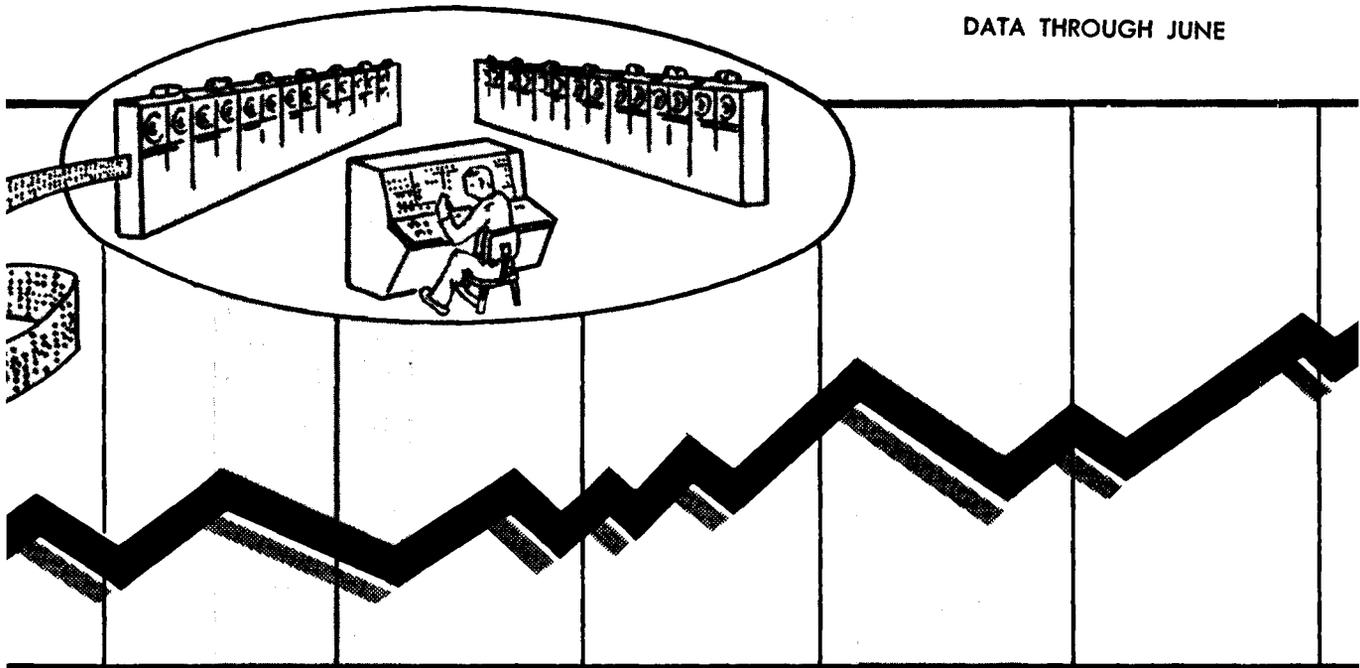


JULY 1964

Business Cycle Developments

DATA THROUGH JUNE



U.S. DEPARTMENT OF COMMERCE



BUREAU OF THE CENSUS

Business Cycle Developments

JULY 1964

DATA THROUGH JUNE

Series ES1 No. 64-7



U.S. DEPARTMENT OF COMMERCE

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New Features and Changes for This Issue

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

1. Nine new financial series are added to the report. These series are shown in two groups: One group (reserves, money supply, and financing) includes three series (85, 93, and 98) which were included in previous issues and four new series (110-113); the other group (interest rates) includes five new series (114-118). These series have not been classified according to their typical cyclical timing (leading, coincident, or lagging), but this may be done for later issues. Series 67, bank interest on business loans, continues to be shown with the lagging indicators. Other financial series, such as stock prices and corporate profits, are also included elsewhere. Historical data for the new series are provided in appendix F and brief descriptions in appendix G.

The interest rate series appears to have seasonal fluctuations. However, they are small relative to the cyclical fluctuations. Partly for this reason and partly because the pattern of the seasonal fluctuations has been changing and the amplitude declining in recent years, it is difficult to make current adjustments of such series. Consequently, the interest rate series are shown in unadjusted form. Seasonal adjustments may be introduced in later issues. The series on financial flows are seasonally adjusted. No seasonal adjustment has been made for the series on reserves.

The inclusion of additional financial indicators was recommended by a committee appointed by the American Economic Association to advise the Census Bureau on Business Cycle Developments. The members of this committee who suggested the indicators were Geoffrey H. Moore, National Bureau of Economic Research; Frank A. Morris, Loomis-Sayles and Company; and Beryl Sprinkel, Harris Trust and Savings Bank. Additional advice was obtained from the staffs of the Treasury Department, the Federal Reserve System, and the Federal Housing Administration.

2. The two series on money supply (85 and 98) have been revised for the period January 1948 to date. The revision reflects the source agency's adoption of a new benchmark for 1962 and 1963 and revision of seasonal factors for the period 1955 to date. Historical data for these series are included in appendix F.

3. National Industrial Conference Board diffusion indexes over 1- and 3-quarter spans for new capital appropriations in 17 industries have replaced those previously shown for 15 industries (1-quarter spans) and 602 companies (4-quarter spans).

4. Revisions back to January 1961, are shown throughout the report for the following series: 16, 17, 21, 22, 49, 50, 52, 53, 57, 62, and 95. These changes reflect periodic revisions in national income accounts made by the Office of Business Economics.

5. Series 47, index of industrial production, has been revised for the period January 1963 to date, reflecting a new seasonal adjustment of this series by the source agency for the period beginning January 1961. Revised figures for 1961 and 1962 will be published in a subsequent issue of this report.

6. A brief statement explaining the relations between MCD and some other types of moving averages has been added to the text, under "MCD Moving Averages."

7. An article, "Eight Series on Manufacturers' Orders and Inventories: Descriptions and Procedures," by John Musgrave and John Kuntz, is included in this report. It describes eight BCD series (6, 24, 20, 25, 64, 65, 96, and 99) which are compiled and seasonally adjusted by the Bureau of the Census, briefly explains their typical business cycle behavior, and gives a comprehensive list of sources of such information.

The August issue of Business Cycle Developments is scheduled for release on August 25.

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Technical Papers and Background Materials

To aid users of Business Cycle Developments, technical papers dealing with the statistical adjustments and series used in BCD will be included in this report from time to time. The following papers have been included as part of this program:

- No. 1.—Summary Description of the X-9 and X-10 Versions of the Census Method II Seasonal Adjustment Program (published as appendix E in the September 1963 Issue). A new version of this program is scheduled to be released in the fall. Announcement will be made at that time.
- No. 2.—Business Cycle Indicators—The Known and the Unknown (published as appendix H in the September 1963 issue). This paper explains what is known about business cycle indicators, the problems of using them, and the research needed to improve their usefulness. It was presented at the 34th session of the International Statistical Institute in Ottawa, Canada, on August 24, 1963.
- No. 3.—Census Trading-Day Adjustment Method (published in May 1964 issue). This paper is a summary of the technique used at the Census Bureau to adjust monthly series for variations arising from the number of trading or working days in the month. This technique will be included in a new variant of the Census Method II seasonal-adjustment program (X-11) to be released later this year.
- No. 4.—Eight Series on Manufacturers' Orders and Inventories: Descriptions and Procedures (published in this issue).

A limited number of copies of these articles are available, free of charge, from the Chief Economic Statistician, Bureau of the Census, Washington, D.C., 20233.

The Bureau of the Census has just published a Chart Book on Manufactures' Shipments, Inventories, and Orders showing line graphs for 108 series. The chart book covers the 1953-63 period and provides charts for industry groupings, market groupings, and supplemental series such as machinery and equipment industries, consumer durables, and defense products. Copies are available from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402, at \$1.50.

Descriptions and Procedures

Business Cycle Series

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

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

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

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

Method of Presentation

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

Basic data (chart 1 and tables 1 and 2).—Over 50 business cycle indicators and about 30 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 3-6).—These measures aid in forming a judgment of the imminence of a turning point in the business cycle and 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 7-9).—The current cyclical change is compared with changes at corresponding stages of earlier cycles. These comparisons are made in different ways depending upon the phase of the business cycle.

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

Designation of Business Cycle Turning Points

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

Seasonal and Related Statistical 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, 5, 9, 10, 11, 13, 14, 15, 17, 18, 30, 37, 55, 62, 81, 82, 83, 84, 90, 91, 92, 97, 112, and 128. Seasonal adjustments for these series were developed by either the NBER or the Bureau of the Census using Method II. The adjustment factors are shown in appendix table D, except for series 11 and 97 which are the sums of seasonally adjusted components, and series 9 and 10 which are based on

unpublished source data. Seasonally adjusted data prepared by the collecting agency will be substituted for the series mentioned above whenever they are published.

Method II adjusts for changes in average climatic conditions and institutional arrangements during the year. Adjustments for variations in the number of trading days are also made for some series; for example, new building permits. Further adjustments for variable holidays, such as Easter, are made for certain series; for example, retail sales of apparel. Studies are now underway to determine whether similar adjustments for Labor Day, Thanksgiving Day, and the day of the week upon which Christmas falls would be useful.

Studies of the effects of unusual weather upon some series have also been started. It is important to note, however, that present methods adjust for average weather conditions and not for the dispersion about this average; that is, present methods are designed to adjust for normal but not abnormal weather at any time of the year. For this reason, many seasonally adjusted series, such as housing starts, will tend to be low in months when the weather is unusually bad and high in months when the weather is unusually good. While it eventually may be possible, Census methods do not at present make any adjustments for such variations.

MCD Moving Averages

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

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

MCD moving averages are shown in chart 1 for all series with an MCD of "5" or more. To provide an indication of the variation about these moving averages, seasonally adjusted data are also plotted for years beginning with 1958. Although not so smooth as more powerful moving averages such as

the weighted 15-term Spencer curve, the MCD curve is more current and has a smaller rounding bias around business cycle peaks and troughs. On balance, the MCD curve seems to offer a reasonable compromise in terms of currency, smoothness, and fidelity to the patterns of business cycle fluctuations.

Because of advance reporting and preliminary seasonal factors, the MCD's for current data are usually larger than those computed from historical series and shown in appendix C. MCD is usually computed for a fairly long period, one covering both expansions and contractions.¹ Since the pace of change varies from phase to phase of the business cycle, such a measure will not provide an accurate estimate of the span over which to estimate cyclically significant changes at all times. Thus MCD computed for the period 1953-63 is likely to be too high during the early stages of recovery when expansion has usually been rapid and too low during the late stages of expansion when the rate of advance has usually been small. This limitation should also be borne in mind when making use of this measure.²

Analytical Measures of Current Change

Three kinds of analytical measures are presented—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.

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 widespread a business change is. They vary between the limits of 100 (all components rising) and zero (all components falling). Widespread increases are often associated with rapid growth in aggregate activity, and widespread declines with sharp reductions.

The diffusion indexes in this report are grouped according to the timing classification of the NBER. For monthly series, comparisons are made over 1-month intervals (January-February, February-March, etc.) and generally for either 3- or 5-month intervals depending upon the irregularity of the

¹Various terms are used to describe the phases of the business cycle. In this report both "contraction" and "recession" are used to describe the declining phase. No difference in meaning is intended.

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

series. The indexes based on 1-month intervals are more "current" but they are also more irregular than the 3- or 5-month indexes (see chart 2). Quarterly series are compared over 1-quarter intervals and 4-quarter intervals.

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

This report includes 29 diffusion indexes based on 15 indicator series (see tables 4 and 5). Eighteen 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 these indicators show comparisons for components over 1-month and either 3- or 5-month spans. The 11 other diffusion indexes are based on 7 indicators closely related to the above 9 indicators. They include two National Industrial Conference Board indexes (1- and 3-quarter spans) based on newly approved capital appropriations (17 industries); the First National City Bank of New York index based on quarterly profit reports (700 companies); and 8 NBER diffusion indexes—actual and anticipated—for the following: Manufacturers' sales (800 companies) and new orders (400 companies), based on data from Dun and Bradstreet, Inc.; carloadings (19 commodity groups), based on data from the Association of American Railroads; and new plant and equipment expenditures (16 industries), based on data from the Office of Business Economics and the Securities and Exchange Commission.

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

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

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

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

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

The letter "H" is used in the basic data table (table 2) to identify and highlight the current high values during the expansion, and the letter "L" to identify the low values preceding the current highs. The highs designated during the current cyclical phase will not necessarily be the specific cycle peaks. Thus, as new high levels are reached during the expansion, the current highs will be moved ahead. On the other hand, lows preceding current highs are usually specific cycle troughs. Comparisons of the current timing distributions with those for periods around earlier business cycle troughs and peaks are helpful for appraising the evidence of a prospective business cycle turning point.

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

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

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

Comparisons of Cyclical Patterns

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

Expansions may be compared by measuring changes from the immediately preceding peak levels. In table 7 of this report, the current expansion is measured from the May 1960 reference peak to the month of latest reported data. For earlier expansions, percentage changes are 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 number of months for each expansion, the spans from the preceding peak dates are different, depending on the length of the contractions for each period. Also, for those earlier periods of expansion that were shorter than the current one, the comparisons made in table 7 reflect the status at a point after a new contraction had set in. 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 expansions.

Expansions also may be compared by computing changes from reference trough levels and from reference trough dates (table 8). This type of comparison measures the extent of the rise from the trough level so many months after the upswing began. The same situation exists here as for the comparisons shown in table 7: For earlier expansions that were shorter than the current one, the comparisons show the status at a point after a new contraction had set in.

Contractions can be 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. These comparisons will be made during a contraction period.

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 (See appendix B). Specific cycle comparisons are shown in table 9. These comparisons differ from those shown for reference cycles in that they show the status only up to the specific peak date. For some series past specific expansions were shorter than the current one and, therefore, the earlier comparisons span fewer months than those for the current expansion.

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 pro-

cedure since 1919. The principal cases of this sort are as follows:

7. New private nonfarm dwelling units started (prior to 1939: Residential building contracts, floor space)
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 labor cost per unit of output, total manufacturing (prior to 1946: Production worker wage cost per unit).

Charts

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

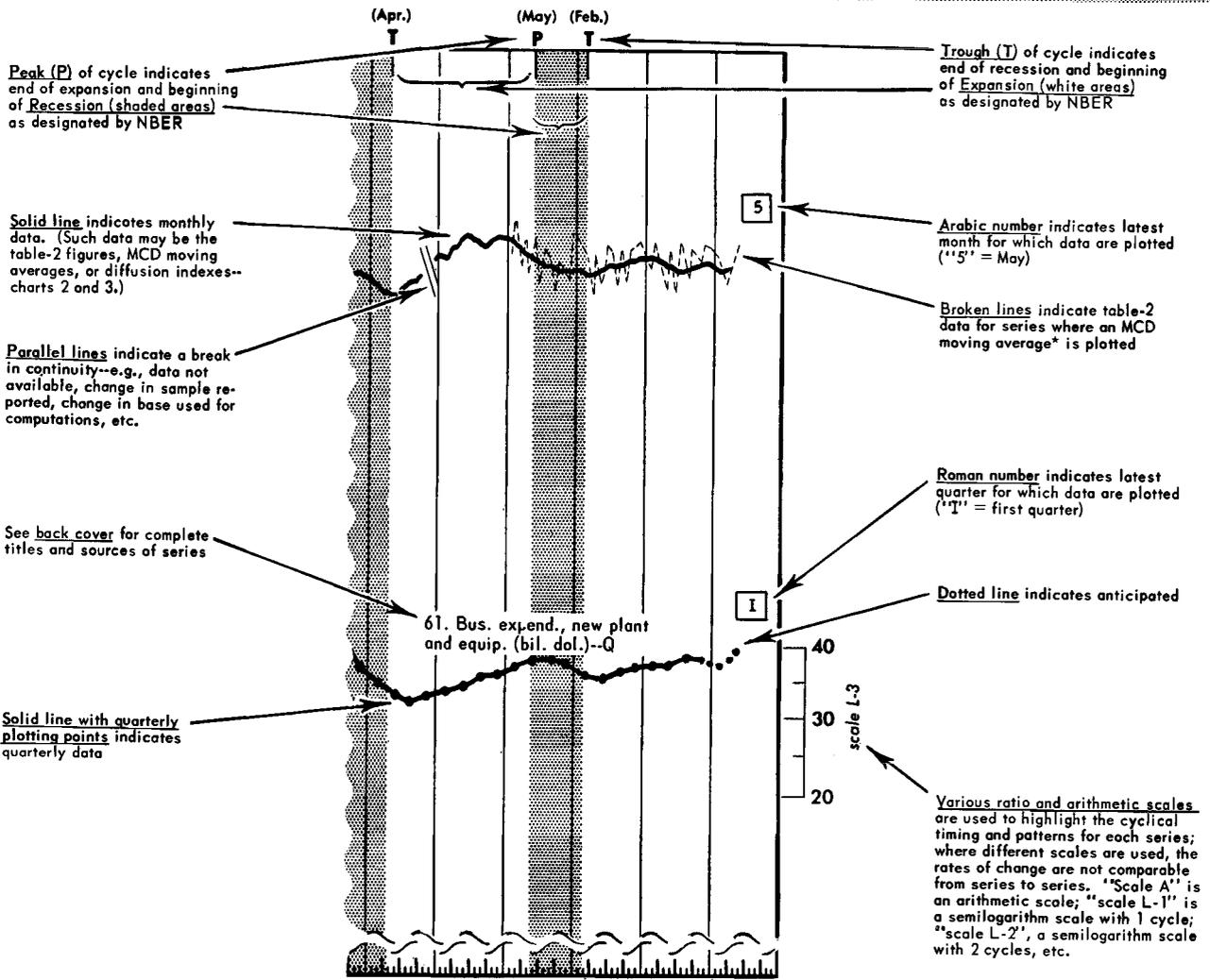
Historical Time Series (charts 1, 2, and 3).—These charts show the cyclical fluctuations of each series against the background of expansions and recessions in general business activity from 1948 to the current month. Shaded areas on the charts indicate periods of business cycle recession between business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

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

Cyclical Comparisons (charts 4 and 5).—These charts compare the performance of each series during the current expansion with its performance during the expansion phase of previous business cycles. The usual date sequence followed in charts is disregarded, and instead the data are lined at the strategic point of the business cycle: For expansions, the reference trough (chart 4) and specific trough (chart 5). Thus these charts facilitate judgements on the vigor of the current expansion relative to cyclical movements during the corresponding expansions of previous cycles.

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

How to Read Charts 1, 2, and 3



*Certain irregular series are shown in terms of their MCD moving averages. These series are noted. Such averages are plotted 2 months behind actual data for MCD 5-term moving averages and 2½ months behind, for MCD 6-term moving averages. See text for description of MCD moving averages.

Table 1.--BASIC DATA AND CURRENT CHANGES FOR BUSINESS CYCLE SERIES: 4 MOST RECENT MONTHS

Series descriptions (See complete titles and sources on back cover)	Unit of measure	Basic data ¹				Percent change ²			
		Mar. 1964	Apr. 1964	May 1964	June 1964	Avg. change, 1953- 1963 ³	Mar. to Apr. 1964	Apr. to May 1964	May to June 1964
NBER LEADING INDICATORS									
1. Avg. workweek, prod. workers, mfg...	Hours.....	40.7	40.7	40.7	p40.6	0.5	0.0	0.0	-0.2
2. Accession rate, manufacturing.....	Per 100 empl.	4.0	r4.0	p3.7	(NA)	4.9	0.0	-7.5	(NA)
30. Nonagri. placements, all industries.	Thous.....	520	522	533	516	1.8	+0.4	+2.1	-5.2
3. Layoff rate, manufacturing.....	Per 100 empl.	1.7	1.6	p1.7	(NA)	9.5	+5.9	-6.2	(NA)
4. Temporary layoff, all industries....	Thous.....	91	122	104	117	17.8	-34.1	+14.8	-12.5
5. Avg. weekly initial claims, State unemployment insurance.....	..do.....	273	260	260	259	5.3	+4.8	0.0	+0.4
6. New orders, durable goods indus....	Bil. dol.....	19.26	r20.46	r20.10	p19.84	3.8	+6.2	-1.8	-1.3
24. New orders, mach. and equip. indus..	..do.....	3.46	r3.61	r3.98	p3.73	4.5	+4.3	+10.2	-6.3
9. Construction contracts, commercial and industrial.	Mil. sq. ft. floor space.	48.17	54.84	46.22	(NA)	9.7	+13.8	-15.7	(NA)
10. Contracts and orders, plant, equip..	Bil. dol.....	4.10	r4.37	p4.68	(NA)	4.9	+6.6	+7.1	(NA)
11. New capital appropriations, mfg. ⁴...	..do.....	...	...	(NA)	(NA)	11.6	...	(NA)	(NA)
7. Private nonfarm housing starts.....	Ann. rate, thous.....	1638	r1501	r1478	p1549	7.3	-8.4	-1.5	+4.8
29. New bldg. permits, private housing..	1957-59=100..	122.5	111.1	r110.3	p115.6	3.8	-9.3	-0.7	+4.8
12. Net change, number of businesses ^{4, 5} .	Thous.....	...	...	(NA)	(NA)	2	...	(NA)	(NA)
13. New business incorporations.....	Number.....	16064	16242	15932	(NA)	2.7	+1.1	-1.9	(NA)
14. Liabilities of business failures....	Mil. dol.....	107.25	98.50	90.44	153.07	16.9	+8.2	+8.2	-69.3
15. Large business failures.....	No. per week.	37	46	39	38	13.1	-24.3	+15.2	+2.6
16. Corporate profits after taxes ⁴	Ann. rate, bil. dol....	...	...	(NA)	(NA)	6.3	...	(NA)	(NA)
17. Ratio, price to unit labor cost, mfg..	1957-59=100..	r102.7	r103.8	r103.5	p103.3	0.7	+1.1	-0.3	-0.2
18. Profits per dol. of sales, mfg. ⁴ ...	Cents.....	...	...	(NA)	(NA)	6.8	...	(NA)	(NA)
22. Ratio, profits to income originat- ing, corporate, all industries ⁴	Percent.....	...	...	(NA)	(NA)	5.1	...	(NA)	(NA)
19. Stock prices, 500 common stocks*....	1941-43=100..	78.80	79.94	80.72	80.24	2.6	+1.4	+1.0	-0.6
21. Change in business inventories, all industries ^{4, 5}	Ann. rate, bil. dol....	...	...	e+3.0	(NA)	2.5	...	+0.5	(NA)
31. Change in book value, manufacturing and trade inventories ⁵.....	..do.....	r+3.0	r+7.5	p-2.9	(NA)	3.5	+4.9	-10.4	(NA)
20. Change in book value, mfrs.' inven- tories of materials and supplies ⁵..	..do.....	r0.0	r-1.0	p-0.8	(NA)	1.5	-1.0	+0.2	(NA)
37. Purchased materials, percent report- ing higher inventories.....	Percent.....	54	55	51	56	6.8	+1.9	-7.3	+9.8
26. Buying policy, prod. mtls., commit- ments 60 days or longer*.....	..do.....	56	59	58	59	5.8	+5.4	-1.7	+1.7
32. Vendor performance, percent report- ing slower deliveries*.....	..do.....	60	60	63	55	7.7	0.0	+5.0	-12.7
25. Change in unfilled orders, durable goods industries ⁵	Bil. dol.....	+0.16	r+1.04	r+0.46	p+0.58	0.49	+0.88	-0.58	+0.12
23. Industrial materials prices*.....	1957-59=100..	98.9	102.4	100.9	101.4	1.3	+3.5	-1.5	+0.5
NBER ROUGHLY COINCIDENT INDICATORS									
41. Employees in nonagri. establishments.	Thous.....	58327	r58502	r58551	p58665	0.3	+0.3	+0.1	+0.2
42. Total nonagricultural employment....	..do.....	65207	65811	65889	65549	0.4	+0.9	+0.1	-0.5
43. Unemployment rate, total.....	Percent.....	5.4	5.4	5.1	5.3	4.2	0.0	+5.6	-3.9
40. Unemployment rate, married males....	..do.....	2.9	2.9	2.6	2.8	6.0	0.0	+10.3	-7.7
45. Avg. weekly insured unemployed, State.	..do.....	3.8	3.8	3.6	3.6	4.8	0.0	+5.3	0.0
46. Help-wanted advertising.....	1957-59=100..	r113	120	118	p121	3.1	+6.2	-1.7	+2.5
47. Industrial production.....	..do.....	r129.0	r130.4	r131.2	p131.8	1.1	+1.1	+0.6	+0.5
50. GNP in 1954 dollars ⁴	Ann. rate, bil. dol....	...	...	p513.7	(NA)	1.3	...	+1.1	(NA)
49. GNP in current dollars ⁴.....	..do.....	...	...	e618.5	(NA)	1.5	...	+1.6	(NA)
57. Final sales ⁴.....	..do.....	...	...	e615.5	(NA)	1.3	...	+1.5	(NA)
51. Bank debits outside NYC.....	..do.....	2322.5	2451.3	r2313.0	p2329.9	1.5	+5.5	-5.6	+0.7
52. Personal income.....	..do.....	r482.9	r486.6	r487.8	p489.2	0.5	+0.8	+0.2	+0.3
53. Labor income in mining, mfg., constr.	..do.....	r124.6	r125.9	r125.8	p126.1	0.8	+1.0	-0.1	+0.2
54. Sales of retail stores.....	Mil. dol.....	r21223	r21392	r21743	p21746	0.8	+0.8	+1.6	0.0
55. Wholesale prices, except farm prod- ucts and foods.....	1957-59=100..	101.0	101.1	r101.1	p101.1	0.2	+0.1	0.0	0.0

Table 1.--BASIC DATA AND CURRENT CHANGES FOR BUSINESS CYCLE SERIES: 4 MOST RECENT MONTHS--Continued

Series descriptions (See complete titles and sources on back cover)	Basic data ¹				Percent change ²				
	Unit of measure	Mar. 1964	Apr. 1964	May 1964	June 1964	Avg. change, 1953- 1963 ³	Mar. to Apr. 1964	Apr. to May 1964	May to June 1964
NBER LAGGING INDICATORS									
61. Business expenditures, new plant and equipment ⁴	Ann. rate, bil. dol....	...	...	a43.35		3.2	...	+1.9	
52. Labor cost per unit of output, mfg.	1957-59=100..	r98.3	r97.5	r97.6	p97.7	0.6	-0.8	+0.1	+0.1
68. Labor cost per dollar of real corporate GNP ⁴.....	..do.....	...	...	104.2		0.9	...	-0.1	
64. Book value of mfrs.' inventories....	Bil. dol....	60.3	60.5	p60.4	(NA)	0.5	+0.3	-0.2	(NA)
65. Book value of mfrs.' inventories of finished goods.....	..do.....	21.4	r21.6	p21.5	(NA)	0.8	+0.9	-0.5	(NA)
66. Consumer installment debt.....	Mil. dol....	54315	54727	55220	(NA)	0.8	+0.8	+0.9	(NA)
67. Bank rates on short-term business loans* ⁴	Percent.....	...	...	4.99		2.3	...	0.0	
OTHER U.S. SERIES WITH BUSINESS CYCLE SIGNIFICANCE									
82. Federal cash payments to public....	Ann. rate, bil. dol....	120.3	123.2	110.3	120.0	5.7	+2.4	-10.5	+8.8
83. Federal cash receipts from public...	..do.....	115.3	126.6	105.1	114.4	5.4	+9.8	-17.0	+8.8
84. Federal cash surplus or deficit ⁵....	..do.....	-5.0	+3.4	-5.2	-5.6	5.6	+8.4	-8.6	-0.4
95. Balance, Federal income and product account ⁴ ⁵.....	..do.....	...	...	(NA)		2.5	...	(NA)	
90. Defense Dept. oblig., procurement...	Mil. dol....	1030	1516	2192	(NA)	26.9	+47.2	+44.6	(NA)
91. Defense Dept. obligations, total....	..do.....	3731	4592	4941	(NA)	15.1	+23.1	+7.6	(NA)
92. Military contract awards in U.S.....	..do.....	1603	2529	2465	(NA)	26.2	+57.8	-2.5	(NA)
99. New orders, defense products.....	Bil. dol....	2.18	r2.37	r2.51	p2.22	23.3	+8.7	+5.9	-11.6
93. Free reserves* ⁵	Mil. dol....	+98	r+162	+84	p+118	104.2	+64	-78	+34
85. Change in money supply ⁵	Percent.....	r+0.26	r+0.32	r-0.13	p+0.71	0.23	+0.06	-0.45	+0.84
98. Change in money supply and time deposits ⁵.....	..do.....	r+0.37	r+0.44	r+0.30	p+0.81	0.21	+0.07	-0.14	+0.51
110. Total private borrowing ⁴	Ann. rate, bil. dol....	...	...	(NA)		11.6	...	(NA)	
111. Corporate gross savings ⁴.....	..do.....	...	...	(NA)		8.6	...	(NA)	
112. Change, business loans ⁵.....	..do.....	+0.05	+1.81	+5.62	+3.86	1.22	+1.76	+3.81	-1.76
113. Change, consumer installment debt ⁵..	..do.....	+6.29	+4.94	+5.92	(NA)	0.85	-1.35	+0.98	(NA)
114. Treasury bill rate*.....	Percent.....	3.55	3.48	3.48	3.48	7.3	-2.0	0.0	0.0
115. Treasury bond yields*.....	..do.....	4.18	4.20	4.16	4.13	1.8	+0.5	-1.0	-0.7
116. Corporate bond yields*.....	..do.....	4.45	4.49	4.48	4.49	1.7	+0.9	-0.2	+0.2
117. Municipal bond yields*.....	..do.....	3.28	3.28	3.20	3.20	2.6	0.0	-2.4	0.0
118. Mortgage yields*.....	..do.....	5.45	5.45	5.45	5.45	.58	0.0	0.0	0.0
86. Exports, excluding military aid....	Mil. dol....	2077.5	2046.0	2052.1	(NA)	4.6	-1.5	+0.3	(NA)
87. General imports.....	..do.....	1522.9	1542.1	1548.1	(NA)	3.6	+1.3	+0.4	(NA)
88. Merchandise trade balance ⁵.....	..do.....	+554.6	+503.9	+504.0	(NA)	59.0	-50.7	+0.1	(NA)
89. U.S. balance of payments ⁴ ⁵.....	..do.....	...	...	(NA)		286	...	(NA)	
81. Consumer prices.....	1957-59=100..	107.7	107.9	108.0	(NA)	0.2	+0.2	+0.1	(NA)
94. Construction contracts, value.....	..do.....	140	138	138	(NA)	7.0	-1.4	0.0	(NA)
96. Unfilled orders, dur. goods indus...	Bil. dol....	47.80	48.84	r49.30	p49.87	1.5	+2.2	+0.9	+1.2
97. Backlog of capital appro. mfg. ⁴.....	..do.....	8.96	...	...	(NA)	5.9	...	...	(NA)

r = revised; p = preliminary; e = estimated; a = anticipated; NA = not available.

¹Series are seasonally adjusted except for those series, indicated by an asterisk (*), that appear to contain no seasonal movement. See additional basic data and notes in table 2.

²To facilitate interpretations of cyclical movements, those series that usually fall when general business activity rises and rise when business falls are inverted so that rises are shown as declines and declines as rises (see series 3, 4, 5, 14, 15, 40, 43, and 45). Percent changes are calculated in the usual way but the signs are reversed; e.g., if the rate of decrease is 0.6 percent, it is shown as +0.6. See footnote 5 for other "change" qualifications.

³This average is based on month-to-month (or quarter-to-quarter) changes without regard to sign. The period varies among the series, covering 1953-63 for most series.

⁴Quarterly series. Figures are placed in the middle month of quarter.

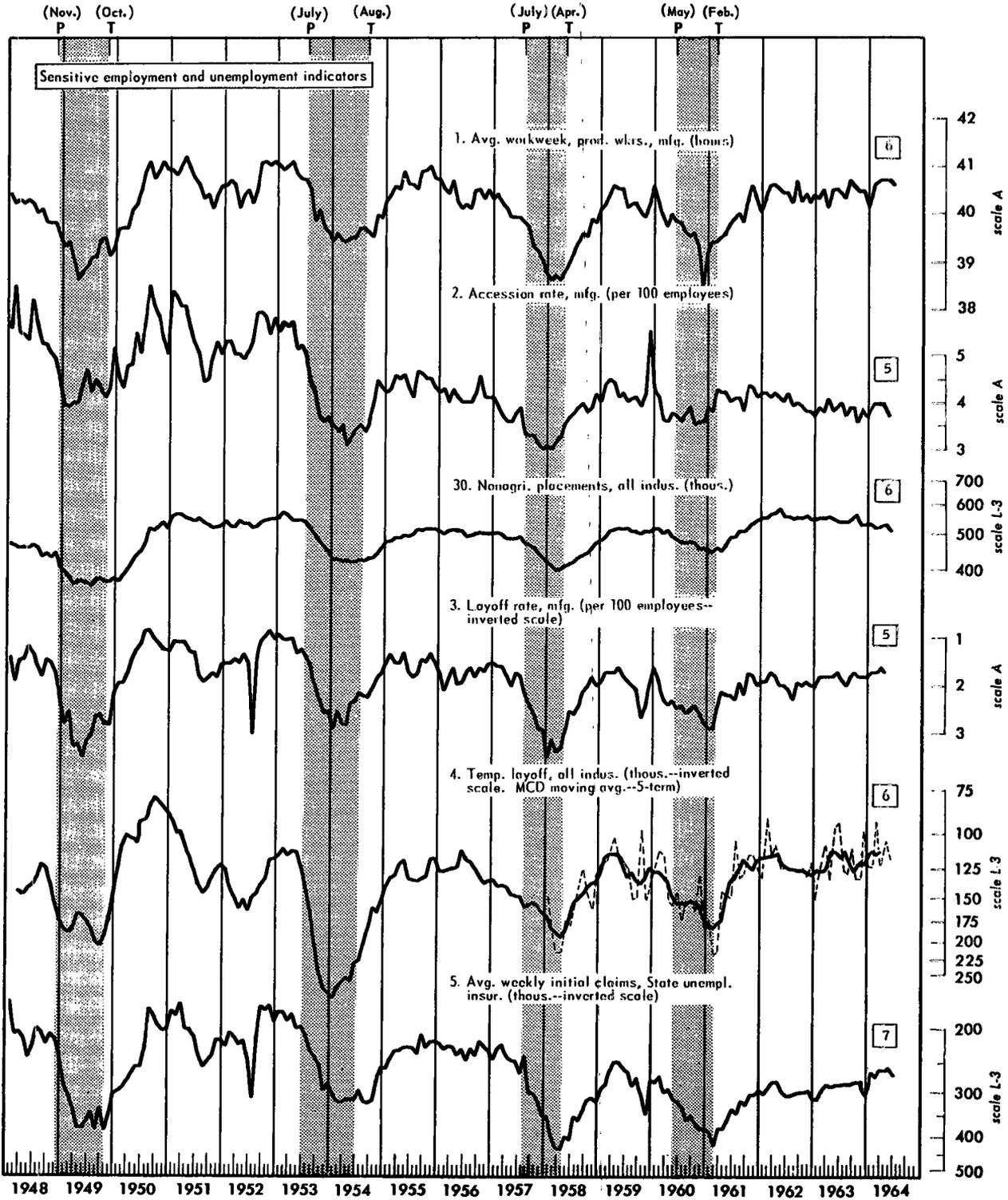
⁵Since basic data for this series are expressed in plus or minus amounts, the changes are month-to-month (or quarter-to-quarter) differences expressed in the same unit of measure as the basic data, rather than in percent.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT

A

NBER Leading Indicators



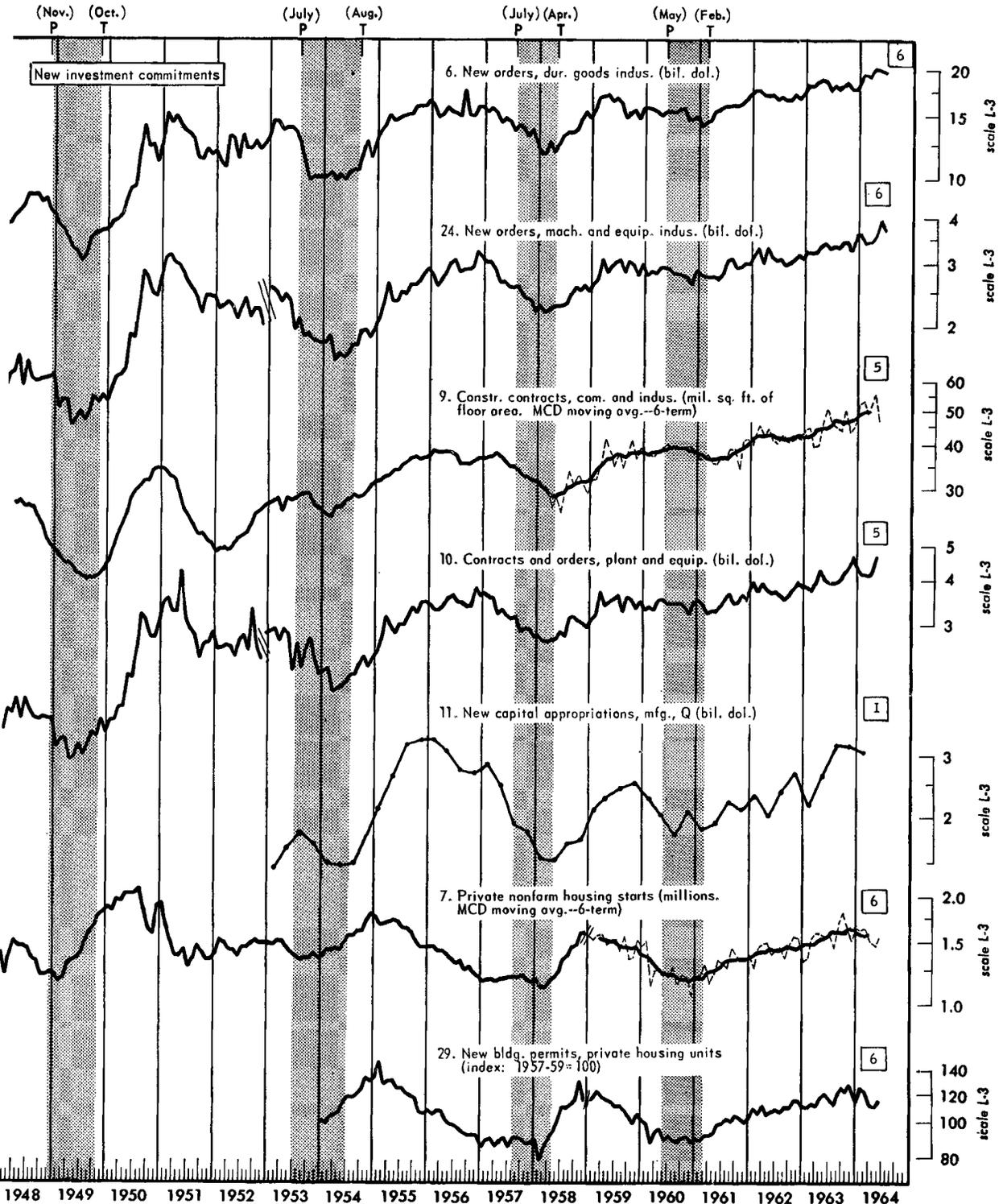
See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

A

NBER Leading Indicators—Con.



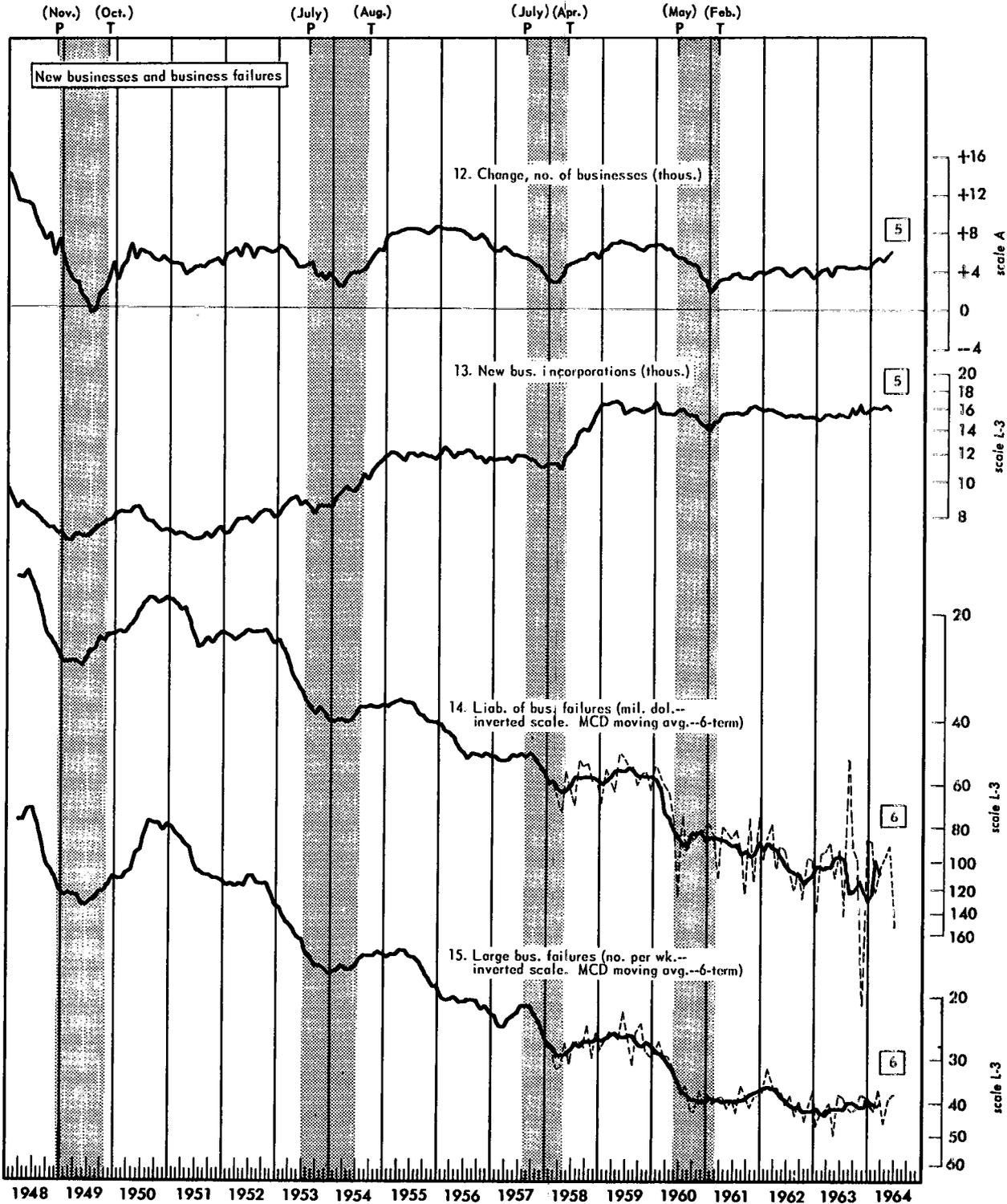
See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

A

NBER Leading Indicators—Con.



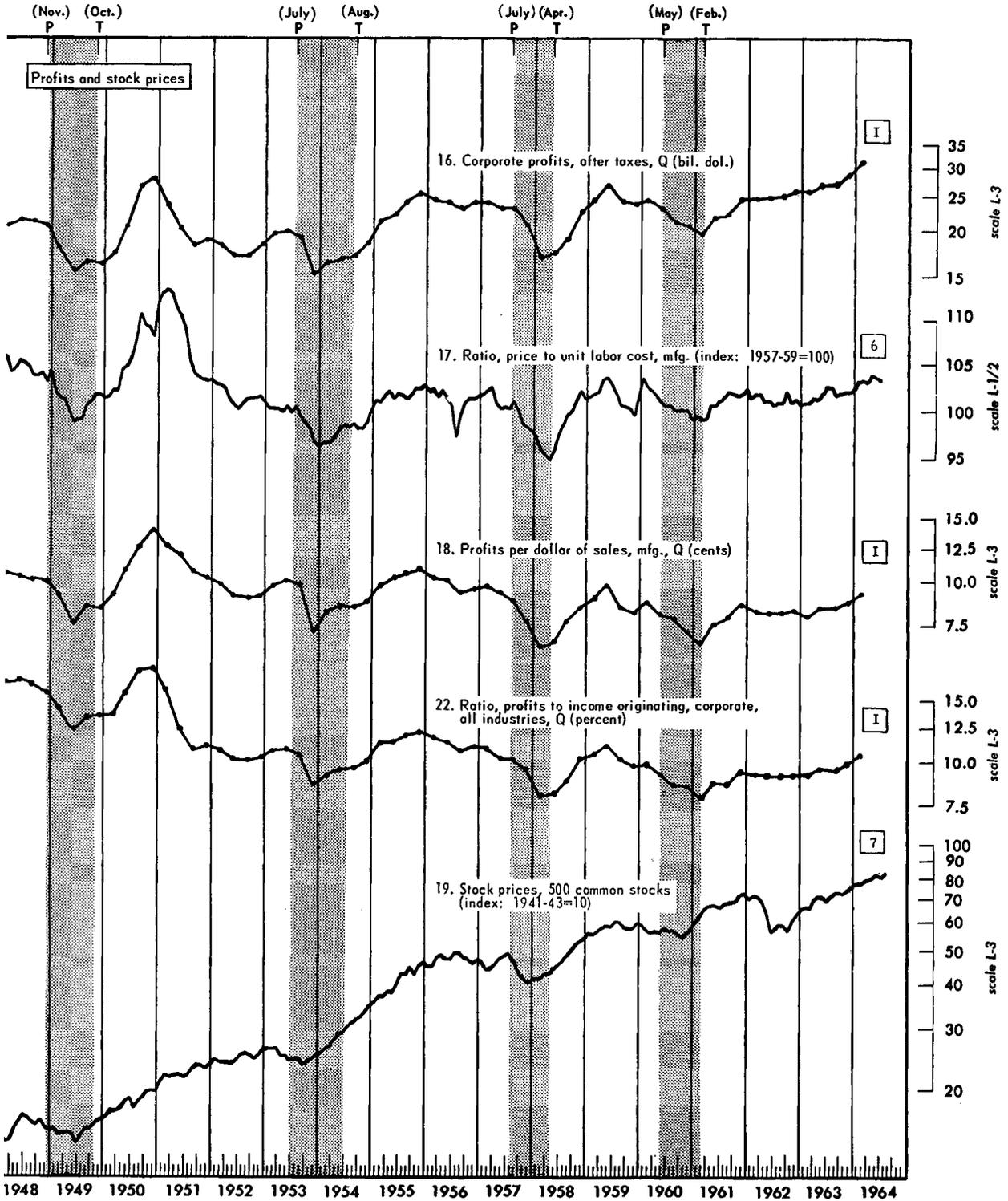
See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

A

NBER Leading Indicators—Con.



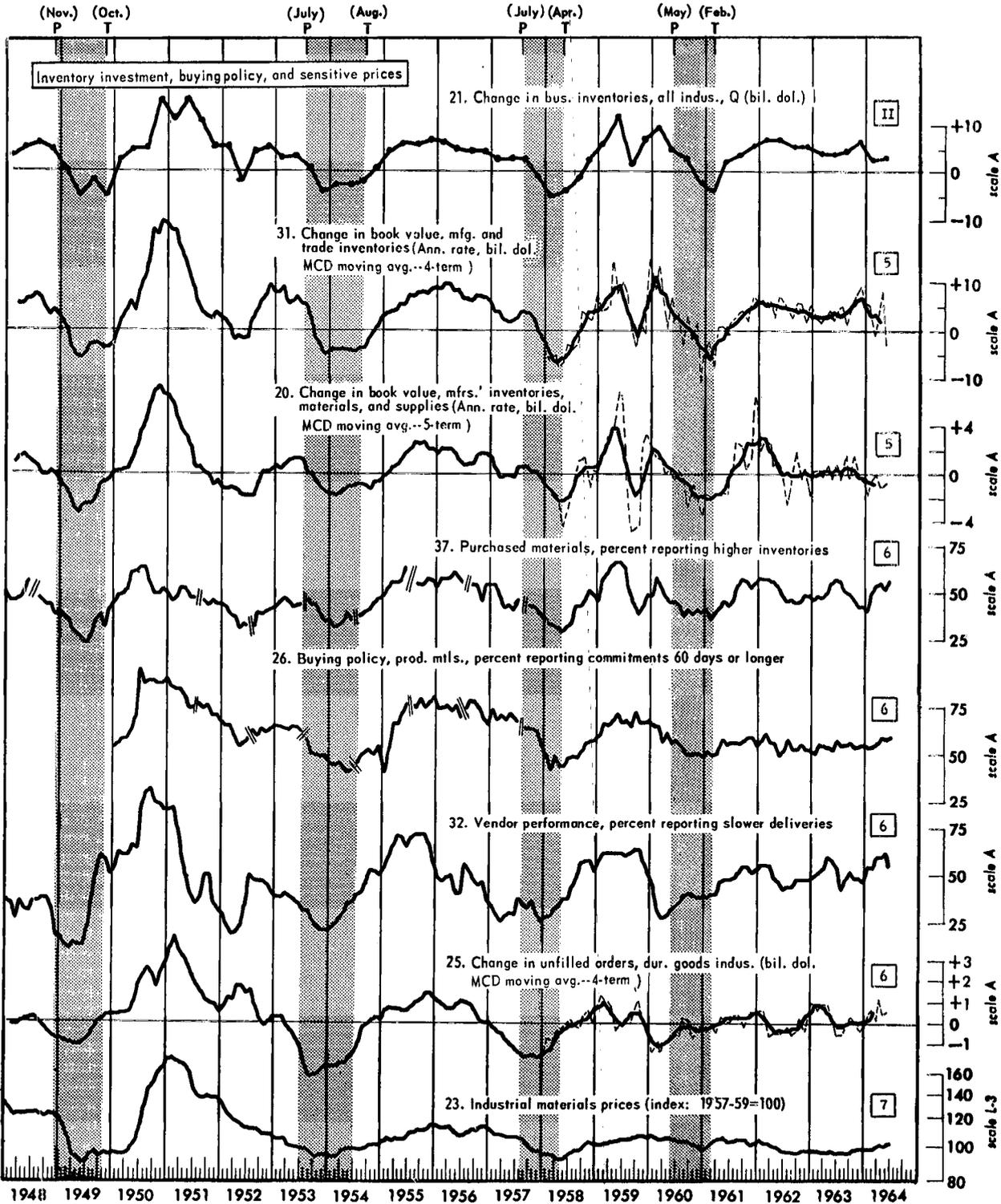
See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

A

NBER Leading Indicators—Con.



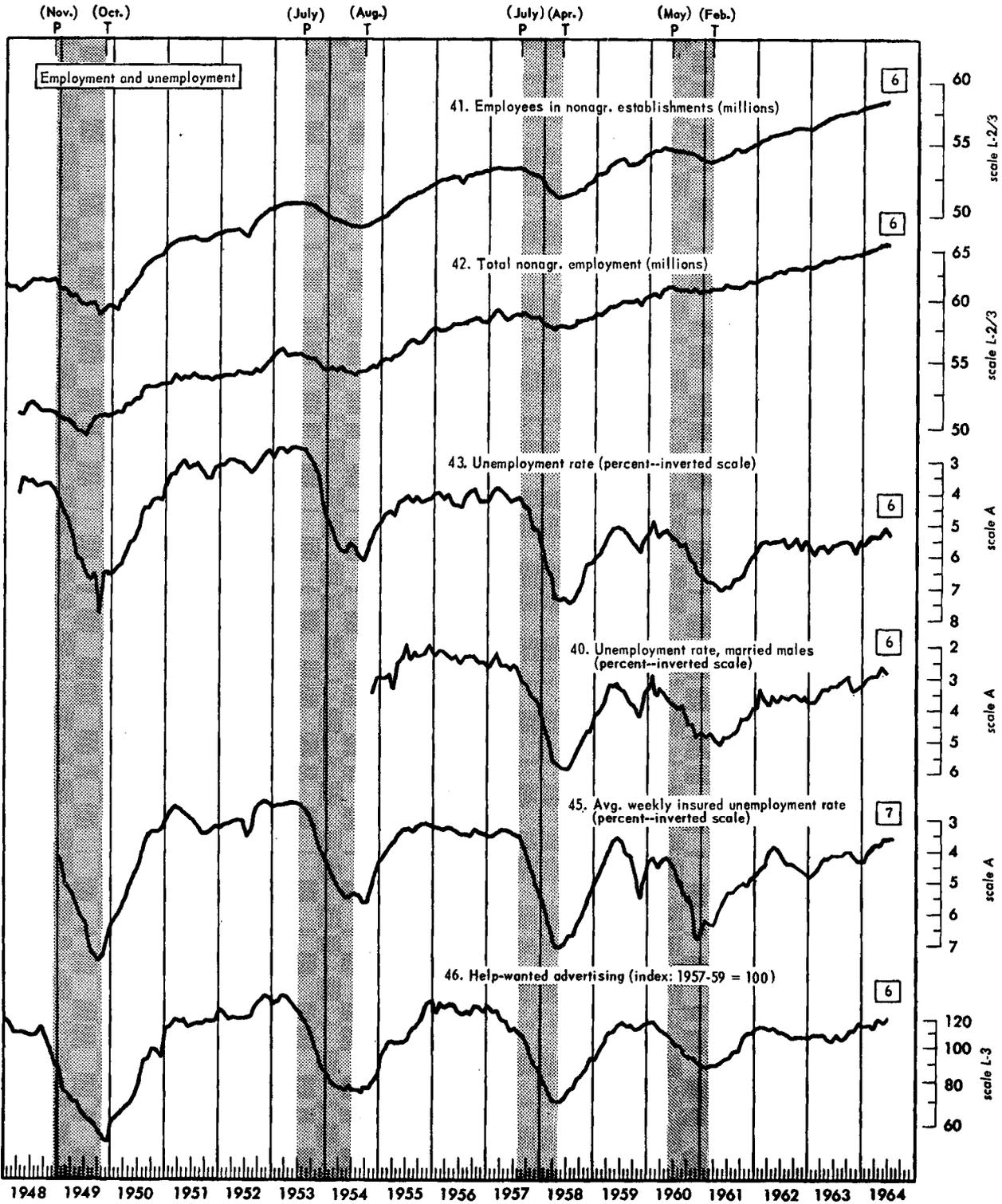
See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

B

NBER Roughly Coincident Indicators



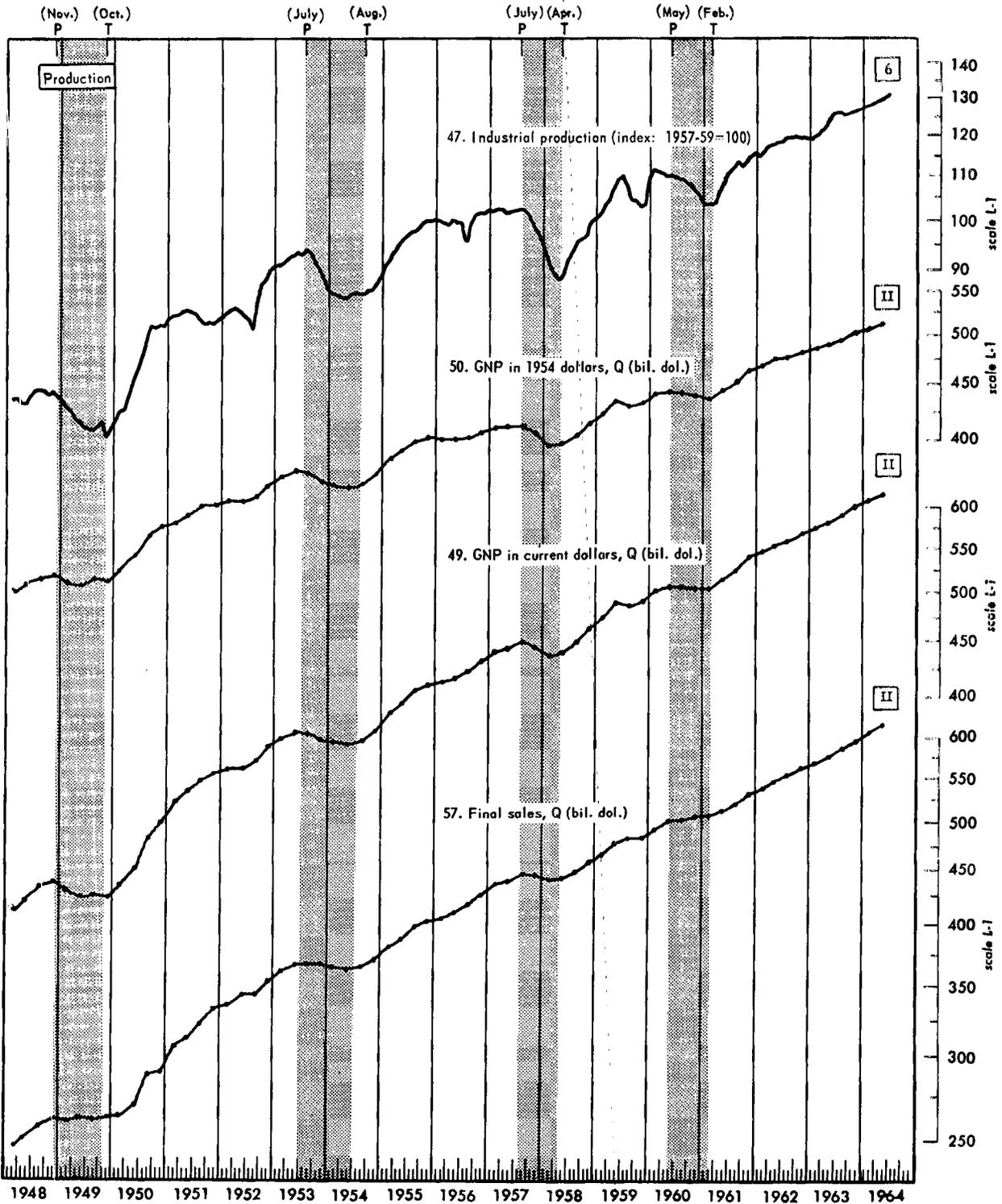
See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

B

NBER Roughly Coincident Indicators—Con.



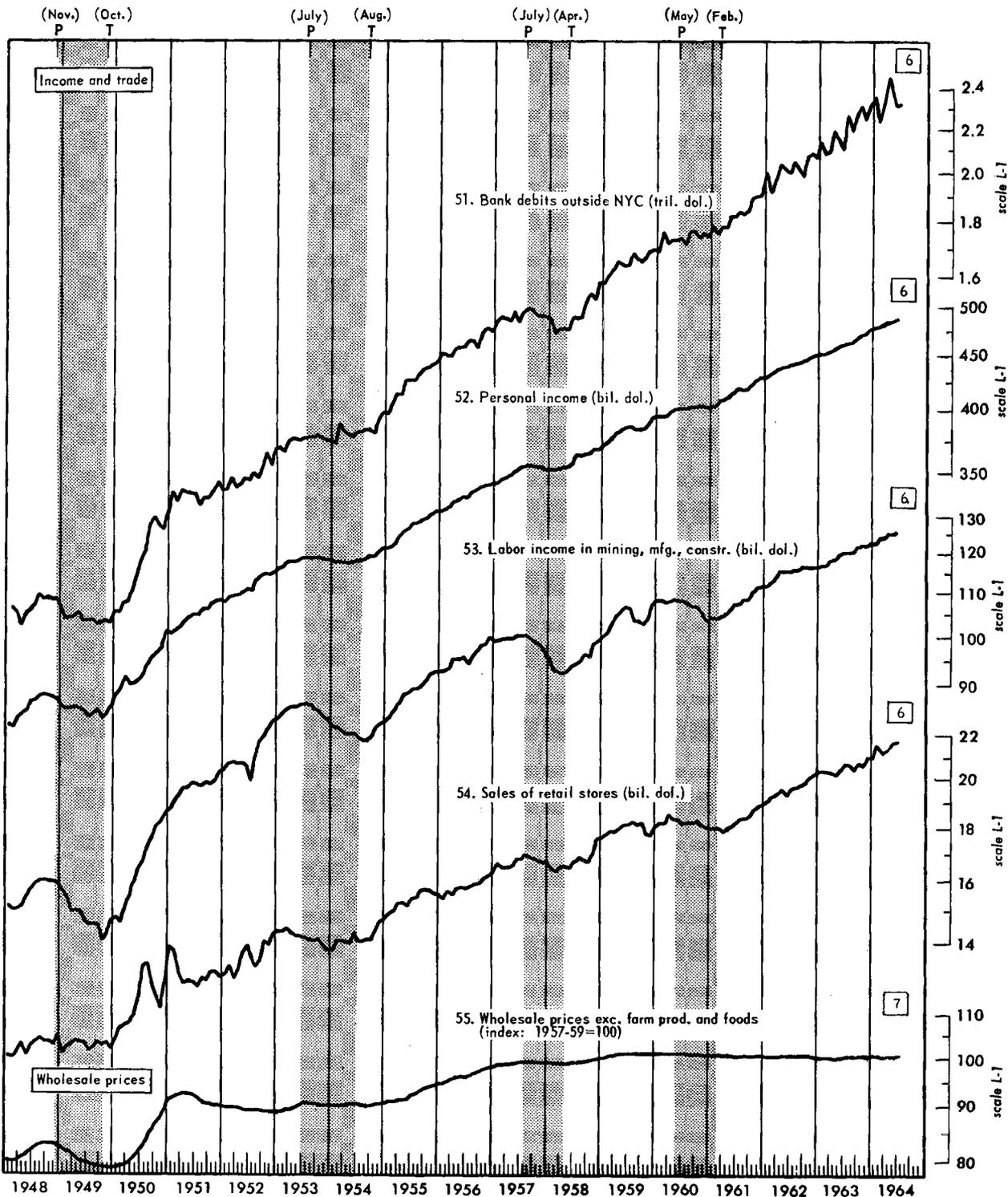
See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

B

NBER Roughly Coincident Indicators--Con.



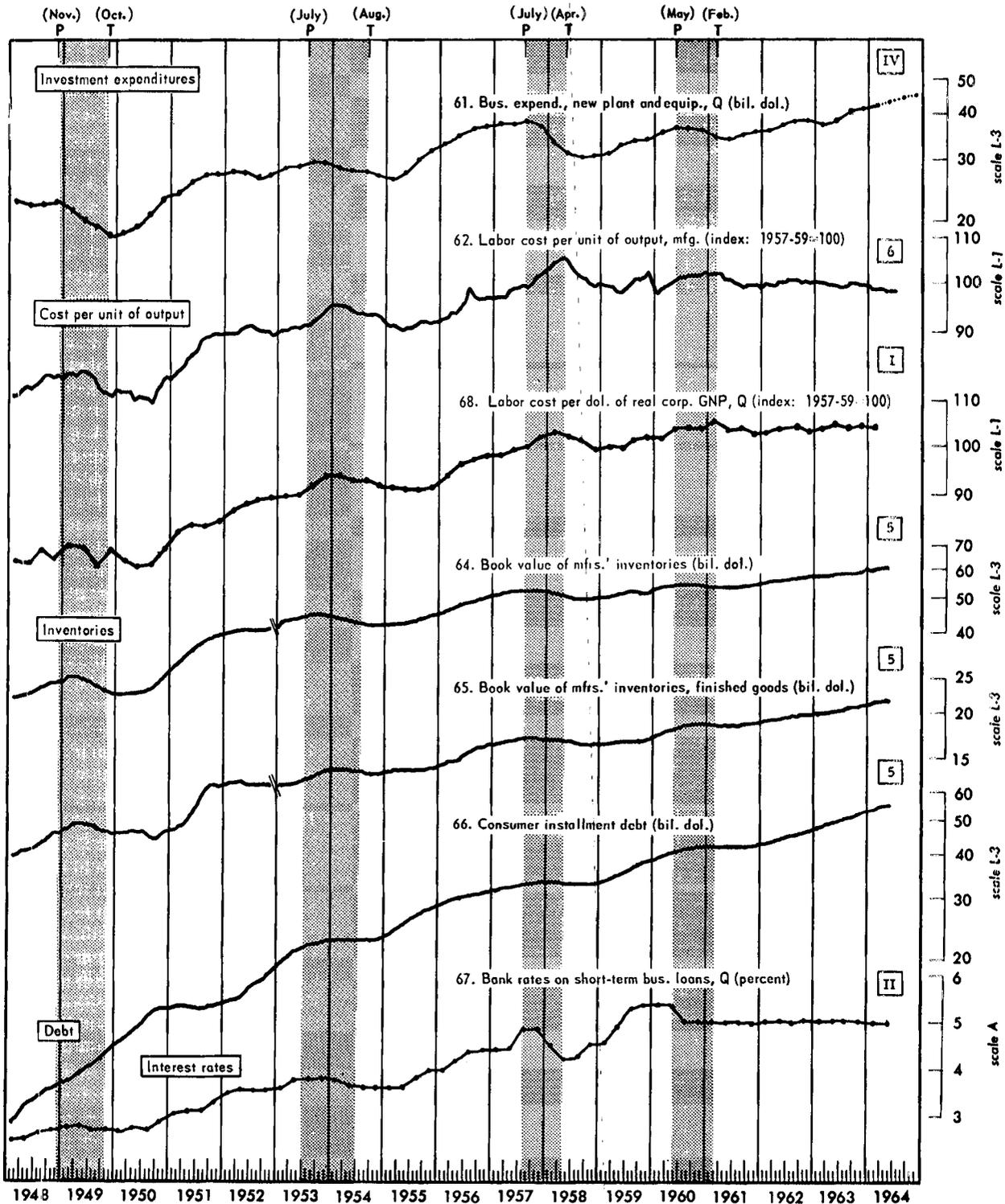
See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

C

NBER Lagging Indicators



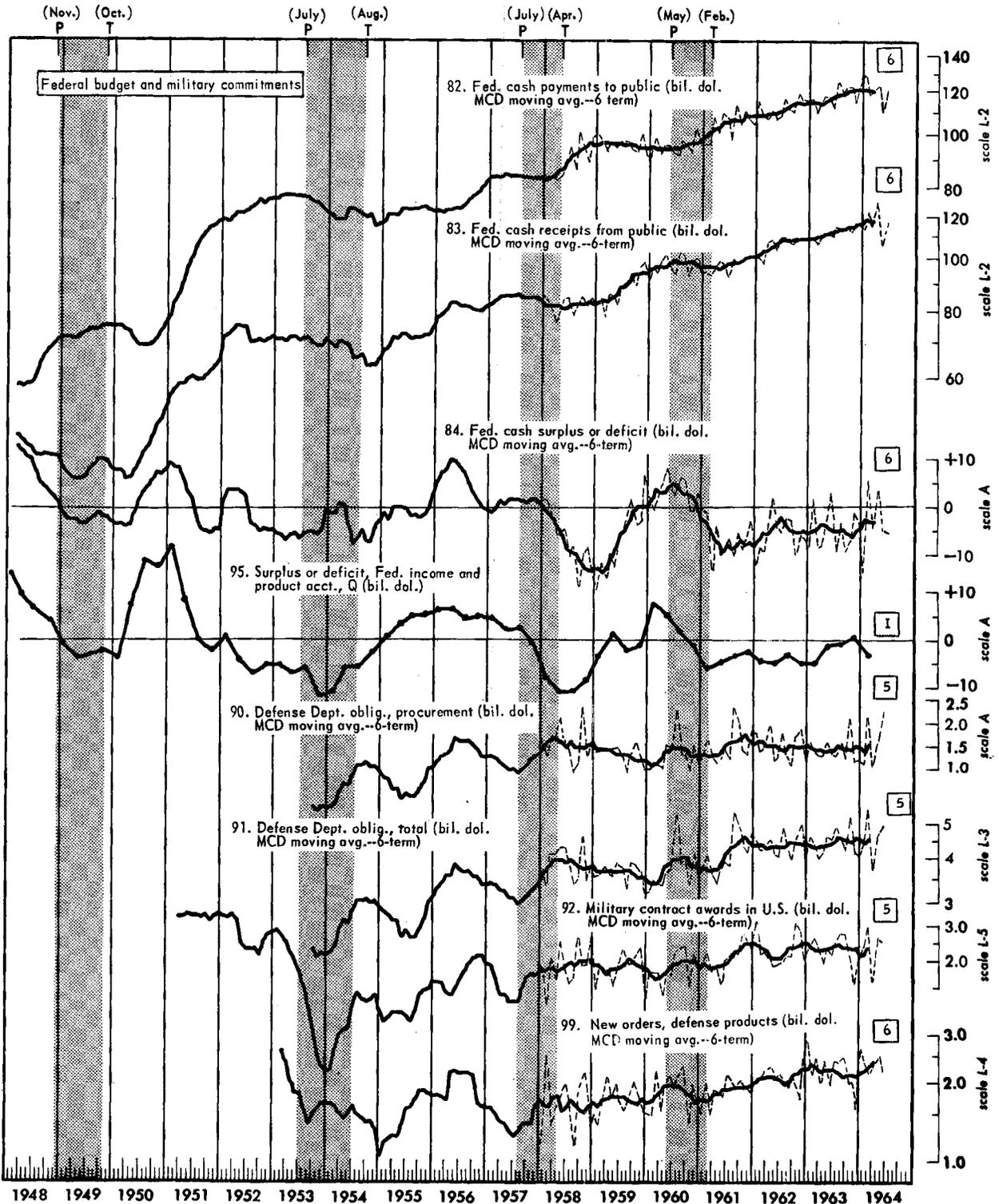
See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

D

Other U.S. Series with Business Cycle Significance--Con.



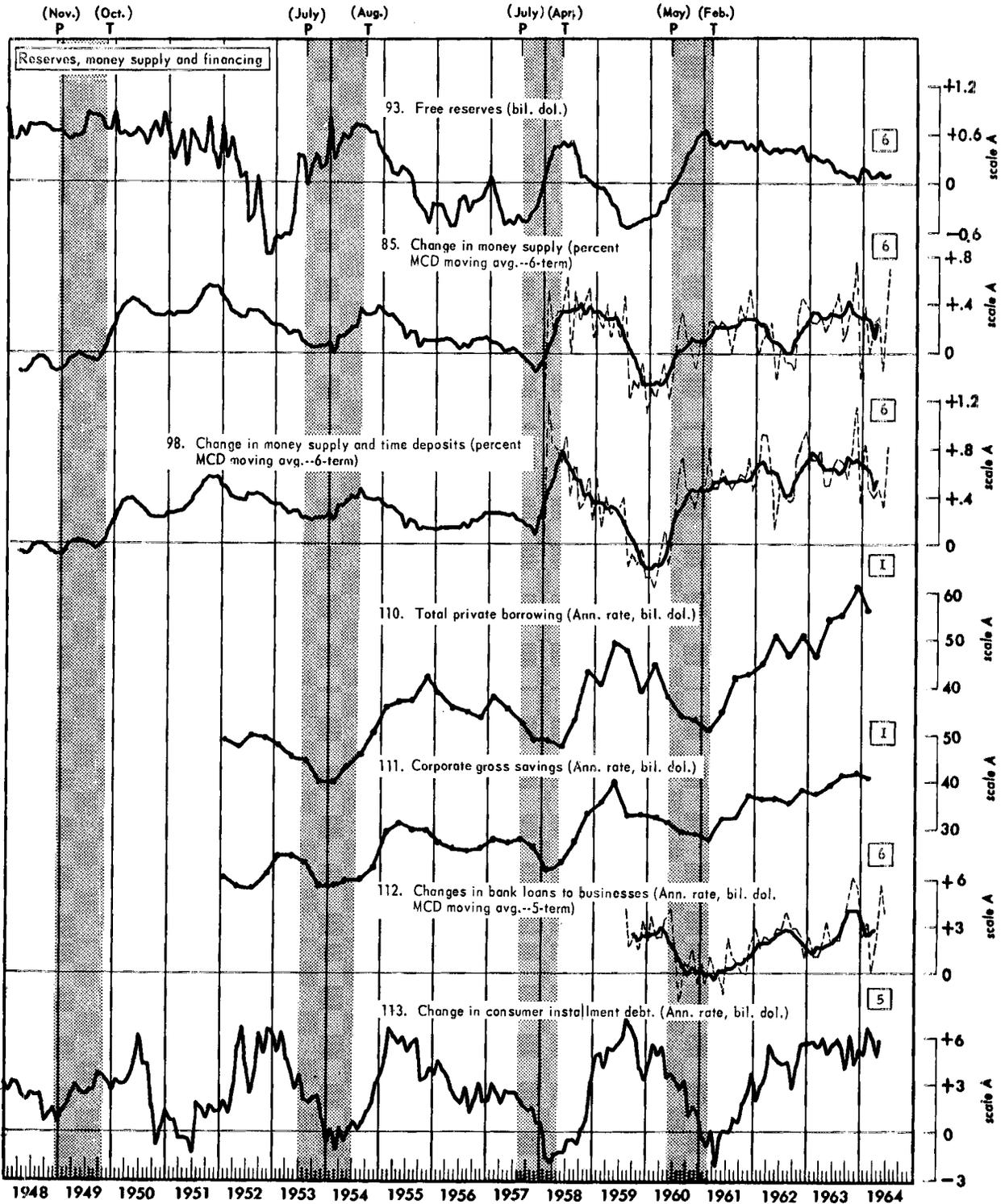
See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

A

NBER Leading Indicators—Con.



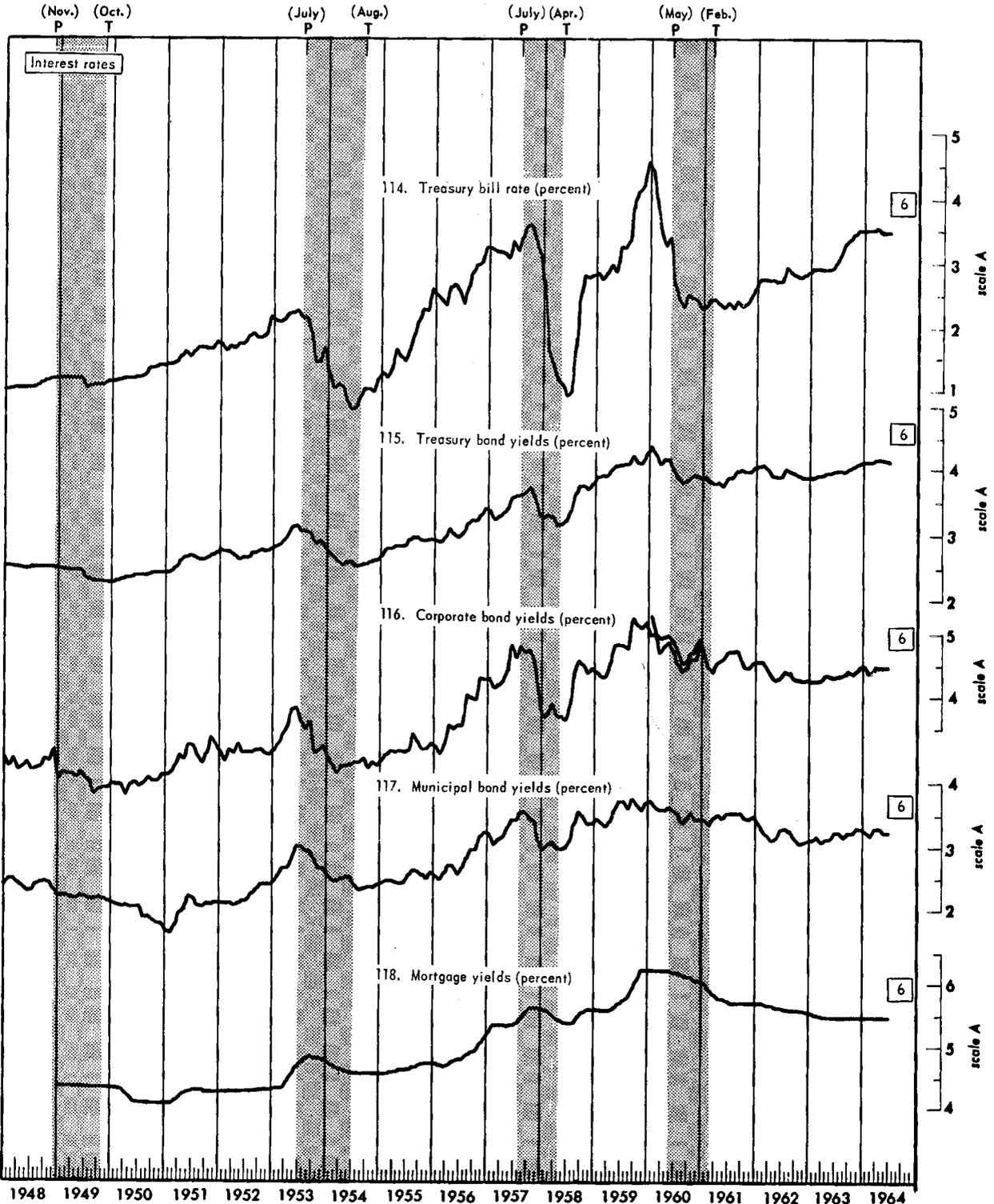
See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

A

NBER Leading Indicators—Con.



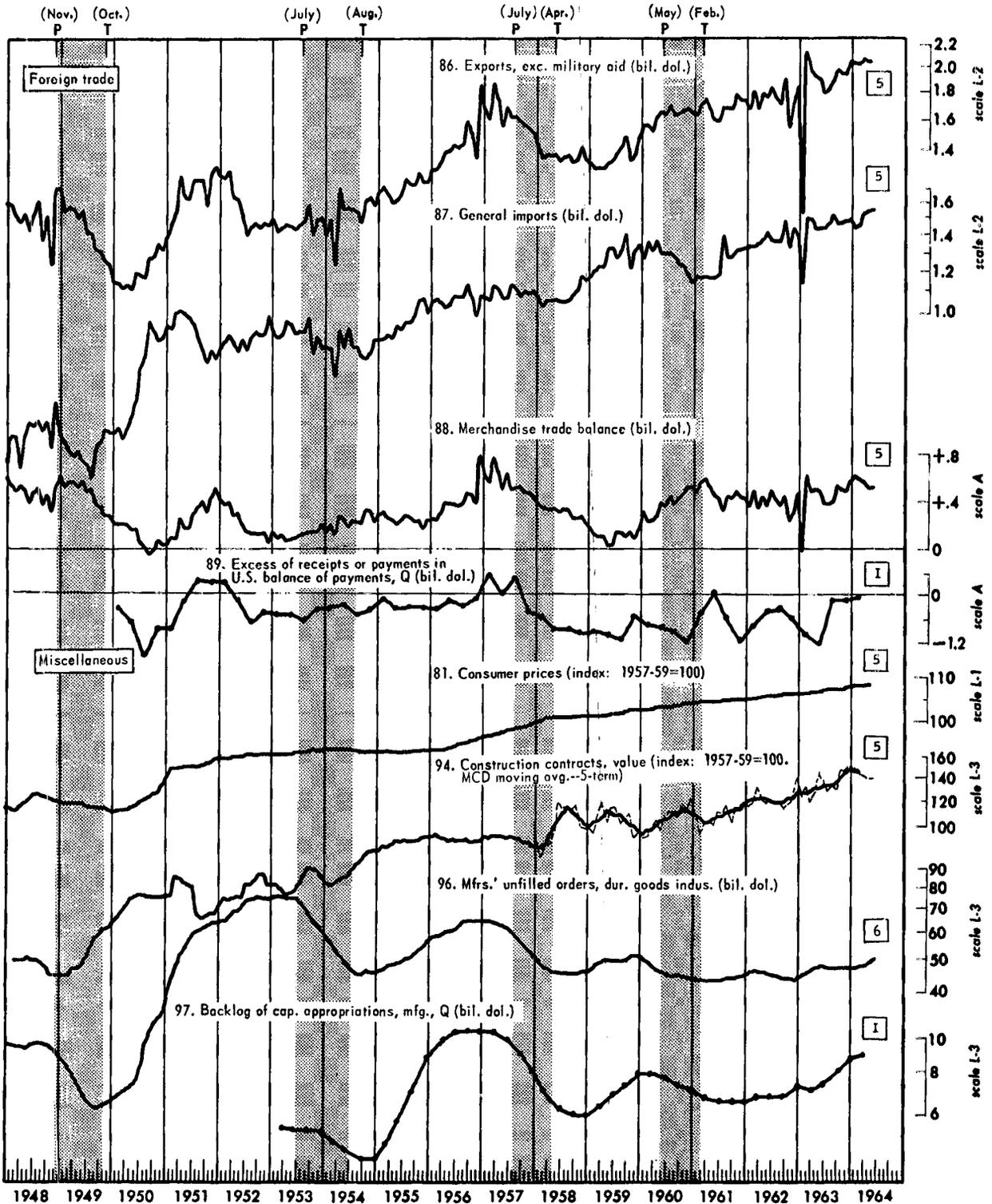
See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

D

Other U.S. Series with Business Cycle Significance--Con.

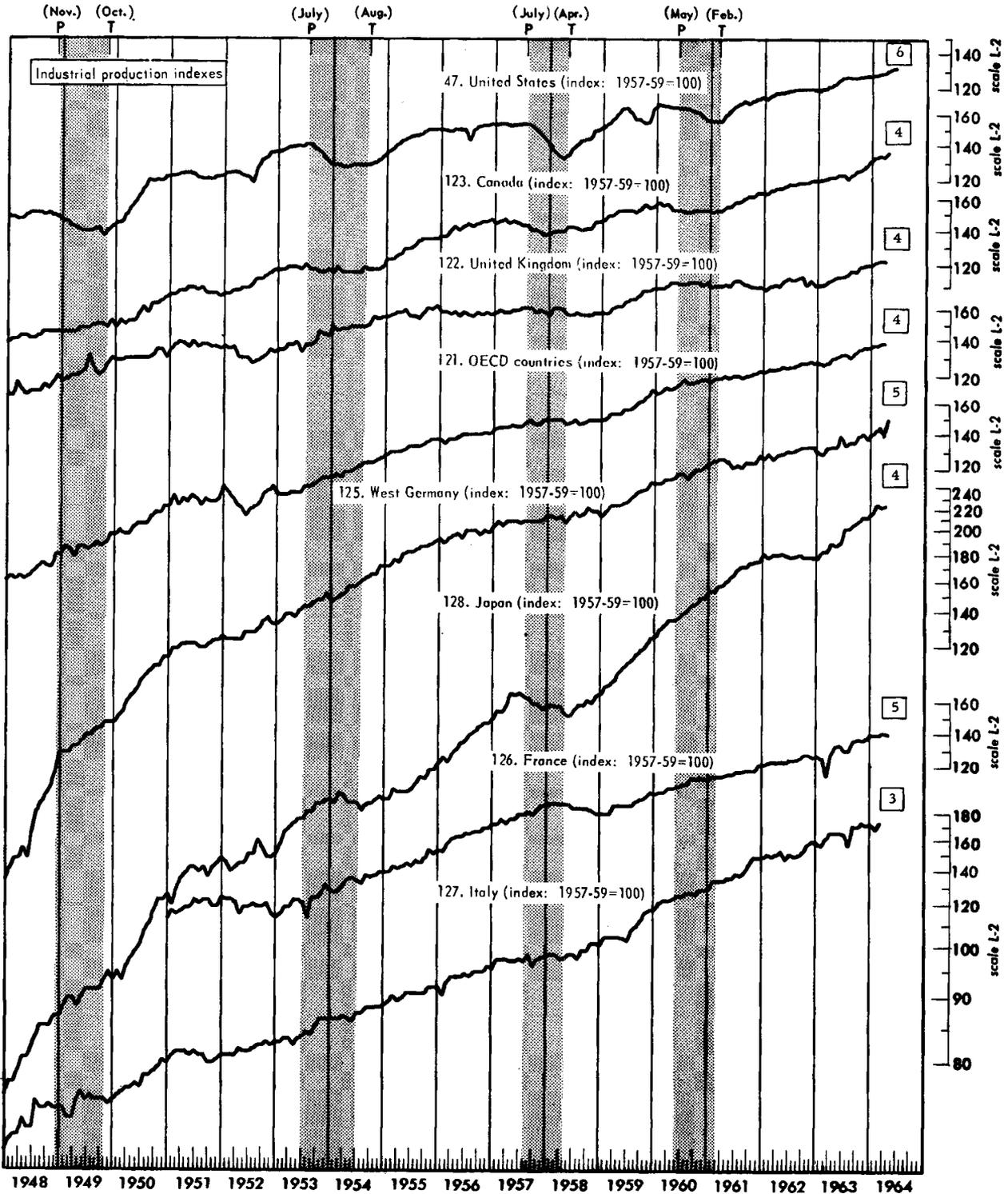


See "How to Read Charts 1, 2, and 3," page 5.

CHART 1

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

E International Comparisons of Industrial Production



Basic Data

Table 2.—BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1961 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, by (H); the reverse is true for inverse series (series 3, 4, 5, 14, 15, 40, 43, and 45). Series numbers are for identification only and do not reflect series relationships or order. Complete titles and sources are shown on the back cover. The "r" indicates revised; "p", preliminary; "e", estimated; "a", anticipated; and "NA", not available.

Year and month	NBER Leading Indicators							
	1. Avg. work-week, production workers, manufacturing ¹	2. Accession rate, manufacturing ²	30. Nonagricultural placements, all industries	3. Layoff rate, manufacturing	4. Persons on temporary layoff, all industries ³	5. Average weekly initial claims, State unemployment insurance ⁴	6. New orders, durable goods industries	24. New orders, machinery and equipment industries ⁵
	(Hours)	(Per 100 employees)	(Thous.)	(Per 100 employees)	(Thous.)	(Thous.)	(Bil. dol.)	(Bil. dol.)
1961								
January.....	39.2	3.9	(L)444	2.9	173	393	(L)13.95	2.76
February.....	39.4	3.8	447	(L)2.9	(L)222	(L)429	14.31	2.74
March.....	39.4	4.3	459	2.4	215	379	14.53	2.71
April.....	39.5	4.2	448	2.1	141	381	15.51	2.74
May.....	39.6	4.2	469	2.2	150	358	15.59	2.70
June.....	39.8	4.0	494	2.2	151	334	15.89	2.80
July.....	39.9	4.1	493	2.3	101	348	15.92	3.03
August.....	40.0	4.1	512	1.9	136	316	16.12	3.07
September.....	39.8	3.8	507	2.2	127	329	15.97	2.88
October.....	40.3	(H)4.4	524	1.7	113	304	16.26	2.91
November.....	40.6	4.3	540	1.8	115	305	16.74	2.98
December.....	40.3	4.1	551	2.0	127	296	17.26	2.96
1962								
January.....	40.0	4.2	557	1.9	135	304	17.70	3.15
February.....	40.3	4.2	559	1.9	(H)88	291	17.70	3.30
March.....	40.6	4.1	572	1.7	118	279	17.15	2.97
April.....	40.6	4.2	574	1.8	107	280	17.02	3.31
May.....	40.5	4.1	(H)592	2.0	126	300	17.22	3.10
June.....	40.4	4.0	557	2.0	124	309	16.65	3.02
July.....	40.4	4.2	557	2.1	128	308	16.91	3.07
August.....	40.2	3.9	550	2.3	127	303	16.59	2.94
September.....	40.7	4.0	555	1.9	127	300	16.55	2.98
October.....	40.2	3.9	554	2.0	125	300	17.29	3.35
November.....	40.4	3.8	563	1.9	133	298	16.73	3.16
December.....	40.2	3.8	547	2.0	120	317	17.33	3.07
1963								
January.....	40.4	3.7	552	2.0	152	313	18.47	3.25
February.....	40.3	3.9	555	1.8	121	294	18.23	3.21
March.....	40.5	3.8	553	1.8	107	285	18.78	3.22
April.....	40.1	4.1	560	1.8	138	290	19.04	3.35
May.....	40.5	3.8	551	1.8	95	286	18.74	3.42
June.....	40.5	3.9	541	1.7	92	287	17.68	3.29
July.....	40.4	4.0	541	1.9	131	283	18.28	3.33
August.....	40.3	3.7	540	2.0	130	285	18.06	3.31
September.....	40.7	3.9	552	1.8	108	282	18.24	3.42
October.....	40.6	3.9	570	1.7	135	281	18.62	3.44
November.....	40.5	3.6	530	1.8	134	280	18.11	3.27
December.....	40.5	3.9	532	1.8	97	308	17.97	3.61
1964								
January.....	40.1	3.7	536	1.8	123	289	19.74	3.62
February.....	40.6	4.0	535	1.7	123	264	19.50	3.41
March.....	40.7	4.0	520	1.7	91	273	19.26	3.46
April.....	40.7	r4.0	522	(H)1.6	122	260	(H)r20.46	r3.61
May.....	(H)40.7	p3.7	533	p1.7	104	260	r20.10	(H)r3.98
June.....	p40.6	(NA)	516	(NA)	117	(H)259	p19.84	p3.73
July.....						e269		
August.....								
September.....								
October.....								
November.....								
December.....								

¹ (L) = December 1960.

² (L) = October 1960.

³ Beginning with April 1962, the 1960 Census is used as the benchmark for computing this series. Prior to April 1962, the 1950 Census is used as the benchmark.

⁴ Data exclude Puerto Rico which is included in figures published by source agency.

⁵ (L) = November 1963.

⁶ Week ended July 11.

Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1961 TO PRESENT--Continued

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

Year and month	NBER Leading Indicators--Continued						
	9. Construction contracts, commercial and industrial buildings	10. Contracts and orders, plant and equipment	11. Newly approved capital appropriations, 602 manufacturing corporations ¹	7. New private nonfarm dwelling units started ²	29. New private housing units authorized by local building permits ²	12. Net change in business population, operating businesses	13. New business incorporations.
	(Mil. sq. ft. floor space)	(Bil. dol.)	(Bil. dol.)	(Ann. rate, thous.)	(1957-59=100)	(Thous.)	(Number)
1961							
January.....	36.21	3.51	...	1,216	89.5	...	Ⓛ13,607
February.....	36.49	3.39	1.84	1,199	88.2	Ⓛ+6	14,570
March.....	37.49	Ⓛ3.20	...	1,305	91.3	...	14,658
April.....	35.62	3.28	...	1,133	91.4	...	15,327
May.....	Ⓛ35.16	3.27	1.93	1,215	93.2	+10	15,298
June.....	36.73	3.39	...	1,340	98.7	...	15,431
July.....	36.57	3.57	...	1,305	98.9	...	15,492
August.....	39.32	3.66	2.23	1,252	101.9	+9	15,277
September.....	38.73	3.40	...	1,453	100.2	...	15,402
October.....	33.88	3.48	...	1,381	104.2	...	16,035
November.....	41.61	3.66	2.10	1,319	101.8	+11	16,149
December.....	41.69	3.50	...	1,324	99.0	...	15,881
1962							
January.....	38.70	3.71	...	1,392	102.8	...	15,599
February.....	42.75	3.98	2.34	1,253	109.8	+11	15,758
March.....	45.90	3.71	...	1,460	105.0	...	15,670
April.....	42.72	3.96	...	1,489	111.5	...	15,372
May.....	44.64	3.76	2.02	1,501	103.7	+12	15,245
June.....	41.16	3.66	...	1,366	107.1	...	14,947
July.....	40.56	3.72	...	1,423	108.6	...	15,171
August.....	42.69	3.61	2.41	1,459	106.3	+11	15,056
September.....	40.96	3.56	...	1,328	110.2	...	15,249
October.....	41.08	3.66	...	1,491	109.5	...	14,892
November.....	42.20	3.82	2.71	1,564	114.9	+11	14,951
December.....	41.89	3.99	...	1,541	114.5	...	14,985
1963							
January.....	44.61	3.84	...	1,317	110.1	...	14,924
February.....	45.11	3.82	2.16	1,353	108.7	+11	15,390
March.....	39.42	3.75	...	1,549	112.7	...	15,563
April.....	40.23	3.98	...	1,590	111.8	...	15,305
May.....	47.00	4.28	2.65	1,590	117.6	+11	15,682
June.....	51.39	3.96	...	1,554	120.6	...	15,536
July.....	45.78	3.94	...	1,573	115.7	...	15,431
August.....	44.93	3.91	Ⓜ3.21	1,434	111.7	+13	16,093
September.....	43.88	4.08	...	1,697	121.4	...	15,689
October.....	50.81	4.17	...	Ⓜ1,807	124.9	...	Ⓜ16,275
November.....	43.14	4.32	3.20	1,533	121.1	+12	15,759
December.....	44.15	4.68	...	1,518	Ⓜ126.2	...	15,867
1964							
January.....	51.64	4.37	...	1,688	116.3	...	16,193
February.....	52.47	4.12	3.08	1,613	124.3	Ⓜ+16	16,086
March.....	48.17	4.10	...	1,638	122.5	...	16,064
April.....	Ⓜ54.84	r4.37	...	r1,501	111.1	...	16,242
May.....	46.22	Ⓜp4.68	(NA)	r1,478	r110.3	(NA)	15,932
June.....	(NA)	(NA)	...	p1,549	p115.6	...	(NA)
July.....							
August.....							
September.....							
October.....							
November.....							
December.....							

¹ Ⓛ = 3rd quarter 1960.² Ⓛ = December 1960.

Table 2.—BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1961 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, by (H); the reverse is true for inverse series (series 3, 4, 5, 14, 15, 40, 43, and 45). Series numbers are for identification only and do not reflect series relationships or order. Complete titles and sources are shown on the back cover. The "r" indicates revised; "p", preliminary; "e", estimated; "a", anticipated; and "NA", not available.

Year and month	NBER Leading Indicators—Continued							
	14. Current liabilities of business failures ¹	15. Business failures with liabilities of \$100,000 and over ²	16. Corporate profits after taxes	17. Ratio, price to unit labor cost index, manufacturing	18. Profits (before taxes) per dol. sales, all mfg. corporations	22. Ratio, profits to income originating, corporate, all indus.	19. Stock prices, 500 common stocks* ²	21. Change in business inventories after valuation adjustment, all indus.
	(Mil. dol.)	(Number per week)	(Ann. rate, bil. dol. Revised ³)	(1957-59=100) Revised ³	(Cents)	(Percent) Revised ³	(1941-43=10)	(Ann. rate, bil. dol.) Revised ³
1961								
January.....	77.79	38	...	99.3	...	...	59.72	...
February.....	83.73	41	(L)19.5	(L)98.8	(L)6.6	(L)7.9	62.17	(L)-3.9
March.....	116.17	39	...	99.0	...	...	64.12	...
April.....	76.88	39	...	100.4	...	...	65.83	...
May.....	82.96	42	21.8	100.4	7.6	8.6	66.50	+2.1
June.....	86.69	40	...	101.0	...	...	65.62	...
July.....	80.15	43	...	101.4	...	...	65.44	...
August.....	94.47	36	22.0	102.0	7.9	8.5	67.79	+3.7
September.....	126.12	39	...	101.7	...	...	67.26	...
October.....	72.28	42	...	101.5	...	...	68.00	...
November.....	119.93	39	24.5	101.7	8.6	9.3	71.08	+5.6
December.....	71.81	38	...	102.3	...	...	71.74	...
1962								
January.....	101.53	37	...	101.3	...	...	69.07	...
February.....	86.03	(H)32	24.5	101.7	8.2	9.2	70.22	(H)+6.9
March.....	77.40	36	...	101.8	...	...	70.29	...
April.....	107.15	38	...	100.9	...	...	68.05	...
May.....	89.80	38	24.9	101.1	8.1	9.1	62.99	+6.1
June.....	93.15	41	...	100.4	...	...	55.63	...
July.....	107.98	38	...	100.7	...	...	56.97	...
August.....	121.85	45	25.0	100.7	8.1	9.1	58.52	+5.1
September.....	106.02	40	...	101.9	...	...	58.00	...
October.....	129.87	46	...	100.7	...	...	56.17	...
November.....	96.62	42	25.7	101.1	8.3	9.1	60.04	+5.4
December.....	99.61	37	...	100.5	...	...	62.64	...
1963								
January.....	146.46	49	...	100.6	...	...	65.06	...
February.....	93.05	43	25.5	100.8	7.9	9.1	65.92	+3.6
March.....	94.12	42	...	101.3	...	...	65.67	...
April.....	88.15	40	...	101.1	...	...	68.76	...
May.....	115.05	51	26.6	101.8	8.5	9.4	70.14	+3.6
June.....	91.07	38	...	102.6	...	...	70.11	...
July.....	144.50	39	...	102.3	...	...	69.07	...
August.....	(H)52.86	42	26.7	101.5	8.5	9.3	70.98	+4.2
September.....	94.52	43	...	101.8	...	...	72.85	...
October.....	99.92	42	...	101.9	...	...	73.03	...
November.....	255.72	38	28.3	101.9	8.8	9.8	72.62	+6.4
December.....	87.17	39	...	102.3	...	...	74.17	...
1964								
January.....	87.70	41	...	103.2	...	...	76.45	...
February.....	121.87	42	(H)31.2	103.3	(H)9.1	(H)10.4	77.39	+2.5
March.....	107.25	37	...	102.7	...	...	78.80	...
April.....	98.50	46	...	(H)103.8	...	...	79.94	...
May.....	90.44	39	(NA)	103.5	(NA)	(NA)	(H)80.72	+3.0
June.....	153.07	38	...	p103.3	...	...	80.24	...
July.....	...	...	...	...	...	...	483.35	...
August.....	...	...	...	...	...	...	...	...
September.....	...	...	...	...	...	...	...	...
October.....	...	...	...	...	...	...	...	...
November.....	...	...	...	...	...	...	...	...
December.....	...	...	...	...	...	...	...	...

¹ (L) = June 1960. ² (L) = October 1960.

³ See "New Features and Changes for This Issue," page ii.

⁴ Average for July 14, 15, and 16.

Table 2.—BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1961 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, by (H); the reverse is true for inverse series (series 3, 4, 5, 14, 15, 40, 43, and 45). Series numbers are for identification only and do not reflect series relationships or order. Complete titles and sources are shown on the back cover. The "r" indicates revised; "p", preliminary; "e", estimated; "a", anticipated; and "NA", not available.

Year and month	NBER Leading Indicators—Continued						
	31. Change in book value, manufacturing and trade inventories, total ¹	20. Change in book value, mfrs.' inventories of materials and supplies ¹	37. Purchased materials, percent reporting higher inventories	26. Production mats., percent reporting commitments 60 days or longer* ¹	32. Vendor performance, percent reporting slower deliveries* ²	25. Change in unfilled orders, durable goods industries ³	23. Industrial materials prices* ¹
	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)	(Percent reporting)	(Percent reporting)	(Percent reporting)	(Bil. dol.)	(1957-59=100)
1961							
January.....	-4.3	-1.6	41	51	38	-0.39	97.3
February.....	-2.2	-1.9	(L) 35	49	40	-0.07	99.3
March.....	-7.2	-2.0	39	50	40	-0.42	103.1
April.....	+1.0	-1.5	42	57	47	+0.36	104.1
May.....	+0.8	-1.3	46	54	48	+0.07	(H) 104.4
June.....	-0.8	-1.6	43	56	48	+0.11	101.0
July.....	+2.0	+0.8	46	56	49	+0.37	101.7
August.....	+3.1	+2.9	54	55	52	+0.42	102.9
September.....	+4.0	+2.2	57	57	55	+0.01	102.9
October.....	+1.9	+0.3	56	59	55	+0.25	102.3
November.....	+7.0	+1.3	52	59	51	+0.41	98.9
December.....	+6.2	(H) +6.6	55	54	53	+0.65	101.0
1962							
January.....	+6.0	+1.9	(H) 58	57	56	+0.63	102.9
February.....	+5.7	+3.0	57	(H) 61	56	+0.62	100.6
March.....	+6.0	+2.7	57	56	55	-0.67	100.4
April.....	+2.6	+0.8	55	55	48	-0.34	98.3
May.....	+7.1	+1.0	53	49	46	-0.46	97.8
June.....	+5.6	+0.2	48	52	42	-0.37	95.4
July.....	+3.9	-2.4	45	58	44	-0.25	94.2
August.....	+2.0	-0.3	46	52	44	-0.60	94.5
September.....	+5.6	+1.8	44	52	48	-0.36	94.0
October.....	+5.5	-0.2	45	55	48	+0.21	94.9
November.....	+1.2	+0.5	49	52	48	-0.40	96.4
December.....	+5.1	-1.7	48	51	48	+0.91	95.8
1963							
January.....	+2.4	+0.6	46	50	50	+0.96	95.5
February.....	+1.9	+0.4	48	55	52	+0.68	95.1
March.....	+2.3	-0.2	47	54	54	+0.94	94.4
April.....	+4.0	+0.9	50	53	60	+0.85	94.5
May.....	+2.1	-0.3	55	52	58	+0.33	95.2
June.....	+4.4	+0.7	57	57	54	-0.58	93.9
July.....	+5.3	-0.5	56	54	42	-0.54	94.2
August.....	+0.9	+1.7	50	55	48	-0.05	94.2
September.....	+4.0	-0.4	49	56	52	+0.38	94.1
October.....	+7.6	+1.7	46	53	48	+0.10	96.3
November.....	(H) +9.1	-0.2	42	54	48	-0.09	97.3
December.....	+6.1	-0.7	42	55	46	-0.40	97.7
1964							
January.....	+5.1	-1.9	40	53	55	+0.40	98.5
February.....	-0.7	-0.5	50	54	54	+0.57	98.5
March.....	r+3.0	r0.0	54	56	60	+0.16	98.9
April.....	r+7.5	r-1.0	55	59	60	(H) r+1.04	102.4
May.....	p-2.9	p-0.8	51	58	(H) 63	r+0.46	100.9
June.....	(NA)	(NA)	56	59	55	p+0.58	101.4
July.....							⁴ 102.6
August.....							
September.....							
October.....							
November.....							
December.....							

¹ (L) = December 1960.² (L) = March 1960.³ (L) = January 1960.⁴ Average for July 15, 16, and 17.

Table 2.—BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1961 TO PRESENT—Continued

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

Year and month	NBER Roughly Coincident Indicators							
	41. Employees in nonagricultural establishments	42. Total nonagricultural employment, labor force survey ^{1 2}	43. Unemployment rate, total ¹	40. Unemployment rate, married males ¹	45. Avg. weekly insured unemployment rate, State programs ³	46. Help-wanted advertising in newspapers	47. Industrial production	50. Gross national product in 1954 dollars
	(Thous.)	(Thous.)	(Percent)	(Percent)	(Percent)	(1957-59=100)	(1957-59=100) Revised ⁴	(Ann. rate, bil. dol.) Revised ⁴
1961								
January.....	53,725	61,034	6.7	4.7	6.2	88	⊖103.3	...
February.....	⊖53,541	60,897	6.9	4.8	6.3	⊖88	103.4	⊖434.2
March.....	53,615	61,229	6.9	4.7	⊖6.3	90	103.8	...
April.....	53,713	61,154	7.0	4.9	5.9	89	106.6	...
May.....	53,911	61,134	⊖7.1	⊖5.0	5.6	91	108.8	444.4
June.....	54,165	61,622	6.9	4.8	5.3	93	110.9	...
July.....	54,294	61,259	6.9	4.8	5.3	94	112.0	...
August.....	54,444	61,274	6.7	4.7	5.2	98	113.4	459.6
September.....	54,480	61,299	6.7	4.6	5.1	98	112.0	...
October.....	54,593	61,463	6.6	4.2	5.0	107	113.5	...
November.....	54,825	61,896	6.2	4.2	5.1	110	114.8	462.5
December.....	54,927	61,747	6.0	3.9	4.8	110	115.6	...
1962								
January.....	54,946	61,899	5.8	3.8	4.7	114	114.6	...
February.....	55,223	62,179	5.5	3.3	4.5	115	116.3	469.1
March.....	55,368	62,253	5.5	3.6	4.4	115	117.3	...
April.....	55,703	62,247	5.6	3.8	3.9	112	117.8	...
May.....	55,822	62,663	5.5	3.5	3.8	114	118.3	475.1
June.....	55,908	62,752	5.5	3.7	4.0	109	118.4	...
July.....	56,010	62,620	5.4	3.5	4.2	110	119.4	...
August.....	56,019	63,021	5.7	3.6	4.4	108	119.4	478.3
September.....	56,125	63,039	5.6	3.5	4.4	107	119.8	...
October.....	56,195	63,007	5.4	3.5	4.5	107	119.2	...
November.....	56,205	62,870	5.8	3.6	4.6	107	119.5	483.0
December.....	56,211	63,240	5.5	3.5	4.7	e107	119.1	...
1963								
January.....	56,333	63,090	5.7	3.7	4.8	e107	119.7	...
February.....	56,458	63,227	5.9	3.7	4.6	e109	120.6	485.4
March.....	56,706	63,478	5.7	3.5	4.4	e108	121.8	...
April.....	56,873	63,770	5.7	3.3	4.2	109	122.7	...
May.....	57,060	63,690	5.9	3.3	4.2	105	124.5	487.9
June.....	57,194	63,843	5.7	3.2	4.1	104	125.5	...
July.....	57,340	64,092	5.6	3.2	4.1	109	125.7	...
August.....	57,344	64,069	5.5	3.1	4.1	105	125.1	494.8
September.....	57,453	64,167	5.5	3.0	4.0	107	125.4	...
October.....	57,646	64,128	5.6	2.9	4.0	111	125.9	...
November.....	57,580	64,319	5.9	3.4	4.1	112	126.1	502.0
December.....	57,748	64,315	5.5	3.3	4.3	118	126.8	...
1964								
January.....	57,850	64,631	5.6	3.2	4.3	116	127.7	...
February.....	58,183	65,035	5.4	3.0	4.0	117	128.2	508.0
March.....	58,327	65,207	5.4	2.9	3.8	r113	129.0	...
April.....	r58,502	65,811	5.4	2.9	3.8	120	130.4	...
May.....	r58,551	⊕65,889	⊕5.1	⊕2.6	3.6	118	131.2	⊕513.7
June.....	⊕p58,665	65,549	5.3	2.8	⊕3.6	⊕p121	⊕p131.8	...
July.....					3.6			...
August.....								...
September.....								...
October.....								...
November.....								...
December.....								...

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

²⊖ = December 1960.

³Data exclude Puerto Rico which is included in figures published by source agency.

⁴See "New Features and Changes for This Issue," page ii.

⁵Week ended July 4.

Table 2.—BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1961 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 (C) and current highs, by (H); the reverse is true for inverse series (series 3, 4, 5, 14, 15, 40, 43, and 45). Series numbers are for identification only and do not reflect series relationships or order. Complete titles and sources are shown on the back cover. The "r" indicates revised; "p", preliminary; "e", estimated; "a", anticipated; and "NA", not available.

Year and month	NBER Roughly Coincident Indicators--Continued						
	49. Gross national product in current dollars	57. Final sales (series 49 minus 21)	51. Bank debits outside NYC, 343 centers ¹	52. Personal income ¹	53. Labor income in mining, manufacturing, and construction ¹	54. Sales of retail stores	55. Wholesale prices except farm products and foods
	(Ann. rate, bil. dol.) Revised ²	(Ann. rate, bil. dol.) Revised ²	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.) Revised ²	(Ann. rate, bil. dol.) Revised ²	(Mil. dol.)	(1957-59=100)
1961							
January.....	...	...	1,786.2	405.0	104.2	17,942	101.0
February.....	(C)501.4	505.3	1,755.0	406.2	104.0	17,965	101.1
March.....	...	...	1,785.1	410.3	104.5	17,971	101.1
April.....	...	...	1,781.8	411.6	105.4	(C)17,811	100.9
May.....	513.9	511.8	1,829.3	413.6	106.4	18,003	100.9
June.....	...	...	1,824.0	416.1	107.7	18,098	100.7
July.....	...	...	1,839.9	420.0	108.0	18,234	100.7
August.....	522.4	518.7	1,832.7	420.0	108.8	18,373	100.8
September.....	...	...	1,848.2	421.8	108.8	18,371	100.8
October.....	...	...	1,904.6	425.4	110.6	18,494	100.7
November.....	536.9	531.3	1,903.8	429.0	111.7	18,775	100.8
December.....	...	...	1,916.9	431.5	112.1	18,879	100.9
1962							
January.....	...	...	2,009.7	431.6	112.0	18,990	100.8
February.....	545.5	538.6	1,916.6	434.9	113.0	19,139	100.7
March.....	...	...	1,985.3	437.6	114.2	19,320	100.7
April.....	...	...	2,044.4	440.2	115.9	19,389	100.7
May.....	553.4	547.3	2,015.0	441.0	115.4	19,585	100.9
June.....	...	...	2,000.2	441.7	115.4	19,311	100.8
July.....	...	...	2,054.8	443.3	116.3	19,658	100.9
August.....	559.0	553.9	2,017.0	444.1	116.1	19,671	100.8
September.....	...	...	1,988.5	446.2	117.1	19,844	100.9
October.....	...	...	2,080.9	447.7	116.8	19,837	100.9
November.....	566.6	561.2	2,090.5	449.5	116.6	20,112	100.8
December.....	...	...	2,066.9	452.0	117.0	20,253	100.7
1963							
January.....	...	...	2,148.0	454.9	117.4	20,387	100.5
February.....	571.8	568.2	2,085.5	454.1	117.4	20,374	100.5
March.....	...	...	2,095.6	456.5	118.3	20,350	100.5
April.....	...	...	2,198.1	457.6	118.8	20,276	(C)100.4
May.....	577.4	573.8	2,150.7	460.2	120.1	20,200	100.5
June.....	...	...	2,105.4	462.7	120.8	20,486	100.8
July.....	...	...	2,276.8	464.0	120.7	20,719	100.9
August.....	587.2	583.0	2,189.7	466.1	120.7	20,666	100.9
September.....	...	...	2,275.0	468.9	122.1	20,426	100.8
October.....	...	...	2,316.3	472.7	122.5	20,716	100.9
November.....	599.0	592.6	2,246.9	473.8	122.2	20,558	100.9
December.....	...	...	2,320.5	477.1	123.1	21,019	101.0
1964							
January.....	...	...	2,355.1	479.4	122.7	21,000	101.1
February.....	608.8	606.3	2,239.9	480.5	124.2	21,533	101.1
March.....	...	...	2,322.5	482.9	124.6	r21,223	101.0
April.....	...	...	(H)2,451.3	486.6	125.9	r21,392	101.1
May.....	(H)e618.5	(H)e615.5	r2,313.0	487.8	125.8	r21,743	r101.1
June.....	...	...	p2,329.9	(H)p489.2	(H)p126.1	(H)p21,746	(H)p101.1
July.....	...	...	...	...	...	...	³ 101.2
August.....	...	...	...	...	...	...	...
September.....	...	...	...	...	...	...	...
October.....	...	...	...	...	...	...	...
November.....	...	...	...	...	...	...	...
December.....	...	...	...	...	...	...	...

¹ (C) = December 1960.

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

³ Week ended July 14.

Table 2.—BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1961 TO PRESENT—Continued

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

Year and month	NBER Lagging Indicators						
	61. Business expenditures, new plant and equipment, total	62. Labor cost per unit of output, manufacturing	68. Labor cost per dollar of real corporate GNP	64. Book value of mfrs.' inventories	65. Book value of mfrs.' inventories of finished goods	66. Consumer installment debt	67. Bank rates on short-term business loans, 19 cities*
	(Ann. rate, bil. dol.)	(1957-59=100) Revised ¹	(1957-59=100)	(Bil. dol.)	(Bil. dol.)	(Mil. dol.)	(Percent)
1961							
January.....	...	101.8	...	53.7	18.4	42,109	...
February.....	33.85	102.4	105.0	53.7	18.4	42,035	4.97
March.....	...	102.2	...	53.5	18.3	42,041	...
April.....	...	100.5	...	53.4	18.4	⊖41,867	...
May.....	⊖33.50	100.2	103.7	53.4	18.3	41,870	4.97
June.....	...	99.5	...	⊖53.4	18.4	41,895	...
July.....	...	99.1	...	53.6	⊖18.3	41,903	...
August.....	34.70	98.5	103.8	53.9	18.5	41,987	4.99
September.....	...	99.0	...	53.9	18.5	42,052	...
October.....	...	98.9	...	54.3	18.6	42,221	...
November.....	35.40	99.0	⊖102.4	54.7	18.7	42,442	⊖4.96
December.....	...	⊖98.4	...	55.1	18.8	42,774	...
1962							
January.....	...	99.4	...	55.4	19.0	42,960	...
February.....	35.70	99.0	103.0	55.7	19.1	43,220	4.98
March.....	...	98.8	...	56.0	19.1	43,532	...
April.....	...	99.8	...	56.1	19.2	44,017	...
May.....	36.95	99.8	103.6	56.4	19.3	44,437	5.01
June.....	...	⊕100.4	...	56.3	19.4	44,826	...
July.....	...	100.1	...	56.9	19.5	45,200	...
August.....	38.35	100.2	104.2	57.0	19.5	45,588	4.99
September.....	...	99.6	...	57.3	19.7	45,838	...
October.....	...	100.1	...	57.4	19.7	46,206	...
November.....	37.95	99.5	103.3	57.6	19.8	46,689	⊕5.02
December.....	...	100.1	...	57.8	19.8	47,174	...
1963							
January.....	...	99.7	...	57.9	19.9	47,659	...
February.....	36.95	99.6	103.9	58.0	20.0	48,154	5.00
March.....	...	99.0	...	58.1	20.0	48,631	...
April.....	...	99.1	...	58.3	20.0	49,152	...
May.....	38.05	98.8	⊕104.4	58.5	20.1	49,593	5.01
June.....	...	98.4	...	58.7	20.3	50,079	...
July.....	...	98.8	...	58.9	20.3	50,588	...
August.....	40.00	99.5	104.1	58.9	20.4	51,069	5.01
September.....	...	99.4	...	59.1	20.6	51,410	...
October.....	...	99.0	...	59.3	20.6	51,941	...
November.....	41.20	99.1	104.3	59.8	21.0	52,324	5.00
December.....	...	98.7	...	60.1	21.2	52,784	...
1964							
January.....	...	97.9	...	60.0	21.2	53,212	...
February.....	⊕42.55	97.8	104.2	60.1	21.4	53,791	4.99
March.....	...	98.3	...	60.3	21.4	54,315	...
April.....	...	97.5	...	⊕60.5	⊕r21.6	54,727	...
May.....	a43.35	97.6	(NA)	p60.4	p21.5	⊕55,220	4.99
June.....	...	p97.7	...	(NA)	(NA)	(NA)	...
July.....	...	...	...	...	...	...	...
August.....	a44.30	...	...	...	...	...	...
September.....	...	...	...	...	...	...	...
October.....	...	...	...	...	...	...	...
November.....	a45.40	...	...	...	...	...	...
December.....	...	...	...	...	...	...	...

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

Table 2.—BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1961 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, by (H); the reverse is true for inverse series (series 3, 4, 5, 14, 15, 40, 43, and 45). Series numbers are for identification only and do not reflect series relationships or order. Complete titles and sources are shown on the back cover. The "r" indicates revised; "p", preliminary; "e", estimated; "a", anticipated; and "NA", not available.

Year and month	Other U.S. series with business cycle significance							
	82. Federal cash payments to public	83. Federal cash receipts from public	84. Federal cash surplus (+), or deficit (-)	95. Surplus (+), or deficit (-), Fed. income and product account	90. Defense Department obligations, procurement	91. Defense Department obligations, total	92. Military prime contract awards to U.S. business firms	99. New orders, defense products
	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Bil. dol.)
1961				Revised ¹				
January.....	95.5	94.2	-1.3	...	1,277	3,641	1,944	1.45
February.....	95.4	94.1	-1.3	-6.0	1,555	4,065	2,153	2.00
March.....	107.4	92.6	-14.8	...	1,230	3,537	1,757	1.48
April.....	100.6	97.0	-3.6	...	1,047	3,381	1,910	1.85
May.....	110.9	99.8	-11.1	-4.7	1,220	3,727	1,530	1.82
June.....	106.5	97.7	-8.8	...	1,390	3,893	1,993	1.73
July.....	97.7	91.2	-6.5	...	1,181	3,784	2,087	2.11
August.....	112.7	101.0	-11.7	-3.4	2,278	5,344	2,232	1.96
September.....	104.1	99.2	-4.9	...	1,933	4,874	2,158	1.92
October.....	109.8	99.5	-10.3	...	1,354	4,296	2,651	1.97
November.....	106.5	101.3	-5.2	-2.6	1,286	4,121	2,379	1.86
December.....	104.3	101.7	-2.6	...	1,773	4,653	2,281	1.82
1962								
January.....	115.1	101.7	-13.4	...	1,718	4,434	3,073	1.99
February.....	108.8	101.3	-7.5	-4.4	1,319	4,181	2,135	2.05
March.....	107.4	98.1	-9.3	...	1,435	4,230	2,225	2.11
April.....	110.1	107.8	-2.3	...	1,885	4,486	2,062	2.24
May.....	106.8	109.9	+3.1	-4.6	1,142	4,059	1,887	2.24
June.....	108.9	104.4	-4.5	...	1,246	4,024	1,930	2.08
July.....	116.3	111.2	-5.1	...	1,731	4,864	2,017	2.07
August.....	111.6	110.1	-1.5	-2.9	1,240	4,300	2,149	1.94
September.....	109.9	107.6	-2.3	...	1,044	3,928	2,111	1.88
October.....	118.6	107.8	-10.8	...	1,684	4,553	2,983	2.09
November.....	114.7	109.0	-5.7	-4.5	1,818	4,952	2,734	1.70
December.....	115.2	109.0	-6.2	...	1,158	3,974	1,984	2.53
1963								
January.....	115.3	108.6	-6.7	...	1,565	4,642	2,343	2.89
February.....	109.2	110.6	+1.4	-4.8	1,325	4,253	2,571	2.09
March.....	114.5	108.9	-5.6	...	1,258	3,905	2,168	2.42
April.....	117.2	110.2	-7.0	...	1,304	4,108	1,973	1.97
May.....	115.8	112.2	-3.6	-1.0	1,530	4,601	2,250	2.40
June.....	110.2	111.9	+1.7	...	1,298	4,378	2,125	1.90
July.....	124.7	114.9	-9.8	...	1,255	4,834	2,506	2.40
August.....	118.1	114.7	-3.4	-0.7	1,512	4,497	2,704	2.36
September.....	121.9	113.1	-8.8	...	1,221	4,215	2,688	2.47
October.....	122.3	115.1	-7.2	...	2,038	5,176	2,224	1.92
November.....	114.2	113.3	-0.9	+0.6	1,125	4,138	1,566	1.97
December.....	122.7	118.5	-4.2	...	1,182	4,090	2,041	1.48
1964								
January.....	128.6	114.8	-13.8	...	1,071	4,370	2,337	2.67
February.....	117.2	123.4	+6.2	-3.0	2,067	5,484	2,854	2.40
March.....	120.3	115.3	-5.0	...	1,030	3,731	1,603	2.18
April.....	123.2	126.6	+3.4	...	1,516	4,592	2,529	r2.37
May.....	110.3	105.1	-5.2	(NA)	2,192	4,941	2,465	r2.51
June.....	120.0	114.4	-5.6	(NA)	(NA)	(NA)	(NA)	p2.22
July.....								
August.....								
September.....								
October.....								
November.....								
December.....								

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Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1961 TO PRESENT--Continued

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Year and month	Other U.S. series with business cycle significance--Continued					
	93. Free reserves*	85. Change in total U.S. money supply	98. Change in money supply and time deposits	110. Total private borrowing ¹	111. Corporate gross savings ¹	112. Change, business loans ¹
	(Mil. dol.)	(Percent) Revised ¹	(Percent) Revised ¹	(Annual rate, million dollars)	(Annual rate, million dollars)	(Annual rate, billion dollars)
1961						
January.....	+696	+0.07	+0.37	...	...	+0.54
February.....	+517	+0.28	+0.79	29,352	26,580	-0.77
March.....	+486	+0.28	+0.46	...	...	+0.92
April.....	+551	+0.21	+0.46	...	...	-0.37
May.....	+453	+0.28	+0.64	33,864	32,072	-0.31
June.....	+549	+0.21	+0.55	...	...	-1.50
July.....	+530	0.00	+0.45	...	...	+2.18
August.....	+537	+0.21	+0.50	41,844	32,308	+1.00
September.....	+547	+0.42	+0.58	...	...	+0.56
October.....	+442	+0.28	+0.53	...	...	+0.01
November.....	+517	+0.55	+0.71	42,632	37,304	-0.01
December.....	+419	+0.28	+0.44	...	...	+1.72
1962						
January.....	+555	0.00	+0.57	...	...	+2.90
February.....	+434	+0.14	+0.91	44,848	36,224	+1.51
March.....	+382	+0.21	+0.91	...	...	+2.23
April.....	+441	+0.27	+0.64	...	...	+2.09
May.....	+440	-0.20	+0.13	51,340	36,668	+2.09
June.....	+391	+0.07	+0.51	...	...	+2.77
July.....	+440	-0.07	+0.38	...	...	+2.66
August.....	+439	-0.07	+0.34	46,344	35,108	+3.85
September.....	+375	-0.14	+0.38	...	...	+2.82
October.....	+419	+0.34	+0.71	...	...	+2.82
November.....	+473	+0.48	+0.87	51,416	38,628	+2.28
December.....	+268	+0.41	+0.95	...	...	+0.95
1963						
January.....	+375	+0.27	+0.69	...	...	+2.26
February.....	+301	+0.27	+0.69	46,188	37,376	+1.01
March.....	+269	+0.34	+0.76	...	...	+1.01
April.....	+313	+0.20	+0.48	...	...	+1.57
May.....	+247	+0.27	+0.48	54,824	39,700	+3.18
June.....	+138	+0.40	+0.63	...	...	+1.74
July.....	+161	+0.53	+0.71	...	...	+1.97
August.....	+133	+0.13	+0.66	55,208	41,920	+2.03
September.....	+91	+0.26	+0.54	...	...	+2.94
October.....	+94	+0.46	+0.73	...	...	+4.67
November.....	+33	+0.79	+1.15	61,556	42,328	+6.10
December.....	+209	-0.20	+0.34	...	...	+5.34
1964						
January.....	r+173	+0.39	+0.83	...	...	+2.26
February.....	r+88	0.00	+0.45	56,352	40,920	+3.05
March.....	+98	+0.26	+0.37	...	...	+0.05
April.....	r+162	+0.32	+0.44	...	...	+1.81
May.....	+84	-0.13	+0.30	(NA)	(NA)	+5.62
June.....	p+118	p+0.71	p+0.81	...	...	+3.86
July.....						
August.....						
September.....						
October.....						
November.....						
December.....						

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

Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1961 TO PRESENT--Continued

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Year and month	Other U.S. series with business cycle significance--Continued					
	113. Change, consumer installment debt ¹	114. Treasury bill rate* ¹	115. Treasury bond yields* ¹	116. Corporate bond yields* ¹	117. Municipal bond yields* ¹	118. Mortgage yields* ¹
1961	(Annual rate, billion dollars)	(Percent)	(Percent)	(Percent)	(Percent)	(Percent)
January.....	-0.36	2.30	3.89	4.63	3.40	6.00
February.....	-0.89	2.41	3.81	4.43	3.31	5.89
March.....	+0.07	2.42	3.78	4.36	3.45	5.82
April.....	-20.9	2.33	3.80	4.56	3.50	5.77
May.....	+0.04	2.29	3.73	4.61	3.43	5.74
June.....	+0.30	2.36	3.88	4.73	3.52	5.72
July.....	+0.10	2.27	3.90	4.74	3.52	5.68
August.....	+1.01	2.40	4.00	4.75	3.52	5.68
September.....	+0.78	2.30	4.02	4.69	3.53	5.69
October.....	+2.03	2.35	3.98	4.45	3.42	5.70
November.....	+2.65	2.46	3.98	4.48	3.41	5.70
December.....	+3.98	2.62	4.06	4.56	3.47	5.69
1962						
January.....	+2.23	2.75	4.08	4.55	3.34	5.69
February.....	+3.12	2.75	4.09	4.54	3.21	5.68
March.....	+3.74	2.72	4.01	4.42	3.14	5.65
April.....	+5.82	2.74	3.89	4.31	3.06	5.64
May.....	+5.04	2.69	3.88	4.26	3.11	5.60
June.....	+4.67	2.72	3.90	4.30	3.26	5.59
July.....	+4.49	2.94	4.02	4.41	3.28	5.58
August.....	+4.66	2.84	3.98	4.39	3.23	5.57
September.....	+3.00	2.79	3.94	4.28	3.11	5.56
October.....	+4.42	2.75	3.89	4.27	3.02	5.55
November.....	+5.80	2.80	3.87	4.23	3.04	5.54
December.....	+5.82	2.86	3.87	4.28	3.07	5.53
1963						
January.....	+5.82	2.91	3.89	4.22	3.10	5.52
February.....	+5.94	2.92	3.92	4.25	3.15	5.48
March.....	+5.72	2.90	3.93	4.26	3.05	5.47
April.....	+6.25	2.91	3.97	4.35	3.10	5.46
May.....	+5.29	2.92	3.97	4.35	3.11	5.45
June.....	+5.83	3.00	4.00	4.32	3.21	5.45
July.....	+6.11	3.14	4.01	4.34	3.22	5.45
August.....	+5.77	3.32	3.99	4.33	3.13	5.45
September.....	+4.09	3.38	4.04	4.40	3.20	5.45
October.....	+6.37	3.45	4.07	4.36	3.20	5.45
November.....	+4.60	3.52	4.11	4.42	3.30	5.45
December.....	+5.52	3.52	4.14	4.49	3.27	5.45
1964						
January.....	+5.14	3.53	4.15	4.49	3.22	5.45
February.....	+6.95	3.53	4.14	4.38	3.14	5.45
March.....	+6.29	3.55	4.18	4.45	3.28	5.45
April.....	+4.94	3.48	4.20	4.49	3.28	5.45
May.....	+5.92	3.48	4.16	4.48	3.20	5.45
June.....	(NA)	3.48	4.13	4.49	3.20	5.45
July.....						
August.....						
September.....						
October.....						
November.....						
December.....						

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Table 2.—BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1961 TO PRESENT—Continued

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Year and month	Other U.S. series with business cycle significance—Continued							
	86. Exports excluding military aid shipments, total	87. General imports, total	88. Merchandise trade balance (col. 86 minus 87)	89. Excess, receipts (+) or payments (-) in U.S. balance of payments	81. Consumer prices	94. Construction contracts, total value	96. Manufacturers' unfilled orders, durable goods industries	97. Backlog of capital appropriations, manufacturing
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(1957-59=100)	(1957-59=100)	(Bil. dol.)	(Bil. dol.)
1961								
January.....	1,622.7	1,161.4	+461.3	...	103.9	108	43.01	...
February.....	1,711.6	1,149.8	+561.8	-486	104.0	95	42.94	...
March.....	1,750.7	1,162.9	+587.8	...	104.0	104	42.52	6.68
April.....	1,661.5	1,152.0	+509.5	...	103.9	103	42.88	...
May.....	1,585.1	1,152.9	+432.2	¹ +47	103.9	102	42.95	...
June.....	1,581.9	1,173.8	+408.1	...	104.1	111	43.06	6.55
July.....	1,688.5	1,379.3	+309.2	...	104.4	110	43.43	...
August.....	1,688.9	1,253.6	+435.3	-700	104.4	116	43.85	...
September.....	1,678.4	1,262.0	+416.4	...	104.5	103	43.86	6.58
October.....	1,779.8	1,300.1	+479.7	...	104.5	114	44.11	...
November.....	1,733.1	1,308.5	+424.6	-1,231	104.5	116	44.52	...
December.....	1,724.8	1,314.5	+410.3	...	104.5	119	45.17	6.53
1962								
January.....	1,668.3	1,326.5	+341.8	...	104.7	115	45.80	...
February.....	1,809.3	1,319.8	+489.5	-748	104.9	119	46.42	...
March.....	1,672.0	1,341.7	+330.3	...	105.1	131	45.75	6.82
April.....	1,795.4	1,365.0	+430.4	...	105.3	121	45.41	...
May.....	1,761.7	1,404.1	+357.6	-440	105.4	117	44.95	...
June.....	1,835.6	1,350.7	+484.9	...	105.4	120	44.58	6.81
July.....	1,748.3	1,346.6	+401.7	...	105.3	117	44.33	...
August.....	1,702.5	1,345.9	+356.6	-334	105.5	118	43.73	...
September.....	1,907.9	1,471.4	+436.5	...	105.9	113	43.37	6.87
October.....	1,542.8	1,312.1	+230.7	...	105.8	117	43.58	...
November.....	1,724.6	1,424.9	+299.7	-681	105.8	123	43.18	...
December.....	1,838.7	1,376.5	+462.2	...	105.9	138	44.09	7.29
1963								
January.....	984.8	1,091.6	-106.8	...	106.1	121	45.06	...
February.....	2,117.5	1,497.4	+620.1	-1,072	106.1	130	45.74	...
March.....	1,960.4	1,486.7	+473.7	...	106.2	118	46.68	7.06
April.....	1,912.7	1,417.2	+495.5	...	106.3	125	47.53	...
May.....	1,892.6	1,420.2	+472.4	-1,300	106.4	144	47.86	...
June.....	1,784.7	1,420.5	+364.2	...	106.7	135	47.28	7.53
July.....	1,823.0	1,457.5	+365.5	...	106.9	126	46.74	...
August.....	1,894.6	1,508.3	+386.3	-132	107.1	132	46.70	...
September.....	1,979.6	1,450.4	+529.2	...	106.9	128	47.07	8.02
October.....	1,946.4	1,458.8	+487.6	...	107.0	146	47.17	...
November.....	1,944.6	1,471.9	+472.7	-140	107.2	144	47.08	...
December.....	2,049.4	1,480.0	+569.4	...	107.7	148	46.68	8.75
1964								
January.....	2,037.3	1,421.8	+615.5	...	107.8	147	47.07	...
February.....	2,028.7	1,445.3	+583.4	-42	107.6	143	47.64	...
March.....	2,077.5	1,522.9	+554.6	...	107.7	140	47.80	8.96
April.....	2,046.0	1,542.1	+503.9	...	107.9	138	48.84	...
May.....	2,052.1	1,548.1	+504.0	(NA)	108.0	138	r49.30	...
June.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	p49.87	(NA)
July.....								
August.....								
September.....								
October.....								
November.....								
December.....								

¹Includes \$650 million in special debt payments to the United States.

Table 2.—BASIC DATA FOR BUSINESS CYCLE SERIES: JANUARY 1961 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, by (H); the reverse is true for inverse series (series 3, 4, 5, 14, 15, 40, 43, and 45). Series numbers are for identification only and do not reflect series relationships or order. Complete titles and sources are shown on the back cover. The "r" indicates revised; "p", preliminary; "e", estimated; "a", anticipated; and "NA", not available.

Year and month	International comparisons of industrial production							
	47. United States, industrial production	123. Canada, industrial production	122. United Kingdom, industrial production	121. OECD. ¹ European countries, industrial production	125. West Germany, industrial production	126. France, industrial production	127. Italy, industrial production	128. Japan, industrial production
1961	(1957-59=100) Revised ²	(1957-59=100)	(1957-59=100)	(1957-59=100)	(1957-59=100)	(1957-59=100)	(1957-59=100)	(1957-59=100)
January.....	103	104	109	117	124	115	130	155
February.....	103	105	110	119	125	116	134	154
March.....	104	105	110	119	126	116	134	158
April.....	107	107	111	120	126	116	134	159
May.....	109	107	110	119	124	117	136	162
June.....	111	109	113	120	121	117	136	165
July.....	112	109	113	120	122	118	138	169
August.....	113	111	111	119	121	118	137	172
September.....	112	112	110	120	124	119	140	172
October.....	114	112	109	121	123	119	145	175
November.....	115	114	109	122	124	119	149	176
December.....	116	114	109	123	128	122	148	177
1962								
January.....	115	113	108	122	126	122	149	182
February.....	116	115	110	124	129	123	151	178
March.....	117	116	111	123	125	124	149	181
April.....	118	116	110	124	128	123	151	181
May.....	118	117	113	125	129	124	153	182
June.....	118	118	114	124	130	123	147	180
July.....	119	118	113	125	130	125	151	179
August.....	119	119	114	126	131	125	149	180
September.....	120	119	115	127	132	126	150	181
October.....	119	119	110	127	132	128	153	179
November.....	120	120	113	128	133	128	158	179
December.....	119	120	110	127	132	126	160	178
1963								
January.....	120	120	110	127	129	127	158	179
February.....	121	121	111	126	128	125	156	184
March.....	122	122	113	127	132	116	162	184
April.....	123	122	114	130	133	129	166	191
May.....	124	123	115	131	133	133	166	189
June.....	126	123	115	132	139	134	166	191
July.....	126	121	116	132	133	130	164	203
August.....	125	123	118	130	135	130	156	203
September.....	125	125	117	133	135	136	171	207
October.....	126	126	120	135	139	137	172	210
November.....	126	128	121	136	141	136	173	214
December.....	127	131	121	136	137	138	171	213
1964								
January.....	128	133	122	138	141	140	r172	217
February.....	128	134	123	138	143	139	168	r226
March.....	129	133	123	139	145	139	p173	r223
April.....	130	p136	p122	p137	r139	141	(NA)	p224
May.....	131	(NA)	(NA)	(NA)	p149	p140	(NA)	(NA)
June.....	p132				(NA)	(NA)		
July.....								
August.....								
September.....								
October.....								
November.....								
December.....								

¹Organization for Economic Cooperation and Development.

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

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

Number of months before benchmark date that high was reached	Number of series that reached a high before benchmark dates--							
	Business cycle peak				3d month before business cycle peak			
	Nov. 1948	July 1953	July 1957	May 1960	Aug. 1948	Apr. 1953	Apr. 1957	Feb. 1960
	NBER LEADING INDICATORS							
8 months or more.....	12	7	22	14	11	3	20	12
7 months.....	1	1	...	2	1	4	...	1
6 months.....	...	3	1	1	...	...	1	...
5 months.....	4	1	...	3	...	2	1	1
4 months.....	1	...	...	2	1	2	...	2
3 months.....	...	2	...	1	...	3	1	1
2 months.....	...	2	...	...	4	1	...	3
1 month.....	...	...	...	...	1	...	...	2
Benchmark month.....	...	3	...	...	...	4	...	1
Number of series used.....	¹ 18	² 19	23	23	¹ 18	² 19	23	23
Percent of series high on benchmark date.	0	16	0	0	0	21	0	4
	NBER ROUGHLY COINCIDENT INDICATORS							
8 months or more.....	3	1	2	1	1	...	1	1
7 months.....	...	...	...	...	2	...	...	...
6 months.....	...	...	...	...	...	...	1	...
5 months.....	...	1	1	...	...	2	...	...
4 months.....	4	1	3	2	...	...	1	1
3 months.....	1	...	...	3	...	...	...	...
2 months.....	2	2	...	...	...	1	2	...
1 month.....	...	3	...	2	4	4	3	3
Benchmark month.....	1	3	5	3	4	4	3	6
Number of series used.....	11	11	11	11	11	11	11	11
Percent of series high on benchmark date.	9	27	45	27	36	36	27	55
Number of months before benchmark date that high was reached	6th month before business cycle peak				Current expansion			
	May 1948	Jan. 1953	Jan. 1957	Nov. 1959	Mar. 1964	Apr. 1964	May 1964	June 1964
	NBER LEADING INDICATORS							
8 months or more.....	6	2	17	4	8	3	3	7
7 months.....	1	1	1	4	1	...	2	...
6 months.....	...	2	1	4	...	2	1	1
5 months.....	4	1	1	2	2	1	1	...
4 months.....	2	4	...	4	1	2	...	...
3 months.....	...	1	1	...	2	1	...	...
2 months.....	2	2	1	1	2	...	...	...
1 month.....	2	3	...	2	3	...	5	4
Benchmark month.....	1	3	1	2	4	9	6	1
Number of series used.....	¹ 18	² 19	23	23	23	24	23	16
Percent of series high on benchmark date.	6	16	4	9	17	39	26	6
	NBER ROUGHLY COINCIDENT INDICATORS							
8 months or more.....	1	...	1	...	...	...	...	...
7 months.....	...	...	...	...	...	...	...	...
6 months.....	...	...	...	...	...	...	...	...
5 months.....	...	...	...	4	...	...	...	...
4 months.....	4	...	...	2	...	...	...	...
3 months.....	...	...	2	...	1	...	...	...
2 months.....	...	2	...	...	1	1	...	1
1 month.....	1	3	5	2	2	...	...	2
Benchmark month.....	5	6	3	3	7	16	7	2
Number of series used.....	11	11	11	11	11	11	11	11
Percent of series high on benchmark date.	45	55	27	27	64	91	73	73

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

¹5 series were not available.

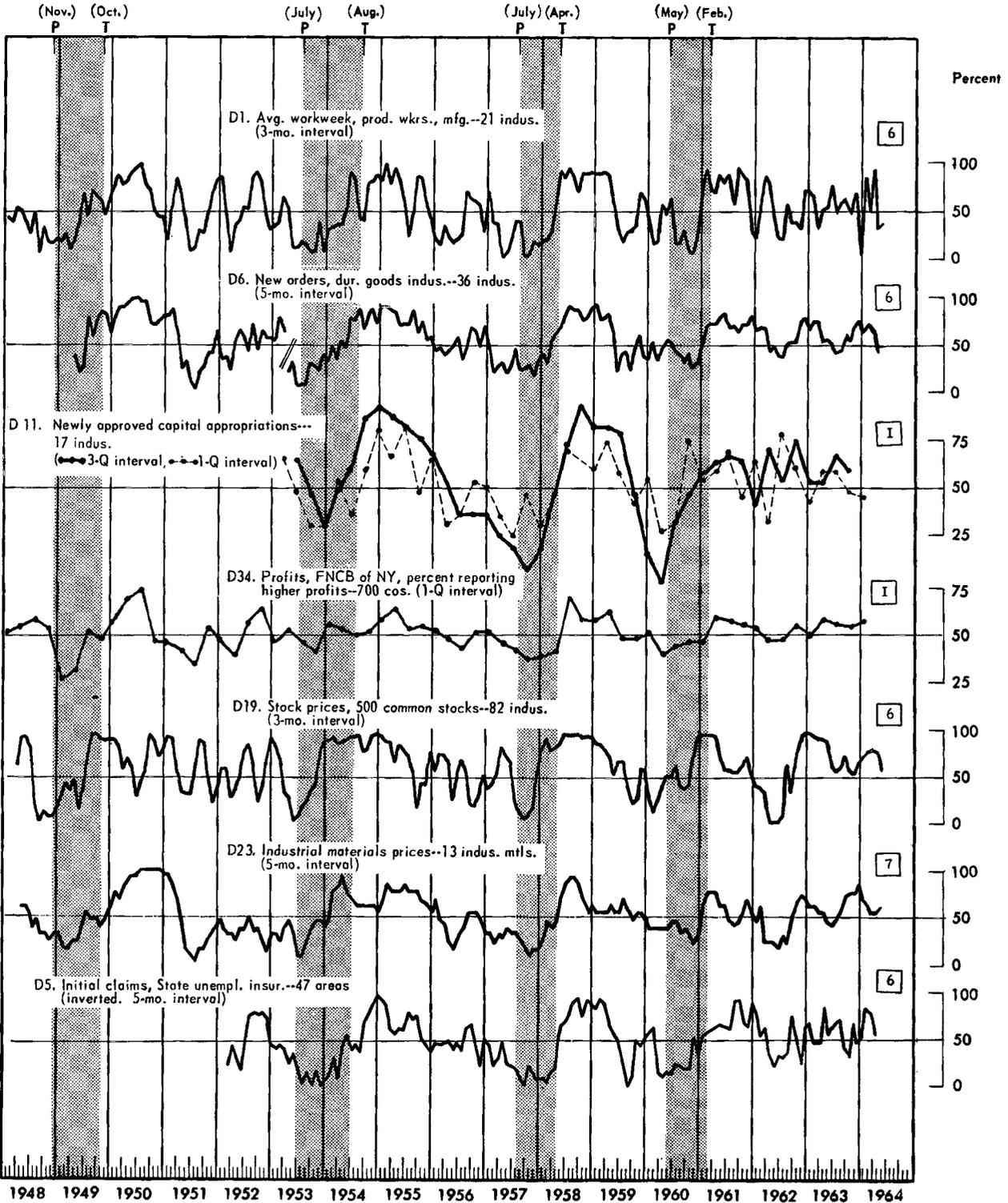
²2 series were not available and 2 series were omitted because their peaks were reached during the Korean War and such peaks were disregarded in this distribution.

CHART 2

DIFFUSION INDEXES: 1948 TO PRESENT

A

NBER Leading Indicators

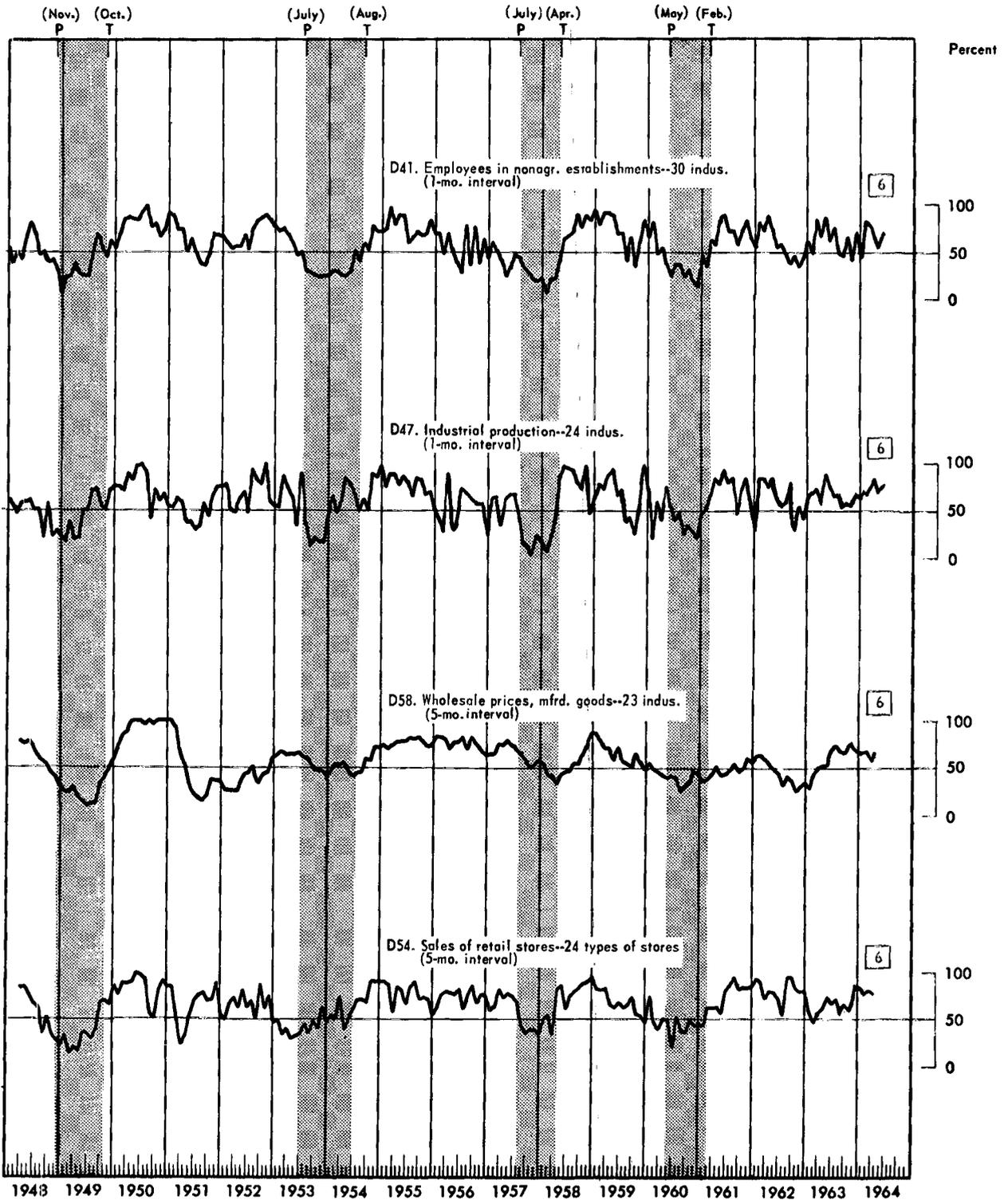


See "How to Read Charts 1, 2, and 3," page 5.

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

B

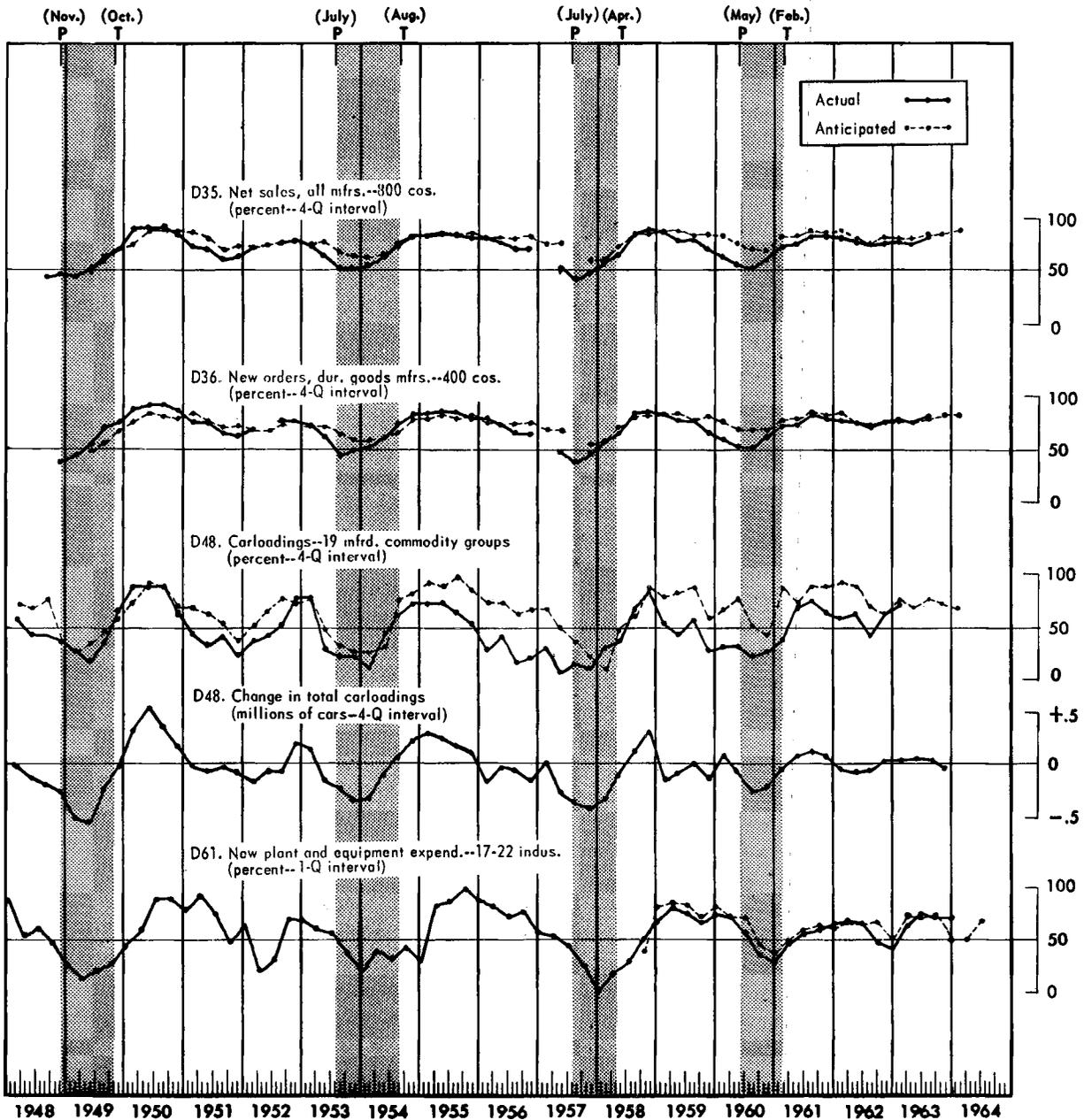
NBER Roughly Coincident Indicators



See "How to Read Charts 1, 2, and 3," page 5.

CHART 3

DIFFUSION INDEXES, ACTUAL AND ANTICIPATED: 1948 TO PRESENT



Data are centered within intervals. Latest data are as follows:

Series number and date of survey	Latest interval shown	
	Actual	Anticipated
D35, D36 (Apr. 1964)	1st Q 1963 - 1st Q 1964	3rd Q 1963 - 3rd Q 1964
D48 (June 1964)	3rd Q 1962 - 3rd Q 1963	3rd Q 1963 - 3rd Q 1964
D61 (May 1964)	4th Q 1963 - 1st Q 1964	2nd Q 1964 - 3rd Q 1964

See "How to Read Charts 1, 2, and 3," page 5.

Analytical Measures

Table 4.--DIFFUSION INDEXES FOR 11 MAJOR ECONOMIC ACTIVITIES: JANUARY 1961 TO PRESENT

Percent of series components rising. Numbers are centered within intervals: 1-month figures are placed on 1st month; 3-month figures are placed on the 3d month and 5-month figures are placed on the 4th month of span; 4-quarter figures are centered in the middle quarter; 3-quarter figures are placed on the 1st month of the 3d quarter; 1-quarter figures are placed in the 1st month of the 2d quarter. Seasonally adjusted components are used except in indexes D11a and D11b which require no adjustment, and D34 which is adjusted only for the index. Table 6 identifies the components for most of the indexes shown. The "r" indicates revised; "p", preliminary; and "NA", not available.

Year and month	NBER Leading indexes					
	D1. Average workweek, manufacturing (21 industries)		D6. Value of manufacturers' new orders, durable goods industries (36 industries)		D11. Newly approved capital appropriations, NICB (17 industries) ¹	
	1-month interval	3-month interval	1-month interval	5-month interval	1-quarter interval	3-quarter interval
1961						
January.....	95.2	66.7	33.3	52.8	53	69
February.....	71.4	95.2	48.6	72.2	...	...
March.....	54.8	71.4	66.7	72.2	...	...
April.....	81.0	69.0	62.5	72.2	59	65
May.....	45.2	90.5	63.9	77.8	...	...
June.....	90.5	78.6	66.7	83.3	...	...
July.....	64.3	88.1	36.1	66.7	68	68
August.....	73.8	54.8	63.9	69.4	...	...
September.....	38.1	97.6	47.2	62.5	...	...
October.....	85.7	85.7	55.6	72.2	44	65
November.....	66.7	81.0	61.1	70.8	...	...
December.....	23.8	26.2	58.3	80.6	...	...
1962						
January.....	14.3	21.4	63.9	63.9	65	41
February.....	73.8	59.5	52.8	68.1	...	...
March.....	73.8	88.1	36.1	66.7	...	...
April.....	76.2	78.6	51.4	41.7	29	71
May.....	21.4	40.5	56.9	48.6	...	...
June.....	28.6	21.4	37.5	37.5	...	...
July.....	35.7	21.4	56.9	36.1	79	51
August.....	47.6	59.5	36.1	52.8	...	...
September.....	81.0	35.7	48.6	52.8	...	...
October.....	7.1	38.1	68.1	52.8	69	76
November.....	59.5	31.0	50.0	75.0	...	...
December.....	59.5	73.8	47.2	77.8	...	...
1963						
January.....	52.4	71.4	63.9	66.7	41	53
February.....	73.8	64.3	43.1	75.0	...	...
March.....	40.5	31.0	54.2	73.6	...	...
April.....	16.7	52.4	63.9	55.6	59	53
May.....	81.0	54.8	52.8	56.9	...	...
June.....	47.6	78.6	47.2	50.0	...	...
July.....	45.2	47.6	51.4	41.7	59	68
August.....	42.9	59.5	52.8	45.8	...	...
September.....	66.7	64.3	52.8	62.5	...	...
October.....	57.1	47.6	69.4	54.2	47	59
November.....	21.4	66.7	33.3	69.4	...	...
December.....	83.3	7.1	62.5	77.8	...	...
1964						
January.....	0.0	85.7	55.6	66.7	44	(NA)
February.....	85.7	50.0	44.4	72.2	...	...
March.....	28.6	r92.9	58.3	r65.3	...	...
April.....	r78.6	33.3	r61.1	p44.4	(NA)	...
May.....	r28.6	p38.1	r48.6	...	...	...
June.....	p23.8	...	p51.4	...	...	...
July.....	...	...	...	...	...	...
August.....	...	...	...	...	...	...
September.....	...	...	...	...	...	...
October.....	...	...	...	...	...	...
November.....	...	...	...	...	...	...
December.....	...	...	...	...	...	...

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

Table 4.—DIFFUSION INDEXES FOR 11 MAJOR ECONOMIC ACTIVITIES: JANUARY 1961 TO PRESENT—Continued

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

Year and month	NBER Leading indexes--Continued						
	D34. Profits, mfg., FNCB (around 700 corporations)	D19. Index of stock prices, 500 common stocks (80 industries) ¹		D23. Index of industrial materials prices (13 industrial materials)		D5. Initial claims for unemployment insurance, State programs, week ended nearest the 22d (47 areas)	
	1-quarter interval	1-month interval	3-month interval	1-month interval	5-month interval	1-month interval	5-month interval
1961							
January.....	47	87.0	96.3	42.3	61.5	59.6	57.4
February.....	...	96.3	96.3	76.9	76.9	31.9	59.6
March.....	...	86.0	95.1	84.6	76.9	80.9	61.7
April.....	60	72.6	93.9	73.1	76.9	40.4	66.0
May.....	...	81.1	70.7	53.8	61.5	48.9	68.1
June.....	...	40.2	57.3	46.2	61.5	53.5	66.0
July.....	58	42.1	57.9	53.8	46.2	51.1	61.7
August.....	...	81.1	54.9	46.2	42.3	61.7	93.6
September.....	...	39.6	55.5	61.5	46.2	46.8	93.6
October.....	56	45.7	62.2	38.5	53.8	78.7	68.1
November.....	...	87.8	72.6	15.4	69.2	74.5	63.8
December.....	...	56.1	52.4	61.5	53.8	23.4	91.5
1962							
January.....	54	26.2	39.6	76.9	46.2	57.4	74.5
February.....	...	74.4	37.8	38.5	61.5	83.0	51.1
March.....	...	48.2	32.9	38.5	23.1	46.8	66.0
April.....	47	9.1	0.0	15.4	23.1	46.8	31.9
May.....	...	1.2	1.2	42.3	23.1	40.4	21.3
June.....	...	1.2	1.2	26.9	15.4	14.9	34.0
July.....	48	67.7	8.5	23.1	30.8	68.1	31.9
August.....	...	78.0	67.1	34.6	23.1	57.4	38.3
September.....	...	34.8	31.1	61.5	53.8	44.7	78.7
October.....	56	6.7	72.6	53.8	66.7	46.8	48.9
November.....	...	98.8	90.2	84.6	75.0	72.3	22.3
December.....	...	84.8	98.8	66.7	69.2	27.7	63.8
1963							
January.....	50	97.6	97.6	58.3	61.5	23.4	69.1
February.....	...	79.3	93.8	58.3	61.5	85.1	48.9
March.....	...	43.8	91.2	50.0	58.3	31.9	48.9
April.....	59	91.2	90.0	38.5	58.3	44.7	85.1
May.....	...	85.0	88.0	50.0	46.2	48.9	54.3
June.....	...	51.9	62.5	61.5	42.3	70.2	63.8
July.....	56	29.4	54.4	53.8	46.2	42.6	68.1
August.....	...	75.0	60.2	53.8	53.8	48.9	70.2
September.....	...	76.9	74.4	53.8	73.1	44.7	40.4
October.....	55	44.9	56.4	76.9	76.9	61.7	31.9
November.....	...	44.9	50.6	69.2	76.9	31.9	68.1
December.....	...	68.4	68.4	53.8	84.6	34.0	48.9
1964							
January.....	57	74.7	73.7	61.5	69.2	85.1	51.1
February.....	...	64.7	81.0	57.7	61.5	12.8	83.0
March.....	...	78.2	82.1	38.5	53.8	66.0	78.7
April.....	(NA)	75.6	77.9	61.5	53.8	75.5	55.3
May.....	...	52.6	57.7	38.5	² 61.5	51.1	...
June.....	...	35.3	...	50.0	...	51.1	...
July.....	...	...	...	² 73.1	...	...	...
August.....	...	...	...	...	...	...	...
September.....	...	...	...	...	...	...	...
October.....	...	...	...	...	...	...	...
November.....	...	...	...	...	...	...	...
December.....	...	...	...	...	...	...	...

¹The diffusion index is based on 82 components, January 1961 to February 1963; on 80 components, March 1963 to August 1963; and on 79 components thereafter. 18 components and 5 composites, representing an additional 22 components, are shown in the direction-of-change table (table 6C).

²Average for July 15, 16, and 17.

Table 4.--DIFFUSION INDEXES FOR 11 MAJOR ECONOMIC ACTIVITIES: JANUARY 1961 TO PRESENT--Continued

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

Year and month	NBER Roughly Coincident indexes							
	D41. Number of employees in nonagricultural establishments (30 industries)		D47. Index of industrial production (24 industries)		D54. Sales of retail stores (24 types of stores)		D58. Index of wholesale prices (23 manufacturing industries)	
	1-month interval	3-month interval	1-month interval	3-month interval	1-month interval	5-month interval	1-month interval	5-month interval
1961			Revised ¹	Revised ¹				
January.....	45.0	15.0	45.8	37.5	58.3	43.8	39.1	43.5
February.....	33.3	40.0	52.1	62.5	41.7	43.8	47.8	34.8
March.....	61.7	43.3	66.7	81.3	60.4	64.6	41.3	39.1
April.....	56.7	78.3	83.3	83.3	22.9	62.5	65.2	43.5
May.....	86.7	85.0	77.1	87.5	79.2	64.6	45.7	52.2
June.....	88.3	90.0	91.7	83.3	77.1	56.3	37.0	41.3
July.....	70.0	90.0	79.2	100.0	60.4	83.3	50.0	43.5
August.....	70.0	66.7	83.3	79.2	68.8	87.5	56.5	47.8
September.....	56.7	80.0	45.8	79.2	39.6	95.8	60.9	54.3
October.....	71.7	80.0	72.9	75.0	83.3	81.3	39.1	45.7
November.....	81.7	78.3	83.3	87.5	87.5	83.3	47.8	50.0
December.....	63.3	76.7	56.3	41.7	60.4	83.3	56.5	60.9
1962								
January.....	55.0	78.3	29.2	50.0	58.3	85.4	69.6	54.3
February.....	80.0	88.3	83.3	66.7	50.0	93.8	43.5	63.0
March.....	71.7	88.3	83.3	91.7	70.8	89.6	52.2	63.0
April.....	86.7	80.0	75.0	83.3	68.8	70.8	58.7	58.7
May.....	71.7	73.3	83.3	70.8	58.3	81.3	45.7	52.2
June.....	55.0	65.0	62.5	79.2	18.8	79.2	43.5	47.8
July.....	56.7	51.7	54.2	68.8	83.3	70.8	39.1	43.5
August.....	46.7	38.3	58.3	79.2	75.0	54.2	41.3	30.4
September.....	36.7	35.0	79.2	41.7	64.6	95.8	54.3	41.3
October.....	45.0	26.7	29.2	62.5	39.6	95.8	34.8	34.8
November.....	33.3	28.3	54.2	45.8	87.5	81.3	45.7	23.9
December.....	43.3	43.3	41.7	68.8	66.7	79.2	39.1	30.4
1963								
January.....	63.3	53.3	66.7	70.8	50.0	81.3	39.1	34.8
February.....	48.3	65.0	72.9	87.5	54.2	56.3	43.5	28.3
March.....	83.3	71.7	79.2	87.5	52.1	45.8	37.0	45.7
April.....	66.7	83.3	54.2	91.7	41.7	58.3	41.3	50.0
May.....	85.0	78.3	79.2	83.3	52.1	62.5	58.7	52.2
June.....	61.7	75.0	66.7	87.5	75.0	75.0	63.0	52.2
July.....	75.0	60.0	70.8	85.4	66.7	66.7	47.8	69.6
August.....	48.3	50.0	70.8	79.2	64.6	70.8	58.7	73.9
September.....	45.0	48.3	56.3	77.1	25.0	54.2	58.7	71.7
October.....	65.0	40.0	60.4	75.0	58.3	68.8	76.1	69.6
November.....	41.7	63.3	58.3	79.2	54.2	58.3	69.6	73.9
December.....	70.0	48.3	72.9	66.7	77.1	87.5	60.9	71.7
1964								
January.....	43.3	73.3	66.7	83.3	43.8	81.2	58.7	67.4
February.....	83.3	75.0	79.2	83.3	70.8	r79.2	63.0	69.6
March.....	76.7	r85.0	70.8	91.7	52.1	r83.3	45.7	r54.3
April.....	r63.3	r81.7	83.3	83.3	r52.1	p79.2	63.0	p60.9
May.....	r60.0	p73.3	70.8	p85.4	r70.8		r43.5	
June.....	p70.0		p77.1		p56.2		p47.8	
July.....								
August.....								
September.....								
October.....								
November.....								
December.....								

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

Analytical Measures

Table 5.--DIFFUSION INDEXES, ACTUAL AND ANTICIPATED, FOR 4 MANUFACTURING ACTIVITIES: JANUARY 1961 TO PRESENT

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

Year and month	D35. Net sales, manufactures (800 companies) 4-quarter interval		D36. New orders, durable manufactures (400 companies) 4-quarter interval		D48. Freight carloadings (19 manufactured commodity groups) 4-quarter interval			D61. New plant and equipment expenditures (16 industries) 1-quarter interval	
	Actual	Anticipated	Actual	Anticipated	Actual	Anticipated	Change in total (000)	Actual	Anticipated
1961									
January.....	...	...	...	...	...	...	...	28.1	37.5
February.....	72	82	72	78	36.8	89.5	-28	...	...
March.....	...	...	...	...	...	...	...	...	...
April.....	...	...	...	...	...	...	...	46.9	53.1
May.....	74	83	73	78	68.4	73.7	+79	...	...
June.....	...	...	...	...	...	...	...	...	...
July.....	...	...	...	...	...	...	...	56.2	62.5
August.....	82	88	82	86	r73.7	89.5	+125	...	...
September.....	...	...	...	...	...	...	...	...	...
October.....	...	...	...	...	...	...	...	59.4	65.6
November.....	81	86	78	82	63.2	89.5	+62	...	...
December.....	...	...	...	...	...	...	...	...	...
1962									
January.....	...	...	...	...	...	...	...	65.6	62.5
February.....	80	88	76	84	57.9	94.7	-67	...	...
March.....	...	...	...	...	...	...	...	...	...
April.....	...	...	...	...	...	...	...	68.8	68.8
May.....	76	80	74	74	63.2	89.5	-96	...	...
June.....	...	...	...	...	...	...	...	...	...
July.....	...	...	...	...	...	...	...	65.6	65.6
August.....	72	74	71	70	42.1	68.4	-66	...	...
September.....	...	...	...	...	...	...	...	...	...
October.....	...	...	...	...	...	...	...	46.9	68.8
November.....	74	82	76	76	63.2	63.2	+28	...	...
December.....	...	...	...	...	...	...	...	...	...
1963									
January.....	...	...	...	...	...	...	...	40.6	50.0
February.....	76	80	77	76	73.7	78.9	+38	...	...
March.....	...	...	...	...	...	...	...	...	...
April.....	...	...	...	...	...	...	...	65.6	75.0
May.....	74	80	76	76	(NA)	68.4	+44	...	...
June.....	...	...	...	...	...	...	...	...	...
July.....	...	...	...	...	...	...	...	75.0	71.9
August.....	82	84	82	80	...	78.9	+39	...	...
September.....	...	...	...	...	...	...	...	...	...
October.....	...	...	...	...	...	...	...	71.9	75.0
November.....	(NA)	85	(NA)	84	...	73.7	r-35	...	...
December.....	...	...	...	...	...	...	...	...	...
1964									
January.....	...	...	...	...	...	...	...	71.9	50.0
February.....	...	87	...	84	...	68.4	...	...	...
March.....	...	...	...	...	...	...	...	...	...
April.....	...	...	...	...	...	...	...	...	50.0
May.....	...	...	...	...	...	...	...	...	...
June.....	...	...	...	...	...	...	...	...	...
July.....	...	...	...	...	...	...	...	...	68.8
August.....	...	...	...	...	...	...	...	...	...
September.....	...	...	...	...	...	...	...	...	...
October.....	...	...	...	...	...	...	...	...	...
November.....	...	...	...	...	...	...	...	...	...
December.....	...	...	...	...	...	...	...	...	...

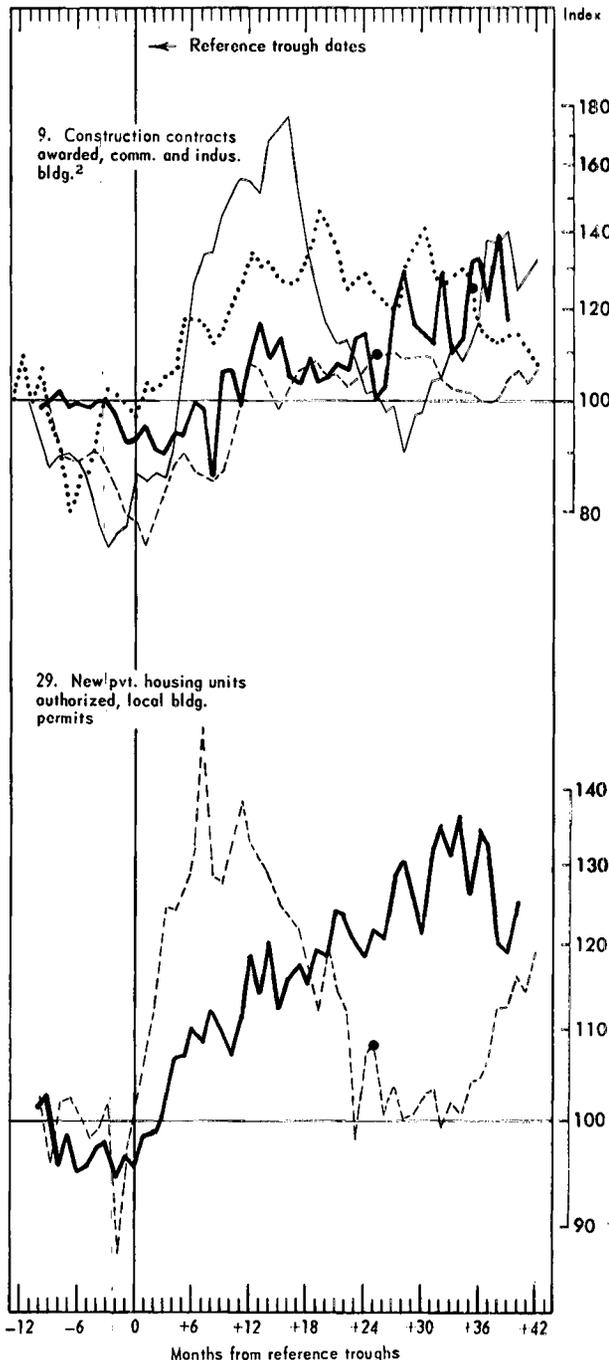
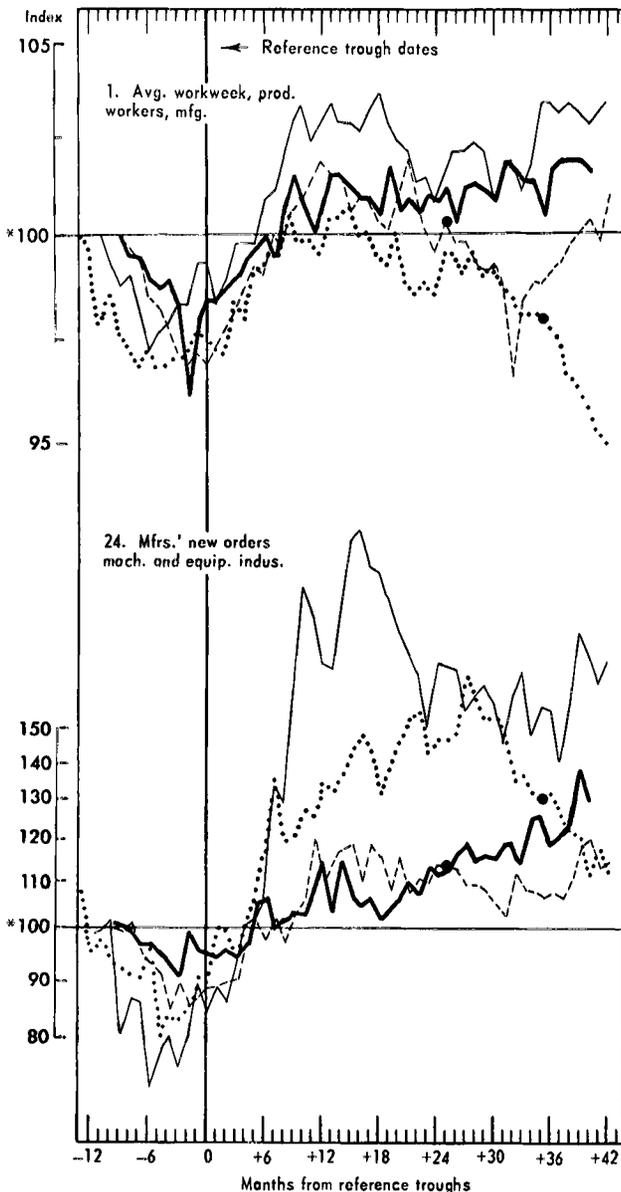
CHART 4

COMPARISONS OF REFERENCE CYCLE PATTERNS--Con.

Percent of reference peak levels of selected series compared for 4 business cycles. Period begins with the reference peak date preceding the trough of each cycle.

PERIOD COVERED

- Nov. 1948 to Apr. 1953 (Reference trough: Oct. 1949)
 - July 1953 to Feb. 1958 (Reference trough: Aug. 1954)
 - - - July 1957 to Oct. 1961 (Reference trough: Apr. 1958)
 - May 1960 to present¹ (Reference trough: Feb. 1961)
- Indicates the point at which this expansion reached its reference peak.



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

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

²For the 1949, 1954, and 1958 cycles, a 3-term moving average is shown.

CHART 4

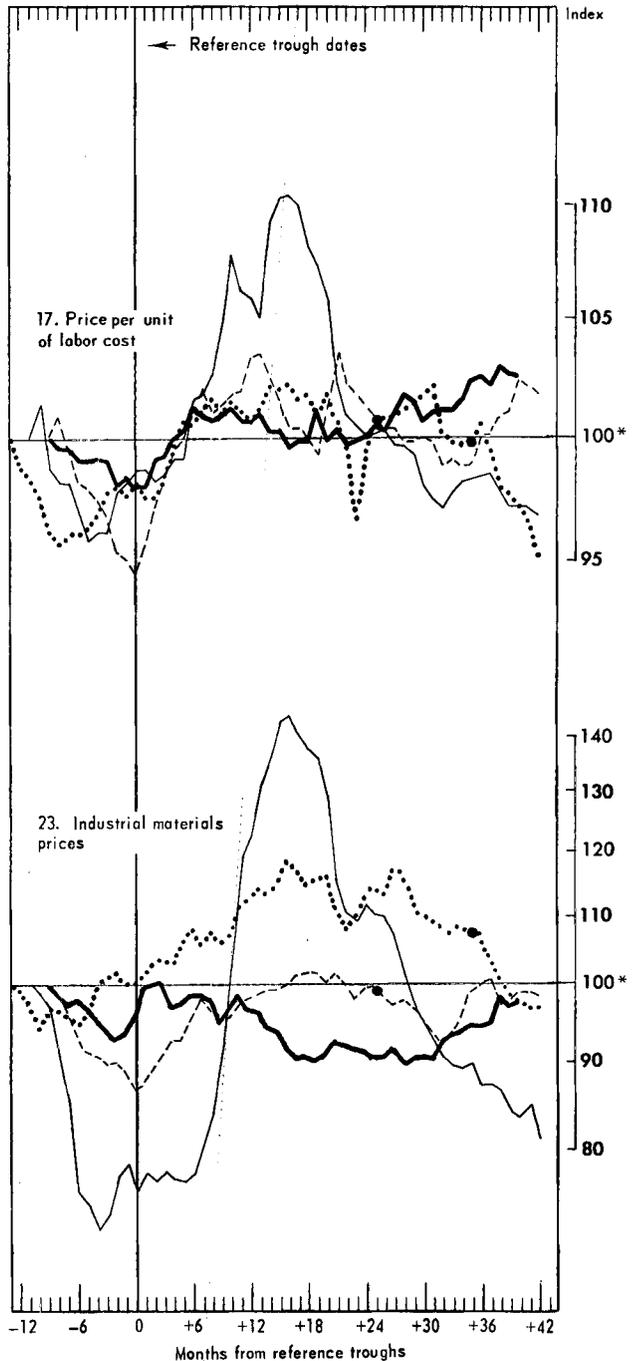
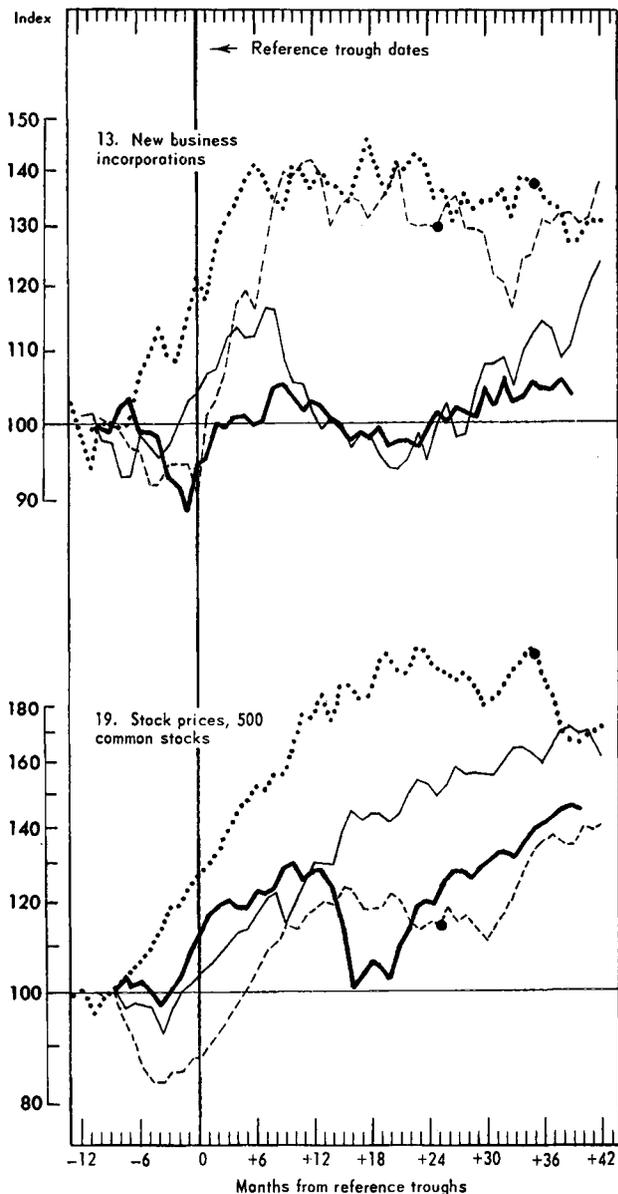
COMPARISONS OF REFERENCE CYCLE PATTERNS--Con.

Percent of reference peak levels of selected series compared for 4 business cycles. Period begins with the reference peak date preceding the trough of each cycle.

PERIOD COVERED

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

● Indicates the point at which this expansion reached its reference peak.



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

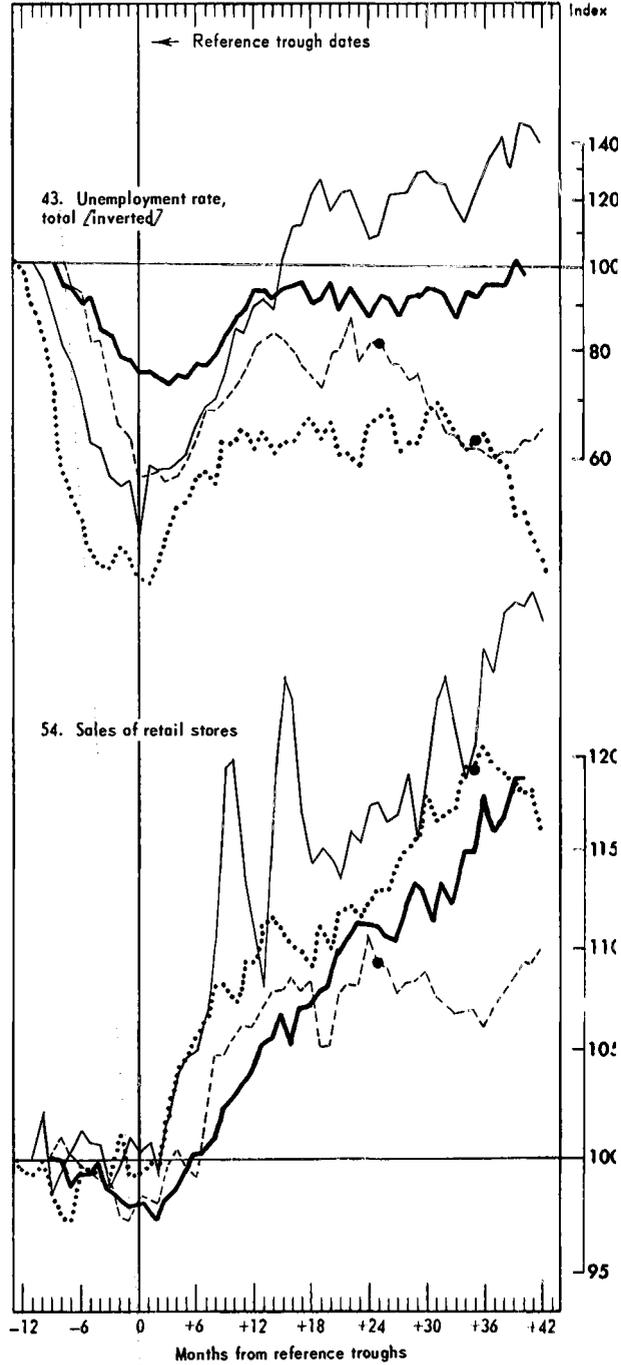
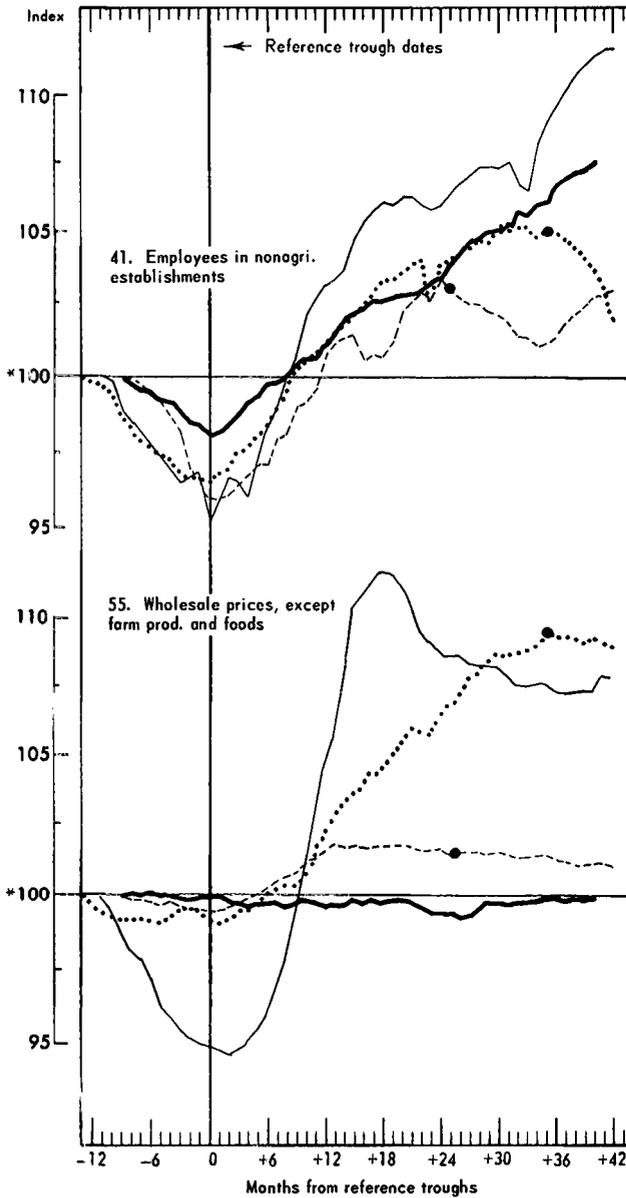
¹See table 2 for latest month in current period. Percent changes for this month and comparable months of previous expansions are shown in table 7.

CHART 4 COMPARISONS OF REFERENCE CYCLE PATTERNS--Con.

Percent of reference peak levels of selected series compared for 4 business cycles. Period begins with the reference peak date preceding the trough of each cycle.

PERIOD COVERED

- Nov. 1948 to Apr. 1953 (Reference trough: Oct. 1949)
 - July 1953 to Feb. 1958 (Reference trough: Aug. 1954)
 - - - July 1957 to Oct. 1961 (Reference trough: Apr. 1958)
 - May 1960 to present¹ (Reference trough: Feb. 1961)
- Indicates the point at which this expansion reached its reference peak.



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

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

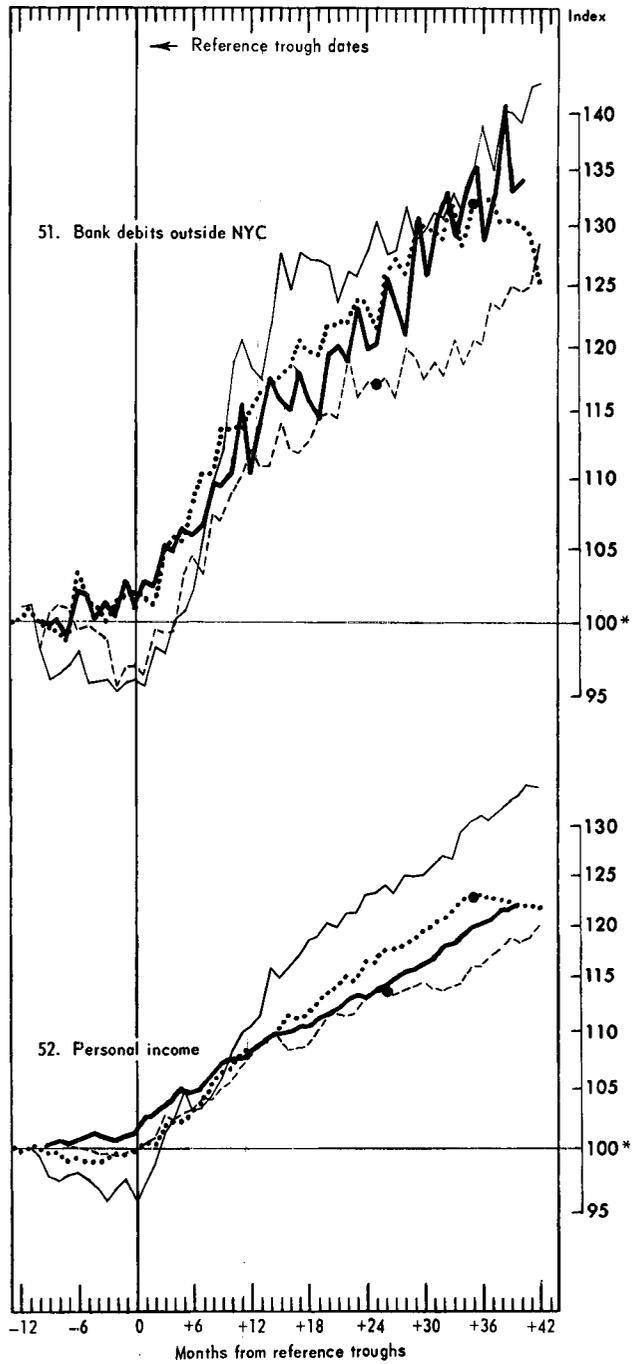
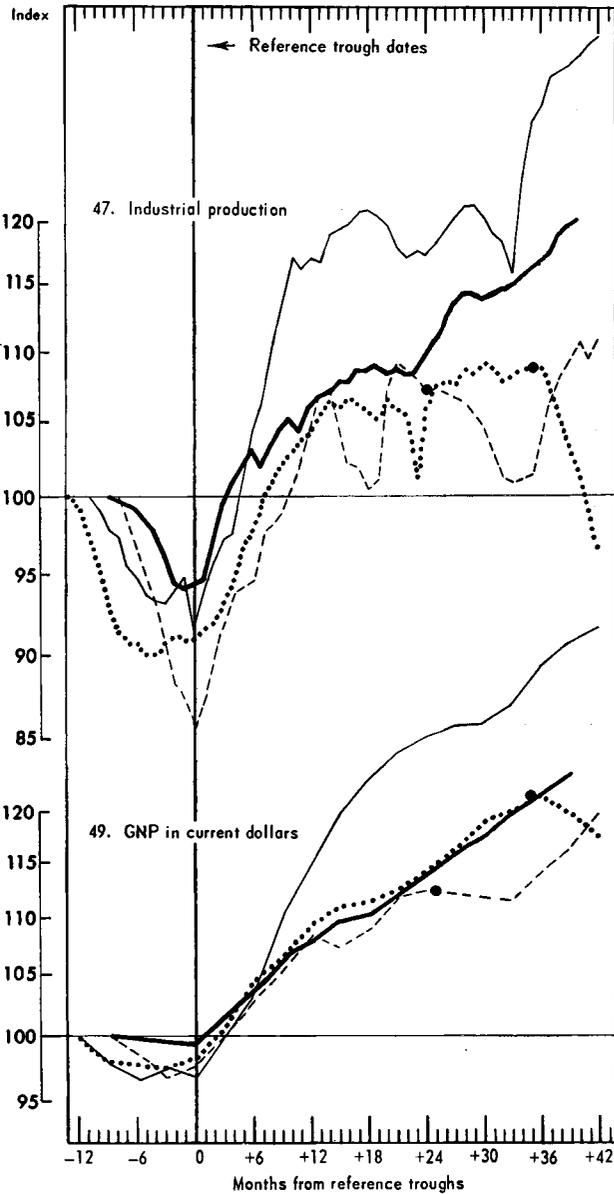
CHART 4

COMPARISONS OF REFERENCE CYCLE PATTERNS--Con.

Percent of reference peak levels of selected series compared for 4 business cycles. Period begins with the reference peak date preceding the trough of each cycle.

PERIOD COVERED

- Nov. 1948 to Apr. 1953 (Reference trough: Oct. 1949)
 - July 1953 to Feb. 1958 (Reference trough: Aug. 1954)
 - - - July 1957 to Oct. 1961 (Reference trough: Apr. 1958)
 - May 1960 to present² (Reference trough: Feb. 1961)
- Indicates the point at which this expansion reached its reference peak.



*Reference peak level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the reference peak is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the reference peak month is set at "100". For quarterly series, the reference peak quarter is set at "100". MCD values are shown in appendix C.
²See table 2 for latest month in current period. Percent changes for this month and comparable months of previous expansions are shown in table 7.

CHART 4

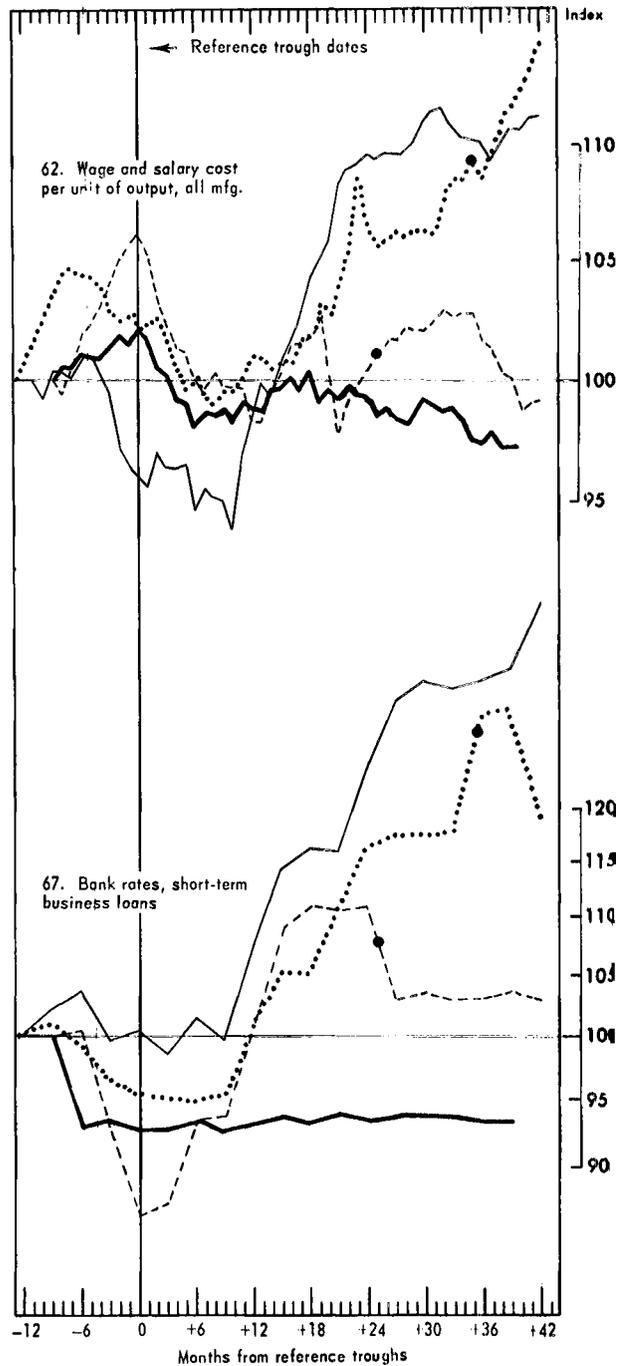
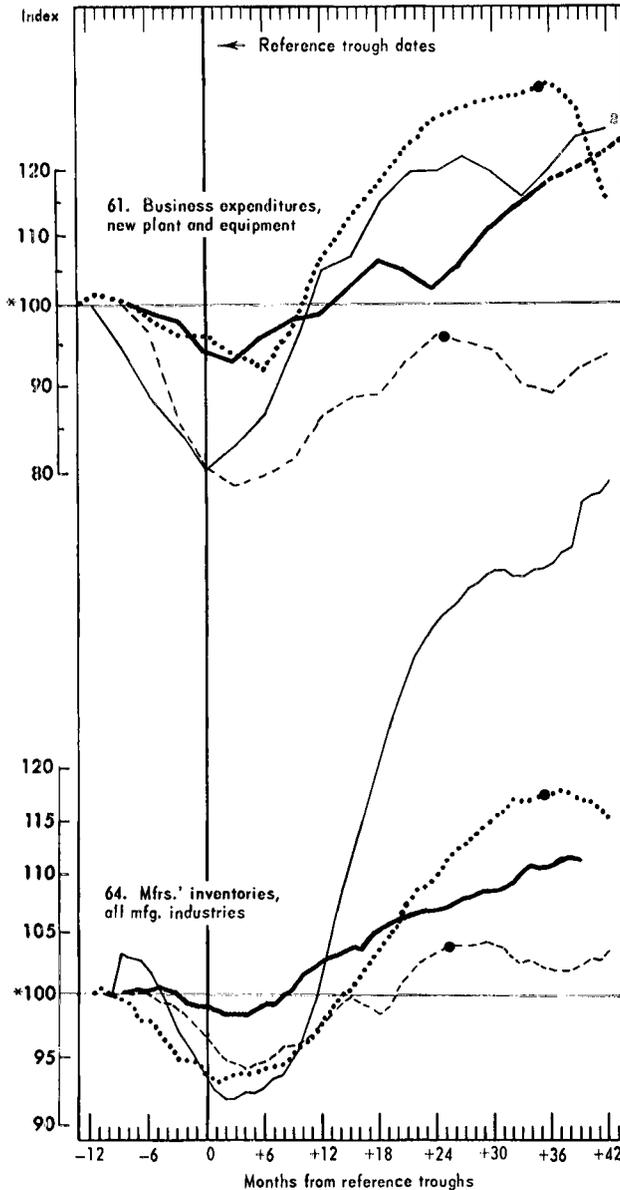
COMPARISONS OF REFERENCE CYCLE PATTERNS--Con.

Percent of reference peak levels of selected series compared for 4 business cycles. Period begins with the reference peak date preceding the trough of each cycle.

PERIOD COVERED

- Nov. 1948 to Apr. 1953 (Reference trough: Oct. 1949)
- July 1953 to Feb. 1958 (Reference trough: Aug. 1954)
- - - July 1957 to Oct. 1961 (Reference trough: Apr. 1958)
- May 1960 to present² (Reference trough: Feb. 1961)

● Indicates the point at which this expansion reached its reference peak.



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

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

²Last 3 quarters anticipated.

CHART 5

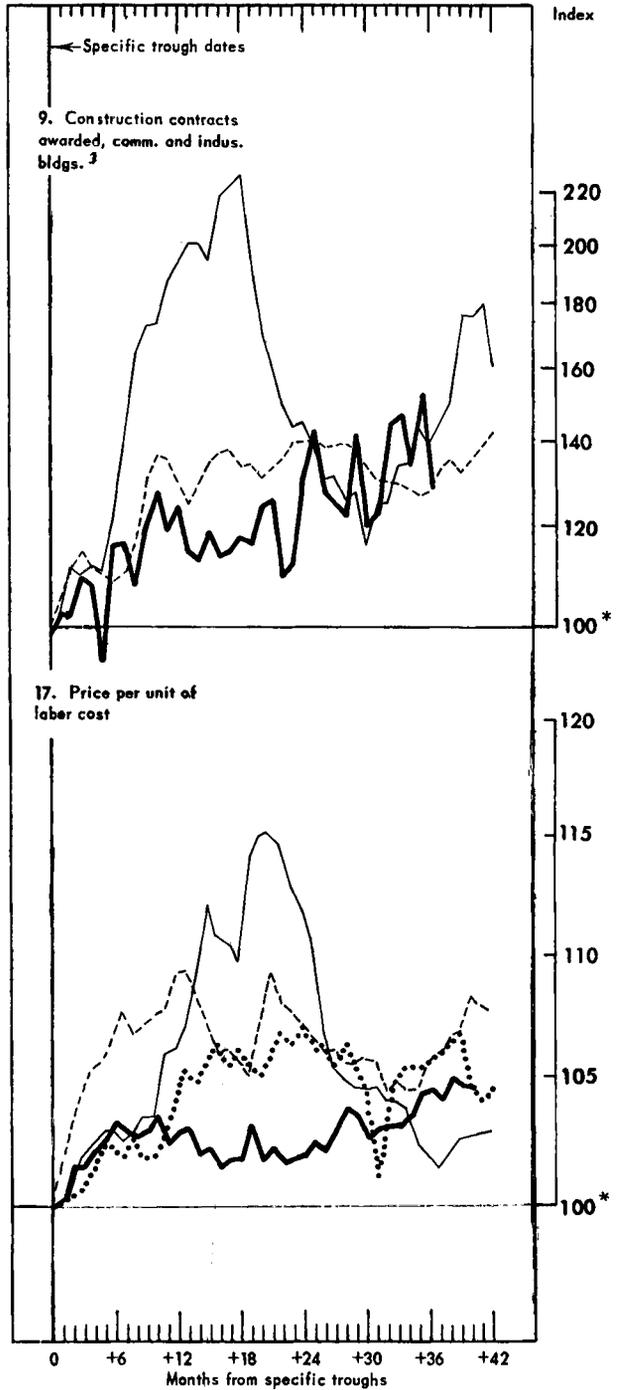
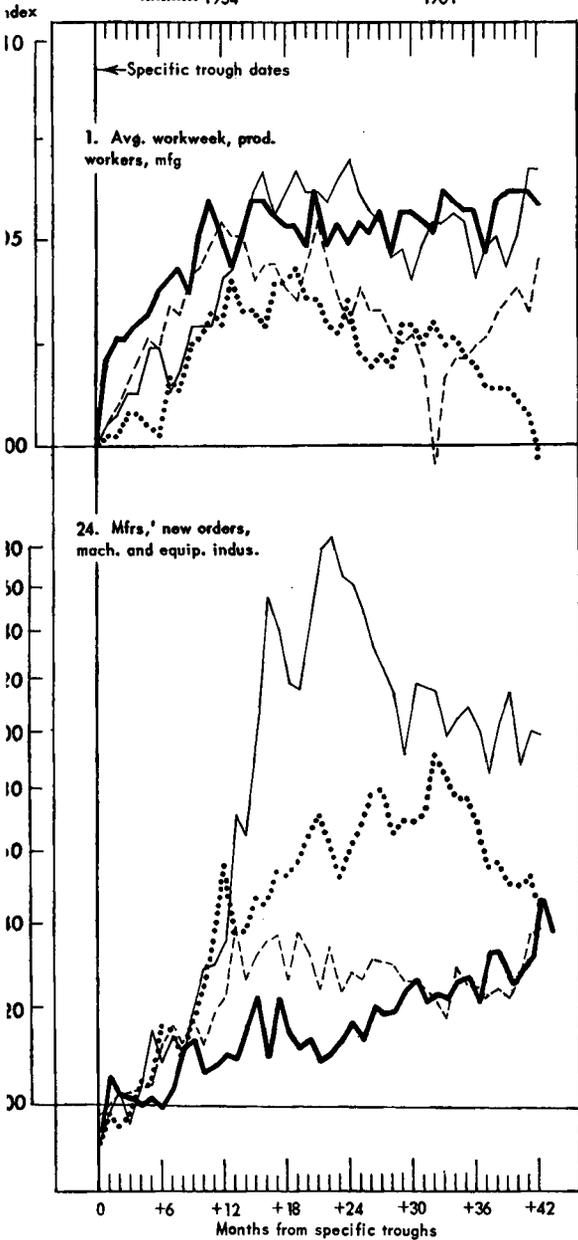
COMPARISONS OF SPECIFIC CYCLE PATTERNS

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

PERIOD COVERED

From specific trough dates to 42 months later.² Specific trough dates are the dates each series actually begins the expansion identified with the reference trough of--

— 1949 - - - 1958
 1954 — 1961

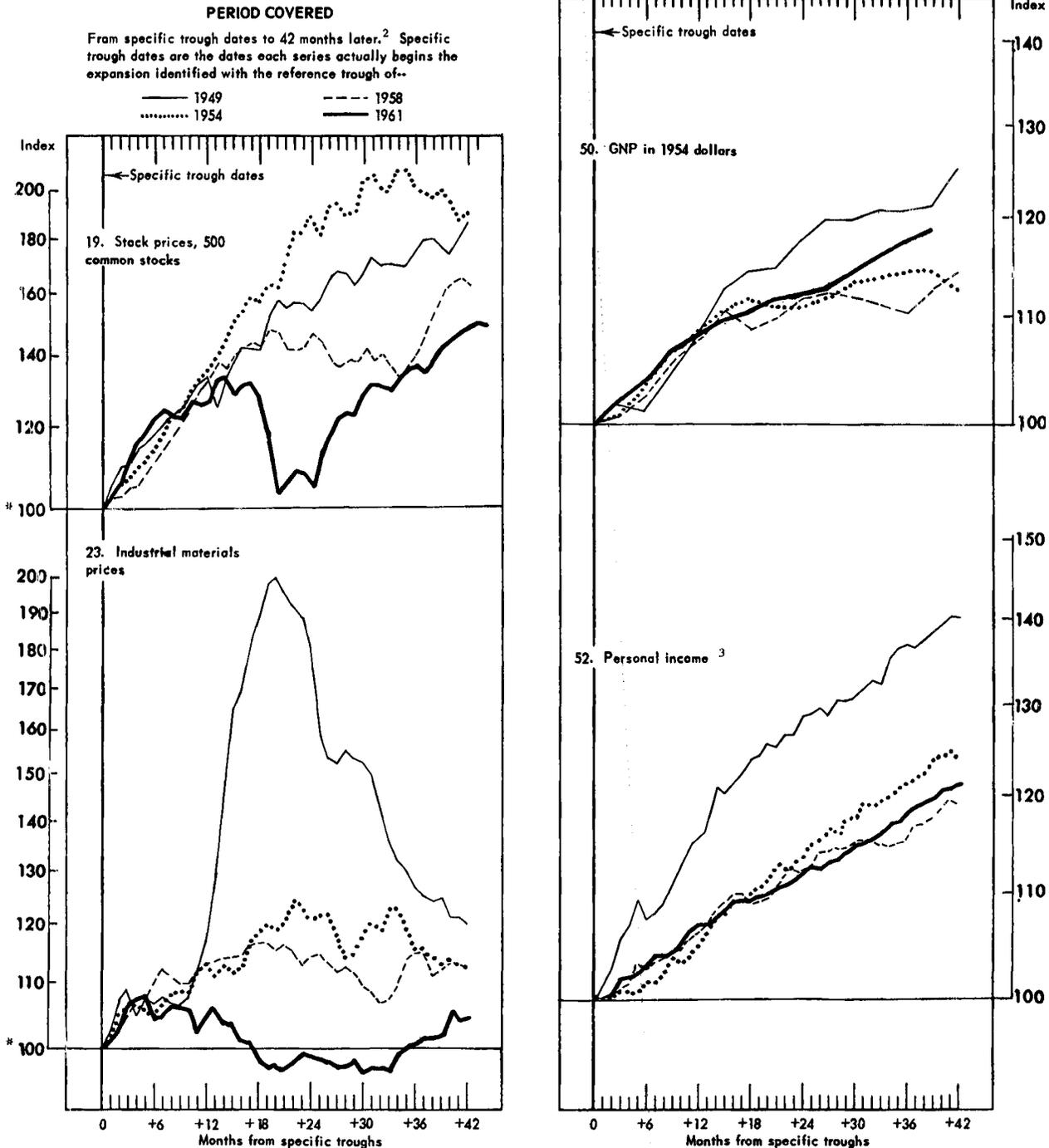


* Specific trough level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the specific trough is set at "100". For series with MCD of "3" or more, the average of the 3 months centered on the specific trough month is set at "100". For quarterly series, the specific trough quarter is set at "100". MCD values are shown in appendix C.
¹ See appendix B for specific dates. ² See table 2 for latest month in current period. Percent changes for this month and comparable months after the specific troughs of previous expansions are shown in table 9. ³ For the current cycle, changes are based on the low (L) shown in table 2. For the 1949 and 1958 cycles, a 3-term moving average is shown.

CHART 5

COMPARISONS OF SPECIFIC CYCLE PATTERNS--Con.

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



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

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

CHART 5

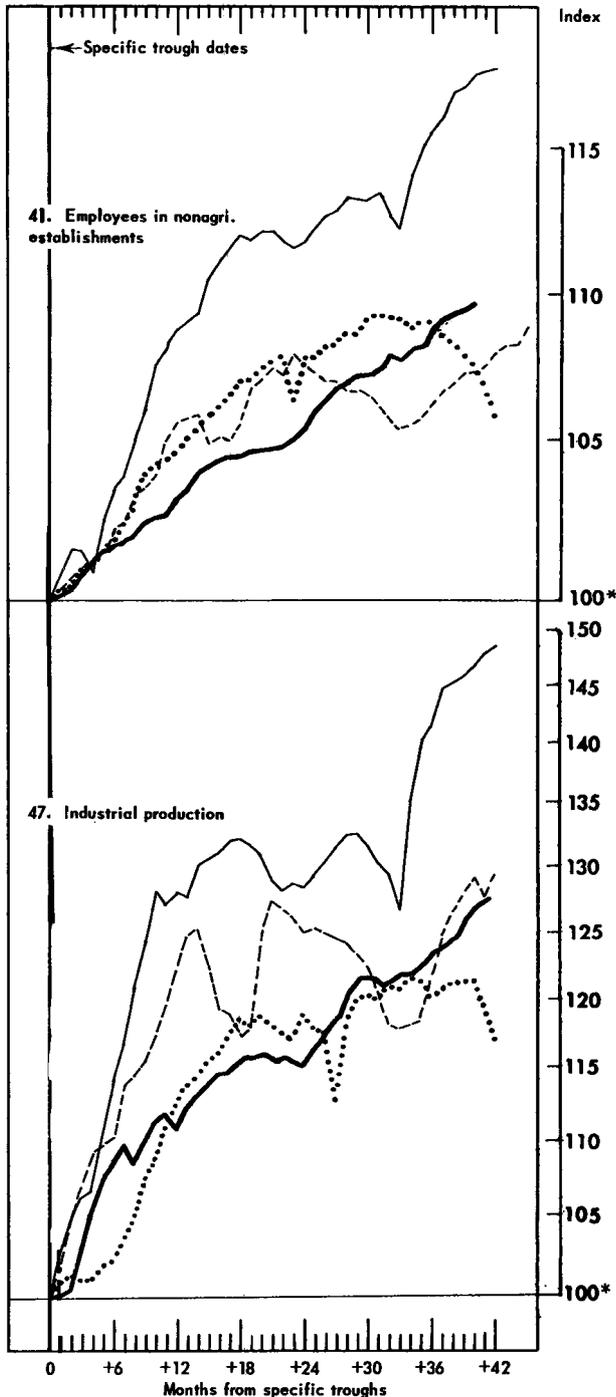
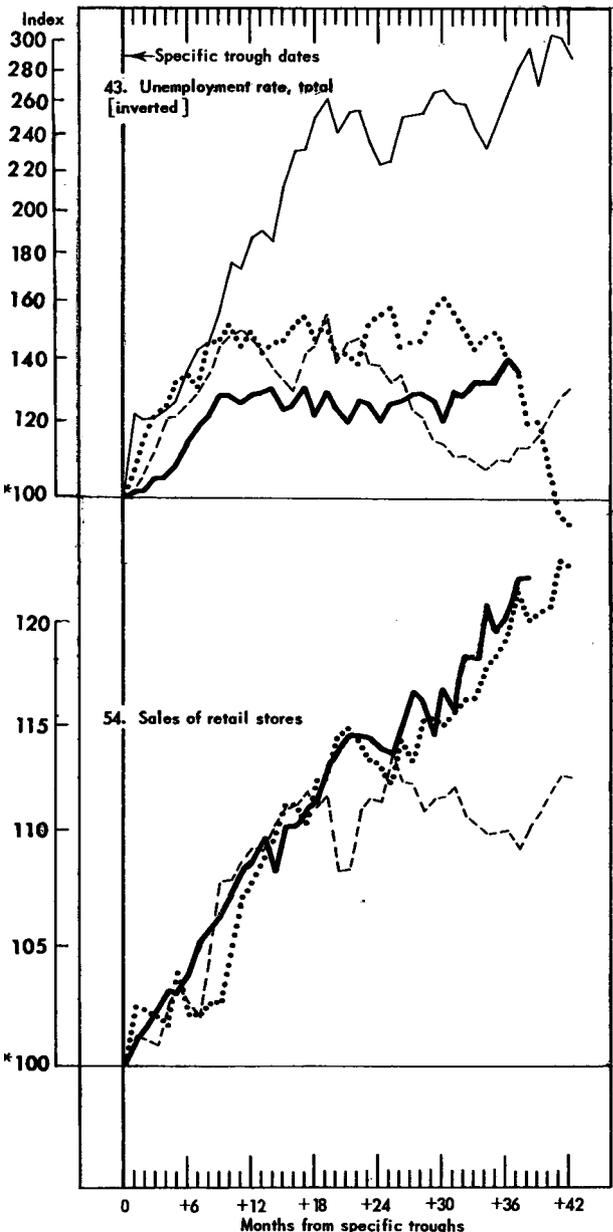
COMPARISONS OF SPECIFIC CYCLE PATTERNS--Con.

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

PERIOD COVERED

From specific trough dates to 42 months later.² Specific trough dates are the dates each series actually begins the expansion identified with the reference trough of--

— 1949 - - - 1958
 1954 — 1961



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

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

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

For series with a "months for cyclical dominance" (MCD) of "1" or "2" (series 1, 17, 19, 23, 41, 43, 47, 52, 54, 56, 62, 64, and 66), the figure for the reference peak month is used as the base. For series with an MCD of "3" or more (series 2, 3, 6, 7, 9, 13, 14, 24, 29, and 51), the average of the 3 months centered on the reference peak month is used as the base. The base for quarterly series (series 16, 49, 50, 61, and 67) is the reference peak quarter. See also MCD footnote to appendix C.

Selected series	Months after reference trough ¹	Percent of reference peak prior to reference expansion beginning in--									
		July 1921	July 1924	Nov. 1927	Mar. 1933	June 1938	Oct. 1949	Aug. 1954	Apr. 1958	Feb. 1961	
NBER LEADING INDICATORS											
1. Average workweek of production workers, manufacturing.....	40	NA	95.6	86.0	73.4	102.3	102.8	95.8	100.3	101.5	
2. Accession rate, manufacturing.....	39	20.1	27.8	38.9	58.4	106.0	115.4	63.7	111.8	100.0	
3. Layoff rate, manufacturing (inverted).....	39	10.4	27.6	61.4	76.2	119.6	203.7	48.3	82.6	141.2	
6. Value of manufacturers' new orders, durable goods industries.....	40	218.5	113.1	46.2	70.9	190.2	176.5	103.2	116.0	130.2	
7. New private nonfarm dwelling units started..	40	167.5	136.0	44.1	59.0	199.8	121.5	84.9	105.5	124.5	
9. Construction contracts awarded for commercial and industrial bldgs., floor space ² ...	39	36.4	95.5	34.6	34.4	253.1	139.7	114.1	104.7	117.2	
13. Number of new business incorporations.....	39	62.2	98.3	95.8	69.9	71.2	110.7	127.2	132.7	103.7	
14. Current liabilities of bus. failures (inv.)..	40	25.3	121.3	61.3	NA	191.8	114.5	80.7	51.5	59.1	
16. Corporate profits after taxes (Q).....	36	56.0	78.8	9.4	41.2	197.7	88.6	115.3	95.6	138.1	
17. Price per unit of labor cost index.....	40	NA	NA	NA	NA	NA	97.3	97.3	102.5	102.5	
19. Index of stock prices, 500 common stocks...	40	109.2	196.8	134.6	51.7	60.5	169.1	166.0	139.7	145.3	
23. Index of industrial materials prices.....	40	65.5	81.6	61.9	76.6	107.5	83.7	97.9	99.1	97.4	
24. Value of manufacturers' new orders, machinery and equipment industries.....	40	NA	NA	NA	NA	NA	172.7	111.1	121.0	129.2	
29. Index of new private housing units authorized by local building permits.....	40	NA	NA	NA	NA	NA	NA	NA	115.8	125.0	
NBER ROUGHLY COINCIDENT INDICATORS											
41. Number of employees in nonagricultural establishments.....	40	81.0	92.8	79.6	90.3	118.4	111.4	103.8	102.7	107.5	
43. Unemployment rate, total (inverted).....	40	NA	NA	NA	NA	NA	145.4	50.9	61.7	98.1	
47. Index of industrial production.....	40	102.8	100.6	83.6	92.5	142.1	133.6	101.2	111.0	119.9	
49. Gross national product in current dollars(Q)	39	NA	112.5	86.9	78.8	140.2	137.1	119.9	116.4	123.7	
50. Gross national product in 1954 dollars (Q)..	39	NA	114.6	98.9	98.1	NA	124.1	108.2	109.6	116.2	
51. Bank debits outside NYC, 343 centers.....	40	97.2	128.5	84.6	62.5	136.4	139.2	129.7	124.1	134.4	
52. Personal income.....	40	NA	114.2	90.9	83.3	134.2	133.0	121.6	118.0	121.6	
54. Sales of retail stores.....	40	109.4	108.8	91.9	89.5	125.2	128.4	118.1	109.4	113.7	
55. Index of wholesale prices, all commodities other than farm products and foods.....	40	64.0	86.4	78.2	86.8	107.6	107.2	109.2	101.2	99.9	
NBER LAGGING INDICATORS											
61. Business expenditures on new plant and equipment, total (Q): ³											
a.....	36	44.5	91.2	64.9	49.3	NA	120.0	134.3	83.7	117.2	
b.....	45	54.8	100.2	41.4	64.7	NA	129.5	107.9	94.6	125.1	
62. Index of labor cost per unit of output, total manufacturing.....	40	75.6	91.5	84.8	81.7	113.2	110.6	112.8	98.9	97.4	
64. Manufacturers' inventories, book value.....	39	NA	NA	NA	81.5	NA	149.3	117.1	102.5	111.2	
66. Consumer installment debt.....	39	NA	NA	NA	103.5	160.3	NA	152.9	127.9	156.8	
67. Bank rates on short-term business loans, 19 cities (Q).....	39	77.7	87.7	93.3	55.4	NA	134.1	130.0	103.3	93.3	

NOTE: For the expansions beginning in July 1921, July 1924, November 1927, August 1954, and April 1958, the peak had been passed and a reference contraction was underway by the month indicated in the first column. See appendix A for the reference peak dates and earlier issues of Business Cycle Developments for the levels reached on those dates.

NA Not available.

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

²Except for 1961, changes are computed in a 3-term moving average of the seasonally adjusted series.

³Comparisons are made for this series on the basis of (a) the period 36 months after the February 1961 trough (actual expenditures) and (b) the period 45 months after the same period (anticipated expenditures for 4th quarter 1964).

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

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

Selected series	Months after refer- ence trough ¹	Percent change from reference trough of expansion beginning in--								
		July 1921	July 1924	Nov. 1927	Mar. 1933	June 1938	Oct. 1949	Aug. 1954	Apr. 1958	Feb. 1961
NBER LEADING INDICATORS										
1. Average workweek of production workers, manufacturing.....	40	+3.7	+4.6	-12.4	+8.8	+17.2	+3.5	-1.8	+3.6	+3.0
2. Accession rate, manufacturing.....	39	NA	+29.4	-46.8	+42.6	+18.7	+29.9	-12.3	+21.8	-7.5
3. Layoff rate, manufacturing (inverted).....	39	NA	-11.1	-13.4	+106.3	+141.2	+203.7	-25.3	+39.1	+60.8
6. Value of manufacturers' new orders, durable goods industries.....	40	+209.5	+1.0	-53.8	NA	NA	+103.8	+15.3	+31.4	+39.1
7. New private nonfarm dwelling units started..	40	+71.1	+37.3	-57.6	NA	+112.7	-13.3	-27.5	+8.8	+24.9
9. Construction contracts awarded for commercial and industrial bldgs., floor space ² ...	39	+33.7	+37.5	-60.2	+187.0	NA	+61.8	+17.7	+33.2	+25.8
13. Number of new business incorporations.....	39	-14.1	+32.8	-7.7	-11.8	-17.4	+5.9	+7.7	+39.0	+11.6
14. Current liabilities of bus. failures (inv.)..	40	+50.2	+14.5	-33.4	NA	+160.7	-2.4	-15.3	-31.5	-39.5
16. Corporate profits after taxes (Q).....	36	NA	+46.4	-87.2	+16.7	NA	+13.3	+35.3	+27.5	+60.0
17. Price per unit of labor cost index.....	40	NA	NA	NA	NA	NA	-1.5	-0.9	+7.7	+4.6
19. Index of stock prices, 500 common stocks....	40	+47.6	+88.9	+2.8	+149.8	-3.7	+62.7	+31.2	+60.1	+29.1
23. Index of industrial materials prices.....	40	+56.5	-2.7	-36.6	+84.4	+58.9	+11.4	-2.1	+14.1	+2.1
24. Value of manufacturers' new orders, machinery and equipment industries.....	40	NA	NA	NA	NA	NA	+97.0	+19.3	+37.1	+36.3
29. Index of new private housing units authorized by local building permits.....	40	NA	NA	NA	NA	NA	-6.0	-25.7	+13.9	+28.9
NBER ROUGHLY COINCIDENT INDICATORS										
41. Number of employees in nonagricultural establishments.....	40	+17.6	+6.8	-17.1	+32.0	+32.1	+17.4	+7.4	+7.0	+9.6
43. Unemployment rate, total (inverted).....	40	NA	NA	NA	+78.0	NA	+203.8	+17.6	+10.4	+30.2
47. Index of industrial production.....	40	+50.5	+22.5	-11.2	+91.7	+108.0	+46.0	+11.2	+29.2	+27.5
49. Gross national product in current dollars (Q)	39	+25.3	+15.1	-13.4	+56.4	+59.2	+41.8	+22.2	+19.5	+23.4
50. Gross national product in 1954 dollars (Q)..	39	+26.0	+14.9	-3.3	+36.2	NA	+25.9	+11.5	+14.0	+18.3
51. Bank debits outside NYC, 343 centers.....	40	+25.4	+32.6	-22.2	+64.0	+63.3	+44.9	+27.7	+28.1	+31.2
52. Personal income.....	40	+35.5	+14.2	-9.8	+69.3	+50.7	+39.0	+21.9	+18.6	+20.4
54. Sales of retail stores.....	40	+16.7	+8.8	-8.1	+70.0	+53.5	+28.4	+18.9	+11.1	+21.0
55. Index of wholesale prices, all commodities other than farm products and foods.....	40	+1.1	-5.3	-16.0	+19.9	+13.9	+12.9	+10.1	+1.7	0.0
NBER LAGGING INDICATORS										
61. Business expenditures on new plant and equipment, total (Q): ³										
a.....	36	+29.8	+30.7	-26.1	+187.2	NA	+50.0	+40.6	+10.5	+25.7
b.....	45	+59.5	+43.6	-52.9	+276.9	NA	+61.8	+13.0	+17.7	+34.1
62. Index of labor cost per unit of output, total manufacturing.....	40	-16.0	-11.0	-13.8	+11.4	+9.1	+15.0	+10.5	-6.5	-4.6
64. Manufacturers' inventories, book value.....	39	NA	NA	NA	+37.6	NA	+59.9	+25.3	+6.3	+12.5
66. Consumer installment debt.....	39	NA	NA	NA	+116.6	+72.0	+82.2	+47.9	+26.9	+31.4
67. Bank rates on short-term business loans, 19 cities (Q).....	39	-27.9	0.0	-3.1	-28.9	NA	+33.6	+36.2	+19.7	+0.4

NOTE: For the expansions beginning in July 1921, July 1924, November 1927, August 1954, and April 1958, the peak had been passed and a reference contraction was underway by the month indicated in the first column. See appendix A for the reference peak dates and earlier issues of Business Cycle Developments for the levels reached on those dates.

NA Not available.

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

²Except for 1961, changes are computed in a 3-term moving average of the seasonally adjusted series.

³Comparisons are made for this series on the basis of (a) the period 36 months after the February 1961 trough (actual expenditures) and (b) the period 45 months after the same period (anticipated expenditures for 4th quarter 1964).

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

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

Selected series	Months after specific trough ¹	July 1921	July 1924	Nov. 1927	Mar. 1933	June 1938	Oct. 1949	Aug. 1954	Apr. 1958	Feb. 1961
		Percent of specific peak prior to reference expansion beginning in year shown								
NBER LEADING INDICATORS										
1. Average workweek of production workers, manufacturing.....	42	NA	*97.8	*100.0	71.3	100.0	NSC	*99.8	*99.0	130.0
9. Construction contracts awarded for commercial and industrial bldgs., floor space ² ...	36	*45.2	*114.6	*108.2	22.3	227.4	43.8	NSC	87.9	³ 120.0
13. Number of new business incorporations.....	40	*86.3	*106.8	*110.5	*70.4	38.4	68.0	NSC	*138.1	96.7
17. Price per unit of labor cost index.....	40	NA	NA	NA	NA	NA	*107.2	*90.3	*101.0	99.7
19. Index of stock prices, 500 common stocks....	44	*99.2	157.9	NSC	46.5	48.4	*155.6	*186.3	*122.5	134.3
23. Index of industrial materials prices.....	42	*71.3	*100.8	*76.6	74.9	102.3	*135.1	*65.1	*92.9	95.8
24. Value of manufacturers' new orders, machinery and equipment industries.....	43	NA	NA	NA	NA	NA	*211.6	*106.2	*99.2	126.9
29. Index of new private housing units authorized by local building permits.....	42	NA	NA	NA	NA	NA	NA	NA	*95.5	96.7
NBER ROUGHLY COINCIDENT INDICATORS										
41. Number of employees in nonagricultural establishments.....	40	*91.3	*96.6	*105.6	90.3	117.8	111.3	*105.4	*103.0	107.2
43. Unemployment rate, total (inverted).....	37	NA	NA	NA	NA	282.7	NA	*67.5	*78.2	92.5
47. Index of industrial production.....	41	*112.3	*108.2	*116.2	84.0	142.1	132.8	*109.2	*109.0	118.0
49. Gross national product in current dollars(Q)	39	NA	NSC	NSC	78.8	133.5	130.5	*121.6	*112.4	122.7
50. Gross national product in 1954 dollars (Q)..	39	NA	NSC	NSC	88.3	NA	118.6	*110.1	*107.6	116.2
52. Personal income.....	42	NA	*111.1	*112.9	78.6	133.6	133.8	*122.6	117.9	³ 120.7
53. Labor income in mining, mfg., and construc..	42	NA	NA	NA	72.1	161.8	146.4	*116.1	*108.3	115.9
54. Sales of retail stores.....	38	102.9	NSC	NSC	82.1	133.4	NSC	114.1	*109.4	117.2
NBER LEADING INDICATORS										
1. Average workweek of production workers, manufacturing.....	42	*+15.4	*+7.9	*+4.5	+5.5	+19.9	+6.5	*+4.1	*+5.2	+5.7
9. Construction contracts awarded for commercial and industrial bldgs., floor space ² ...	36	*+118.5	*+82.6	*+40.1	+131.2	NA	+40.6	NSC	+28.6	³ +29.0
13. Number of new business incorporations.....	40	*+23.6	*+42.9	*+20.5	*+12.8	-51.9	+15.0	NSC	*+51.7	+13.1
17. Price per unit of labor cost index.....	40	NA	NA	NA	NA	NA	*+15.2	*+6.8	*+9.4	+4.6
19. Index of stock prices, 500 common stocks....	44	*+46.2	+85.4	NSC	+205.0	-11.4	*+87.4	*+109.6	*+48.1	+49.3
23. Index of industrial materials prices.....	42	*+75.0	*+36.7	*+7.3	+101.4	+58.3	*+100.3	*+24.7	*+17.4	+4.8
24. Value of manufacturers' new orders, machinery and equipment industries.....	43	NA	NA	NA	NA	NA	*+180.1	*+89.9	*+36.7	+37.3
29. Index of new private housing units authorized by local building permits.....	42	NA	NA	NA	NA	NA	NA	NA	*+56.3	+29.7
NBER ROUGHLY COINCIDENT INDICATORS										
41. Number of employees in nonagricultural establishments.....	40	*+32.6	*+12.0	*+11.5	+32.0	+32.1	+17.4	*+9.1	*+7.6	+9.6
43. Unemployment rate, total (inverted).....	37	NA	NA	NA	+72.3	+415.5	+182.1	*+61.9	*+54.2	+34.0
47. Index of industrial production.....	41	*+66.1	*+31.7	*+24.9	+80.2	+110.1	+47.4	*+21.3	*+27.2	+27.6
49. Gross national product in current dollars(Q)	39	NA	NSC	NSC	+56.4	+59.2	+35.3	*+24.9	*+16.4	+23.4
50. Gross national product in 1954 dollars (Q)..	39	NA	NSC	NSC	+31.1	NA	+21.5	*+14.3	*+12.5	+18.3
52. Personal income.....	42	*+32.8	*+15.3	*+15.9	+59.8	+52.9	+40.2	*+24.2	+19.3	³ +21.3
53. Labor income in mining, mfg., and construc..	42	NA	NA	NA	+102.7	+121.3	+67.5	*+25.6	*+17.6	+21.6
54. Sales of retail stores.....	38	+20.7	NSC	NSC	+59.9	+65.1	NSC	+20.0	*+13.7	+22.1

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

*Indicates that a specific peak had been passed and a specific contraction was underway for this series by the month indicated in the first column. The figure shown represents the change to the specific peak and the period covered is shorter than that of the current expansion (col. 1). See appendix B for specific peak dates.

¹Based on period of the most recent specific expansion for each series; i.e., from the most recent specific trough to the latest month shown in table 2. The number of months is the same for each expansion except those indicated by an asterisk. Specific trough dates are shown in appendix B.

²Except for 1961, changes are computed in a 3-term moving average of the seasonally adjusted series.

³Since no specific trough or peak has been designated, figures are based on the low (L) shown in table 2 and the high preceding that low.

Technical Papers and Background Materials

Eight Series on Manufacturers' Orders and Inventories: Descriptions and Procedures

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INTRODUCTION

Eight series on manufacturers' orders and inventories are compiled and seasonally adjusted by the Bureau of the Census and are included in Business Cycle Developments (BCD). This paper describes the composition of these series and their importance to the business cycle analyst. It is basically a set of technical notes with references to various analytical studies dealing with the series. It does not provide a full description of the technical methods used in the compilation and analysis of the data, nor does it include a detailed economic interpretation of the behavior of the data. The first part of the paper deals with the economic significance and historical performance of the series; the second part deals with aids to interpreting the data; and the third part describes the series, the procedure used, and gives the sources.

Four of the series in this group are leading indicators, two are lagging indicators, and two are "other series with business cycle significance". The complete titles of these series and their series numbers in the BCD report are as follows:

NBER leading indicators:

6. Value of manufacturers' new orders, durable goods industries (M)
24. Value of manufacturers' new orders, machinery and equipment industries (M)
20. Change in book value of manufacturers' inventories of materials and supplies (EOM)
25. Change in manufacturers' unfilled orders, durable goods industries (EOM)

NBER lagging indicators:

64. Book value of manufacturers' inventories, all manufacturing industries (EOM)
65. Book value of manufacturers' inventories of finished goods, all manufacturing industries (EOM)

Other series with business cycle significance:

96. Manufacturers' unfilled orders, durable goods industries (EOM)
99. New orders, defense products (M)

All of the series are monthly series showing data for the month (M) or as of the end of the month (EOM).

ECONOMIC SIGNIFICANCE OF MANUFACTURERS' ORDERS AND INVENTORIES

Manufacturers' orders and inventories play fundamental roles in the timing and amplitude of business cycles. The levels of manufacturing production, shipments, and employment in the future depend upon the amount of new orders received currently and the backlog of unfilled orders, received earlier. An extensive study of the relation of new and unfilled orders to the business cycle has been made by Victor Zarnowitz. His findings are summarized in two papers (15, 16)¹, and the results of his complete study will be published in a forthcoming National Bureau of Economic Research (NBER) volume. A listing of other work on this subject is given in reference 15.

Manufacturers' inventory investment is considered by many to be a major cause of cyclical instability. Some analysts have interpreted the four postwar cycles as being primarily inventory cycles. A change in the rate of manufacturers' inventory investment generally foreshadows a corresponding change in aggregate economic activity. Although inventory investment usually changes direction before business cycle turning points, it generally does not change in sign until after turning points. (In other words, inventory investment usually begins to decline before a cyclical peak but does not become negative until after the peak. Similarly, it may turn up before a cyclical trough but not become positive until after the trough.) Hence, the stocks of inventories themselves tend to lag behind aggregate activity. Two comprehensive studies on the role of manufacturers' inventories and inventory investment in the cycle are those by Abramovitz (1) for the interwar period and Stanback

NOTE: Several people have provided the authors with valuable assistance. This paper was written at the Bureau of the Census under the direction of Julius Shiskin. Allan Young and Shirley Kallek of the Census Bureau made important contributions. Lawrence Bridge and Irving Rottenberg of the Office of Business Economics provided helpful advice. Sophie Sakowitz of the National Bureau of Economic Research furnished assistance in the preparation of table 1. Geraldine Censky and Marie Wann of the Census Bureau provided editorial review.

¹Numbers in parenthesis indicate references cited. See references at end of paper.

(8) for the postwar period. Stanback's paper and several others on inventory fluctuations and their influences on economic stability are given in a four-volume publication by the Joint Economic Committee of Congress (11). Two other recent Joint Economic Committee publications (12, 13) discuss inventory fluctuations and their implications for public policy. An annotated bibliography of the literature on the subject is given in part III of reference 11.

The six NBER leading and lagging indicators on manufacturers' orders and inventories selected for inclusion in *Business Cycle Developments* were chosen on the basis of their cyclical timing and conformity and their economic significance. The composition of these series is detailed under "Descriptions and Sources of Series". Their postwar records of timing, in relation to NBER reference cycles, are given in table 1; their timing performances before 1948 may be found in papers by Abramovitz (1) and Zarnowitz (15).

Table 1.--MONTHLY LEADS (-) AND LAGS (+) FOR MANUFACTURERS' ORDERS AND INVENTORIES SERIES AT NBER REFERENCE TURNING POINTS

Series number	Reference peaks				Average lead (-) or lag (+)
	Nov. 1948	July 1953	July 1957	May 1960	
NBER leading indicators:					
6.....	-3	-6	-19	-13	-10 1/4
24.....	-7	-29	-8	-8	-13
20.....	¹ -28	-2	-23	-11	-16
25.....	-5	-30	-19	-15	-17 1/4
NBER lagging indicators:					
64.....	+2 1/2	+2 1/2	+2 1/2	+4 1/2	+3
65.....	¹ +4 1/2	+8 1/2	+1 1/2	+6 1/2	+5 1/4
Series number	Reference troughs				Average lead (-) or lag (+)
	Oct. 1949	Aug. 1954	Apr. 1958	Feb. 1961	
NBER leading indicators:					
6.....	-4	-11	-3	-1	-4 3/4
24.....	-6	-5	-2	-3	-4
20.....	¹ -4	-5	+1	-2	-2 1/2
25.....	-6	-11	-3	-13	-8 1/4
NBER lagging indicators:					
64.....	+3 1/2	+1 1/2	+4 1/2	+3 1/2	+3 1/4
65.....	¹ +10 1/2	+3 1/2	+6 1/2	+1 1/2	+5 1/2

This table supersedes the corresponding entries in table B-2 of reference 5, which were based on the old OBE series. For the method used in identifying the specific peaks and troughs of the series, see reference 3, pages 116-128.

¹Computed using specific turning points from old OBE series. New Census series is spliced to old series at January 1953.

AIDS TO INTERPRETATION

Economic time series such as manufacturers' orders and inventories are assumed to be composed of three major types of fluctuation, as follows:

1. Trend-cycle.—The long-term drift and business-cycle influences underlying the series
2. Seasonal.—The periodic intrayear fluctuations which are repeated constantly or in an evolving fashion from year to year
3. Irregular.—The errors of measurement and the random unforeseeable influences such as strikes and abnormal weather.

The analyst who is primarily interested in studying the underlying cyclical movements in the indicators will encounter difficulty when examining a series such as manufacturers' new orders for durable goods because the month-to-month changes are dominated by seasonal, trading-day, and irregular factors. Table 2 shows the percentage contributions of the various types of fluctuation to month-to-month changes in the orders and inventories series. For the two new orders series classified as NBER leading indicators (series 6 and 24), note that the underlying trend-cycle contributes less than 7 percent of the variation in the unadjusted series.

Table 2.--PERCENT OF TOTAL MONTH-TO-MONTH VARIATION CONTRIBUTED BY TYPES OF FLUCTUATION IN MANUFACTURERS' ORDERS AND INVENTORIES SERIES

Series number	Total	Trading-day	Trend-cycle	Seasonal	Irregular
6.....	100.0	11.8	6.3	52.9	29.0
24.....	100.0	6.8	3.7	65.9	24.5
64.....	100.0	-	66.7	23.3	10.0
65.....	100.0	-	21.4	52.7	25.9
96.....	100.0	-	72.4	14.5	13.1
99.....	100.0	0.8	2.1	8.9	88.2

The percent contributions ($x\%$) of the components are computed by the formula $x\% = 100 (\bar{X}^2 / \bar{O}^2)$, where $X = TD, C, S, I$ (the percentages are adjusted to total 100). This comes from the approximation $\bar{O}^2 = \bar{TD}^2 + \bar{C}^2 + \bar{S}^2 + \bar{I}^2$, which was derived by J. Bongard (see reference 2). $\bar{O}, \bar{TD}, \bar{C}, \bar{S}$, and \bar{I} are the average month-to-month percent changes, without regard to sign, in the unadjusted series, trading-day, trend-cycle, seasonal, and irregular components, respectively. These summary measures are based on data for the period 1953-62.

To eliminate the influence of seasonal fluctuations, the series are seasonally adjusted by the X-9 and X-10 versions of the Census Method II computer program. The series on manufacturers' inventories and unfilled orders (series 64, 65, and 96) which have MCI equal to 1 or 2 (see table 3) are adjusted by the standard X-9 program, while those series on manufacturers' new orders (series 6, 24, and 99) which have MCI equal to 3 or 6 are adjusted by the X-10 program. The X-10 program is designed to handle more erratic series by varying the number of years included in the computation of the seasonal factors for each month on the basis of the magnitude of year-to-year changes in the irregular component relative to those in the seasonal. Although the seasonal patterns in the orders and inventories series changed markedly in 1957 because of increased sample coverage, the seasonal factors supplied by the methods are considered to be adequate for adjustment of current data.

The level of the new orders series also varies from month to month depending upon the number of Sundays,

Table 3.--SUMMARY MEASURES FOR THE 8 SERIES ON MANUFACTURERS' ORDERS AND INVENTORIES

Series	\bar{CI}	\bar{I}	\bar{C}	\bar{I}/\bar{C}	MCD	\bar{I}/\bar{C} for MCD span	Average duration of run (ADR)			
							CI	I	C	MCD
6. Value of manufacturers' new orders, durable goods industries.....	3.79	3.25	1.61	2.02	3	0.59	1.67	1.54	8.33	4.56
24. Value of manufacturers' new orders, machinery and equipment industries:										
Old series.....	6.07	5.55	2.19	2.53	3	0.73	1.68	1.47	12.82	3.56
New series.....	4.47	4.01	1.61	2.49	3	0.84	1.76	1.51	12.50	3.62
20. Change in book value, manufacturers' inventories of materials and supplies.....	1.52	1.45	0.37	3.93	5	0.92	1.64	1.46	6.05	3.15
25. Change in manufacturers' unfilled orders, durable goods industries.....	0.49	0.46	0.16	2.93	4	0.79	1.79	1.58	7.44	3.45
54. Book value of manufacturers' inventories, all manufacturing industries.....	0.54	0.19	0.49	0.39	1	0.39	8.33	2.02	13.89	8.33
55. Book value of manufacturers' inventories of finished goods, all manufacturing industries.....	0.87	0.54	0.49	1.10	2	0.53	2.40	1.42	15.63	5.17
26. Manufacturers' unfilled orders, durable goods industries.....	1.51	0.57	1.34	0.43	1	0.43	5.95	1.87	13.89	5.95
29. New orders, defense products.....	23.31	23.46	3.60	6.52	6	(¹)	1.52	1.45	5.63	2.41

\bar{CI} , \bar{I} , and \bar{C} represent the average absolute month-to-month percent change for the period 1953-62 in the seasonally adjusted series, irregular component, and trend-cycle, respectively. MCD (months for cyclical dominance) is the shortest monthly span for which \bar{I}/\bar{C} is less than 1. ADR is the average number of consecutive monthly changes in the same direction and is shown for CI, I, C, and a series derived by taking an unweighted moving average of the seasonally adjusted series with number of terms equal to MCD. More complete explanations of these summary measures appear in appendix C of Business Cycle Developments and in reference 6.

¹Not computed for series when MCD is "6" or more.

Mondays, etc., in the month. These series are trading-day adjusted prior to seasonal adjustment. The procedure used is described in reference 9, pages 17-18. The standard Census Bureau method of trading-day adjustment and its theoretical base are presented in a technical paper by Allan Young in the May 1964 issue of Business Cycle Developments (14).

After the series have been adjusted for seasonal and trading-day fluctuations, the analyst must still decide whether particular month-to-month changes in the seasonally adjusted series represent irregular fluctuations or movements in the underlying trend-cycle. A tool to facilitate this analysis is the concept of "months for cyclical dominance" (MCD), which is the shortest span, in months, for which changes in the trend-cycle (C) are greater than changes in the irregular (I). By examining changes over the MCD span, the user should be able to distinguish meaningful signals in the underlying trend-cycle from short-term irregular noise, which is dominant at shorter spans. In the current period, series will tend to be more erratic than they are historically, since the current seasonal factors are based on less information than the historical factors. Hence, it may be necessary for the user to examine changes over spans 1 or 2 months longer than the MCD span to assess current fluctuations in the seasonally adjusted series.

DESCRIPTIONS AND SOURCES OF SERIES

The first data on manufacturers' orders and inventories to be published on a national level came from a survey on manufacturers' sales, inventories, and orders originated in 1939 by the Bureau of Foreign and Domestic Commerce, now the Office of Business Economics (OBE). This survey provided indexes of the activity of manufacturers' shipments, orders, and inventories. (For a description, see reference 4.) These indexes were

abandoned in 1949 in favor of dollar aggregates in response to a demand for more detailed and accurate estimates. In 1957, the task of collecting and tabulating the data was shifted to the Bureau of the Census. In October 1963, the responsibility for seasonally adjusting and publishing the data was also transferred to the Census Bureau putting the entire operation of collecting, tabulating, editing, and adjusting the data under Census responsibility. At that time, the Census Bureau introduced extensive modifications in the survey and published revised historical data back to 1947 (9). Current data are available through a monthly report published by the Bureau of the Census (10).

The present estimation procedure used to obtain current monthly shipments, unfilled orders, and inventories figures at the industry level is a link-relative method in which the preceding month's estimate is multiplied by the percent change obtained from the reports of an identical group of companies in the current month's sample. The estimate of manufacturers' new orders for the current month is derived by adding the change in unfilled orders between the current and previous months to the shipments estimate for the current month. For a detailed explanation of sample design, estimation procedure, and original benchmarking, see chapter IV of reference 9.

Brief descriptions of the eight series on manufacturers' orders and inventories and the sources used in Business Cycle Developments follow. More detailed descriptions may be found in references 5² and 7. All series are monthly. The data published in Business Cycle Developments are in billions of dollars while data in other references are in millions of dollars.

²Since the composition of series 24 changed in October 1963, its description in this reference is out of date.

Series 6.—Value of manufacturers' new orders, durable goods industries.—This series represents the total current dollar volume of net new business received by durable goods manufacturers. Because of the lag between the receipt of an order and the shipment of durable goods, manufacturers generally accumulate a backlog of unfilled orders each month. Since some companies do not keep books on new orders for all items shipped, net new orders (gross new orders less cancellations) are computed by adding net shipments (gross shipments less returns) to the change in unfilled orders during the month.³ For a list of the 36 industry components of this series, see BCD table 6, D6.

Sources: The 1939-46 data are contained in reference 5 (OBE data); 1947-52 data, in the 1964 annual supplement to reference 10 (these figures are revisions of data published in reference 9); January 1953-July 1963 data, in reference 9.⁴ Current figures are available from the Census Bureau report, reference 10. Historical data for the period 1948-60 were shown in appendix F of the May 1964 issue of Business Cycle Developments. For the period 1939-46, data were seasonally adjusted by NBER; for the period 1947 to present, by the Bureau of the Census.

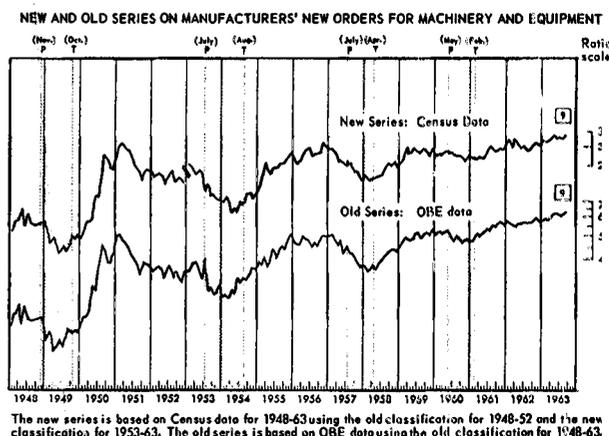
Series 24. Value of manufacturers' new orders, machinery and equipment industries.—This series represents the total current dollar volume of net new orders placed with the following industries which produce machinery and business equipment: Steam engines and turbines; internal combustion engines; construction, mining, and material handling equipment; metalworking machinery; miscellaneous equipment; special industry machinery; general industrial machinery; office and store machines; service industry machinery; electrical transmission and distribution equipment; electrical industrial apparatus; other electrical machinery; shipbuilding and railroad equipment. Such durable goods industries as motor vehicles and aircraft are excluded since orders received by them do not primarily represent business purchases of equipment. The net new orders figures for these industries are computed by adding net shipments to the change in unfilled orders during the month.³

When the industry survey was shifted to the Bureau of the Census in 1963, the composition of the series was changed to reflect the revised Census industry categories. The new series is thus based on greater industrial detail and provides a more accurate estimate of business demand for machinery and equipment. The new and old series for January 1948 to September 1963 are shown in the chart below. Summary measures for the new and old series are shown table 3.

Sources: This series is compiled and seasonally adjusted by the Bureau of the Census. Figures in BCD prior to December 1963 were based on data supplied by OBE and the composition of the series was based on old

³ Since shipments, new orders, and unfilled orders data are seasonally adjusted separately, the monthly seasonally adjusted new orders figures may not be exactly equal to the adjusted shipments figure plus the change in the adjusted unfilled orders figures.

⁴ Since the "unadjusted" data for new orders in references 9 and 10 are adjusted for trading-day and length-of-month variation, they are not comparable to earlier unadjusted data.



industry categories. The January 1953-July 1963 figures, based on Census data and the new composition are shown in the 1964 annual supplement to reference 10. Current figures are available from the Census Bureau report, reference 10.⁴ Historical data for the period 1948-60 were shown in appendix G of the December 1963 issue of Business Cycle Developments. The 1953-60 figures are based on Census data using the new classification. The 1948-52 figures, which are based on OBE data using the old classification, were adjusted by the Census Bureau to the 1953 level of the new Census figures to make them comparable with later data

Series 20. Change in book value of manufacturers' inventories of materials and supplies.—This series represents the net investment in (change in book value of) stocks of materials purchased during the month for all companies in manufacturing industries, expressed as an annual rate. The series is computed by taking the month-to-month changes in the book value of manufacturers' inventories of purchased materials and raising the figures to annual rates (see also description of series 64).

Sources: The 1948-52 data are derived by the Census Bureau from data compiled and seasonally adjusted by OBE. Beginning with 1953, figures are derived from data compiled and adjusted by the Census Bureau. Historical data for the period 1948-60 were shown in appendix F of the June 1964 issue of Business Cycle Developments. (See also sources for series 65).

Series 25.—Change in manufacturers' unfilled orders, durable goods industries.—This series represents the current dollar change in the backlog of unfilled orders during the month for durable goods manufacturers. It is computed by taking the month-to-month changes of series 96 (see description of series 96).

Sources: This series is derived by the Census Bureau from data compiled and seasonally adjusted by the Census Bureau. Historical data for the period 1948-60 were shown in appendix G of the December 1963 issue of Business Cycle Developments. (See also sources for series 96.)

Series 64. Book value of manufacturers' inventories, all manufacturing industries.—This series represents the book value of stocks owned by all companies in manufacturing industries at the end of the month and

includes materials and supplies, goods in process, and finished goods. Inventories owned by a company include goods in the company's factories and warehouses and goods in transit to which the company still has title. Goods in manufacturers' sales branches are not included. The book value of a company's inventories varies not only with changes in the physical volume of stocks but also with changes in the prices at which they are valued.

Sources: Data for 1926-38 are published in the Department of Commerce report, Survey of Current Business, April 1949. The 1939-46 data are contained in reference 5. January 1947-July 1963 data are found in reference 9. Current figures are available from the Census Bureau report, reference 10. Historical data for the period 1948-60 were shown in appendix F of the June 1964 issue of Business Cycle Developments. For the period 1926-46, data were seasonally adjusted by OBE; for the period 1947 to present, by the Bureau of the Census.

Series 65.—Book value of manufacturers' inventories of finished goods, all manufacturing industries.—This series represents the book value of stocks of finished goods owned by all companies in manufacturing industries at the end of the month (see also description of series 64).

Sources: The 1939-52 data are available from reference 5. January 1953-July 1963 data are published in reference 9. Current figures are available from the Census Bureau report, reference 10. Historical data for the period 1948-60 were shown in appendix F of the June 1964 issue of Business Cycle Developments. For the period 1939-52, data were seasonally adjusted by OBE; for the period 1953 to present, by the Bureau of the Census.

Series 96. Manufacturers' unfilled orders, durable goods industries.—This series represents the total current dollar volume of the backlog of unfilled orders at the end of the month accumulated by durable goods manufacturers. For a list of the 36 industry components of this series, see BCD table 6, D6.

Sources: Data for the period 1939-46 are contained in a mimeographed OBE release, "Manufacturers' New and Unfilled Orders". Data for 1947-52 are shown in the 1964 annual supplement to reference 10 (these figures are revisions of data published in reference 9). January 1953-July 1963 data are contained in reference 9. Current figures are available from the Census Bureau report, reference 10. Historical data for the period 1948-60 were shown in appendix F of the June 1964 issue of Business Cycle Developments. Data for the period 1939-46 were not seasonally adjusted. Beginning with 1947, data were seasonally adjusted by the Bureau of the Census.

Series 99. New orders, defense products.—This series represents the total current dollar volume of net orders placed with the following industries which manufacture defense products: Communication equipment; complete aircraft; aircraft parts; and ordnance. The net new orders figures for these industries are computed by adding net shipments to the change in unfilled orders during the month.³

³ ⁴ See preceding page.

Sources: Data are compiled and seasonally adjusted by the Bureau of the Census. The January 1953-July 1963 data are published in reference 9.⁴ Current figures are available from reference 10. Historical data for the period 1953-60 were shown in appendix F of the June 1964 issue of Business Cycle Developments.

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Appendixes

(Standard appendix C is omitted from this issue)

Appendix 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 pre- vious peak)	Expansion (trough to peak)	Cycle	
Trough	Peak			Trough from previous trough	Peak from previous peak
December 1854	June 1857.....	xxx	30	xxx	xxx
December 1858	October 1860.....	18	22	48	40
June 1861	April 1865.....	8	46	30	<u>54</u>
December 1867	June 1869.....	<u>32</u>	<u>18</u>	<u>78</u>	<u>50</u>
December 1870	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
June 1894	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 1907.....	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	<u>10</u>	<u>51</u>	<u>17</u>
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	<u>80</u>	63	<u>93</u>
October 1945	November 1948.....	<u>8</u>	<u>37</u>	<u>88</u>	<u>45</u>
October 1949	July 1953.....	11	<u>45</u>	48	<u>56</u>
August 1954	July 1957.....	<u>13</u>	35	<u>58</u>	48
April 1958	May 1960.....	9	25	<u>44</u>	34
February 1961		9		34	
Average, all cycles:					
26 cycles, 1854-1961.....		19	30	49	¹ 49
10 cycles, 1919-1961.....		15	35	50	² 54
4 cycles, 1945-1961.....		10	36	46	³ 46
Average, peacetime cycles:					
22 cycles, 1854-1961.....		20	26	45	⁴ 46
8 cycles, 1919-1961.....		16	28	45	⁵ 48
3 cycles, 1945-1961.....		10	32	42	⁶ 42

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

¹25 cycles, 1857-1960.

⁴21 cycles, 1857-1960.

²9 cycles, 1920-1960.

⁵7 cycles, 1920-1960.

³4 cycles, 1945-1960.

⁶3 cycles, 1945-1960.

Source: National Bureau of Economic Research.

Appendix C.--AVERAGE CHANGES AND RELATED MEASURES FOR BUSINESS CYCLE SERIES

Part 1.--Average Percentage Changes

Monthly series	CI	I	C	I/C	MCD	I/C for MCD span	Average duration of run (ADR)			
							CI	I	C	MCD
NBER LEADING INDICATORS										
1. Avg. workweek, production workers, mfg.....	.49	.42	.21	2.00	2	.95	2.15	1.65	10.58	4.06
2. Accession rate, manufacturing.....	4.92	4.69	1.72	2.73	3	.89	1.85	1.54	9.00	5.64
0. Nonagricultural placements, all industries....	1.82	1.29	1.18	1.09	2	.59	2.27	1.63	9.77	5.25
3. Layoff rate, manufacturing.....	9.52	8.05	4.02	2.00	3	.70	2.21	1.73	8.40	5.39
4. Temporary layoff, all industries.....	17.76	17.12	3.90	4.29	5	.89	1.63	1.44	6.35	3.08
5. Avg. weekly initial claims, State unemploy- ment insurance.....	5.29	4.62	2.49	1.86	2	.86	1.72	1.51	9.77	3.94
6. New orders, durable goods industries.....	3.79	3.25	1.61	2.02	3	.59	1.67	1.54	8.33	4.56
4. New orders, machinery and equipment indus....	4.47	4.01	1.61	2.49	3	.84	1.76	1.51	12.50	3.62
9. Construction contracts, commercial and industrial.....	9.66	9.43	1.67	5.65	6	(¹)	1.70	1.54	6.63	3.03
0. Contracts and orders, plant and equipment....	4.93	4.61	1.47	3.14	4	.82	1.82	1.59	10.75	3.71
7. Private nonfarm housing starts.....	7.34	7.31	1.14	6.41	6	(¹)	1.53	1.53	6.13	2.32
9. New building permits, private housing.....	3.82	3.39	1.48	2.29	3	.68	1.89	1.53	14.38	3.32
3. New business incorporations.....	2.68	2.36	1.10	2.15	3	.77	2.10	1.70	6.30	3.02
4. Liabilities of business failures.....	16.86	16.36	2.52	6.49	6	(¹)	1.48	1.32	5.77	2.26
5. Large business failures.....	13.09	12.81	2.11	6.07	6	(¹)	1.53	1.37	9.77	5.30
7. Ratio, price to unit labor cost, manufacturing	.69	.56	.33	1.70	2	.94	2.23	1.74	7.47	3.60
9. Stock prices, 500 common stocks.....	2.65	1.86	1.67	1.11	2	.68	2.35	1.67	12.70	3.94
7. Purchased materials, percent reporting higher inventories.....	6.81	5.29	3.10	1.71	3	.66	2.54	1.76	10.58	4.63
6. Production materials, percent reporting com- mitments 60 days or longer.....	5.81	5.32	2.14	2.49	3	.76	1.87	1.63	12.70	3.91
2. Vendor performance, percent reporting slower deliveries.....	7.68	5.54	4.73	1.17	2	.79	3.53	2.12	9.77	4.20
3. Industrial materials prices.....	1.32	1.04	.74	1.41	2	.95	2.44	2.05	11.55	4.06
NBER ROUGHLY COINCIDENT INDICATORS										
1. Employees in nonagricultural establishments...	.30	.15	.25	.60	1	.60	5.29	2.05	14.11	5.29
2. Total nonagricultural employment.....	.36	.29	.19	1.53	2	.79	1.82	1.62	18.71	3.33
3. Unemployment rate, total.....	4.19	3.14	2.41	1.30	2	.69	2.67	1.58	8.19	3.33
0. Unemployment rate, married males.....	5.98	5.02	2.86	1.76	2	.88	2.53	1.63	10.90	4.91
5. Average weekly insured unemployment, State....	4.82	2.56	3.56	.72	1	.72	3.74	2.12	9.07	3.74
6. Help-wanted advertising.....	3.11	1.88	2.35	.80	1	.80	3.47	1.60	9.62	3.47
7. Industrial production.....	1.09	.58	.79	.73	1	.73	3.53	2.05	9.77	3.53
31. Bank debits outside NYC.....	1.48	1.44	.60	2.40	3	.54	1.69	1.53	18.14	4.31
32. Personal income.....	.49	.27	.41	.66	1	.66	3.43	1.84	18.14	3.43
33. Labor income in mining, mfg., construction....	.81	.53	.61	.87	1	.87	3.43	1.90	11.55	3.43
34. Sales of retail stores.....	.78	.63	.44	1.43	2	.85	2.53	1.80	9.54	3.62
35. Wholesale prices, except farm prod. and foods.	.17	.10	.13	.77	1	.77	3.53	2.65	11.55	3.53
NBER LAGGING INDICATORS										
32. Labor cost per unit of output, manufacturing..	.65	.48	.36	1.33	2	.72	2.27	1.55	9.07	4.34
34. Book value of manufacturers' inventories.....	.54	.19	.49	.39	1	.39	8.33	2.02	13.89	8.33
35. Book value of manufacturers' inventories of finished goods.....	.80	.54	.49	1.10	2	.53	2.40	1.42	15.63	5.17
36. Consumer installment debt.....	.83	.17	.78	.22	1	.22	11.45	2.29	18.00	11.45
OTHER U.S. SERIES WITH BUSINESS CYCLE SIGNIFICANCE										
32. Federal cash payments to public.....	5.68	5.59	.82	6.82	6	(¹)	1.51	1.41	8.47	2.18
33. Federal cash receipts from public.....	5.37	5.20	.95	5.47	6	(¹)	1.74	1.57	7.47	2.60
30. Defense Dept. obligations, procurement.....	26.87	26.37	4.09	6.45	6	(¹)	1.51	1.46	5.93	2.27
31. Defense Dept. obligations, total.....	15.12	14.78	2.70	5.47	6	(¹)	1.47	1.43	6.61	2.48
32. Military contract awards in U.S.....	26.25	26.21	6.12	4.28	6	(¹)	1.58	1.47	5.95	2.86
99. New orders, defense products.....	23.31	23.46	3.60	6.52	6	(¹)	1.52	1.45	5.63	2.41
14. Treasury bill rate.....	7.33	5.69	4.71	1.21	2	.81	2.47	2.00	9.71	3.55
15. Treasury bond yields.....	1.80	1.89	1.04	1.34	2	.95	2.72	2.13	10.46	3.75
16. Corporate bond yields.....	1.68	1.50	.58	2.59	4	.93	2.26	1.79	8.67	4.90
17. Municipal bond yields.....	2.57	2.17	1.12	1.94	3	.86	2.63	1.90	8.56	3.55
18. Mortgage yields.....	.58	.27	.52	.52	1	.52	9.13	2.63	17.13	9.13

See footnotes at end of table.

Appendix C.--AVERAGE CHANGES AND RELATED MEASURES FOR BUSINESS CYCLE SERIES--Continued
Part 1.--Average Percentage Changes--Continued

Monthly series	$\bar{C}I$	\bar{I}	\bar{C}	\bar{I}/\bar{C}	MCD	\bar{I}/\bar{C} for MCD span	Average duration of run (ADR)			
							CI	I	C	MCD
OTHER U.S. SERIES WITH BUSINESS CYCLE SIGNIFICANCE--Con.										
86. Exports, excluding military aid.....	4.59	4.39	1.11	3.95	4	.96	1.77	1.66	7.06	2.75
87. General imports.....	3.61	3.47	.97	3.58	4	.85	1.59	1.51	7.53	2.97
81. Consumer prices.....	.15	.10	.13	.77	1	.77	6.00	2.25	25.20	6.00
94. Construction contracts, value.....	7.03	6.69	1.69	3.96	5	.84	1.52	1.45	7.88	3.59
96. Unfilled orders, durable goods industries....	1.51	.57	1.34	.43	1	.43	5.95	1.87	13.89	5.95
INTERNATIONAL COMPARISONS OF INDUSTRIAL PRODUCTION										
123. Canada.....	.90	.77	.52	1.48	2	.72	3.47	2.12	15.63	8.27
122. United Kingdom.....	1.14	1.09	.47	2.32	3	.81	2.40	1.87	8.93	5.56
121. OECD European countries.....	.86	.83	.50	1.66	2	.89	3.47	2.40	31.25	7.75
125. West Germany.....	1.42	1.18	.69	1.71	2	.93	2.86	2.14	18.00	5.43
126. France.....	1.36	1.20	.68	1.76	2	.89	3.21	2.08	25.00	11.27
127. Italy.....	1.44	1.41	.74	1.91	3	.64	2.70	1.82	31.00	6.42
128. Japan.....	1.70	1.07	1.23	.87	1	.87	2.91	1.52	17.86	2.91
Quarterly series	$\bar{C}I$	\bar{I}	\bar{C}	\bar{I}/\bar{C}	QCD	\bar{I}/\bar{C} for QCD span	Average duration of run (ADR)			
NBER LEADING INDICATORS										
11. New capital appropriations, manufacturing....	11.65	7.26	7.39	.98	1	.98	2.47	1.45	4.67	2.47
16. Corporate profits after taxes.....	6.28	4.03	4.71	.86	1	.86	2.47	1.35	5.25	2.47
18. Profits per dollar of sales, manufacturing...	6.76	4.80	4.17	1.15	2	.56	2.47	1.40	5.25	2.73
22. Ratio, profits to income originating, corporate, all industries.....	5.10	3.76	3.78	.99	1	.99	3.23	1.40	5.25	3.23
NBER ROUGHLY COINCIDENT INDICATORS										
50. GNP in 1954 dollars.....	1.29	.49	1.07	.46	1	.46	3.82	1.45	4.67	3.82
49. GNP in current dollars.....	1.54	.50	1.33	.38	1	.38	4.67	1.35	6.00	4.67
57. Final sales.....	1.30	.38	1.20	.31	1	.31	6.00	1.45	8.40	6.00
NBER LAGGING INDICATORS										
61. Business expenditures, new plant and equip...	3.15	1.26	2.64	.48	1	.48	4.67	1.83	4.67	4.67
68. Labor cost per dollar of real corp. GNP.....	.90	.49	.72	.68	1	.68	3.15	1.41	5.86	3.15
67. Bank rates on short-term business loans.....	2.31	1.57	2.00	.79	1	.79	2.47	1.56	4.67	2.47
OTHER U.S. SERIES WITH BUSINESS CYCLE SIGNIFICANCE										
110. Total private borrowing.....	11.61	8.33	7.58	1.10	2	.43	2.59	1.33	4.00	4.30
111. Corporate gross savings.....	8.60	5.67	6.55	.87	1	.87	2.32	1.38	4.00	2.32
97. Backlog of capital appropriations, mfg.....	5.89	1.56	5.54	.28	1	.28	3.00	1.50	6.00	3.00

NOTE: Measures are computed for a period of at least 10 years beginning with January 1953, except for series 7, 86, 87, and 116. The period begins with May 1959 for series 7 and with January 1960 for series 116. For series 86 and 87, the period ends with June 1962.

¹Not 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 Electronic Computers and Business Indicators, by Julius Shiskin, issued as Occasional Paper 57 by the National Bureau of Economic Research, 1957 (reprinted from Journal of Business, October 1957).

" $\bar{C}I$ " is the average month-to-month (or quarter-to-quarter) percentage change, without regard to sign, in the seasonally adjusted series. " \bar{I} " is the same for the irregular component, obtained by dividing the cyclical com-

ponent into the seasonally adjusted series. " \bar{C} " is the same for the cyclical component, a smooth, flexible moving average of the seasonally adjusted series.

"MCD" (months for cyclical dominance) provides an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. It is small for smooth series and large for irregular series. In deriving MCD, percentage changes are computed separately for the irregular component and the cyclical component for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5-month spans. Averages, without regard to sign, are then computed for the changes over each span. MCD is the shortest span in months for which the average percentage change (without regard to sign) in the cyclical component is larger than the average percentage change (without regard to sign) in the irregular component, and remains so. Thus, it indicates the point at which fluctuations in the seasonally adjusted series become dominated by cyclical rather than irregular

movements. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6". Similarly, "QCD" provides an estimate of the appropriate time span over which to observe cyclical movements in quarterly series. It is the shortest span (in quarters) for which the average percentage change (without regard to sign) in the cyclical component is larger than the average percentage change (without regard to sign) in the irregular component, and remains so.

" \bar{I}/\bar{C} " 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 1-month spans and for spans of the period of MCD. When MCD is "6", no \bar{I}/\bar{C} ratio is shown for the MCD period. For quarterly series, \bar{I}/\bar{C} is shown for 1-quarter spans and QCD spans.

"Average Duration of Run" (ADR) is another 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, a change in the same direction as the preceding change is assumed. The ADR is shown for the seasonally adjusted series CI, irregular component I, cyclical component C, and the MCD curve. The MCD curve is a moving average with the number of terms equal to MCD) of the seasonally adjusted series.

A comparison of these measures of ADR with the expected ADR of a random series gives an indication of whether the changes approximate those of a random series. Over 1-month intervals in a random series, the expected value of the ADR is 1.5. The actual value of ADR falls between 1.36 and 1.75 about 95 percent of the time. Over 1-month intervals in a moving average (MCD) of a random series, the expected value of ADR is 2.0. For example, the ADR of CI is 1.67 for series 6, Value of Manufacturers' New Orders, Durable Goods Industries. This indicates that 1-month changes in the seasonally adjusted series, on the average, reverse sign about as often as expected in a random series. The ADR measures shown in the next two columns, 1.54 for I and 8.33 for C, suggest that the seasonally adjusted series has been successfully separated into an essentially random component and a cyclical (nonrandom) component. Finally, ADR is 4.56 for the MCD moving average. This indicates that a 3-month moving average of the seasonally adjusted series (3 months being the MCD span) reverses direction, on the average, about every 4 to 5 months. The increase in the ADR from 1.67 for CI to 4.56 for the MCD moving average indicates that, for this series, month-to-month changes in the MCD moving average usually reflect the underlying cyclical-trend movements of the series, whereas the month-to-month changes in the seasonally adjusted series usually do not.

Appendix C.--AVERAGE CHANGES AND RELATED MEASURES FOR BUSINESS CYCLE SERIES--Continued

Part 2.--Average Unit Changes

Monthly series	Unit of measure	\bar{CI}	I	C	\bar{I}/\bar{C}	MCD ¹	\bar{I}/\bar{C} for MCD span	Average duration of run (ADR)			
								CI	I	C	MCD
NBER LEADING INDICATORS											
31. Change in book value, manufacturing and trade inventories...	Ann. rate, bil. dol...	3.50	3.37	.85	3.96	4	.94	1.47	1.44	7.94	3.22
20. Change in book value, mfrs.' inventories of matls., supplies	..do.....	1.52	1.45	.37	3.93	5	.92	1.64	1.46	6.05	3.15
25. Change in unfilled orders, durable goods.....	Bil. dol....	.49	.46	.16	2.93	4	.79	1.79	1.58	7.44	3.45
OTHER U.S. SERIES WITH BUSINESS CYCLE SIGNIFICANCE											
84. Fed. cash surplus or deficit....	Ann. rate, bil. dol...	5.60	5.46	.97	5.64	9	.79	1.54	1.47	6.09	3.07
93. Free reserves.....	Mil. dol....	104.23	82.19	52.77	1.56	2	.95	2.03	1.52	10.31	3.17
85. Change in money supply.....	Percent....	.23	.23	.03	6.75	11	.82	1.45	1.48	6.18	3.32
98. Change in money supply and time deposits.....	..do.....	.21	.21	.04	5.29	7	.97	1.51	1.45	6.80	2.60
12. Change, business loans.....	Ann. rate, bil. dol...	1.22	1.19	.26	4.51	5	.93	1.47	1.47	6.22	2.48
13. Change, consumer installment debt.....	..do.....	.85	.75	.34	2.19	3	.78	1.71	1.55	9.00	3.24
88. Merchandise trade balance.....	Mil. dol....	58.96	56.60	17.50	3.23	3	.93	1.82	1.61	11.30	2.64

NOTE: Measures are computed for the period, January 1953 to mid-1964, except for series 88 and 112. For series 88, the period ends with June 1962 and for series 112, the period begins with August 1959.

¹Where MCD is larger than "6", a 6-term moving average is used as the MCD curve.

The measures in the above table are computed by an additive method to avoid the distortion caused by zero and

negative data. Thus, " \bar{CI} " is the average month-to-month change in the seasonally adjusted series. This average is computed without regard to sign and is expressed in the same unit of measure as the series itself. "C" is the same for the cyclical component, which is a moving average of the seasonally adjusted series. "I" is the same for the irregular component, which is determined by subtracting the cyclical component from the seasonally adjusted series. All other measures shown above have the same meaning as in part 1.

Appendixes

Appendix D.--CURRENT SEASONAL ADJUSTMENT FACTORS FOR BUSINESS CYCLE SERIES ADJUSTED BY BUREAU OF THE CENSUS OR NBER
(NOVEMBER 1963 TO DECEMBER 1964)

Series	1963		1964											
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
4. Temporary layoff, all industries.	86.7	95.9	144.5	107.7	98.9	86.6	84.0	76.7	98.3	146.0	82.4	90.7	86.6	95.2
5. Avg. weekly initial claims, State unemployment insurance....	103.1	133.7	142.1	109.5	94.4	93.8	83.0	82.9	104.7	85.5	78.7	89.0	103.0	134.2
13. New business incorporations ¹	82.3	97.5	116.3	96.3	110.0	106.9	102.9	106.7	108.2	90.5	92.9	99.0	82.3	102.2
14. Liabilities of business failures.	102.5	78.5	110.3	101.7	103.5	114.6	103.3	94.4	82.7	124.9	91.0	92.0	102.6	77.0
15. Large business failures.....	94.3	85.7	111.7	112.8	115.0	109.1	99.7	104.7	87.6	95.9	90.3	93.5	94.3	85.3
17. Ratio, price to unit labor cost, manufacturing.....	101.1	97.7	98.0	99.4	100.0	100.3	100.8	102.3	96.2	99.1	101.7	103.3	101.1	97.7
18. Profits per dol. of sales, mfg. ² .	100.8	...	...	94.7	...	...	106.2	...	...	97.6	...	...	100.8	...
20. Nonagri. placements, all indus. ¹ .	93.1	81.1	82.6	77.4	92.0	103.6	107.4	110.8	105.0	111.0	124.4	112.6	93.3	82.2
27. Purchased materials, percent re- porting higher inventories.....	95.1	96.7	109.6	107.4	109.3	109.1	106.3	96.7	92.8	91.6	93.7	92.1	95.1	96.6
55. Wholesale prices, except farm products and foods.....	100.0	100.2	100.2	100.1	100.1	100.0	100.0	99.9	99.9	99.9	99.9	100.1	100.0	100.2
62. Labor cost per unit of output, manufacturing.....	98.9	102.3	102.3	100.6	99.9	99.4	99.0	97.6	103.9	100.8	97.9	96.9	98.9	102.4
81. Index of consumer prices.....	100.2	99.9	99.9	100.0	100.0	99.9	99.8	99.9	100.2	100.0	100.2	100.2	100.2	99.9
82. Federal cash payments to public..	103.1	98.5	91.9	96.2	93.7	99.0	103.7	102.9	96.6	115.0	93.8	105.7	102.9	98.5
85. Federal cash receipts from pub...	101.9	106.4	69.3	112.1	126.6	79.0	121.6	149.8	48.9	115.1	123.5	46.1	102.0	106.9
90. Defense Department obligations-- procurement.....	92.8	102.7	85.8	85.7	102.5	79.7	72.3	207.0	89.6	89.2	97.1	95.8	92.9	102.7
91. Defense Dept. oblig., total.....	90.3	99.6	92.2	85.7	108.0	94.6	86.2	147.1	101.1	94.3	98.1	103.6	90.3	99.6
92. Military contract awards in U.S..	84.8	94.5	91.5	83.3	124.8	84.0	89.6	197.9	69.9	88.0	99.0	93.9	84.8	94.5
112. Change, business loans ³	100.8	101.7	100.2	99.4	100.4	100.7	100.1	99.7	99.1	98.7	99.3	99.8	100.9	101.8
128. Japan, index of industrial pro- duction.....	99.0	102.0	94.7	100.9	108.4	100.3	100.5	99.4	99.1	96.8	99.1	100.3	99.0	102.0

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

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

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

³Factors apply to total series before month-to-month changes are computed.

Appendix F.--HISTORICAL DATA FOR SELECTED SERIES

Each month historical data are presented for certain series that either have not been shown here previously or have been revised historically. The months of issue for series previously included in this appendix are given in the index. Current data are shown in tables 2, 4, and 5. Data are seasonally adjusted except series 114.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
110. Total funds raised by private nonfinancial borrowers in credit markets (Annual rate, mil. dol.) ¹												
952.....	...	27,168	...	...	25,520	...	...	28,572	...	...	27,880	...
953.....	...	25,876	...	...	22,912	...	...	22,492	...	...	17,524	...
954.....	...	17,492	...	...	21,332	...	...	24,120	...	...	29,100	...
955.....	...	35,168	...	...	36,484	...	...	36,792	...	...	41,792	...
956.....	...	37,512	...	...	34,256	...	...	33,436	...	...	32,200	...
957.....	...	37,412	...	...	34,352	...	...	31,424	...	...	27,356	...
958.....	...	27,232	...	...	25,660	...	...	32,128	...	...	43,100	...
959.....	...	39,704	...	...	49,664	...	...	47,312	...	...	37,960	...
960.....	...	44,492	...	...	36,840	...	...	32,496	...	...	31,620	...
111. Gross retained earnings of nonfinancial corporations (Annual rate, mil. dol.) ¹												
952.....	...	17,884	...	...	15,604	...	...	15,180	...	...	18,564	...
953.....	...	23,320	...	...	23,204	...	...	21,556	...	...	15,996	...
954.....	...	16,256	...	...	17,460	...	...	17,464	...	...	20,480	...
955.....	...	28,912	...	...	31,096	...	...	29,028	...	...	28,940	...
956.....	...	25,796	...	...	24,564	...	...	24,072	...	...	25,012	...
957.....	...	27,116	...	...	26,020	...	...	27,192	...	...	24,948	...
958.....	...	19,580	...	...	21,604	...	...	26,276	...	...	33,364	...
959.....	...	35,680	...	...	40,188	...	...	32,276	...	...	32,772	...
960.....	...	32,080	...	...	30,600	...	...	28,328	...	...	27,980	...
112. Net change in bank loans to businesses (Annual rate, bil. dol.) ¹												
959.....	...	...	...	...	...	...	...	+4.16	+1.68	+2.54	+1.45	+3.24
960.....	+2.05	+3.58	+2.20	+2.30	+3.44	+4.07	+1.70	-1.79	+0.59	+0.08	+1.39	-0.76
113. Net change in consumer installment debt (Annual rate, bil. dol.) ¹												
948.....	+3.13	+2.65	+3.31	+3.19	+2.38	+2.03	+2.54	+2.38	+2.52	+0.77	+1.19	+1.52
949.....	+0.64	+1.37	+1.76	+2.63	+3.12	+2.68	+2.44	+2.76	+2.88	+3.89	+3.65	+3.32
950.....	+2.77	+3.44	+3.16	+3.18	+3.73	+4.70	+6.36	+4.48	+4.37	+1.73	-0.84	+0.28
951.....	+1.37	+0.79	+0.70	-0.49	-0.47	-0.58	-1.45	+1.80	+1.50	+0.89	+1.72	+1.32
952.....	+1.45	+2.04	+1.31	+2.78	+5.58	+6.89	+4.44	+2.58	+3.88	+6.43	+5.18	+6.74
953.....	+6.47	+5.28	+6.50	+4.79	+4.01	+2.83	+3.70	+2.15	+1.91	+2.28	+2.45	+0.86
954.....	-0.78	+0.16	-1.16	+0.34	-0.56	+0.26	+0.74	+0.29	+0.83	+1.45	+1.91	+3.29
955.....	+3.86	+5.02	+6.85	+6.24	+5.83	+6.30	+5.34	+5.87	+6.13	+3.48	+3.59	+4.25
956.....	+3.74	+4.66	+4.04	+3.62	+2.62	+2.16	+1.85	+2.89	+1.34	+2.10	+3.22	+2.06
957.....	+2.06	+3.13	+2.64	+1.96	+2.76	+2.62	+2.66	+2.17	+1.73	+1.40	+1.61	+0.61
958.....	+0.65	-1.61	-2.00	-1.34	-1.21	-1.20	-0.41	-0.38	-0.71	+0.34	+0.97	+3.31
959.....	+4.82	+5.14	+4.33	+5.63	+5.41	+5.84	+6.29	+7.42	+7.00	+6.26	+4.24	+3.46
960.....	+4.58	+5.82	+5.15	+5.66	+3.73	+3.90	+3.42	+2.83	+3.42	+1.20	+1.78	+1.24
114. Discount rate on new issues of 91-day Treasury bills (Percent) ¹												
948.....	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.03	1.09	1.12	1.14	1.15
949.....	1.16	1.16	1.16	1.16	1.15	1.16	0.98	1.02	1.06	1.04	1.06	1.10
950.....	1.09	1.12	1.14	1.16	1.17	1.17	1.17	1.21	1.32	1.33	1.36	1.37
951.....	1.39	1.39	1.42	1.52	1.58	1.50	1.59	1.64	1.65	1.61	1.61	1.73
952.....	1.69	1.57	1.66	1.62	1.71	1.70	1.82	1.88	1.79	1.78	1.86	2.13
953.....	2.04	2.02	2.08	2.18	2.20	2.23	2.10	2.09	1.88	1.40	1.43	1.63
954.....	1.21	0.98	1.05	1.01	0.78	0.65	0.71	0.89	1.01	0.99	0.95	1.17
955.....	1.26	1.18	1.34	1.62	1.49	1.43	1.62	1.88	2.09	2.26	2.22	2.56
956.....	2.46	2.37	2.31	2.61	2.65	2.53	2.33	2.61	2.85	2.96	3.00	3.23
957.....	3.21	3.16	3.14	3.11	3.04	3.32	3.16	3.40	3.58	3.59	3.34	3.10
958.....	2.60	1.56	1.35	1.13	1.05	0.88	0.96	1.69	2.48	2.79	2.76	2.81
959.....	2.84	2.71	2.85	2.96	2.85	3.25	3.24	3.36	4.00	4.12	4.21	4.57
960.....	4.44	3.95	3.44	3.24	3.39	2.64	2.40	2.29	2.49	2.43	2.38	2.27

¹See appendix G, for description of this series.

Appendix F.--HISTORICAL DATA FOR SELECTED SERIES--Continued

Each month historical data are presented for certain series that either have not been shown here previously or have been revised historically. The months of issue for series previously included in this appendix are given in the index. Current data are shown in tables 2, 4, and 5. Data are not seasonally adjusted.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
115. Yield on long-term Treasury bonds (Percent) ¹												
1948.....	2.45	2.45	2.44	2.44	2.42	2.41	2.44	2.45	2.45	2.45	2.44	2.44
1949.....	2.42	2.39	2.38	2.38	2.38	2.38	2.27	2.24	2.22	2.22	2.20	2.19
1950.....	2.20	2.24	2.27	2.30	2.31	2.33	2.34	2.33	2.36	2.38	2.38	2.39
1951.....	2.39	2.40	2.47	2.56	2.63	2.65	2.63	2.57	2.56	2.61	2.66	2.70
1952.....	2.74	2.71	2.70	2.64	2.57	2.61	2.61	2.70	2.71	2.74	2.71	2.75
1953.....	2.80	2.83	2.89	2.97	3.11	3.13	3.02	3.02	2.98	2.83	2.86	2.79
1954.....	2.69	2.62	2.53	2.48	2.54	2.55	2.47	2.48	2.52	2.54	2.57	2.59
1955.....	2.68	2.78	2.78	2.82	2.81	2.82	2.91	2.95	2.92	2.87	2.89	2.91
1956.....	2.88	2.85	2.93	3.07	2.97	2.93	3.00	3.17	3.21	3.20	3.30	3.40
1957.....	3.34	3.22	3.26	3.32	3.40	3.58	3.60	3.63	3.66	3.73	3.57	3.30
1958.....	3.24	3.28	3.25	3.12	3.14	3.20	3.36	3.60	3.75	3.76	3.70	3.80
1959.....	3.91	3.92	3.92	4.01	4.08	4.09	4.11	4.10	4.26	4.11	4.12	4.27
1960.....	4.37	4.22	4.08	4.18	4.16	3.98	3.86	3.79	3.84	3.91	3.93	3.88
116. Yield on new issues of high-grade corporate bonds (Percent) ¹												
1948.....	2.97	2.85	2.99	2.81	2.86	2.93	2.80	2.83	2.86	2.99	2.96	3.15
1949.....	2.66	2.77	2.75	2.74	2.69	2.77	2.68	2.60	2.40	2.50	2.54	2.53
1950.....	2.60	2.58	2.57	2.40	2.58	2.63	2.55	2.61	2.70	2.64	2.63	2.75
1951.....	2.74	2.78	2.90	3.06	2.98	3.24	3.20	3.01	2.91	3.09	3.36	3.22
1952.....	3.08	2.94	3.14	3.09	3.25	3.09	3.11	3.08	3.14	3.16	3.07	3.04
1953.....	3.17	3.26	3.41	3.53	3.80	3.82	3.59	3.46	3.60	3.09	3.13	3.23
1954.....	3.00	2.88	2.74	2.88	2.90	2.91	2.94	2.94	3.01	2.84	2.94	2.87
1955.....	2.99	3.09	3.14	3.11	3.15	3.11	3.14	3.41	3.27	3.15	3.17	3.27
1956.....	3.20	3.07	3.25	3.55	3.48	3.56	3.56	4.02	3.96	3.94	4.29	4.26
1957.....	4.28	4.13	4.18	4.23	4.41	4.81	4.59	4.78	4.68	4.71	4.56	4.04
1958.....	3.62	3.73	3.88	3.67	3.66	3.61	3.85	4.39	4.56	4.48	4.35	4.44
1959.....	4.36	4.29	4.30	4.53	4.81	4.82	4.80	4.74	5.29	5.10	5.07	5.16
1960 ²	4.95	4.96	4.66	4.78	4.86	4.69	4.49	4.37	4.45	4.60	4.59	4.79
1960 ³	5.27	5.02	4.92	4.91	4.95	4.86	4.71	4.50	4.55	4.68	4.72	4.92
117. Yield on municipal bonds, 20-bond average (Percent) ¹												
1948.....	2.36	2.47	2.45	2.37	2.31	2.24	2.27	2.37	2.41	2.42	2.38	2.26
1949.....	2.16	2.20	2.18	2.14	2.14	2.20	2.16	2.12	2.14	2.16	2.12	2.09
1950.....	2.06	2.03	2.01	2.03	2.00	1.99	2.01	1.83	1.84	1.79	1.74	1.72
1951.....	1.61	1.58	1.74	1.94	2.00	2.19	2.15	2.02	2.01	2.06	2.05	2.09
1952.....	2.09	2.07	2.08	2.04	2.06	2.13	2.15	2.24	2.30	2.38	2.38	2.38
1953.....	2.43	2.55	2.65	2.65	2.78	2.99	2.98	2.90	2.90	2.75	2.62	2.60
1954.....	2.50	2.42	2.40	2.47	2.50	2.48	2.32	2.26	2.31	2.34	2.32	2.36
1955.....	2.40	2.44	2.44	2.41	2.38	2.41	2.54	2.60	2.58	2.51	2.46	2.57
1956.....	2.50	2.44	2.57	2.70	2.68	2.54	2.65	2.80	2.94	2.95	3.16	3.22
1957.....	3.18	3.00	3.10	3.13	3.27	3.41	3.40	3.54	3.54	3.42	3.37	3.04
1958.....	2.91	3.02	3.06	2.96	2.92	2.97	3.09	3.36	3.54	3.45	3.32	3.34
1959.....	3.42	3.36	3.30	3.39	3.58	3.72	3.71	3.58	3.78	3.62	3.55	3.68
1960.....	3.72	3.60	3.56	3.56	3.60	3.55	3.50	3.34	3.42	3.53	3.40	3.40
118. Secondary market yields on FHA mortgages (Percent) ¹												
1948.....	...	...	...	...	...	...	...	...	...	...	...	...
1949.....	4.35	4.35	4.35	4.35	4.34	4.35	4.34	4.34	4.32	4.32	4.32	4.32
1950.....	4.31	4.31	4.30	4.23	4.16	4.09	4.08	4.08	4.08	4.08	4.08	4.08
1951.....	4.08	4.08	4.12	4.19	4.27	4.29	4.31	4.31	4.30	4.27	4.27	4.26
1952.....	4.26	4.27	4.29	4.29	4.29	4.30	4.30	4.30	4.30	4.31	4.32	4.32
1953.....	4.34	4.34	4.34	4.45	4.56	4.67	4.74	4.82	4.86	4.82	4.81	4.78
1954.....	4.75	4.69	4.64	4.62	4.59	4.57	4.56	4.56	4.56	4.56	4.56	4.56
1955.....	4.56	4.56	4.59	4.60	4.63	4.63	4.64	4.67	4.70	4.73	4.75	4.73
1956.....	4.73	4.70	4.68	4.71	4.78	4.81	4.81	4.87	4.92	4.95	5.05	5.15
1957.....	5.25	5.36	5.35	5.35	5.32	5.35	5.38	5.46	5.54	5.63	5.63	5.61
1958.....	5.58	5.56	5.51	5.43	5.39	5.37	5.35	5.37	5.50	5.57	5.60	5.60
1959.....	5.60	5.58	5.57	5.58	5.64	5.71	5.75	5.80	5.94	6.08	6.23	6.23
1960.....	6.24	6.23	6.22	6.21	6.21	6.19	6.18	6.14	6.11	6.09	6.05	6.04

Appendix F.--HISTORICAL DATA FOR SELECTED SERIES--Continued

Month historical data are presented for certain series that either have not been shown here previously or have been revised historically. The months of issue for series previously included in this appendix are given in the index. Current data are shown in tables 2, 4, and 5. Data are seasonally adjusted.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
85. Percent change in total U.S. money supply (Percent)												
8.....	+0.27	-0.18	-0.53	-0.27	-0.18	-0.09	+0.18	+0.09	-0.09	-0.09	-0.27	-0.27
9.....	-0.27	0.00	0.00	+0.09	+0.18	-0.18	-0.09	-0.18	-0.09	0.00	+0.09	+0.18
0.....	+0.27	+0.54	+0.36	+0.62	+0.44	+0.35	+0.44	+0.35	+0.17	+0.43	+0.17	+0.26
1.....	+0.43	+0.34	+0.43	+0.17	+0.34	+0.34	+0.42	+0.42	+0.67	+0.50	+0.83	+0.57
2.....	+0.33	+0.41	+0.16	+0.24	+0.32	+0.40	+0.24	+0.32	+0.56	+0.24	+0.32	+0.24
3.....	-0.08	+0.08	+0.47	+0.23	+0.16	0.00	+0.08	+0.08	-0.08	+0.08	0.00	+0.08
4.....	+0.16	+0.08	+0.08	-0.46	+0.86	+0.15	+0.31	+0.31	+0.15	+0.46	+0.46	+0.15
5.....	+0.53	+0.68	-0.22	+0.22	+0.52	-0.15	+0.30	0.00	+0.15	+0.15	-0.22	+0.22
6.....	+0.22	0.00	+0.15	+0.22	-0.15	+0.15	0.00	-0.22	+0.37	+0.07	+0.22	+0.22
7.....	0.00	-0.07	+0.07	0.00	+0.07	-0.07	+0.07	+0.07	-0.22	-0.22	-0.15	-0.29
8.....	-0.29	+0.52	+0.22	+0.37	+0.36	+0.65	0.00	+0.51	+0.29	+0.43	+0.57	+0.14
9.....	+0.35	+0.21	+0.42	+0.14	+0.35	+0.14	+0.45	-0.35	-0.21	-0.28	-0.07	-0.49
0.....	-0.28	-0.35	-0.21	-0.07	-0.36	-0.14	+0.21	+0.36	+0.14	0.00	-0.14	+0.14
98. Percent change in money supply and time deposits (Percent)												
8.....	+0.27	0.00	-0.40	-0.20	-0.14	0.00	+0.14	+0.14	-0.07	-0.07	-0.14	-0.20
9.....	-0.14	0.00	0.00	+0.14	+0.20	-0.07	-0.07	-0.14	-0.07	0.00	+0.07	+0.14
0.....	+0.20	+0.54	+0.27	+0.54	+0.47	+0.27	+0.26	+0.20	+0.07	+0.26	+0.20	+0.26
1.....	+0.33	+0.20	+0.33	+0.19	+0.32	+0.32	+0.51	+0.45	+0.70	+0.44	+0.76	+0.56
2.....	+0.37	+0.50	+0.25	+0.31	+0.37	+0.43	+0.30	+0.42	+0.60	+0.30	+0.48	+0.30
3.....	+0.12	+0.18	+0.53	+0.29	+0.29	+0.12	+0.23	+0.23	+0.12	+0.29	+0.17	+0.23
4.....	+0.29	+0.29	+0.29	-0.06	+0.86	+0.28	+0.51	+0.51	+0.17	+0.45	+0.39	+0.17
5.....	+0.50	+0.61	-0.11	+0.27	+0.38	0.00	+0.27	0.00	+0.27	+0.16	-0.05	+0.22
6.....	+0.11	0.00	+0.22	+0.27	-0.05	+0.27	+0.11	0.00	+0.43	+0.11	+0.27	+0.21
7.....	+0.37	+0.21	+0.37	+0.16	+0.31	+0.10	+0.31	+0.26	+0.05	+0.10	+0.10	0.00
8.....	-0.10	+1.19	+0.82	+0.76	+0.65	+0.90	+0.40	+0.64	+0.29	+0.34	+0.54	+0.19
9.....	+0.53	+0.14	+0.38	+0.24	+0.29	+0.29	+0.38	-0.19	-0.09	-0.19	-0.05	-0.29
0.....	-0.29	-0.38	-0.10	+0.10	-0.19	+0.14	+0.53	+0.72	+0.47	+0.38	+0.28	+0.47

Appendix G.--DESCRIPTIONS AND SOURCES OF SERIES

110. Total funds raised by private nonfinancial borrowers in credit markets. This series measures the amount of funds raised in credit markets by households, state and local governments, and nonfinancial businesses. Forms of credit covered are security issues (including corporate stock flotations), mortgages, consumer credit, business farm loans from banks, Federal loans to businesses and firms, commercial paper, and acceptances. All security credit, loans to financial businesses, and foreign borrowings are excluded. Data are net figures; that is, they consist of funds raised less debt repaid. Data are seasonally adjusted by the source agency. (Source: Board of Governors of the Federal Reserve System)

111. Gross retained earnings of nonfinancial corporations. This series is obtained by adding the retained earnings and the depreciation allowances of nonfinancial corporations. Retained earnings consist of corporate profits and inventory valuation adjustment, less dividends and taxes paid, plus branch profits received from abroad. Both retained earnings and depreciation are derived directly from national income data by eliminating the amounts attributable to banks, other financial businesses, and the rest of the world, and by substituting profit tax payments for accruals. Data are seasonally adjusted by the source agency. (Source: Board of Governors of the Federal Reserve System)

112. Net change in bank loans to businesses. This series is derived from a weekly Federal Reserve series based on reports by approximately 350 member banks in about

100 cities. Included are most of the larger banks in the more important banking centers. Although these banks account for about 70 percent of all business loans by commercial banks, the behavior of business loans outstanding at these banks may at times differ substantially from that at other commercial banks. Business loans outstanding are reported as of Wednesday of each week, and the weekly series is simply the aggregate of all reporting banks. The net change series is computed by averaging the weekly figures for each month and then finding the month-to-month changes.

This series includes all loans for commercial and industrial purposes, except those secured by real estate. It excludes all loans to financial institutions and loans for the purpose of purchasing or carrying securities. Comparable data for the period prior to July 1959 are not available. Before that date, the series included loans to financial institutions, which represented about 14 percent of the total on July 1, 1959, the only date for which overlapping data are available. Prior to 1956, agricultural loans were also included and represented about 2 percent of the total. Data are seasonally adjusted by the Bureau of the Census. (Source: Board of Governors of the Federal Reserve System)

113. Net change in consumer installment debt. This series measures the change during the month in the amount of consumer installment debt outstanding (series 66). Each monthly change is determined by subtracting the consumer installment credit repaid during the month from the new credit extended.

Appendix G.--DESCRIPTIONS AND SOURCES OF SERIES--Continued

Consumer credit consists of all debt used to purchase goods and services for personal consumption. It includes both loans and deferred payment sales, as well as the refinancing of debts originally classified as consumer credit. Most consumer credit is in the form of installment debt; that is, it is scheduled to be repaid in two or more payments. Specifically, consumer installment credit includes automobile paper, other consumer goods paper, personal loans, and repair and modernization loans. It does not include home mortgages. Data are seasonally adjusted by the source agency. (Source: Board of Governors of the Federal Reserve System)

114. Discount rate on new issues of 91-day Treasury bills. This series measures the discount rate on new issues of 91-day Treasury bills. Bills are issued weekly to the highest bidders. For each week's issue, the average discount rate is based on the average of the auction prices at which the various portions of the issue are sold. The monthly series is the average of the four or five weekly averages for each month. (These auction rates are not the same as average market rates, although they are similar; market rates are based on daily trading quotations.) These figures are on a week-ended basis and lag the actual auction date (the date when the price decisions are made) by 5 days. This means that the monthly averages sometimes reflect rates which refer to a period about a week earlier. Since August 1949, this series has been based on bills issued during the period; prior to that, it was based on issues announced during the period. Information on individual issues may be found in the Treasury Bulletin. Data are not seasonally adjusted. (Source: Board of Governors of the Federal Reserve System)

115. Yield on long-term Treasury bonds. This series is a measure of the average yield on fully taxable long-term U.S. Treasury bonds. To be included in this series, a bond must be neither due nor callable for a given number of years. Prior to April 1952, the requirement was 15 years; from April 1952 through March 1953, it was 12 years; and from April 1953 to date, it has been 10 years.

The series is composed of monthly averages of a daily series, the latter being computed by averaging the daily yields for all bonds meeting the above requirement. Treasury bond yields are reported to the Treasury Department by the Federal Reserve Bank of New York and are based on the daily closing bid quotations in the New York over-the-counter market. Before April 1953, yields were based on the mean of the closing bid-and-ask quotations. Data are not seasonally adjusted. (Source: Treasury Department)

116. Yield on new issues of high-grade corporate bonds. For the period 1948-60, this series has been computed by the First National City Bank. It is a weighted average of the rooffering yields on new high-grade corporate bond offerings during the month, with the weights being the size of the offerings. With the exception of serial bonds, convertible debentures, equipment trust certificates, and offerings by natural gas transmission or foreign companies, all new public offerings rated Aaa, Aa, or A by Moody's Investors Service are included in this series. Before averaging, the yields on Aa and A issues are adjusted to the level of the Aaa yields. The Aa yields are

adjusted by subtracting from them the difference between Moody's average yields on Aaa and Aa corporate bonds outstanding during the month. The offerings rated A are treated in similar fashion. These adjusted yields, along with the Aaa yields, are then weighted according to the size of the offering and averaged.

The series for the more recent period is an estimate of the monthly average of the rooffering yields on new Aa bonds and is based on weekly computations by the Treasury Department. The offerings excluded are the same as listed above, except for natural gas transmission companies. Although Aa bonds are not the most common among the quality ratings, they are numerous enough to provide a meaningful series. The limitation of this segment to such bonds using a 3-week moving average, produces a series which follows closely the movements of the FNCB series but smoother. Data are not seasonally adjusted. (Source: First National City Bank, 1948-60; Treasury Department 1960 to date)

117. Yield on municipal bonds, 20-bond average. This series consists of monthly averages of the Bond Buyer weekly index of 20 new municipal bonds. This index is an average of the market values (yields) of general obligation bonds of 20 issuing bodies (states, cities, school districts). It should be noted that the computations do not necessarily involve specific issues; the yields used are those applicable to a bond selling near par with about 2 years to maturity. The ratings of the issues used in the index are all in the top four classifications, according to Moody's Investors Service, and are concentrated in the second and third classes. Substitutions have occasionally been made in the list of components to keep the index abreast of the market. Data are not seasonally adjusted. (Source: The Bond Buyer)

118. Secondary market yields on FHA mortgages. This series is derived monthly from a national average of secondary market prices for FHA-insured new-home mortgage. Prices are based on opinion reports from FHA field offices on transactions in their market areas as of the first of each month. Yield data are shown in Business Cycle Developments as applicable to the previous month.

Since July 1961, yields in this series are based on mortgages which have an original maturity of 30 years, assumed to be prepaid in 15 years, and carry FHA's maximum permissible interest rate. For the prior period, they are based on an original term of 25 years for mortgages assumed to be prepaid in 12 years and also carrying FHA interest rate.

Transactions are for immediate delivery in the secondary market and exclude seasoned mortgages or deliveries to the Federal National Mortgage Association. Prices used are after discounts, commitment fees, and other charges. Before 1956, prices represent typical transactions; beginning with 1956, they represent new-home mortgages, first with a 25-year maturity and a 10-percent downpayment and after July 1961, with a 30-year maturity and the minimum downpayment. Before March 1956, the national average prices were unweighted; subsequently, the price data have been weighted to reflect the probable volume of transactions in each office area. Data are not seasonally adjusted. (Source: Federal Housing Administration)

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¹See back cover for series titles and sources. ²Page number shown is for the June 1964 issue. ³Before May 64, this appendix was "G".

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¹See back cover for series titles and sources, 1964, this appendix was "G".

²Page number shown is for the June 1964 issue.

³Before May

TITLES AND SOURCES OF PRINCIPAL BUSINESS CYCLE SERIES AND DIFFUSION INDEXES

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

30 NBER LEADING INDICATORS

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

30. Nonagricultural placements, all industries (M).--Department of Labor, Bureau of Employment Security; seasonal adjustment by Bureau of the Census
31. Change in book value of manufacturing and trade inventories, total (EOM).--Department of Commerce, Office of Business Economics
32. Vendor performance, percent reporting slower deliveries (M).--Chicago Purchasing Agents Association; no seasonal adjustment
37. Percent reporting higher inventories, purchased materials (M).--National Association of Purchasing Agents; seasonal adjustment by Bureau of the Census

15 NBER ROUGHLY COINCIDENT INDICATORS

40. Unemployment rate, married males, spouse present (M).--Department of Labor, Bureau of Labor Statistics
- *41. Number of employees in nonagricultural establishments (M).--Department of Labor, Bureau of Labor Statistics
42. Total nonagricultural employment, labor force survey (M).--Department of Labor, Bureau of Labor Statistics, and Department of Commerce, Bureau of the Census
- *43. Unemployment rate, total (M).--Department of Labor, Bureau of Labor Statistics, and Department of Commerce, Bureau of the Census
45. Average weekly insured unemployment rate, State programs (M).--Department of Labor, Bureau of Employment Security
46. Index of help-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 outside New York City, 343 centers (M).--Board of Governors of the Federal Reserve System
- *52. Personal income (M).--Department of Commerce, Office of Business Economics
53. Labor income in mining, manufacturing, and construction (M).--Department of Commerce, Office of Business Economics
- *54. Sales of retail stores (M).--Department of Commerce, Bureau of the Census
- *55. Index of wholesale prices, all commodities, other than farm products and foods (M).--Department of Labor, Bureau of Labor Statistics; seasonal adjustment by Bureau of the Census
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, total (Q).--Department of Commerce, Office of Business Economics; and the Securities and Exchange Commission
- *62. Index of labor cost per unit of output, total manufacturing—ratio, index of compensation of employees in manufacturing (the sum of wages and salaries and supplements to wages and salaries) to index of industrial production, manufacturing (M).--Department of Commerce, Office of Business Economics, and the Board of Governors of the Federal Reserve System; seasonal adjustment by Bureau of the Census
- *64. Book value of manufacturers' inventories, all manufacturing industries (EOM).--Department of Commerce, Bureau of the Census
65. Book value of manufacturers' inventories of finished goods, all manufacturing industries (EOM).--Department of Commerce, Bureau of the Census
- *66. Consumer installment debt (EOM).--Board of Governors of the Federal Reserve System. FRS seasonally adjusted net change added to seasonally adjusted figure for previous month to obtain current figure (NBER seasonally adjusted data through January 1955 used as base).
- *67. Bank rates on short-term business loans, 19 cities (Q).--Board of Governors of the Federal Reserve System; no seasonal adjustment
68. Index of labor cost per dollar of real corporate gross national product (ratio of compensation of employees in corporate enterprises to value of corporate product in 1954 dollars) (Q).--Department of Commerce, Office of Business Economics, National Income Division

Continued on reverse

OFFICIAL BUSINESS
FIRST CLASS MAIL

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

28 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 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.
84. Federal cash surplus or deficit (M).--Treasury Department, Bureau of Accounts, and Executive Office of the President, Bureau of the Budget. Monthly seasonal adjustments by the Bureau of the Census do not equal quarterly totals of the official seasonally adjusted series because of differences in the method of seasonal adjustment.
85. Percent change in total U.S. money supply (demand deposits plus currency) (M).--Board of Governors of the Federal Reserve System
86. Exports, excluding military aid shipments, total (M).--Department of Commerce, Bureau of the Census
87. General imports, total (M).--Department of Commerce, Bureau of the Census
88. Merchandise trade balance (series 86 minus series 87) (M).--Department of Commerce, Bureau of the Census
89. Excess of receipts or payments in U.S. balance of payments (Q).--Department of Commerce, Office of Business Economics
90. Defense Department obligations, procurement (M).--Department of Defense, Fiscal Analysis Division; seasonal adjustment by Bureau of the Census
91. Defense Department obligations, total (M).--Department of Defense, Fiscal Analysis Division; seasonal adjustment by Bureau of the Census
92. Military prime contract awards, U.S. business firms (M).--Department of Defense, Directorate for Statistical Services; seasonal adjustment by Bureau of the Census
93. Free reserves (member bank excess reserves minus borrowings) (M).--Board of Governors of the Federal Reserve System; no seasonal adjustment
94. Index of construction contracts, total value (M).--F. W. Dodge Corporation
95. Surplus or deficit, Federal income and product account (Q).--Department of Commerce, Office of Business Economics
96. Manufacturers' unfilled orders, durable goods industries (EOM).--Department of Commerce, Bureau of the Census
97. Backlog of capital appropriations, manufacturing (Q).--National Industrial Conference Board; component industries are seasonally adjusted by National Bureau of Economic Research, Inc., and added to obtain seasonally adjusted total
98. Percent change in total U.S. money supply (demand deposits and currency) and commercial bank time deposits (M).--Board of Governors of the Federal Reserve System
99. New orders, defense products (M).--Department of Commerce Bureau of the Census
110. Total funds raised by private nonfinancial borrowers in credit markets (Q).--Board of Governors of the Federal Reserve System
111. Gross retained earnings of nonfinancial corporations (Q).--Board of Governors of the Federal Reserve System

112. Net change in bank loans to businesses (M).--Board of Governors of the Federal Reserve System; seasonal adjustment by Bureau of the Census
113. Net change in consumer installment debt (EOM).--Board of Governors of the Federal Reserve System
114. Discount rate on new issues of 91-day Treasury bills (M).--Board of Governors of the Federal Reserve System; no seasonal adjustment
115. Yield on long-term Treasury bonds (M).--Treasury Department, no seasonal adjustment
116. Yield on new issues of high-grade corporate bonds (M).--First National City Bank of New York and Treasury Department, no seasonal adjustment
117. Yield on municipal bonds, 20-bond average (M).--The Bond Buyer; no seasonal adjustment
118. Secondary market yields on FHA mortgages (M).--Federal Housing Administration; no seasonal adjustment

7 INTERNATIONAL COMPARISONS OF
INDUSTRIAL PRODUCTION

121. Organization for Economic Cooperation and Development, European Countries, index of industrial production (M).--Organization for Economic Cooperation and Development
122. United Kingdom, index of industrial production (M).--Central Statistical Office (London)
123. Canada, index of industrial production (M).--Dominion Bureau of Statistics (Ottawa)
125. West Germany, index of industrial production (M).--Deutsche Bundesbank (Frankfurt)
126. France, index of industrial production (M).--Statistical Office (Paris)
127. Italy, index of industrial production (M).--Organization for Economic Cooperation and Development
128. Japan, index of industrial production (M).--Ministry of International Trade and Industry (Tokyo); seasonal adjustment by compiler and 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:

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