYCLE PATTERNS

Percent of reference peak levels measured from reference peak dates to 18 months after reference trough dates in 4 recent business cycles, for selected series.

Reference trough dates
——October, 1949---April, 1958
-. 'August, 1954 -February, 1961

24. Value of new orders, mach. and equip.



For series with a "months for cyclical dominance" (MCD) of " 1 " or " 2 " (series 1), the figure for the reference peak is set at " 100 ". For series with an MCD of " 3 " or more (series $9,24,29$ ), the average of the reference peak month, the month preceding the reference peak month, and the month following the reference peak month is set at " 100 ".
$1_{\text {For the }} 1949$, 1954, and 1958 cycles a 3 -term moving average is shown.
Latest data plotted: Series 9 - January: Series 1, 24; 29- February.

## CHART 4 COMPARISONS OF REFERENCE CYCLE PATTERNS.-Con.

Percent of reference peak levels measured from reterence peak dates to 18 months ofter reterence frough dates; in 4 recent business cycles, for selected series.



Reference trough dates
—October, $1949 —$-April, 1958
—. August, $1954 —$ February, 1961
17. Price per unit of labor cosi

23. Industrial materials prices


For series with a "months for cyclical dominance" (MCD) of "1" or "2" (series 19, 23), the figure for the reference peak is set at " $100^{\prime}$. For series with an MCD of " 3 " or more (series 13, 17), the average of the reference peak month, the month preceding the reference peak month, and the month fillowing the reference peak month is set at " 100 ".
Latest data plotted: February:

## CHART 4 COMPARISONS OF REFERENCE CYCLE PATTERNS --Con.

Percent of reference peak levels measured from reference peak dates to 18 months after reference trough dates in 4 recent business cycles, for selected series.

54. Soles of retail stores


Reference trough dates
-October, 1949---April, 1958
-. . August, 1954 - February, 1961

55. Wholesale prices (excl. torm and food)


For series with a "months for cyclical dominance" (MCD) of " 1 " or " 2 ' (series $41,43,55$ ), the figure for the reference peak is set at " $100^{\prime \prime}$. For series with an MCD of " 3 " or more (series 54 ), the average of the reference peak month, the month preceding the reference peak month, and the month following the reference peak month is set at " $100^{*}$. Latest data plotted: February.

## CHART 4 COMPARISONS OF REFERENCE CYCLE PATTERNS.-Con.

## Percent of reference peak levels measured from reference peak dates to 18 months after reference trough dates in 4 recent business cycles, for selected series.

47. Industrial production

48. GNP, current dollars


Reference trough dates
——October, 1949 -~-April, 1958
-. . August, 1954 - February, 1961

52. Personal income


For series with a "months for cyclical dominance" (MCD) of " 1 " or " 2 " (series $47,49,52$ ), the figure for the reference Feak is set at " 100 ". For series with an MCD of " 3 " or more (series 51 ), the average of the reference peak month, the month preceding the reference peak month, and the month following the reference peak month is set at " 100 ".
Latest data plotted: February.

Percent of specific trough levels measured 1 . to 30 months after specific trough dates in 4 recent expansions, for selected series.
9. Construction contracts, comm. and indus. ${ }^{2}$

Specific trough dates ${ }^{\text {¹ }}$ identified with reference trough dates in--




29. New put. housing units authorized


For series with a "months for cyclical dominance" (IACD) of " 1 " or " 2 " (series I), the figure for the specific trough is set at " 100 ". For series with an $\mathrm{K} . \mathrm{CD}$ of " 3 " or more (series 9, 24, 29), the average of the specific trough month, the month preceding the specific trough month, and the month following the specific trough month is set at " 100 '
${ }^{1}$ See appendix table $E$ for "specific" dates.
${ }^{2}$ For the 1949 and 1958 cycles, a 3 -term noving average is shown; the 1961 specific trough date has been selected tentatively.

CHART 5 COMPARISONS OF SPECIFIC CYCLE PATTERNS.-Con.
Percent of specific trough levels measured 1 to 30 months after specific trough dates in 4 recent expansions, for selected series.

19. Stock prices, 500 common stocks


Specific trough dates ${ }^{1}$ identified with reference trough dates in..

| $1949 —$ | 1958-~- |
| :--- | :--- |
| $1954 \ldots 1$ |  |

17. Price per unit of labor cost

18. Industrial materials prices


For series with a "months for cyclical dominance" (MCD) of "1" or " 2 " (series 19, 23), the figure for the specific trough is set at " 100 ". For series with an MCD of "3" or more (series 13, 17), the overage of the specifie trough month, the month preceding the specific trough month, and the month following the specific trough month is set at "100".
${ }^{1}$ See appendix table B for "specific" dates.
Latest data plotted: February.

## CHART 5 COMPARISONS OF SPECIFIC CYCLE PATTERNS...Con.

Percent of specific trough levels measured 1 to 30 months after specific trough dates in 4 recent expansions, for selected series.



Months from specific troughs

Specific trough dates ${ }^{1}$ identified with reference trough dates in.-

43. Unemployment rate (inverted)

49. GNP. current dollars


For series with a "months for cyclical dominance"(MCD) of " 1 " or " 2 " (series $41,43,47$ and 49) the figure for the specific trough is set at " 100 ".
${ }^{\text {Spee }}$ appendix table B for "specific" dates.
Latest data plotted: February

Percent of specific trough levels measured 1 to 30 months after specific trough dates in 4 recent expansions, for selected series.

Specific trough dates ${ }^{1}$ identified with reference trough dates in..
$1949 — 1958$ _....
54. Soles of retail stores



For series with a "months for cyclical dominance" (MCD) of " 1 " or " 2 " (series 52, 53), the figure for the specific trough is set at " 100 ". For series with an MCD of " 3 "' or more (series 51, 54), the averaae of the specific trough month, the month preceding the specific trough month, and the month following the specific trough month is set at " 100 ".
'See oppendix table 8 for "specific" dates.
${ }^{2}$ Eased on tentative specific trough date for 1961 expansion.
Lailost data plotted: February.
Federal Reserve Bank of St. Louis

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

For series with a "months for cyclical dominance" (MCD) of "l" or "2" (series 1, 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 $2,3,6,7,9,13,14,17,24,29,51$, and 54 ), the average of the reference peak month, the month immediately preceding the reference peak month, and the month immediately following the reference peak month is used as the base. The base for quarterly series ( $49,50,67$ ) is the reference peak quarter. See also MCD footnote to appendix table $C$.

| Selected series | Months after reference trough ${ }^{1}$ | Percent of reference peak prior to reference expansion beginning in-- |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \text { July } \\ & 1921 \end{aligned}$ | $\begin{aligned} & \text { July } \\ & 1924 \end{aligned}$ | $\begin{aligned} & \text { Nov. } \\ & 1927 \end{aligned}$ | $\begin{aligned} & \text { Mar. } \\ & 1933 \end{aligned}$ | $\begin{aligned} & \text { 'June } \\ & 1938 \end{aligned}$ | $\begin{aligned} & \text { Oct. } \\ & 1949 \end{aligned}$ | $\begin{aligned} & \text { Aug. } \\ & 1954 \end{aligned}$ | $\begin{aligned} & \text { Apr. } \\ & 1958 \end{aligned}$ | $\begin{aligned} & \text { Feb. } \\ & 1961 \end{aligned}$ |
| NBER LEADING INDICATORS |  |  |  |  |  |  |  |  |  |  |
| 1. Average workweek of production workers, manufacturing. | 12 | NA | 96.2 | 99.4 | 73.0 | 94.2 | 102.8 | 99.8 | 102.0 | 100.5 |
| 2. Accession rate, manufacturing. | 11 | 66.6 | 50.6 | 100.0 | 91.5 | 90.0 | 125.0 | 85.7 | 127.0 | 107.9 |
| 3. Layoff rate, manufacturing (inverted) | 11 | 16.3 | 64.7 | 119.8 | 52.0 | 64.5 | 180.0 | 77.8 | 118.8 | 127.8 |
| 6. Value of manufacturers' new orders, durable goods industries. | 12 | 188.8 | 122.3 | 108.7 | 35.8 | 90.2 | 158.3 | 135.8 | 120.2 | 110.2 |
| 7. New private permanent nonfarm dwelling units started. | 12 | 157.1 | 174.8 | 99.7 | 21.0 | 123.2 | 141.6 | 126.3 | 138.0 | 86.2 |
| 9. Construction contracts awarded for commercial and industrial buildings, floor space ${ }^{2}$ | 11 | 43.4 | 113.5 | 116.3 | 15.8 | 66.0 | 156.1 | 127.3 | 101.5 | 95.7 |
| 13. Number of new business incorporations....... | 12 | 79.1 | 101.9 | 116.5 | 68.2 | 80.0 | 101.5 | 136.3 | 142.2 | 102.9 |
| 14. Current liabilities of business failures (inverted). | 12 | 16.8 | 108.0 | 89.3 | 187.5 | 107.0 | 179.5 | 86.9 | 77.2 | 103.6 |
| 17. Price per unit of labor cost inde | 12 | NA | NA | NA | NA | NA | 107.3 | 103.2 | 102.2 | 100.8 |
| 19. Index of prices, 500 common stocks | 12 | 96.4 | 128.0 | 177.1 | 35.7 | 70.3 | 130.0 | 174.7 | 117.7 | 127.2 |
| 23. Index of industrial materials prices. | 12 | 54.1 | 103.3 | 96.3 | 69.6 | 78.0 | 122.2 | 112.8 | 98.4 | 96.7 |
| 24. Value of manufacturers' new orders, machinery and equipment industries................. | 12 | NA | NA | NA | NA | NA | NA | 130.0 | 111.9 | 108.0 |
| . New private housing units authorized by local building permits..................... | 12 | NA | NA | NA | NA | NA | NA | NA | 131.4 | 122.1 |
| NBER ROUCHLY COINCIDENT INDICATORS |  |  |  |  |  |  |  |  |  |  |
| 41. Number of employees in nonagricultural establishments.............................. | 12 | 78.2 | 94.2 | 100.7 | 80.0 | 95.2 | 103.2 | 101.1 | 100.5 | 100.2 |
| 43. Unemployment rate, total (inverted) | 12 | NA | NA | NA | 0.2 | 68.9 | 91.0 | 61.5 | 79.7 | 92.1 |
| 47. Index of industrial production.............. | 12 | 90.7 | 100.0 | 107.7 | 70.0 | 85.9 | 117.6 | 103.2 | 105.9 | 104.6 |
| 49. Gross national product in current dollars (Q) | 9 | NA | 104.3 | 104.6 | 53.0 | 94.4 | 110.3 | 106.6 | 105.3 | 107.1 |
| 50. Gross national product in 1954 dollars (Q) | 9 | NA | NA | NA | NA | NA | 109.5 | 104.4 | 102.7 | 104.8 |
| 51. Bank debits outside NYC, 343 cente | 12 | 80.7 | 110.9 | 121.6 | 46.0 | 89.9 | 117.8 | 115.1 | 112.0 | 110.6 |
| 52. Personal income. | 12 | NA | 107.7 | 108.1 | 60.9 | 95.2 | 110.5 | 107.9 | 107.5 | 107.2 |
| 54. Sales of retail stores............ | 12 | 96.8 | 102.9 | 102.7 | 73.0 | 94.3 | 109.3 | 109.4 | 105.9 | 101.9 |
| 55. Index of wholesale prices, all commodities other then farm products and foods.......... | 12 | 68.1 | 97.4 | 93.1 | 86.5 | 93.5 | 104.5 | 101.9 | 101.7 | 99.4 |
| NEER LAGGING INDICATORS |  |  |  |  |  |  |  |  |  |  |
| 62. Wage and salary cost per unit of output, total manufacturing. | 12 | 72.2 | 94.4 | 92.4 | 85.0 | 100.0 | 96.8 | 99.1 | 99.3 | 99.2 |
| 64. Manufacturers' inventories, book value | 11 | NA | NA | NA | 70.0 | 88.7 | 98.0 | 96.8 | 93.3 | 101.3 |
| 66. Consumer installment debt......... | 11 | NA | NA | NA | 52.1 | 100.5 | 165.2 | 120.8 | 105.0 | 105.5 |
| 67. Bank rates on short-term business loans, 19 cities (Q). | 9 | 89.6 | 88.8 | 111.9 | 73.1 | 96.7 | 99.6 | 95.4 | 93.4 | 92.7 |

[^7]
## Table 8.--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 SELECTED SERIES

For sertes with a "months for cycilcal dominance" (MCD) of "1" or " 2 " (series 1, 19, 23, 41, 43, 47, 52, 53), the figure for the "specific" peak (trough) month is used as the base. For series with an MCD of "3" or more (serles 9, 13, 17, 24, 29, 51, and 54), the average of the "specific" peak (trough) month, the month immediately preceding the "specific" peak (trough) month, and the month immediately following the "specific" peak (trough) month is used as the base. The base for quarterly series ( 49,50 ) is the "specific" peak (trough) quarter. See also MCD footnote to appendix table C.

| Selected series | Months a.iter "specdicic" trough ${ }^{1}$ | $\begin{aligned} & \text { July } \\ & 1921 \end{aligned}$ | $\begin{aligned} & \text { July } \\ & 1924 \end{aligned}$ | $\begin{aligned} & \text { Nov. } \\ & 1927 \end{aligned}$ | $\begin{aligned} & \text { Mar. } \\ & 1933 \end{aligned}$ | $\begin{aligned} & \text { June } \\ & 1938 \end{aligned}$ | $\begin{aligned} & \text { Oct. } \\ & 1949 \end{aligned}$ | $\begin{aligned} & \text { Aug. } \\ & 1954 \end{aligned}$ | $\begin{aligned} & \text { Apr. } \\ & 1958 \end{aligned}$ | $\begin{aligned} & \text { Feb. } \\ & 1961 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBER LEADING INDICATORS | 14 | Percent of "specific" peak prior to reference expansion beginning in year shown |  |  |  |  |  |  |  |  |
| 1. Average workweek of production workers, manufacturing. |  | NA | 96.2 | 98.6 | 74.4 | 90.7 | NSC | 98.8 | 98.8 | 99.0 |
| 9. Constmaction contracts awarded for cormercial and Industrial buildings, floor space². | 9 | 28.5 | 91.7 | 99.1 | 17.9 | 62.2 | 73.2 | NSC | 78.3 | 97.9 |
| 13. Number of new business incorporations........ | 13 | 74.5 | 100.2 | 97.2 | 57.9 | 74.8 | 70.1 | NSC | 129.5 | 95.9 |
| 17. Price per unit of labor cost index | 11 | NA | NA | NA | NA | NA | 100.5 | 87.5 | 100.0 | 99.1 |
| 19. Index iff stock prices, 500 common sta | 16 | 92.3 | 113.1 | NSC | 30.5 | 63.7 | 118.1 | 136.0 | 117.1 | 117.5 |
| 23. Index of industrial materials prices......... | 14 | 54.8 | 95.1 | 73.4 | 63.3 | 72.7 | 99.0 | 82.2 | 90.6 | 95.0 |
| 24. Value of manufacturers' new orders, machinery and equipment industries................... | 16 | NA | NANA | NA | NA | NA | NA |  | 104.9 | 107.4 |
| 29. Index of new private housing units authorized by local building permits | 14 | NA |  |  |  |  | NA | NA | 85.3 | 95.2 |
| NB:GR ROUGHLY COINCIOENT INDICATORS |  |  |  |  |  |  |  |  |  |  |
| 41. Number of employees in nonagricultural establishments.. | 12 | 78.2 | 93.7 | 101.5 | 80.0 | 94.7 | 103.1 | 101.1 | 100.4 | 100.0 |
| 43. Unemployment rate, total (inverted) | 9 | NA | NA | NA | NA | 63.8 | 71.2 | 61.9 | 76.2 | 88.0 |
| 47. Index of industrial production..... | 12 | 81.4 | 100.0 | 107.7 | 75.0 | 82.8 | 115.0 | 99.5 | 104.6 | 103.4 |
| 49. Gross national product in current dollars (Q) | 9 | NA | NA | NA | 53.0 | 89.9 | 100.0 | 104.2 | 102.7 | 107.1 |
| 50. Gross national product in 1.954 dollars (Q) | 9 | NA | NA | NA | Na | NA | 101.8 | 102.4 | 100.6 | 104.8 |
| 51. Bank debits outside NYC, 343 cente | 14 | 84.4 | 111.9 | NSC | 49.8 | 88.6 | 117.0 | NSC | 111.3 | 109.5 |
| 52. Personal income | 12 | NA | 103.8 | 100.6 | 60.9 | 93.5 | 109.5 | 103.5 | 105.0 | 106.5 |
| 53. Labor income. | 12 | NA | NA | NA | 56.2 | 86.6 | 112.8 | 103.3 | 104.5 | 103.0 |
| 54. Sales of retail | 13 | 93.9 | 102.4 | NSC | 70.4 | 43.7 | NSC | 103.2 | 105.9 | 102.4 |
| NBER LEA DING INDICATORS |  | expansion beginning in year shown |  |  |  |  |  |  |  |  |
| 1. Averags workweek of production workers, manufacturing. | 14 | +10.6 | +6.1 | +3.0 | +13.3 | +8.8 | +4.9 | +3.0 | +4.9 | +4.7 |
| 9. Construction contracts awarded for commercial and industrial buildings, floor space². | 9 | +38.0 | +46.0 | +28.3 | +84.8 | +36.9 | +70.1 | NSC | +23.3 | +3.7 |
| 13. Number of new business incorporations........ | 13 | +6.7 | +34.0 | +6.0 | +4.7 | -6.3 | +18.5 | NSC | +42.3 | +12.2 |
| 17. Price per unit of labor cost index | 11 | NA | NA | NA | NA | NA | +6.4 | +1.9 | +7.2 | +2.9 |
| 19. Index of stock prices, 500 common sto | 16 | +36.1 | +32.9 | NSC | +100.2 | +16.7 | +42.2 | +53.0 | +41.6 | +30.7 |
| 23. Index of industrial materials prices... | 14 | +34.6 | +28.9 | +2.9 | +70.3 | +17.5 | +47.1 | +13.2 | +14.4 | +3.9 |
| 24. Value of manufacturers' new orders, machinery and equipment industries. | 16 | NA | NA | NA | NA | NA | +156.0 | +37.5 | +41.6 | +15.3 |
| 29. Index of new private housing units authorized by local building permits. | 14 | NA | NA | NA | NA | NA | NA | NA | +38.2 | +27.7 |
| NBER ROUGHLY COINCIDENT INDICATORS |  |  |  |  |  |  |  |  |  |  |
| 41. Number of employees in nonagricultural establishments. | 12 | +13.5 | +8.5 | +7.1 | +16.9 | +6.2 | +8.7 | +4.6 | +4.8 | +2.3 |
| 43. Unemployment rate, total (inverted) | 9 | NA | NA | NA | +43.0 | +16.3 | +55.8 | +46.7 | +47.2 | +25.8 |
| 47. Index of industrial production. | 12 | +20.7 | +20.0 | +16.7 | +60.7 | +23.3 | +27.8 | +10.7 | +22.4 | +12.4 |
| 49. Gross national product in current dollars(Q). | 9 | NA | NA | NA | +5.1 | +7.2 | +3.7 | +7.1 | +6.4 | +8.3 |
| 50. Gross national product in 1954 dollars (Q) | 9 | NA | NA | NA | NA | NA | +4.3 | +6.3 | +5.2 | +7.2 |
| 51. Bank debits outside NYC, 343 cente | 14 | +10.9 | +16.8 | NSC | +30.6 | +7.8 | +22.9 | NSC | +15.3 | +8.8 |
| 52. Personal income | 12 | +10.1 | +7.7 | +3.2 | +23.7 | +7.0 | +15.5 | +4.8 | +6.2 | +7.4 |
| 53. Labor income. | 12 | NA | NA | NA | +58.1 | +18.4 | +29.0 | +11.9 | +13.6 | +9.4 |
| 54. Sales of retail stores | 13 | +6. ${ }^{\text {y }}$ | +5.9 | NSC | +24.6 | $+14.0$ | NSC | +6.7 | +10.7 | +6. 3 |

[^8]
## APPENDIX

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

| Business cycle reference dates | Duration in months |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Contraction (trough from previous peak) | Expansion (trough to peak) | Cycle |  |
|  |  |  | Trough from previous trough | Peak from previous peak |
| Trough Peak |  |  |  |  |
| December 1854 June 1857........... | xxx | 30 | x00x | 300x |
| December 1858 October 1860........ | 18 | 22 | 48 | 40 |
| June 1861 April 1865.......... | 8 | 46 | 30 | 54 |
| December 1867 June 1869........... | 32 | 18 | 78 | 50 |
| December 1.870 October 1873........ | 18 | 34 | 36 | 52 |
| March 1879 March 1882......... | 65 | 36 | 99 | 101 |
| May 1885 March 1887.......... | 38 | 22 | 74 | 60 |
| April 1888 July 1890.......... | 13 | 27 | 35 | 40 |
| May 1891 January 1893........ | 10 | 20 | 37 | 30 |
| $J$ une 1894 ${ }^{\text {december 1895...... }}$ | 17 | 18 | 37 | 35 |
| June 1897 June 1899........... | 18 | 24 | 36 | 42 |
| December 1900 September 1902..... | 18 | 21 | 42 | 39 |
| August 1904 May 19907............ | 23 | 33 | 44 | 56 |
| June 1908 January 1910........ | 13 | 19 | 46 | 32 |
| January 1912 January 1913........ | 24 | 12 | 43 | 36 |
| December 1914 August 1918......... | 23 | 44 | 35 | 67 |
| March 1919 January 1920........ | 7 | 10 | 51 | 17 |
| July 1921 May 1923............ | 18 | 22 | 28 | 40 |
| July 1924 October 1926........ | 14 | 27 | 36 | 41 |
| November 1927 August 1929......... | 13 | 21 | 40 | 34 |
| March 1933 May 1937............ | 43 | 50 | 64 | 93 |
| June 1938 February 1945....... | 13 | 80 | 63 | $\frac{93}{45}$ |
| October 1945 November 1948....... | 8 | 37 | 88 | 45 |
| October 1949 July 1953............ | 11 | 45 | 48 | 56 |
| August 1954 July 1957........... |  | 35 | $\frac{58}{48}$ | 48 |
| April 1958 May 1960............ | 9 | 25 | 44 | 34 |
| February 1961 | 9 |  | 34 |  |
| Average, all cycles: |  |  |  |  |
| 26 cycles, 1854-1961................... | 19 | 30 | 49 | 149 |
| 10 cycles, 1919-1961................... | 15 | 35 | 50 | 254 |
| 4 cycles, 1945-1961.................... | 10 | 36 | 46 | 346 |
| Average, peacetime cycles: |  |  |  |  |
| 22 cycles, 1854-1961.................. | 20 | 26 | 45 | ${ }_{5}^{4} 46$ |
| 8 cycles, 1919-1961.................... | 16 | 28 | 45 | ${ }^{5} 48$ |
| 3 cycles, 1945-1961.................... | 10 | 32 | 42 | 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.

| pansions. | 421 cycles, $1857-1960$. |
| :--- | :--- |
| 29 cycles, $1857-1960$. | ${ }^{2} 27$ cycles, $1920-1960$. |
| 33 cycles, $1920-1960$. | 62 cycles, $1948-1960$. |

Source: National Bureau of Economic Research.

Table 8..."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. "Ref'erence" dates are those dates designated as the trough or peak of business activity as a whole. This table shows, for gelocted leading and coincidant series, the specific dates related to reference dates in 9 recent business cycles.

| Selected series | "Specific" trough dates for reference expansions beginning in- |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Feb. $1961$ | $\begin{aligned} & \text { April } \\ & \text { I. } 958 \end{aligned}$ | Aug. $1954$ | $\begin{aligned} & \text { Oct. } \\ & 1949 \end{aligned}$ | $\begin{aligned} & \text { June } \\ & 1938 \end{aligned}$ | March <br> 1933 | Nov. 1927 | $\begin{aligned} & \text { July } \\ & 1924 \end{aligned}$ | $\begin{aligned} & \text { July } \\ & 1921 \end{aligned}$ |
| NBER LEADING INDICATORS |  |  |  |  |  |  |  |  |  |
| 1. Average workweek, prod. wrks., mfg. | Dec. ${ }^{160}$ | Apr. ' 58 | Apr . ${ }^{\text {' }} 44$ | Apr. ${ }^{4} 49$ | Jan. ${ }^{38}$ | Jul. ${ }^{1} 32$ | Apr. '28 | Jul. '24 | Feb. ${ }^{21}$ |
| 9. Construction contracts awarded for commercial and industrial bldgs... | Apr. ${ }^{6} \mathbf{l}^{1}$ | Jun. ${ }^{158}$ | NSC | Aug. '49 | Sep. ${ }^{138}$ | Oct.'32 | Sep. ${ }^{\prime 27}$ | Jul. '24 | Mar. ${ }^{\prime 21}$ |
| 13. Number of new business incorporations. | Jan. 161 | Nov. ${ }^{1} 57$ | NSC | Feb. '49 | Sep. 139 | Dec.' 34 | Dec. 126 | Jun. '24 | Jan. ${ }^{21}$ |
| 17. Price per unit of labor cost index. | Mar. '61 | Apr. ' 58 | Dec. ${ }^{\prime} 53$ | May '49 | NA | NA | NA |  | NA |
| 19. Indey of stock prices, 500 stocks.. | Oct. '60 | Dec. ${ }^{\prime} 57$ | Sep.'53 | Jun. ${ }^{1} 49$ | Apr. 138 | Jun. '32 | NSC | Oct. ${ }^{\prime} 23$ | Aug. ${ }^{2} 21$ |
| 23. Indes: of industrial mat. prices.... | Dec. ${ }^{6} 6$ | Apr. ${ }^{\prime} 58$ | Feb.' 54 | Jun. '49 | Jun. ${ }^{1} 38$ | Jul.'32 | Aug. ${ }^{1} 28$ | Jun.'24 | Jul.'21 |
| 24. Value of mfrs.' new orders, machinery and equipment industries.. | Oct. ${ }^{\prime} 60$ | Feb. 158 | Jan. ${ }^{154}$ | Apr. ${ }^{1} 49$ | NA | NA | NA | NA | NA |
| 29. Indes: of new private housing units authorized by local bldg. permits. | Dec. ${ }^{\prime} 60$ | Feb. ${ }^{1} 58$ | NA | NA | NA | NA | NA | NA | NA |
| NBER ROUGHLY COINCIDENT INDICATORS |  |  |  |  |  |  |  |  |  |
| 41. Number of employees in nonagricultural establishments................. | Feb. ${ }^{61}$ | Apr. ${ }^{1} 58$ | Aug. ${ }^{\text {' }} 54$ | Oct. ${ }^{1} 49$ | Jun. 138 | Mar. ${ }^{\text {'33 }}$ | Jan. 128 | Jul. ${ }^{124}$ | Jul. ${ }^{121}$ |
| 43. Unemployment rate, total (inverted) | May 161 | Aug. ${ }^{\text {' }} 58$ | Sep. 154 | Oct. '49 | Jun. 138 | May 133 | NA | NA | NA |
| 47. Index of industrial production..... | Feb. ${ }^{61}$ | Apr. ${ }^{\prime} 58$ | Mar. ${ }^{1} 54$ | Oct. ' 49 | May 138 | Jul.'32 | Nov. ${ }^{127}$ | Ju.l. ${ }^{24}$ | Apr. ${ }^{2} 21$ |
| 49. GNP in current dollars (Q) | 1stQ 61 | lstQ '58 | 2ndQ 154 | 2ndQ 149 | 2ndQ 138 | 1stQ 133 | NSC | NSSC | 4 thQ 121 |
| 50. GNP in 1954 dollars (Q) | lstQ ${ }^{61}$ | 1stQ '58 | 2ndQ 154 | 2ndQ 149 | NA | NA | NA | NA | NA |
| 51. Bank debits outside NYC | Dec. ${ }^{1} 60^{2}$ | Feb. ${ }^{1} 58$ | NSC | Aug. ' 49 | May 138 | Apr.'33 | NSC | Jun. '24 | Jul. '21 |
| 52. Personal income.. | Feb. ${ }^{61}$ | Feb. ' 58 | Mar. ${ }^{\prime} 54$ | Oct. 149 | May 138 | Mar. ${ }^{\text {'3 }} 3$ | 4thQ '26 | 2ndQ '24 | 2ndQ 121 |
| 53. Labo: income in mining, manufactur:ing and construction........ | Feb. ${ }^{161}$ | Apr. ${ }^{158}$ | Aug. ${ }^{1} 54$ | Oct. 1/49 | Jun. 138 | Mar.'33 | NA | NA |  |
| 5.4. Sales of retail stores | Jan. '61 | Mar. ${ }^{\text {' }}$ 88 | Jan.'54 | NSC | May 138 | Mar. ${ }^{\text {' }} 33$ | NSC | Oct. 124 | Sep. ${ }^{1} 21$ |
|  |  | "Specific | peak | es for | ference | contrac | ns beg | ning in |  |
| Selected series | May 1960 | $\begin{aligned} & \text { July } \\ & 1957 \end{aligned}$ | $\begin{aligned} & \text { July } \\ & 1953 \end{aligned}$ | Nov. 1948 | May 1937 | Aug. 1929 | $\begin{aligned} & \text { Oct. } \\ & 1926 \end{aligned}$ | May 1923 | Jan. $1920$ |
| N3ER LEADING INDICATORS |  |  |  |  |  |  |  |  |  |
| 1. Averiage workweek, prod. wrks., mfg. <br> 9. Construction contracts awarded for | May ${ }^{\prime} 59$ | Nov. ${ }^{\prime} 55$ | Apr. ${ }^{1} 53$ | NSC | Dec. ${ }^{\prime} 36$ | Oct. ${ }^{29}$ | Nov. ${ }^{2} 25$ | Nov. '22 | NA |
| commercial and industrial bldgs... | Apr. '591 | Mar. ${ }^{\prime} 56$ | NSC | Mar. ${ }^{\prime} 46$ | Jul.'37 | Jan. ${ }^{129}$ | Sep. ${ }^{125}$ | Aug. '22 | Dec. ${ }^{19}$ |
| rations............................. | Apr. ${ }^{\text {' } 59}$ | Feb. ${ }^{156}$ | NSC | Jul. ${ }^{\text {/ }} 6$ | Dec. ${ }^{\prime} 36$ | Jan. '29 | Oct. ${ }^{\prime} 25$ | Apr.'23 | Dec. ${ }^{19}$ |
| 17. Price per unit of labor cost index. | May '59 | Cct. ${ }^{155}$ | Jan. ${ }^{\text {' }} 51$ | Jun. '48 | NA | NA | NA | NA | NA |
| 19. Index of stock prices, 500 stocks.. | Jul.' 59 | Jul.'56 | Jan.'53 | Jun. $1 / 48$ | Feb. 137 | Sep. 129 | NSC | Mar. ${ }^{1} 23$ | Ju. ${ }^{119}$ |
| 23. Index of industrial mat. prices.... | Nov. ' 59 | Dec. ' 55 | Feb. ${ }^{151}$ | Jan. '48 | Mar. ${ }^{\prime} 37$ | Mar. ${ }^{\prime} 29$ | Nov. ${ }^{1} 25$ | Mar. ${ }^{\prime} 23$ | Apr. ${ }^{\prime} 20$ |
| 24. Value of mfrs.' new orders, machinery and equipment industries.. | Dec.'59 | Nov. ${ }^{1} 56$ | Feb. '51 | NA | NA | NA | NA | NA | NA |
| 29. Index of new private housing units authorized by local blde. permits. | Nov. ${ }^{58}$ | Feb. ${ }^{5} 5$ | NA | NA | Na | NA | NA | NA | NA |
| NEER ROUGHLY COINCIDENT INDICATORS |  |  |  |  |  |  |  |  |  |
| 41. Number of employees in nonagricultural establishments................ | Apr. ${ }^{160}$ | Mar. ${ }^{57}$ | May 153 | Jul. ${ }^{1} 48$ | Jul. ${ }^{37}$ | Aug. ${ }^{29}$ | Jan. ${ }^{2} 26$ | Jun. '23 | Jan. ${ }^{20}$ |
| 43. Unemployment rate, total (inverted) | Feb. ${ }^{160}$ | Mar. ${ }^{57}$ | Jun. '53 | Jan. ${ }^{\prime} 48$ | Jul. ${ }^{37}$ | NA | NA | NA |  |
| 47. Index of industrial production | Jan. '60 | Feb. ${ }^{157}$ | Jul.'53 | Jul. ${ }^{1} 48$ | May '37 | Jul. ${ }^{29}$ | Mar. ${ }^{127}$ | May '23 | Feb. ${ }^{20}$ |
| 49. GNP in current dollars (Q). | 2ndQ 160 | 3rdQ 157 | 2ndQ '53 | 4thQ 1/48 | 3 rdQ 137 | 3rdQ 129 | NSC | NSC | NA |
| 50. GNP in 1954 dollars (Q) | IndQ 160 | 3rdQ 157 | 2ndQ 153 | 4 thQ $1 / 48$ | NA | NA | NA | NA | NA |
| 51. Bank debits outside NYC. | Aug. ${ }^{1} 60^{1}$ | Aug. ${ }^{57}$ | NSC | Aug. ' 48 | Mar. '37 | Aug. ${ }^{129}$ | NSC | May '23 | Jul. '20 |
| 52. Personal income. | Oct. ${ }^{\prime} 60$ | A.ug. 57 | Oct. ${ }^{\prime} 53$ | Sep. ${ }^{1} 48$ | Jun. ${ }^{1} 37$ | Aug . ${ }^{\prime} 29$ | 2ndQ ${ }^{1} 26$ | lstQ '24 | NA |
| 53. Labor income in mining, manufacturing and construction......... | May '60 | Jun. '57 | Jul. ${ }^{5} 5$ | Sep. '48 | May 137 | Sep. ${ }^{\prime} 29$ | NA | NA | NA |
| 54. Sales of retail stores.. | Apr. ${ }^{1} 60$ | Jul. ${ }^{57}$ | Jul. ${ }^{5} 3$ | NSC | Sep. 137 | Sep. ${ }^{\prime} 29$ | NSC | Feb. ${ }^{1} 24$ | Ju1. '20 |

[^9]${ }^{1}$ Tentative turning date.

## Table C.--AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR 55 MONTHLY AND 9 QUARTERLY BUSINESS CYCLE SERIES

| Monthly series | $\overline{\mathrm{CI}}$ | $\overline{\mathrm{I}}$ | $\overline{\mathrm{c}}$ | $\overline{\mathrm{I}} / \mathrm{C}$ | MCD | $\begin{aligned} & \overline{\mathrm{I}} / \mathrm{C} \\ & \text { for } \\ & \text { MCD } \\ & \text { span } \end{aligned}$ | Average duration of run |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | CI | I | 0 | MCD |
| NBER LEADING INDICATORS |  |  |  |  |  |  |  |  |  |  |
| 1. Average workweek of production workers, manufacturing ${ }^{1}$ | . 47 | 40 | 24 | 1.67 | 2 | . 95 | 2.57 | 1.84 | 9.82 | 4.26 |
| 2. Accession rate, manufacturing ${ }^{\text {1 }}$. | 6.03 | 5.31 | 2.08 | 2.55 | 3 | . 92 | 2.53 | 1.82 | 8.35 | 4.58 |
| 30. Nonagricultural placements, all indust | 3.42 | 3.14 | 1.35 | 2.33 | 3 | . 55 | 1.86 | 1.49 | 8.67 | 4.53 |
| 3. Layoff rate, manufacturing ${ }^{1}$.......... | 11.94 | 10.46 | 5.45 | 1.92 | 3 | . 76 | 2.49 | 1.80 | 7.59 | 5.16 |
| 4. Number of persons on temporary layoff, all industries. | 19.43 | 17.91 | 4.88 | 3.67 | 5 | . 81 | 1.66 | 1.49 | 7.10 | 3.37 |
| 5. Average weekly initial claims for unemployment insurance, State programs.................. | 6.98 | 6.12 | 3.16 | 1.94 | 2 | . 97 | 1.86 | 1.53 | 9.28 | 3.61 |
| 6. Value of manufacturers' new orders, durable goods industries...................................... | 5.58 | 5.00 | 2.00 | 2.50 | 3 | . 75 | 1.94 | 1.48 | 10.64 | 3.34 |
| 24. Value of manufacturers' new orders, machinery and equipment industries. | 6.07 | 5.55 | 2.19 | 2.53 | 3 | .73 | 1.68 | 1.47 | 12.82 | 3.56 |
| 9. Construction contracts awarded for commercial and industrial buildings.......................... | 12.37 | 11.94 | 2.75 | 4.34 | 5 | . 80 | 1.62 | 1.49 | 8.28 | 3.45 |
| 10. Contracts and orders for plant and equipment.. | 6.37 | 5.94 | 2.19 | 2.71 | 3 | .79 | 1.59 | 1.37 | 8.56 | 3.55 |
| 27. Buying policy--production materials, percent reporting commitments 6 months or longer..... | 7.56 | 7.12 | 2.36 | 3.02 | 4 | . 71 | 1.82 | 1.69 | 10.14 | 5.23 |
| 7. New private permanent nonfarm dwelling units started. | 4.09 | 3.39 | 2.01 | 1.69 | 3 | .67 | 2.29 | 1.67 | 11.46 | 4.46 |
| 29. Index of new private housing units authorized by local building permits.. | 3.90 | 3.44 | 1.67 | 2.06 | 3 | . 60 | 1.93 | 1.53 | 12.43 | 3.70 |
| 12. Net change in the business population, operating businesses. | 12.15 | 15.46 | 7.29 | 2.12 | 3 | . 84 | 2.71 | 1.80 | 10.64 | 4.08 |
| 13. Number of new business incorporations. | 3.04 | 2.57 | 1.30 | 1.98 | 3 | . 65 | 2.19 | 1.69 | 9.31 | 3.50 |
| 14. Current liabilities of business failures. | 16.32 | 16.05 | 2.81 | 5.71 | 6 | (2) | 1.57 | 1.42 | 5.32 | 2.22 |
| 15. Number of business failures with liabilities of $\$ 100,000$ and over. | 17.30 | 17.36 | 3.26 | 5.33 | 6 | (2) | 1.54 | 1.39 | 6.21 | 2.82 |
| 17. Price per unit of labor cost index........... | . 93 | . 74 | . 4.4 | 1.68 | 3 | . 73 | 2.52 | 2.12 | 8.94 | 4.68 |
| 19. Index of stock prices, 500 common stocks..... | 2.58 | 1.90 | 1.49 | 1.28 | 2 | . 79 | 2.40 | 1.73 | 13.55 | 3.36 |
| 26. Buying policy--production materials, percent reporting commitments 60 days or longer...... | 6.17 | 5.53 | 2.76 | 2.00 | 3 | .66 | 1.90 | 1.61 | 11.55 | 4.63 |
| 32. Vendor performance, percent reporting slower deliveries. | 11.30 | 8.12 | 7.20 | 1.13 | 2 | . 77 | 3.18 | 2.01 | 9.94 | 3.59 |
| 23. Index of industrial materials prices. | 2.15 | 1.39 | 1.52 | . 91 | 1 | . 91 | 2.61 | 1.84 | 11.46 | 2.61 |
| NBER ROUGHLY COINCIDENT INDICATORS |  |  |  |  |  |  |  |  |  |  |
| 41. Number of employees in nonagricultural establishments ${ }^{1}$ | . 39 | . 22 | . 29 | . 76 | 1 | .76 | 3.41 | 2.04 | 10.44 | 3.41 |
| 42. Total nonagricultural employment, labor force survey. $\qquad$ | . 41 | . 32 | . 22 | 1.45 | 2 | .72 | 1.94 | 1.62 | 15.73 | 3.44 |
| 43. Unemployment rate, total..... | 4.73 | 3.46 | 2.91 | 1.19 | 2 | . 64 | 2.44 | 1.68 | 7.67 | 3.48 |
| 44. Number of unemployed persons 14 years old and over. | 4.73 | 3.44 | 2.93 | 1.17 | 2 | . 63 | 2.44 | 1.64 | 7.67 | 3.20 |
| 45. Average weekly insured unemployment, State programs | 5.63 | 2.80 | 4.12 | . 68 | 1 | . 68 | 3.47 | 2.44 | 8.28 | 3.47 |
| 46. Index of help-wanted advertising in newspapers. | 3.28 | 2.10 | 2.26 | . 93 | 1 | . 93 | 2.30 | 1.40 | 8.13 | 2.30 |
| 47. Index of industrial production. | 1.32 | . 82 | . 88 | . 93 | 1 | . 93 | 3.92 | 2.92 | 9.31 | 3.92 |
| 51. Bank debits outside NYC, 343 centers | 1.56 | 1.42 | . 70 | 2.03 | 3 | . 58 | 1.82 | 1.55 | 10.64 | 4.32 |
| 52. Personal income....................... | . 69 | . 43 | . 54 | . 80 | 1 | . 80 | 3.39 | 1.69 | 21.29 | 3.39 |
| 53. Labor income in mining, manufacturing, and construction. | 1.12 | . 69 | . 84 | . 82 | , | . 82 | 3.63 | 1.80 | 13.55 | 3.63 |
| 54. Sales of retail stores....................... | 1.58 | 1.43 | . 56 | 2.55 | 4 | . 70 | 1.84 | 1.67 | 8.77 | 3.56 |
| 55. Index of wholesale prices, all commodities other than farm products and foods. | . 35 | . 13 | . 31 | . 42 | 1 | .42 | 5.32 | 2.26 | 11.46 | 5.32 |

See footnotes at end of table.

Table C.--AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR 55 MONTHLY AND 9 QUARTERLY BUSINESS CYCLE SERIES-Continued


## NOTES FOR TABLE C

${ }^{1}$ Revised. See "Important Features and Changes For This Issue," page ii.
${ }^{2}$ Not computed for series when MCD is " 6 " or more.
The following are brief definitions of the measures shown in this table. More complete explanations appear in Business Cycle Indicators, Geoffrey H. Moore, editor; National Bureau of Economic Research, Inc., vol. 1, ch. 17, "Electronic Computers and Business Indicators" by Julius Shiskin (Princeton University Press: 1961).
" $\overline{C I} "$ is the average month-to-month' (for quarterly series, quarter-to-quarter) percentage change, without regard to sign, in the seasonally adjusted series. "Ī" is the same for the irregular component, which is obtained by dividing the cyclical component into the seasonally adjusted series. " $\overline{\mathrm{C}} \mathrm{l}$ is the same for the cyclical component which is a smooth, flexible moving average.
"MCD" represents months for cyclical dominance. The average (without regard to sign) percentage changes in the irregular component and cyclical component are computed for l-month spans (Jan.-Feb., Feb. Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5 -month spans. MCD is the shortest span for which the average change (without regard to sign) in the cyclical component is larger than the average change (without regard to sign) in the irregular component. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6". MCD is small for smooth series and large for erratic series. "QCD" represents quarters for cyclical dominance. It is the shortest span (in quarters) for which the average change (without regard to sign) in cyclical component is larger than the irregular average (without regard to sign) in component.
" $\bar{I} / \mathrm{C} n$. is a measure of the relative smoothness (small values) or irregularity (large values) of the seasonally adjusted series. For monthly series, it is shown for l-month spans and for spans of the period of MCD. When MCD is "6", no $\bar{I} / \mathrm{C}$ ratio is shown for the MCD period. For quarterly series, $\bar{I} / \mathrm{C}$ is shown for 1 -quarter spans and QCD spans.
"Average duration of run" is a measure of smoothness, and is equal to the average number of consecutive monthly changes in the same direction in any series of observations. When there is no change between 2 months, it is assumed that the "no change" is a change in the same direction as the preceding change. The average duration of run is shown for the seasonally adjusted series CI, irregular component $I$, cyclical component $C$, and the MCD moving average. The MCD moving average is a moving average (with the number of terms equal to MCD) of the seasonally adjusted series. For quarterly series, average duration of ran is the average number of consecutive quarterly changes in the same direction.

## Table D.-.SEASONAL ADJUSTMENT FACTORS, MAY 1961 TO JUNE 1962, FOR BUSINESS CYCLE SERIES ADJUSTED by bureau of the census or nber

| Series | May $1961$ | $\begin{array}{\|l\|} \text { Jur } \\ 190 \end{array}$ | $\begin{aligned} & \text { July } \\ & 1961 \end{aligned}$ | $\begin{aligned} & \mathrm{Au}_{\mathrm{g}} \\ & 19 \end{aligned}$ | Sept. 1961 | $\begin{aligned} & \text { Oct. } \\ & 196 i \end{aligned}$ | $\begin{aligned} & \text { Nov. } \\ & 2961 \end{aligned}$ | Dec. <br> 1961 | $\begin{aligned} & \text { Jan. } \\ & 1962 \end{aligned}$ | Feb. <br> 1962 | $\begin{aligned} & \text { Mar. } \\ & 1962 \end{aligned}$ | $\begin{aligned} & \text { Apr. } \\ & 1962 \end{aligned}$ | May <br> 1962 | $\begin{aligned} & \text { June } \\ & 1962 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4. Number of persons on temporary layoff, all industries. | 90.7 | 86.2 | 102.8 | 134.3 | 92.1 | 90. | 89.0 | 106.1 | 105.2 | 118.2 | 98.1 | 86.8 |  |  |
| 5. Av. weekly initial claims for unemploy. insurance, State. | 83.0 | 84.1 |  |  |  | 89.7 |  |  |  |  |  |  |  |  |
| 9. Constr. contracts awarded commercial and indus. bld | 110.7 |  |  | 117.0 |  | 110.3 | 95 | 84 | 83.5 | 6 |  | 108.4 | 110.8 | 98.3 |
| 13. No. of new business incor | 104.7 | 104.2 | 99.9 | 95.4 | 90.2 | 95.7 | 84.6 | 100.3 | 118.1 | 93.1 | 110.1 | 103.7 | 104.7 | 104.3 |
| 14. Cur. liabilities of bus.failures | 95.7 | 96.3 | 85.9 | 103.3 | 94.0 | 94.9 | 106.1 | 95.0 | 101.8 | 103.6 | 113.6 | 109.1 | 95.7 | 96.3 |
| 15. No. of bus. failures with liabilities of $\$ 100,000$ and over.. | 96 | 103.2 | 91.6 | 100.3 | 87.6 | 86.8 |  | 90.1 | 111.4 | 113.1 | 113.4 | 109.6 | 96.9 | 103.2 |
| 18. Profits (before taxes) per dol. of sales, all mfg. corp. ${ }^{1}$....... | 10 |  |  |  |  |  |  |  |  | 98 |  |  | 105. |  |
| 25. Change in mfrs. 1 unfilled orders, dur. goods industries ${ }^{2}$... |  | 98. |  | 100.3 | 100.8 | 100.4 | 100.3 | 100.7 | . 8 | 100.3 | 100.3 |  | 98.7 | 98.8 |
| 30. Nonagri. placements, all indus.. | 108.1 | 111.6 | 106.7 | 114.0 | 123.7 | 112.2 | 90.3 | 85.2 | 81.8 | 77.6 | 88.8 | 100.2 | 108.9 | 112.5 |
| 5. Average weekly insured unemployment, State programs............ | 95. | 85.3 | 86.6 |  |  | 76. | 87.0 | 10 | 13 | 134.5 | 126.5 | 11 | 94 | 4.9 |
| 55. Index of wholesale prices, farm products and foods. | 100 |  | 99.9 | 99.9 | 99.9 | 99.9 | 99.9 | 100.0 | 100.2 | 100.2 | 100.2 | 100.2 | 100.0 | 99.9 |
| 81. Index of consumer pric | 99.8 | 100.0 | 100.1 | 99.9 | 100.1 | 100.2 | 100.2 | 100.1 | 99.9 | 99.9 | 99.8 | 100.0 | 99.8 | 100.0 |
| 82. Federal cash payments to publ | 102.4 | 107.5 | 97.3 | 111.1 | 97.4 | 101.4 | 103.1 | 99.1 | 90.2 | 99.0 | 92.4 | 98.8 | 102.7 | 107.5 |
| 83. Federal cash receipts from pub. | 114.3 | 155.8 | 50.4 | 108.0 | 121.9 | 46.9 | 98.8 | 103.5 | 71.6 | 114.9 | 136.7 | 77.4 | 115.0 | 154.8 |
| 90. Defense Department obligati procurement. | 75.9 | 220.4 | 50.8 | 79.2 | 100.7 | 84.1 | 90.1 | 98.9 | 75.2 | 95.9 | 146.8 | 78.0 | 76.2 | 220.8 |
| 91. Defense Dept. oblig., total. | 88.0 | 156.2 | 82.8 | 86.8 | 99.1 | 98.8 | 90.8 | 100.3 | 91.4 | 91. | 117.8 | 94.5 | 88 | 156.3 |
| 92. Military prime contract awa to U.S. business firms.... | 94.4 | 231.7 | 68.5 | 66.8 | 92.6 | 82.5 | 68.6 | 115 | 80.5 | 80.0 | 125.6 | 94.7 | 94.5 | 229.2 |
| 125. W. Germany, index of indus. prod | 102.5 | 103.1 | 94.0 | 93.0 | 101.5 | 103.7 | 109.5 | 101.4 | 94.5 | 96.2 | 100. | 21.1 | 20. | 103.3 |
| 128. Japan, index of indus. prod. | 99.9 | 100.3 | 99 | 96 | 98.6 | 100 | 98.7 | 102. | 93. | 101 | 108. | 99.9 | 99 | 100.4 |

NOTE: 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. New factars are shown for series 81.
${ }^{1}$ Quarterly series; figures are placed in middle month of quarter.
The seasonal factors are applied to the unfilled orders series; then the change in unfilled orders is computed.

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

## Introduction

Two new versions of the Census Method II seasonal adjustment program are now available. These versions have boen used to compute the new seasonal factors shown in table D. These versions, designated X-9 and X-10 'Experimental Programs 9 and 10), have replaced the method described in "Electronic Computers and Business Indicators," NBER Occesional Paper No. 57 and the X-3 version doscribed in "Tests and Revisions of Bureau of the Census Methods of Seasonal Adjustments," Census Technical Paper No. 5. The X-3 program has been used for about 2 years as the standard program. 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 $\mathrm{X}-9$ 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 $3-$, $3 \times 3-$, $3 \times 5-$, $3 \times 9-$, and $3 \times 15-$ term moving average and a horizontal straight line. This is in contrast to the original and X-9 methods of treating all menths the same, either with the use of a $3 \times 3$ or $3 \times 5$ moving average.

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

## Description of the X-9 Program

The changes from the original program included in $\mathrm{X}-9$ 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 ratjos 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 $\mathrm{X}-3$ ).
(3) The 5-term moving average, used in computing the sigma control limits, is extended by repeating the last moving-average value instead of repaating the average of the last two ratios and taking the moving average. This revision improves the prospects that ex-reme values at the end of series will be identified as such.
(4) The method of centering or forcing the seasonal fastors 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 centerirg 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 $\mathrm{X}-3$, the ratios were centered before maying averages were computed for each month.
(5) Less weight is given to the ratios for ond years in the computation of the seasonals. To extend the $3 \times 5$ moving average, the end four ratios instead of the end two are averaged to obtain additional SI ratios (included in $\mathrm{X}-3$ ). To extend the $3 \times 3$ moving average, the end three ratios, instead of the end two, are averaged to obtain additional SI ratios.

## Description of the $\mathrm{X}-10$ Program

The $\mathrm{X}-10$ 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 percent 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 percentage change in the seasonal. ${ }^{1}$

| Moving season- <br> ality ratio | Average of SI ratios for <br> seasonal factor curve |
| :--- | :--- |
| 0 to 1.49 | 3-term moving average |
| 1.50 to 2.49 | $3 \times 3$-term moving average |
| 2.50 to 4.49 | $3 \times 5$ term moving average |
| 4.50 to 6.49 | $3 \times 9$-term moving everage |
| 6.50 to 8.49 | $3 \times 15$-term moving average |
| 8.50 and over | All ratios (stable) |

In the actual computations, the moving seasonality ratio selects from l-, 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 $\mathrm{X}-10$ 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 Bureelu 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.

[^10]The numbers assigned to the series are for identification purposes only and do not necessarily reflect series relationships or order. " $M^{\prime \prime}$ indicates monthly series and " $Q$ " indicates quarterly series. 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.

## 29 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
4. Number of persons on tamporary layoff, all industrles (M)..-Department of Labor, Bureau of Labor Statistics; seasonal adjustment by Bureau of the Census
5. Average weekly 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 Rusiness Economics
*7. New privote permanent nonfarm dwelling units started (M). --Department of Commerce, Bureau of the Census
*9. Construction contracts awarded for commereial 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 ond orders for plant and equipment ( $M$ ).,-Department of Commerce, Office of Business Economics, and F. W. Dodge Corporation; seasonal adjustment by Bureau of the Census and National Bureau of Economic Research, Inc.
11. Newly approved capital appropriations, 602 manufacturing corporations (Q).--National Industrial Conference Board
*12. Net ehange in the business population, operating businesses (Q).--Department of Commerce, Office of Business Economics
13. Number of new business incorporotions (M).--Dun and Bradstreet, Inc.; seas onal 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 fallures 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 (ratio of wholesale prices of manufactured goods index to wage ond salary cost per unit of output index) (M).--Department of Commerce, Office of Business Economics; Department of Labor, Bureau of Labor Statistics; and Board of Governors of the Federal Reserve System
18. Profits (before taxes) per dollar of sales, all manufacturing corporatlons (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
19. Change in book value of monufacturers' inventories, purchased material (M).--Department of Commerce, Office of Business Economics
*21. Change in business invenfories, form and nonform, after valuotion adjustment (GNP Component) (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
20. Value of manufacturers' new orders, machinery and equipment industries (M).--Department of Commerce, Bureau of the Census and Office of Business Economics
21. Change in manufacturers' unfilled orders, durable goods industries (M).--Department of Commerce, Office of Business Economics; seasonal adjustment by Bureau of the Census
22. Buying policy--production materlals, percent reporting commitments 60 days or longer (M).--National Association of Purchasing Agents; no seasonal adjustment
23. Buying policy--capital expenditures, percent reporting commitments 6 months or longer $(M)$. - National Association of Purchasing Agents; no seasonal adjustment
24. Index of new private housing units authorized by local bullding permits (M)..-Department of Commerce, Bureau of the Census
25. Nonagricultural plocements, all industries (M).--Department of Labor, Bureau of Employment Security; seasonal adjustment by Bureau of the Census
26. Change In book value of manufacturing and trade inventories, total (M)...Department of Commerce, Office of Business Economics
27. Vendor performance, percent roporting slower deliveries (M)..Chicago Purchasing Agents Association; no seasonal adjustment

## 15 NBER ROUGHLY COINCIDENT INDICATORS

*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.
44. Number of unemployed persons 14 years old and over (M).--Department of Labor, Bureau of Labor Statistics, and Department of Commerce, Bureau of the Census
45. Average weekly insured unemployment, State programs (M).-. Department of Labor, Bureau of Employment Security; seasonal adjustment by Bureau of the Census
46. Index of help-wanted 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 outaide 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, monufacturing, and construction (M).-Department of Commerce, Office of Business Economics
*54. Sales of retail stores (M).--Department of Commerce, Bureau of the Census and Office of Business Economics
*55. Index of wholesale prices, all commodities, other than farm praducts and foods (M).--Department of Labor, Bureau of Labor Statistics; seasonal adjustment by Bureau of the Census
57. Final sales (series 49 minus series 21) (Q).--Department of Commerce, Office of Business Economics

## 7 NBER LAGGING INDICATORS

*61. Business expenditures on new plant and equipment, fotal (Q).-Department of Commerce, Office of Business Economics; and the Securities and Exchange Commission
*62. Index of wage and salary cost per unit of oufput, fotal manufacturing (ratio of index of wage and salary disbursements in manufocturing to index of industrial production, manufacturing) (M).--Department of Commerce, Office of Business Economics, and the Board of Governors of the Federal Reserve System
63. Index of labor cost per unit of output, total gross national product (ratio of compensation of employees to GNP in 1954 dol. lors) (Q)..-Department of Commerce, Office of Business Economics
*64. Book value of manufacturers' inventories, all manufacturing industries ( $M$ )..-Department of Commerce, Office of Business Economics
65. Book value of manufacturars' inventories of finished goods, all manufacturing industries ( M ).--Department of Commerce, Office of Business Economics
*66. Consumer installment debt, end of month (M).--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 shopt-term business loans, 19 citios (Q)..-Board of Governors of the Federal Reserve System; no seasonal adjustment

# COMPLETE TITLES AND SOURCES OF PRINCIPAL BUSINESS CYCLE SERIES AND DIFFUSION INDEXES-CON. 

## 15 OTHER U.S. SERIES WITH BUSINESS CYCLE SIGNIFICANCE

81. Index of consumer prices (M).--Department of Labor, Bureau of Labor 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 cash receipts from the public (M). .-Treasury Department, Bureau of Accounts, and Executive Office of the President, Bureau of the Budget. Monthly seasonal adjustmentis 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 adjus tment.
84. Fedoral cash surplus or deficit (M)..-Treasury Department, Bu reau 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 meth ${ }^{-}$ od of seasonal adjustment.
85. Percent change in tatal U.S. money supply (demand deposits plus currency) (M).--Board of Governors of the Federal Reserve System
86. Expoits, excluding military ald shipments, total (M)...-Department of Commerce, Bureau of the Census
87. General imports, fotal (M). n-Department of Commerce, Bureau of the Census
88. Merchandise trade balance (series 86 minus series 87) (M)... Department of Commerce, Bureau of the Census
89. Excesz of recelpts 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
91. Defense Department obligations, tofal (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, Fiscal Analysis Division; seassonal adjustment by Bureau of the Census
93. Free reserves (mombar bank excess reserves minus borpowings) (M).--Board of Governors of the Federal Reserve System; no seasonal adjustment
94. Index of construction contracts, tatal value (M).--F. W. Dadge Corporation
95. Surplus or deficit, Fedaral income and product account (Q).-Department of Commerce, Office of Business Economics

## 7 INTERNATIONAL COMPARISONS OF INDUSTRIAL PRODUCTION

121. Organization for Economic Cooparation ond Development Countries, index of industrial production (M)..-Organization for Economic Cooperation and Development
122. United Kingdom, index of indusitial production (M).--Organization for Economic Cooperation and Development
123. Canada, index of industrial production ( $M$ ).--Dominion Bureau of Statistics, Ottawn
124. West Germany, index of industrial production (M)...Organization for Economic Cooperation and Development; seasonal adjust ment by Bureau of the Census
125. Fronce, index of industrial production (M)..OOrganization for Economic Cooperation and Development
126. Italy, index of industrial production (M). --Organization for Economic Cooperation and Development
127. Japan, index of industrial productlon (M), -a'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, D11, 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), -F First National City Bank of New York; no seasonal adjustment of series components. Diffusion indexes are seasonally adjusted by National Bureau of Fconomic Research, Inc.
D35. Net sales, total manufactures (Q).--Dun and Bradstreet, Inc.; no seasonal adjustment
D36. New orders, durable manufactures (Q).w-Dun and Bradetreet, Inc.; no seasonal adjustment
D48. Freight carloadingz (Q).--Association of American Railroads; no seasonal adjustment
D58. Wholesale prices, manufacturing (M)..-Department of Labor, Bureau of Labor Statistics; no seasonal adjustment of seriez components. Diffusion indexes are seasonally adjusted by National Bureau of Economic Research, Inc.


[^0]:    This report is prepared under the direction of Julius Shiskin, Chief Economic Statistician of the Bureau 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 25. D. C.

[^1]:    ${ }^{1}$ See "Important Features and Changes For This Issue," page ii.
    $2_{\text {Excludes stepped-up rate of payments and special payments of government life insurance dividends to veterans in }}$ March 1961 ( $\$ 1.8$ billion) and July 1961 ( $\$ 2.6$ billion), respectively.
    ${ }^{3}$ Week ended March 13, 1962.

[^2]:    ${ }^{1}$ Anticipated

[^3]:    ${ }^{1}$ Orgarization for Economic Cooperation and Development.

[^4]:    ${ }^{1}$ February to March percentage changes cover part of March only.
    ${ }^{2}$ Percent changes from 4th quarter 1961 to lst quarter 1962 and lst quarter to 2 nd quarter 1962, based on anticipated 1962 data, are +2.0 and +1.4 , respectively.

[^5]:    NOTE：Series components are seasonally adjusted by issuing agency before the direction of change is determined Includes durable industries not available separately．

[^6]:    $+=$ rising; $o=$ unchanged; $-=$ falling.
    NOTE: Series components are seasonally adjusted by issuing agency before the direction of change is determined.

[^7]:    NA Not available.
    ${ }^{1}$ Based on period from February 1961 (current trough) to latest month for which data are available.
    ${ }^{2}$ Except for 1961, changes are computed in a 3 -term moving average of the seasonally adjusted series.

[^8]:    NA Not available. NSC No specifio cycle related to reference dates.
    ${ }^{1}$ Based 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 table B.
    $\boldsymbol{R}^{\text {Exxeept }}$ for 1961, changes are computed in a 3-term moving average of the seasonally adjusted series.

[^9]:    NA Not available. NSC No specific cycle related to reference dates.

[^10]:    ${ }^{1}$ The variable seasongl factor technique was developed by Dr. Stephen N. Marris, Head of the Statistics Division of the Orgenisation for Economic Cooperation and Development, and is described in Seasonal Adjustment on Electronic Computers, pp. 257-309 (OECD, Paris, 1961. Copies can be obtained from the regional office: Organisation for Buropean 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.

