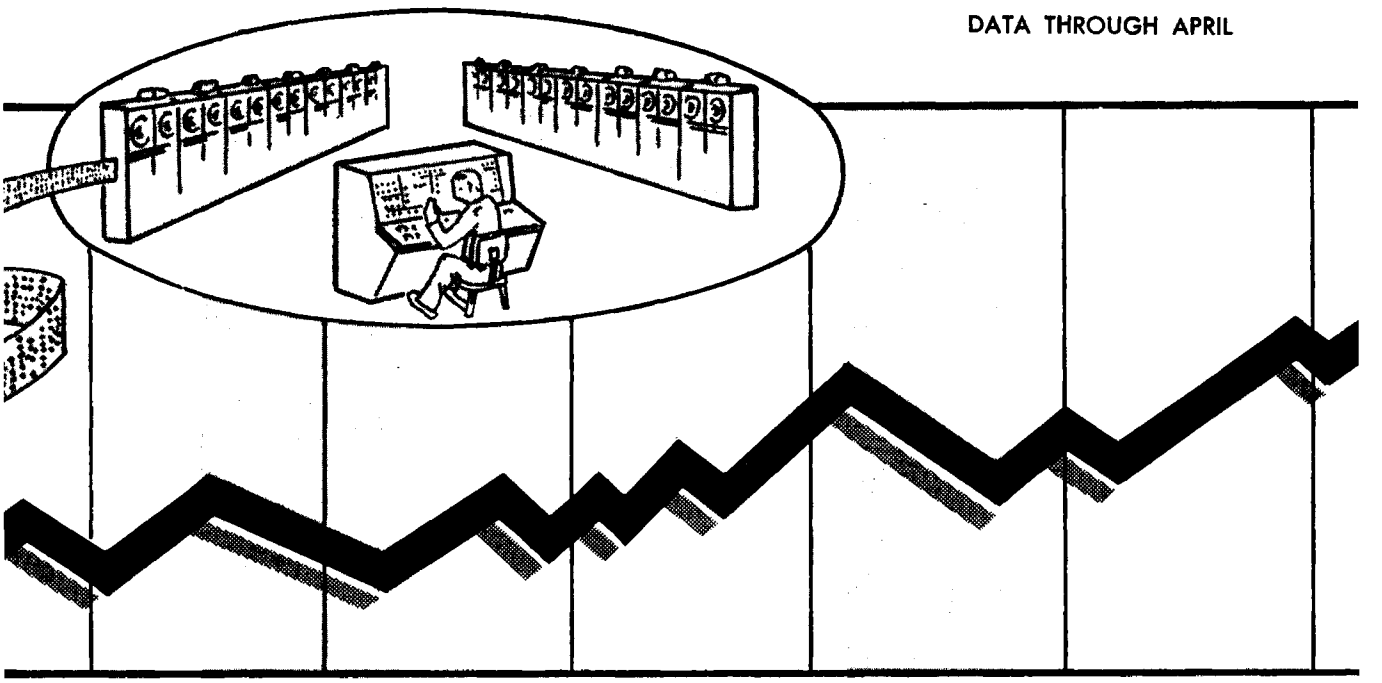
MAY 1964

Business Cycle Developments

DATA THROUGH APRIL



U.S. DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

Business Cycle Developments

MAY 1964

DATA THROUGH APRIL

Series ES1 No. 64-5

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Preface

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

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

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

The chief merits of this report are the speed with which the data for indicators are collected, assembled, and published and the arrangement of the series for business cycle studies. Electronic computers are used for many of the computations, thus making early publication possible. Publication is scheduled for around the 22nd of the month following the month of data.

New Features and Changes for This Issue

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

1. Series 31, change in book value of manufacturing and trade inventories, total, has been revised in tables 1 and 2 and chart 1 for period 1960 to date. This revision reflects the addition of farm products and raw materials to the wholesale segment for the period beginning January 1948 and revised seasonal factors for this segment for the period beginning January 1960. Revised data for the period prior to 1960 will be published in a subsequent issue of this report.

2. The diffusion index for initial claims for unemployment insurance, State programs (D5), has been revised back to January 1963, inclusive, to reflect a new seasonal adjustment of components.

3. A 6-term moving average is shown in chart 1 for each of the series on money supply (series 85 and 98). Seasonally adjusted data are also plotted for the most recent years to provide an indication of the variation about this moving average.

4. Appendix F (formerly appendix G) has been expanded to include historical data for 6 series each month. To provide more room in this issue for this expansion, the number of series covered in chart 5, "Comparisons of Specific Cycle Patterns," has been reduced and the direction of change table for average hours worked per week has been eliminated. The following series are included in appendix F this month: Series 3, 6, 11, D1, D6, and D23.

5. An article, "Census Trading-Day Adjustment Method," by Allan Young, is included in this report, pages 59-64. It 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.

The June issue of Business Cycle Developments is scheduled for release on June 23.

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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 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.

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 20 additional series with business cycle significance are included. Together they provide a broad view of current and prospective business cycle fluctuations in the economy as well as the basis for making an economic interpretation of these fluctuations.

Analytical measures (charts 2-3 and tables 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, 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 for some series in chart 1. To provide an indication of the variation about these moving averages, seasonally adjusted data are also plotted for years beginning with 1958.

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 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

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

[2] For 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).

omputed from components of the indicator series; or example, the diffusion index numbered "D6" is omputed from components of series number 6.)iffusion indexes not computed from basic series omponents are assigned new numbers.

This report includes 29 diffusion indexes based n 15 indicator series (see tables 4 and 5). Eighteen f these indexes are computed by the Bureau of the ensus utilizing nearly 300 components of 9 indiators (D1, D5, D6, D19, D23, D41, D47, D54, nd D58). Indexes for these indicators show comarisons for components over 1-month and either - or 5-month spans. The 11 other diffusion indexes re based on 7 indicators closely related to the bove 9 indicators. They include two indexes on apital appropriations (602 companies and 15 inustries)—NBER indexes based on data from the lational Industrial Conference Board; the First lational City Bank of New York index based on uarterly profit reports (700 companies); and 8 IBER diffusion indexes—actual and anticipated—or the following: Manufacturers' sales (800 comanies) and new orders (400 companies), based on ata from Dun and Bradstreet, Inc.; carloadings 19 commodity groups), based on data from the .ssociation of American Railroads; and new plant nd equipment expenditures (16 industries), based n data from the Office of Business Economics and ne Securities and Exchange Commission.

Diffusion indexes that are based on anticipations how what proportion of business enterprises (or ıdustries) are forecasting a rise in activity. Comarisons with indexes based on actual changes show /hether there is a generally optimistic bias or a ag in recognition of actual developments.

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

Timing distributions.—Distributions of current highs" appear to be helpful in appraising the evience for a prospective business cycle turning oint. Each month a timing distribution is contructed which shows the number of series reachng high values during each month of the expansion. he timing distribution is summarized by showing ıe number of series reaching new highs and the ercent currently high for each of several recent ıonths (see table 3). Similar distributions of lows" will be prepared during contractions.

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

To compile timing distributions for the current yclical phase, the data for the principal business ycle indicators are scanned each month. During a usiness cycle expansion, the high value for each eries is recorded. (For inverted series, that is eries with negative conformity to the business ycle, low values are taken during expansions and igh values during contractions.) If the values for or more months are equal, the latest date is aken 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 be-

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

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

Charts

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

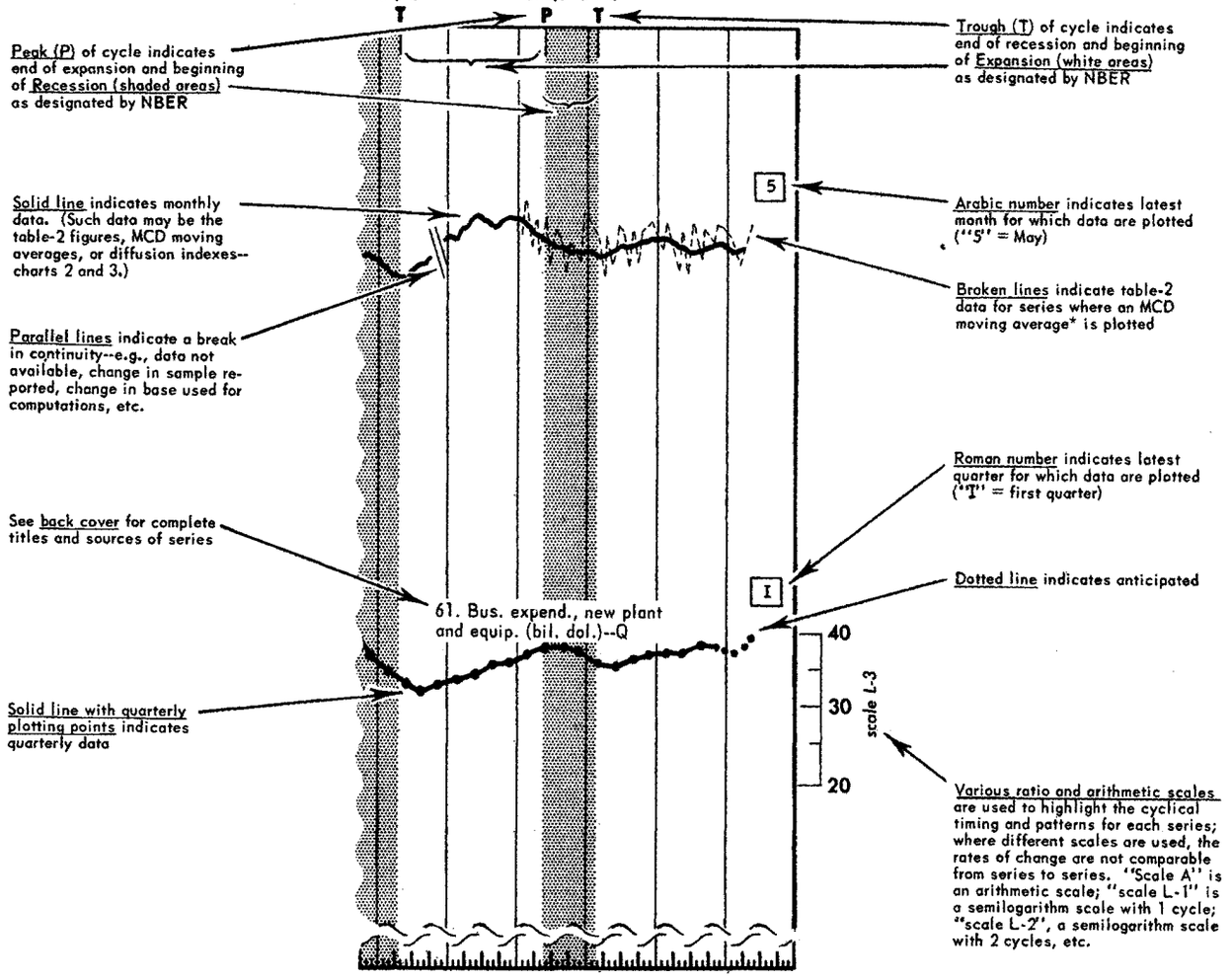
Historical Time Series (charts 1, 2, and 3).— These charts show the cyclical fluctuations of eac series against the background of expansions an recessions in general business activity from 194 to the current month. Shaded areas on the chart indicate periods of business cycle recession be tween business cycle peak dates (beginnings o shaded areas) and business cycle trough date (ends of shaded areas). The shading for a new re cession will be entered only after a trough has bee designated.

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

Cyclical Comparisons (charts 4 and 5).—Thes charts compare the performance of each serie during the current expansion with its performanc during the expansion phase of previous busines cycles. The usual date sequence followed in chart is disregarded, and instead the data are alined a the strategic point of the business cycle: For ex pansions, the reference trough (chart 4) and spe cific trough (chart 5). Thus these charts facilitat judgements on the vigor of the current expansio relative to cyclical movements during the corre sponding expansions of previous cycles.

Two types of cyclical comparisons are made. Chart 4 compares the pattern of the current busi ness or reference cycle (i.e., the cycle for aggre gate economic activity) with movements over th corresponding phase of previous reference cycles Chart 5 compares the pattern of the current spe cific cycle (i.e., the cycle for a particular series with the movements over the corresponding phase of previous specific cycles in that series. In bot charts, the trough dates are alined. In chart 4, th levels of the preceding peaks are also alined an in chart 5, the levels of the preceding troughs ar also alined. See the section, "Comparisons o Cyclical Patterns", for more detailed description 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	Unit of measure	Basic data[1] Jan. 1964	Feb. 1964	Mar. 1964	Apr. 1964	Percent change[2] Avg. change, 1953-1963[3]	Jan. to Feb. 1964	Feb. to Mar. 1964	Mar. to Apr. 1964
NBER LEADING INDICATORS									
1. Average workweek of production workers, manufacturing.	Hours per prod. wkr...	40.1	40.6	40.7	p40.6	0.5	+1.2	+0.2	-0.2
2. Accession rate, manufacturing.....	Per 100 empl.	3.7	r4.0	p3.8	NA	4.9	+8.1	-5.0	NA
30. Nonagri. placements, all industries.....	Thous.....	536	535	520	522	1.8	-0.2	-2.8	+0.4
3. Layoff rate, manufacturing.....	Per 100 empl.	1.8	1.7	p1.7	NA	9.5	+5.6	0.0	NA
4. Number of persons on temporary layoff, all industries.....	Thous.....	123	123	91	122	17.8	0.0	+26.0	-34.1
5. Avg. weekly initial claims for unemployment insurance, State programs.....	..do.....	289	264	273	260	5.3	+8.7	-3.4	+4.8
6. Value of manufacturers' new orders, durable goods industries.....	Bil. dol.....	19.74	r19.54	r19.32	p20.64	3.8	-1.0	-1.1	+6.8
24. Value of manufacturers' new orders, machinery and equipment industries.....	..do.....	3.62	r3.45	r3.45	p3.55	4.5	-4.7	0.0	+2.9
9. Construction contracts awarded for commercial and industrial buildings.	Mil. sq. ft. floor space.	51.64	52.47	48.17	NA	9.7	+1.6	-8.2	NA
10. Contracts and orders for plant and equipment.....	Bil. dol.....	4.37	r4.16	p4.09	NA	4.9	-4.8	-1.7	NA
11. Newly approved capital appropriations, 602 manufacturing corporations[4].....	..do.....	...	NA			11.6	NA		
7. New private nonfarm dwelling units started.	Ann. rate, thous.....	1688	r1613	r1640	p1526	7.3	-4.4	+1.7	-7.0
29. Index of new private housing units authorized by local building permits....	1957-59=100..	116.3	124.3	r122.5	p110.5	3.8	+6.9	-1.4	-9.8
12. Net change in business population, operating businesses[4 5].....	Thous.....	...	+16			2	+4		
13. Number of new business incorporations....	Number.....	16193	16086	16023	NA	2.7	-0.7	-0.4	NA
14. Current liabilities of business failures.	Mil. dol.....	87.70	121.87	107.25	98.50	16.9	+39.0	+12.0	+8.2
15. Number of business failures with liabilities of $100,000 and over.....	No. per week.	41	42	37	46	13.1	+2.4	+11.9	-24.3
16. Corporate profits after taxes[4].....	Ann. rate, bil. dol....	...	31.1			6.3	+8.7		
17. Price per unit of labor cost index, mfg..	1957-59=100..	r102.0	r101.9	r101.3	p102.5	0.7	-0.1	-0.6	+1.2
18. Profits (before taxes) per dollar of sales, all manufacturing corporations[4]..	Cents.....	...	NA			6.8	NA		
22. Ratio, profits (after taxes) to income originating, corporate, all industries[4].	Percent.....	...	p10.6			5.1	+8.2		
19. Index of stock prices, 500 common stocks*	1941-43=10...	76.45	77.39	78.80	79.94	2.6	+1.2	+1.8	+1.4
21. Change in bus. inventories, farm and nonfarm, after valuation adjustment.[4 5]	Ann. rate, bil. dol....	...	r+2.1			2.5	-3.3		
31. Change in book value of manufacturing and trade inventories, total[5].....	..do.....	r+5.1	r-0.7	p+1.3	NA	3.6	-5.8	+2.0	NA
20. Change in book value of mfrs.' inventories, materials and supplies[5].....	..do.....	-1.9	r-0.5	p-0.2	NA	1.5	+1.4	+0.3	NA
37. Purchased materials, percent reporting higher inventories.....	Percent.....	40	50	54	55	6.8	+25.0	+8.0	+1.9
26. Buying policy, prod. mtls., percent reporting commitments 60 days or longer*..	..do.....	53	54	56	59	5.8	+1.9	+3.7	+5.4
32. Vendor performance, percent reporting slower deliveries*.....	..do.....	55	54	60	60	7.7	-1.8	+11.1	0.0
25. Change in manufacturers' unfilled orders, durable goods industries[5].....	Bil. do.....	+0.40	r+0.57	r+0.16	p+1.21	0.48	+0.17	-0.41	+1.05
23. Index of industrial materials prices*....	1957-59=100..	98.5	98.5	98.9	102.4	1.3	0.0	+0.4	+3.5
NBER ROUGHLY COINCIDENT INDICATORS									
41. Number of employees in nonagricultural establishments.....	Thous.....	57850	r58183	r58268	p58471	0.3	+0.6	+0.1	+0.3
42. Total nonagricultural employment, labor force survey.....	..do.....	64631	65035	65207	65811	0.4	+0.6	+0.3	+0.9
43. Unemployment rate, total.....	Percent.....	5.6	5.4	5.4	5.4	4.2	+3.6	0.0	0.0
40. Unemployment rate, married males.....	..do.....	3.2	3.0	2.9	2.9	6.0	+6.2	+3.3	0.0
45. Average weekly insured unemployment rate, State programs.....	..do.....	4.3	4.0	3.8	3.8	4.8	+7.0	+5.0	0.0
46. Index of help-wanted advertising in newspapers.....	1957-59=100..	116	117	r118	p120	3.1	+0.9	+0.9	+1.7
47. Index of industrial production.....	1957-59=100..	r127.4	r127.8	128.2	p129.2	1.1	+0.3	+0.3	+0.8

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

Series	Basic data[1]					Percent change[2]			
	Unit of measure	Jan. 1964	Feb. 1964	Mar. 1964	Apr. 1964	Avg. change, 1953-1963[3]	Jan. to Feb. 1964	Feb. to Mar. 1964	Mar. to Apr. 1964
NBER ROUGHLY COINCIDENT INDICATORS--Con.									
50. Gross national product in 1954 dollars[4]	Ann. rate, bil. dol.	...	506.4			1.3	+0.9		
49. Gross national product in current dol.[4]	..do.	...	r608.0			1.5	+1.3		
57. Final sales (series 49 minus 21)[4]	..do.	...	r605.9			1.3	+1.9		
51. Bank debits outside NYC, 343 centers	..do.	2355.1	2239.9	2322.5	p2452.1	1.5	-4.9	+3.7	+5.6
52. Personal income	..do.	478.1	478.8	r480.9	p483.1	0.5	+0.1	+0.4	+0.5
53. Labor income in mining, manufacturing, and construction	..do.	124.0	125.6	r125.9	p126.8	0.8	+1.3	+0.2	+0.7
54. Sales of retail stores	Mil. dol.	21000	r21533	r21305	p21244	0.8	+2.5	-1.1	-0.3
55. Index of wholesale prices except farm products and foods	1957-59=100	101.1	101.1	101.0	101.1	0.2	0.0	-0.1	+0.1
NBER LAGGING INDICATORS									
61. Business expenditures on new plant and equipment, total.[4]	Ann. rate, bil. dol.	...	a41.25			3.2	+0.1		
62. Index of labor cost per unit of output, total manufacturing	1957-59=100	r99.1	r99.1	r99.6	p98.6	0.6	0.0	+0.5	-1.0
68. Index of labor cost per dollar of real corporate GNP[4]	..do.	...	p104.0			0.9	-0.4		
64. Book value of manufacturers' inventories, all manufacturing industries	Bil. dol.	60.0	60.1	p60.2	NA	0.5	+0.2	+0.2	NA
65. Book value of mfrs.' inventories of finished goods, all manufacturing indus.	..do.	21.2	21.4	p21.3	NA	0.8	+0.9	-0.5	NA
66. Consumer installment debt	Mil. dol.	53212	53791	54315	NA	0.8	+1.1	+1.0	NA
67. Bank rates on short-term business loans, 19 cities* [4]	Percent	...	4.99			2.3	-0.2		
OTHER U.S. SERIES WITH BUSINESS CYCLE SIGNIFICANCE									
86. Exports, excluding military aid shipments, total	Mil. dol.	2037.3	2028.7	2077.5	NA	4.6	-0.4	+2.4	NA
87. General imports, total	..do.	r1421.8	1445.3	1522.9	NA	3.6	+1.7	+5.4	NA
88. Merchandise trade balance[5]	..do.	r+615.5	+583.4	+554.6	NA	59.5	-32.1	-28.8	NA
89. Excess of receipts or payments in U.S. balance of payments[4 5]	..do.	...	-41			286	+151		
82. Federal cash payments to the public	Ann. rate, bil. dol.	128.6	117.2	120.3	123.2	5.7	-8.9	+2.6	+2.4
83. Federal cash receipts from the public	..do.	114.8	123.4	115.3	126.6	5.4	+7.5	-6.6	+9.8
84. Federal cash surplus or deficit[5]	..do.	-13.8	+6.2	-5.0	+3.4	5.5	+20.0	-11.2	+8.4
95. Surplus or deficit, Federal income and product account[4 5]	..do.	...	-5.4			2.5	-3.9		
90. Defense Dept. obligations, procurement	Mil. dol.	1071	2067	1030	NA	26.9	+93.0	-50.2	NA
91. Defense Dept. obligations, total	..do.	4370	5484	3731	NA	15.1	+25.5	-32.0	NA
92. Military prime contract awards to U.S. business firms	..do.	2337	2854	1603	NA	26.2	+22.1	-43.8	NA
85. Change in money supply excluding time deposits[5]	Percent	+0.85	-0.26	+0.26	p+0.45	0.23	-1.11	+0.52	+0.19
98. Change in money supply including time deposits[5]	..do.	+1.21	+0.26	+0.45	p+0.48	0.21	-0.95	+0.19	+0.03
93. Free reserves* [5]	Mil. dol.	+171	+91	r+98	p+163	107	-80	+7	+65
81. Index of consumer prices	1957-59=100	107.8	107.6	107.7	NA	0.2	-0.2	+0.1	NA
94. Index of construction contracts, total	..do.	147	143	140	NA	7.0	-2.7	-2.1	NA
96. Mfrs.' unfilled orders, durable goods	Bil. dol.	47.07	r47.64	r47.80	p49.01	1.5	+1.2	+0.3	+2.5
97. Backlog of capital appropriations, mfg.[4]	..do.	...	...	NA		5.9	...	NA	

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

[1]Series 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.

[2]To facilitate interpretations of cyclical movements, those series that usually fall when general business activity rises and rise when business falls are inverted so that rises are shown as declines and declines as rises (see series 3, 4, 5, 14, 15, 40, 43, and 45). 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.

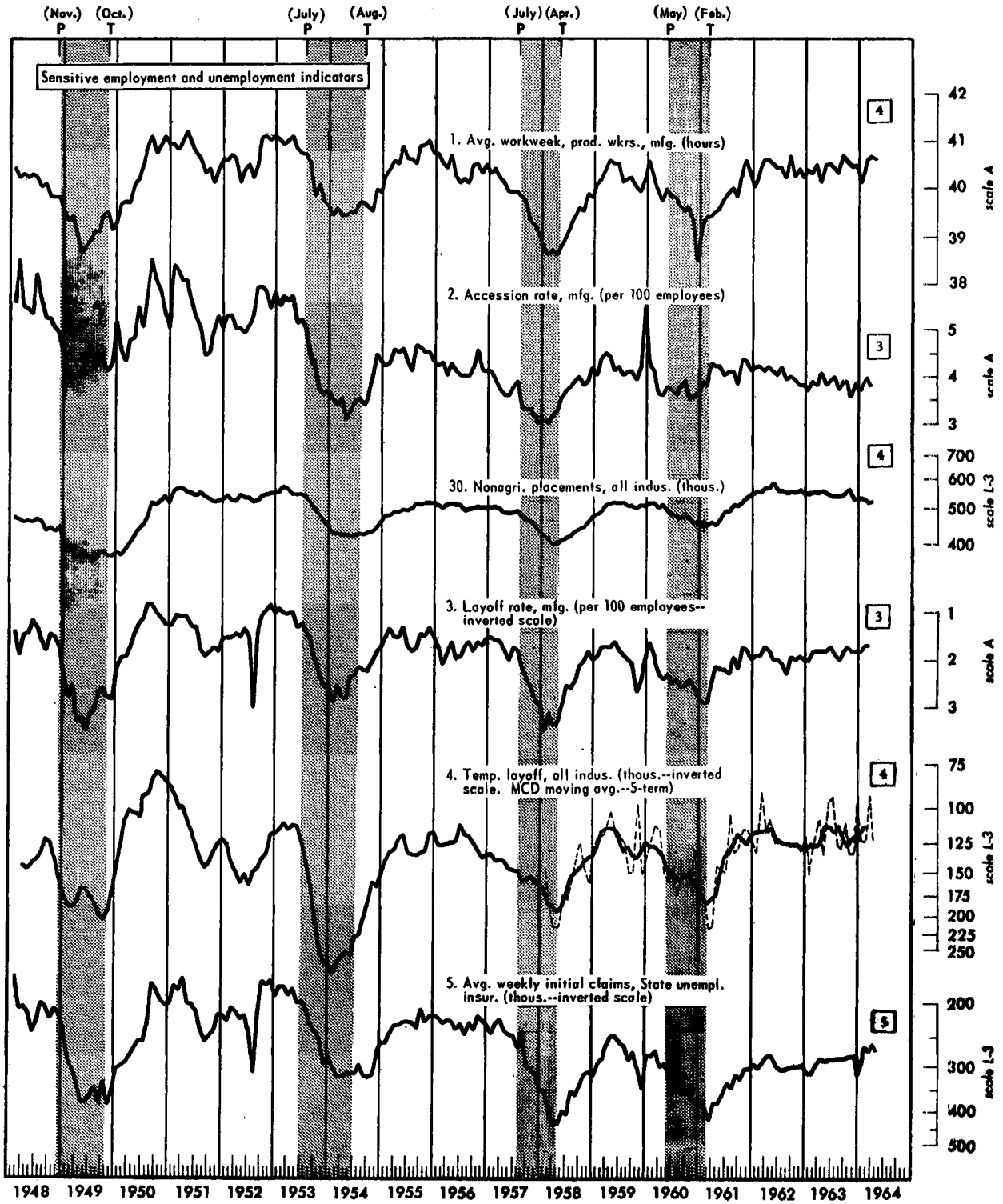
[3]This average is based on month-to-month (or quarter-to-quarter) changes without regard to sign. The period varies among the series, covering 1953-63 for most series.

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

[5]Since 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

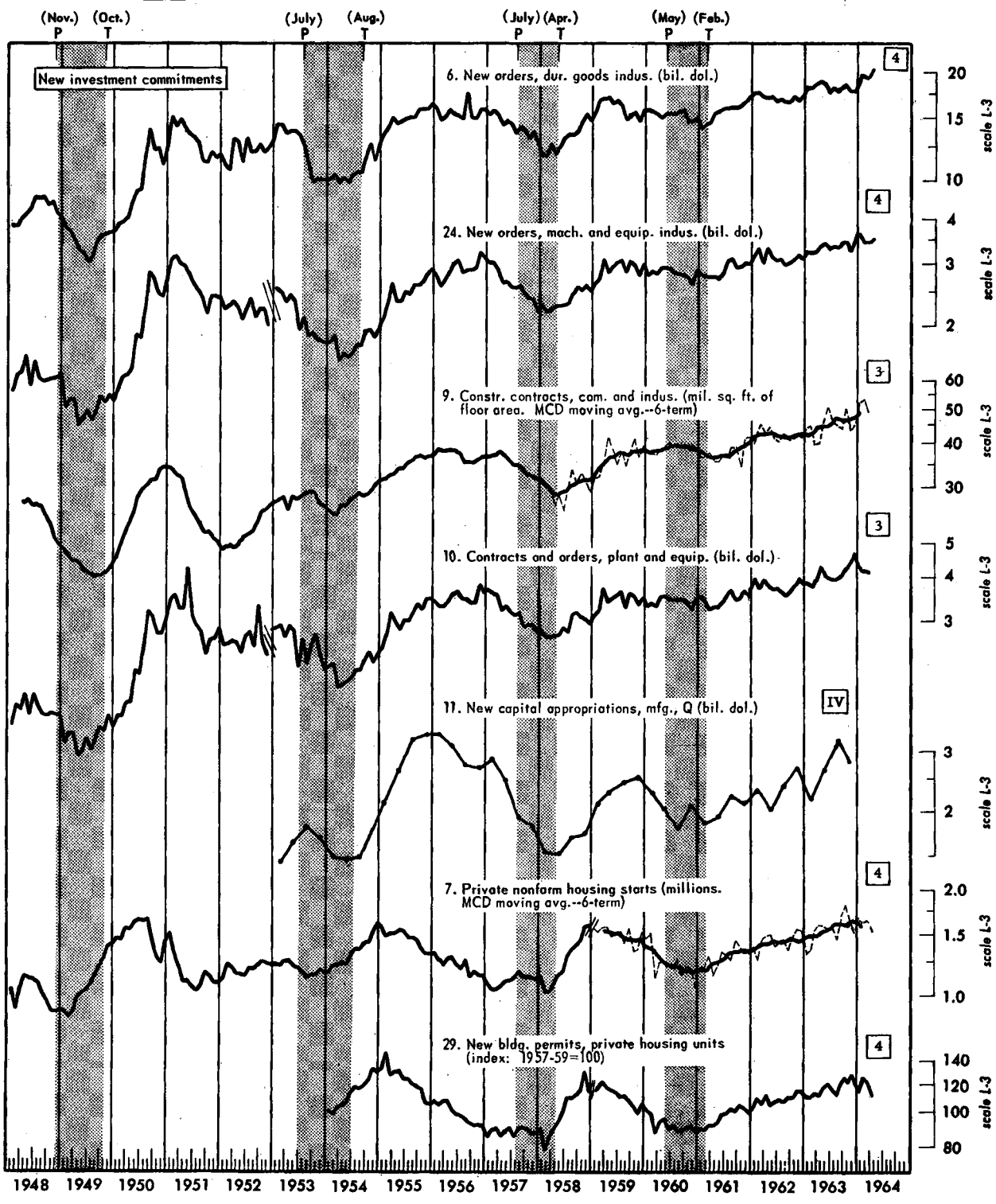
A NBER Leading Indicators



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

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

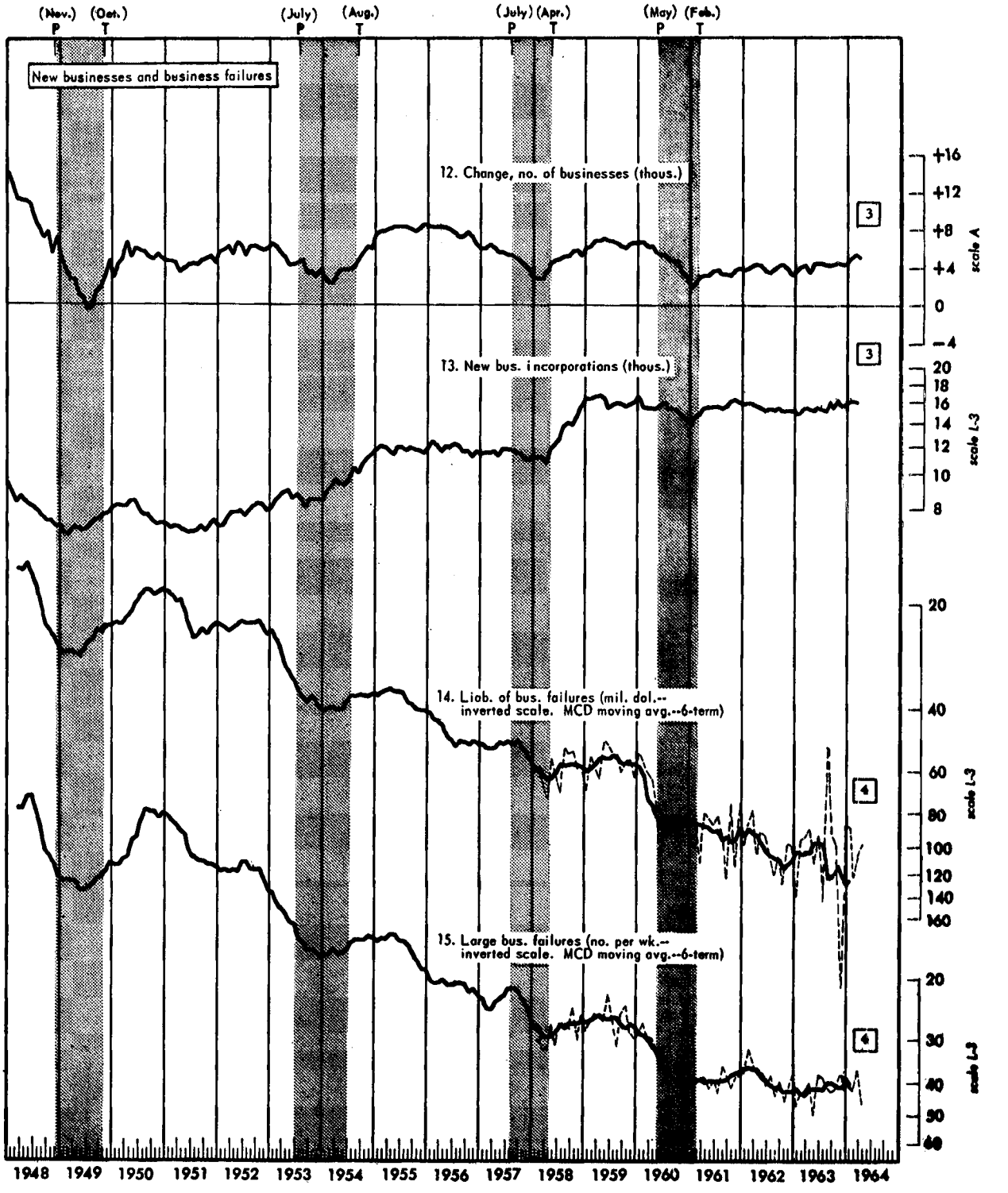
A NBER Leading Indicators—Con.



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.

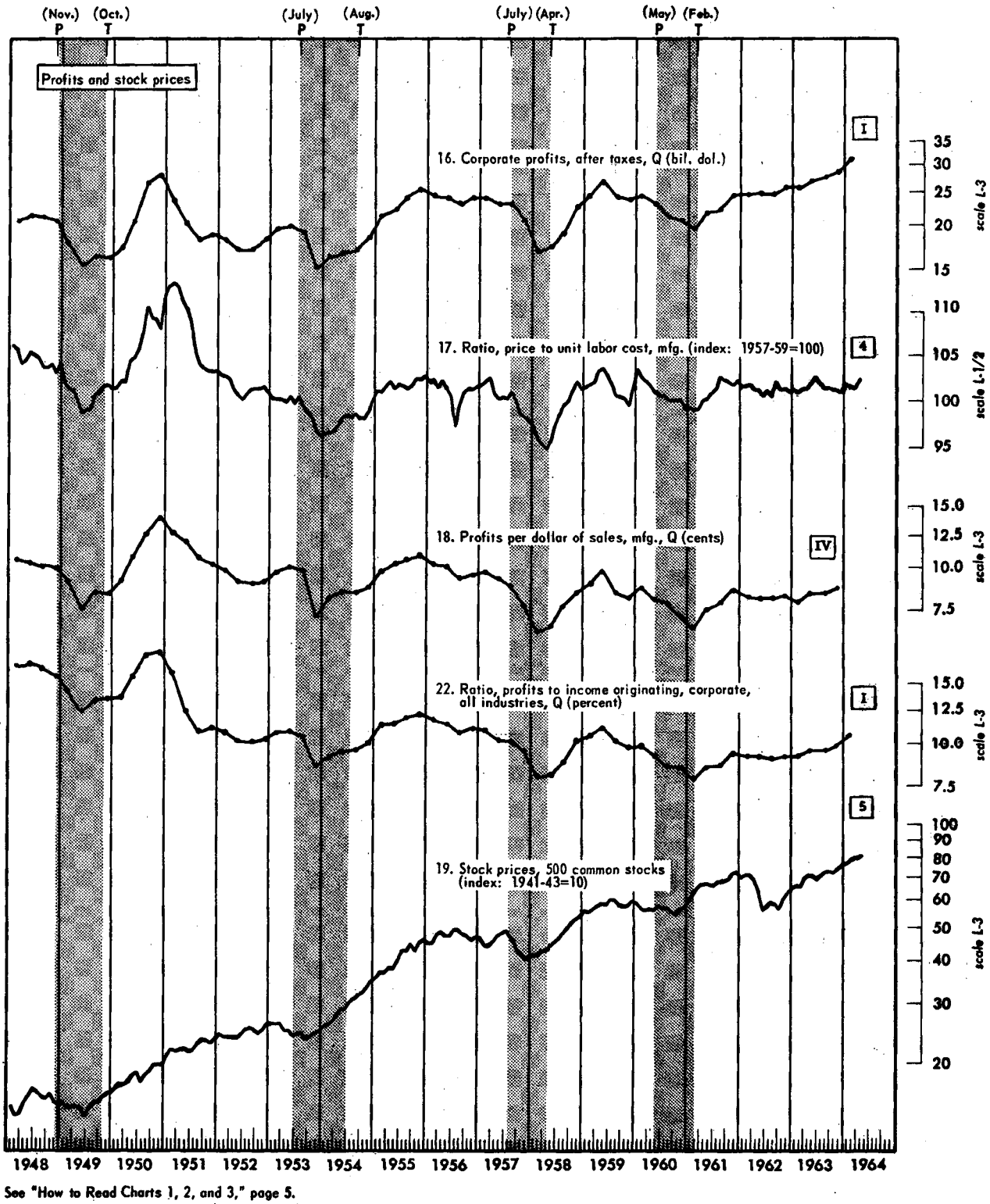


See "How to Read Charts 1, 2, and 3," page 5.

CHART 1 A

BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

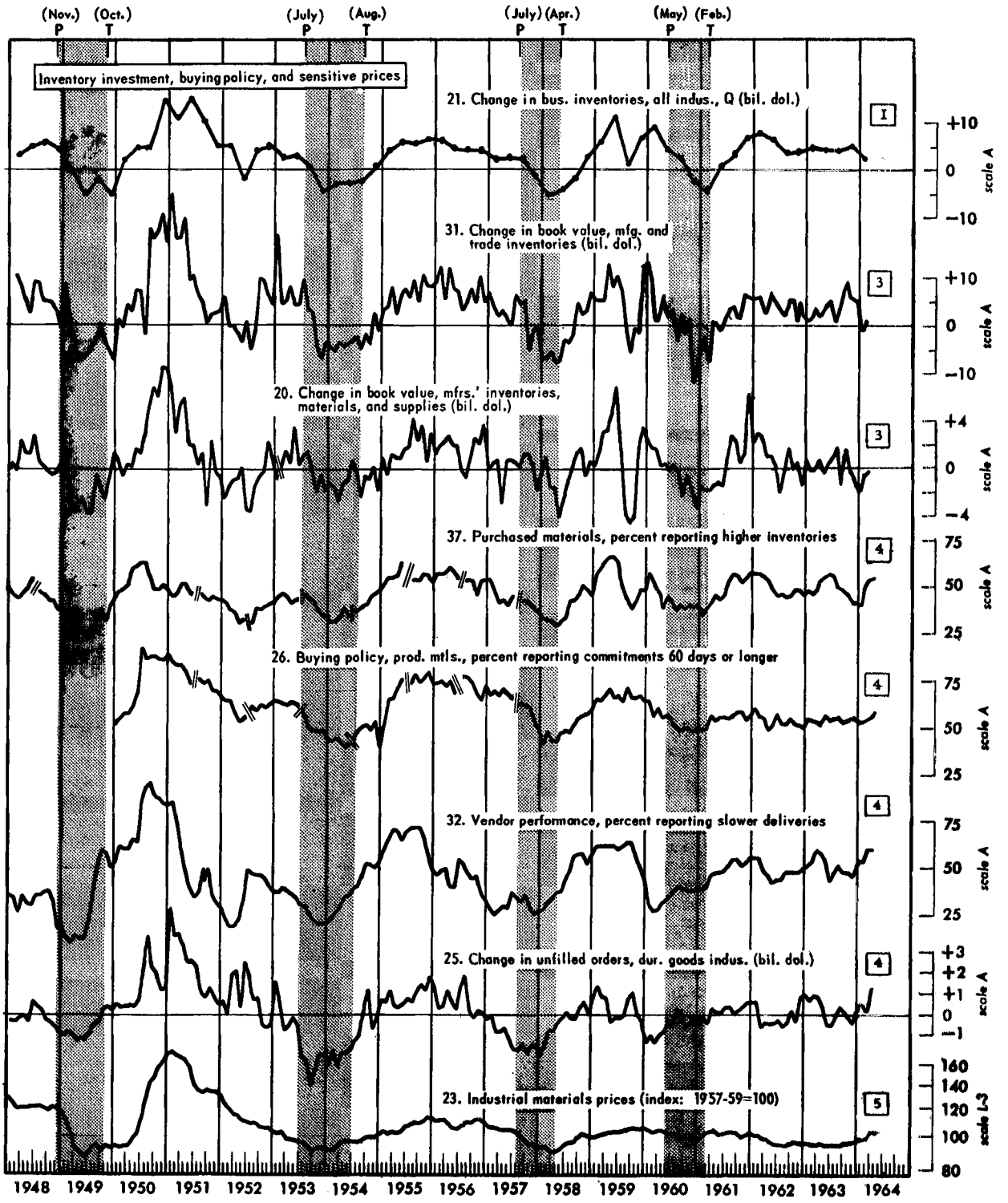
NBER Leading Indicators—Con.



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

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

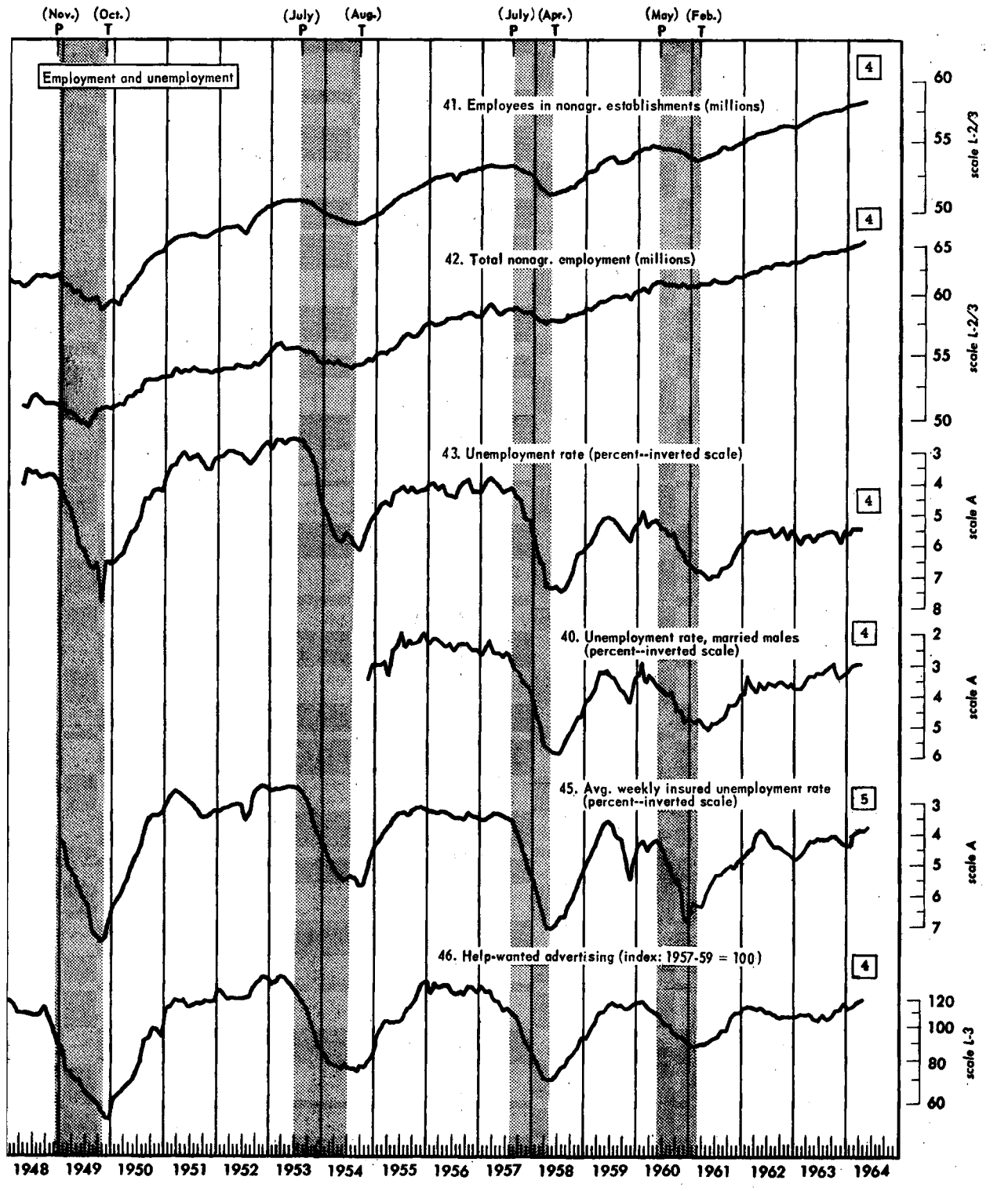
A NBER Leading Indicators—Con.



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

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

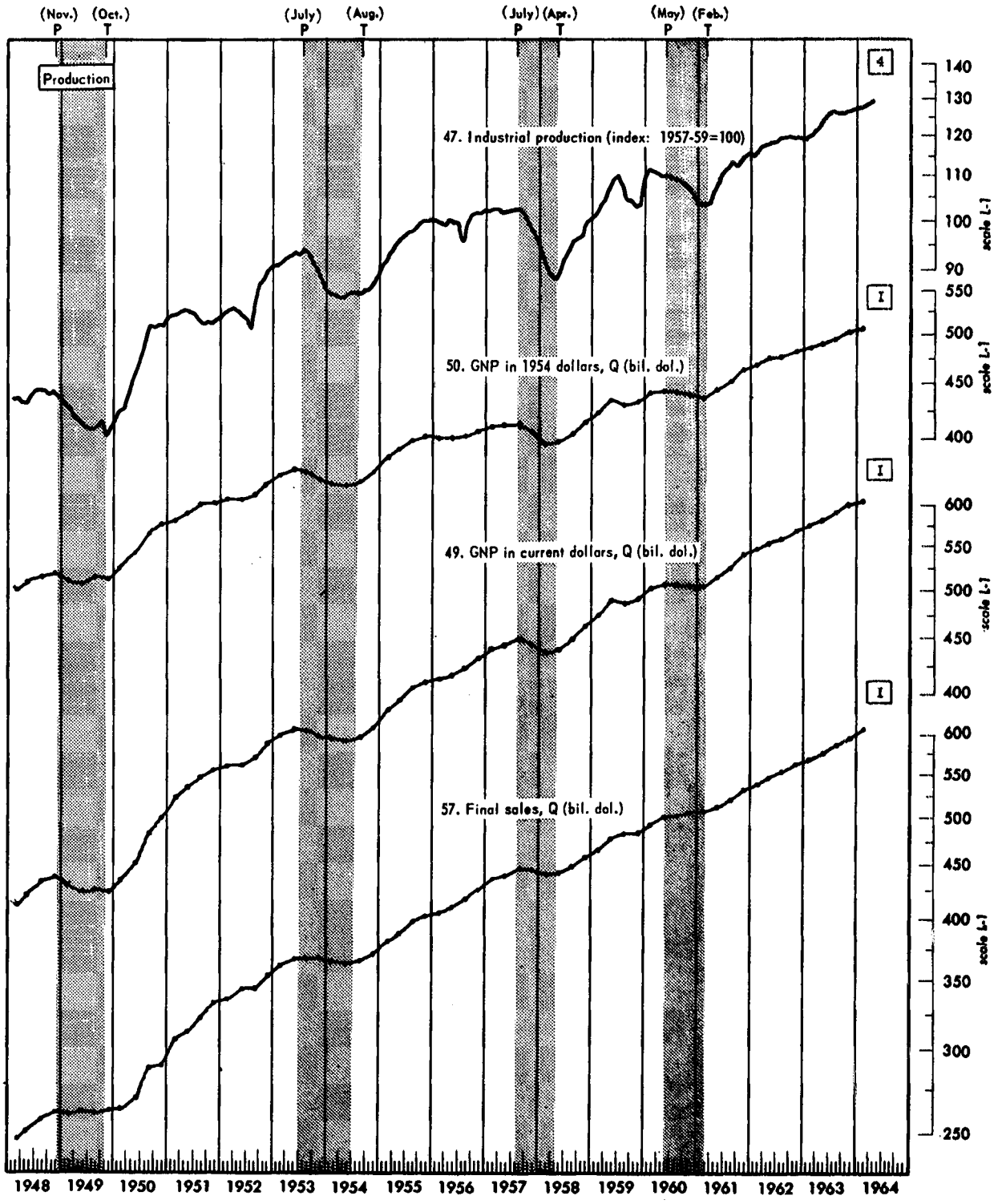
B NBER Roughly Coincident Indicators



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

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

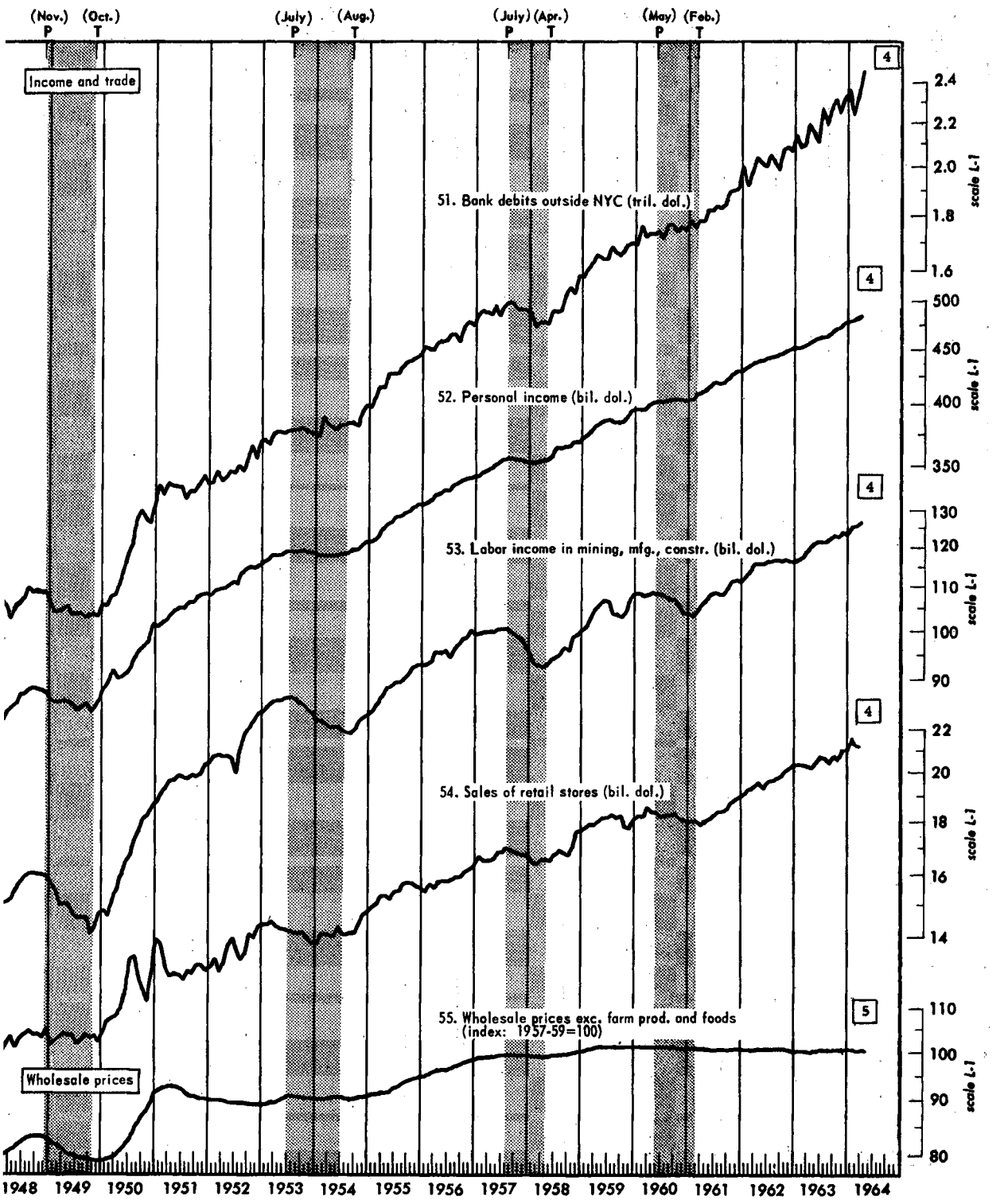
B NBER Roughly Coincident Indicators—Con.



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

CHART 1 **BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.**

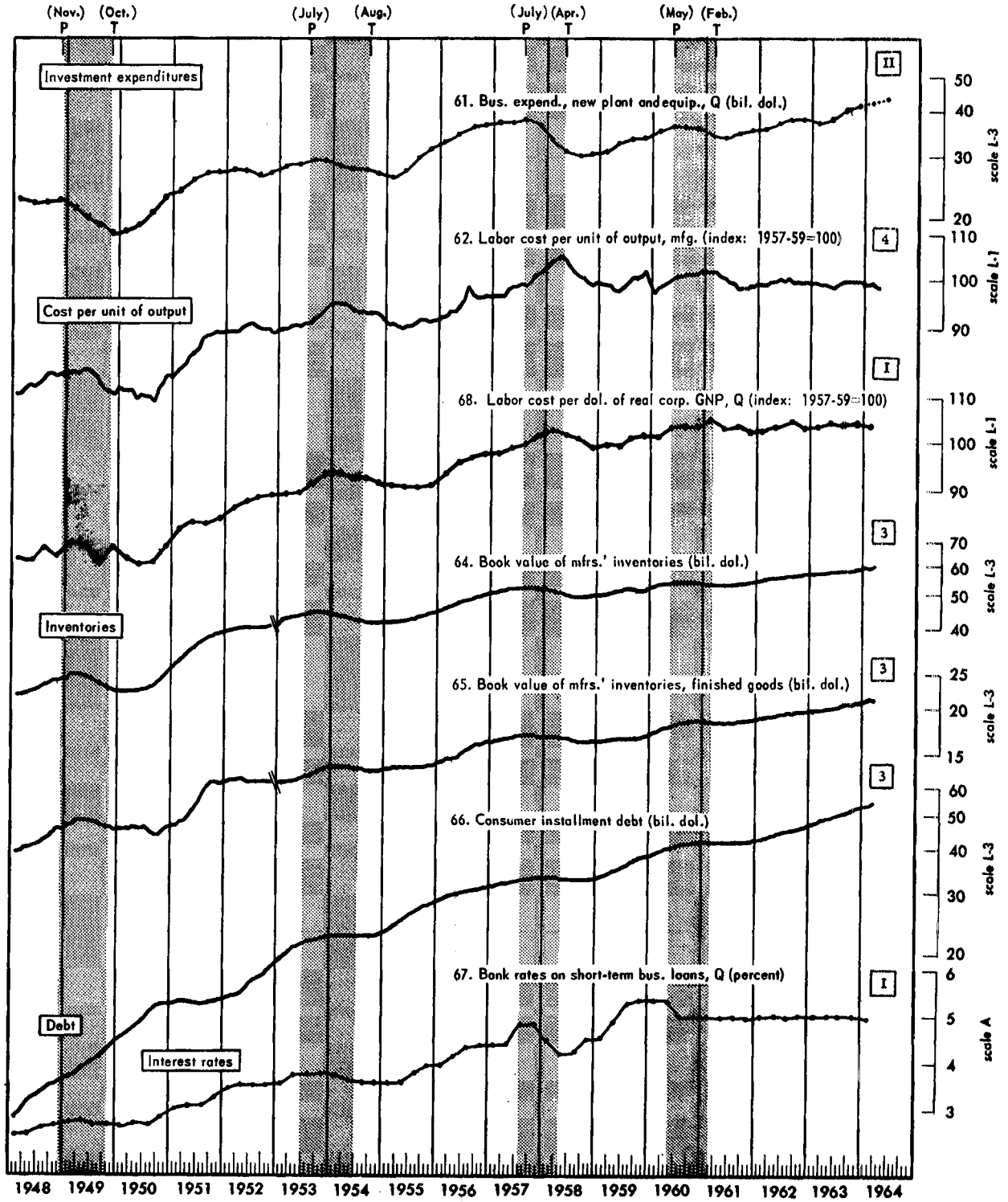
B **NBER Roughly Coincident Indicators--Con.**



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

CHART 1 C — BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

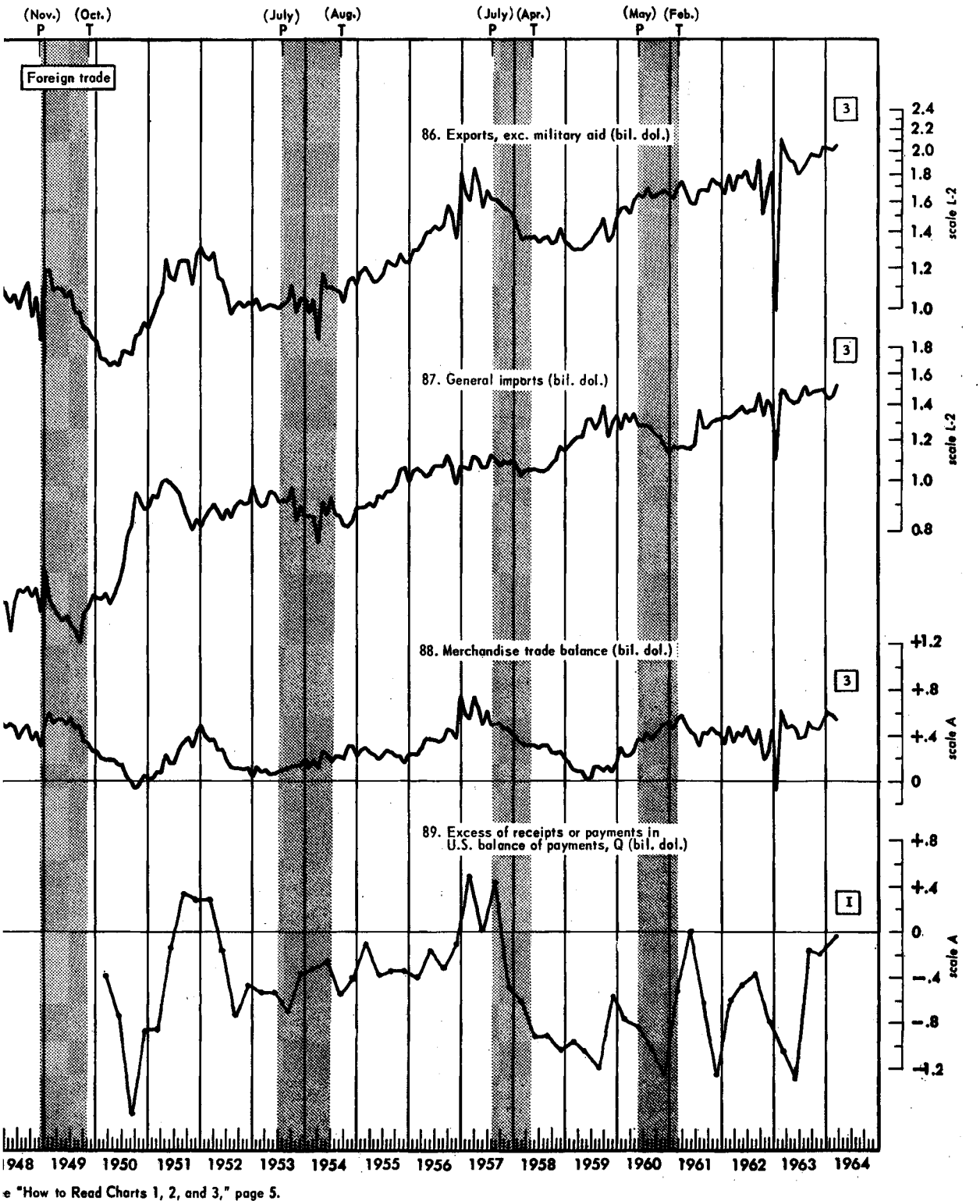
NBER Lagging Indicators



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

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

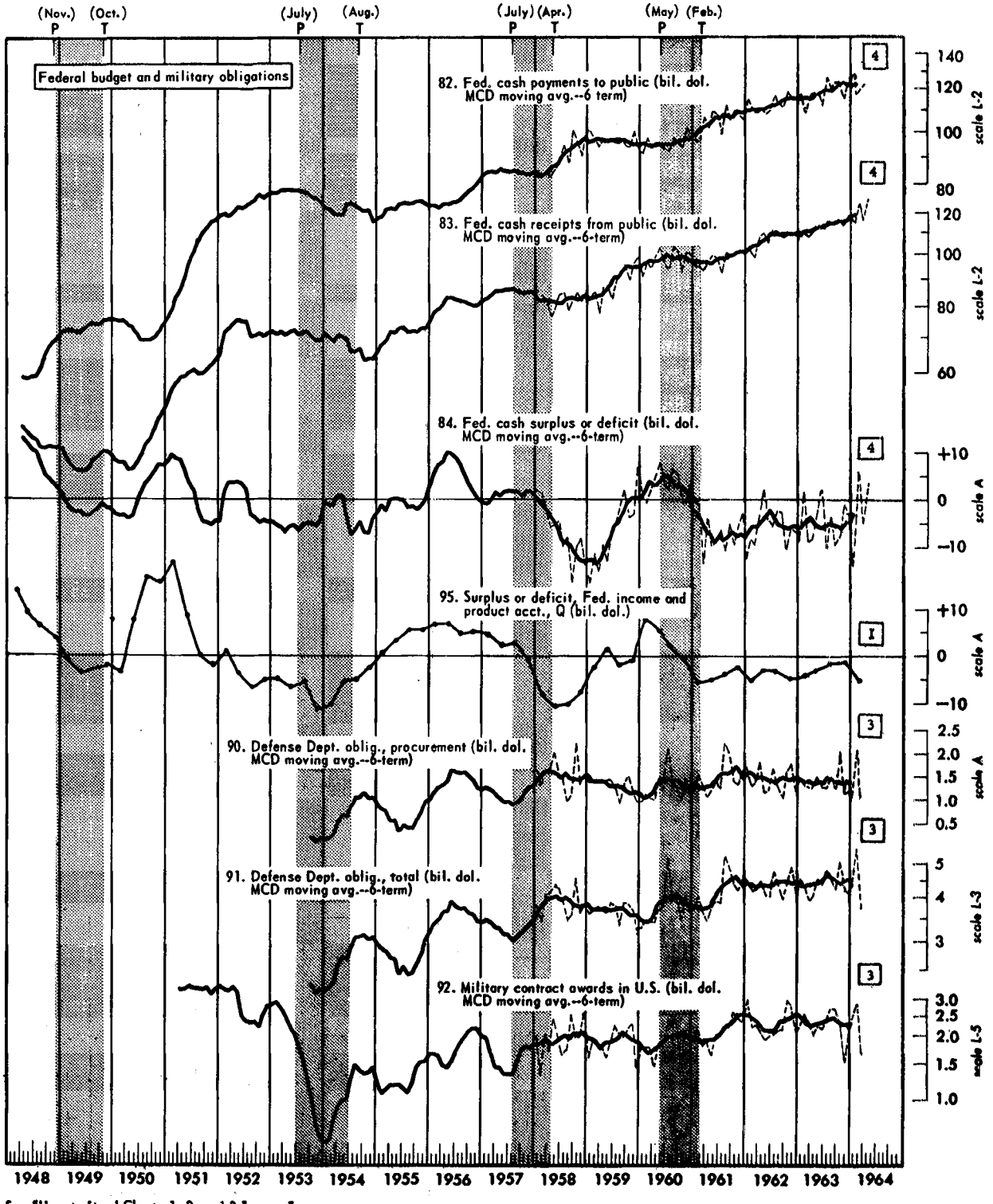
D Other U.S. Series with Business Cycle Significance



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

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

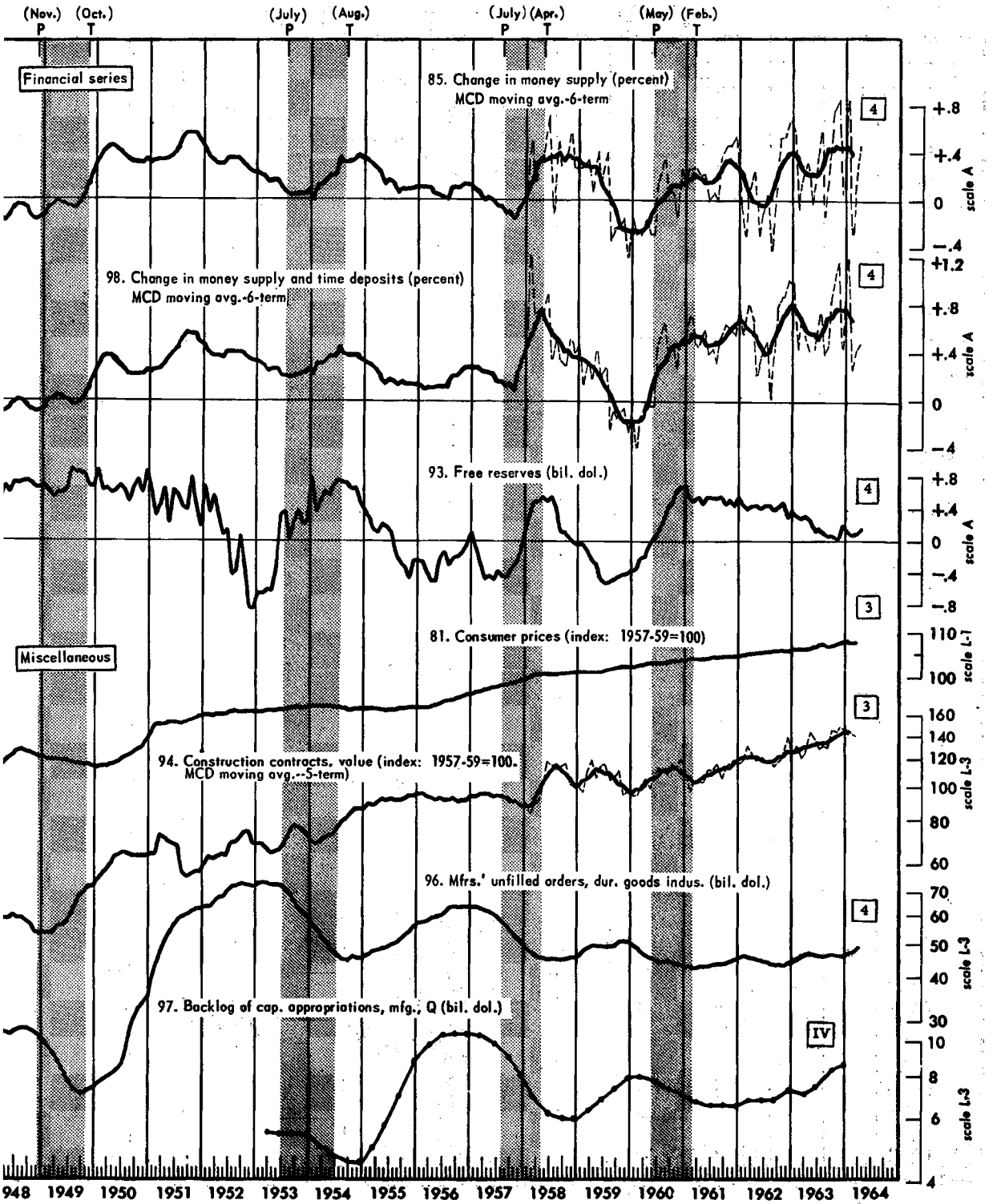
D Other U.S. Series with Business Cycle Significance--Con.



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

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

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



› "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

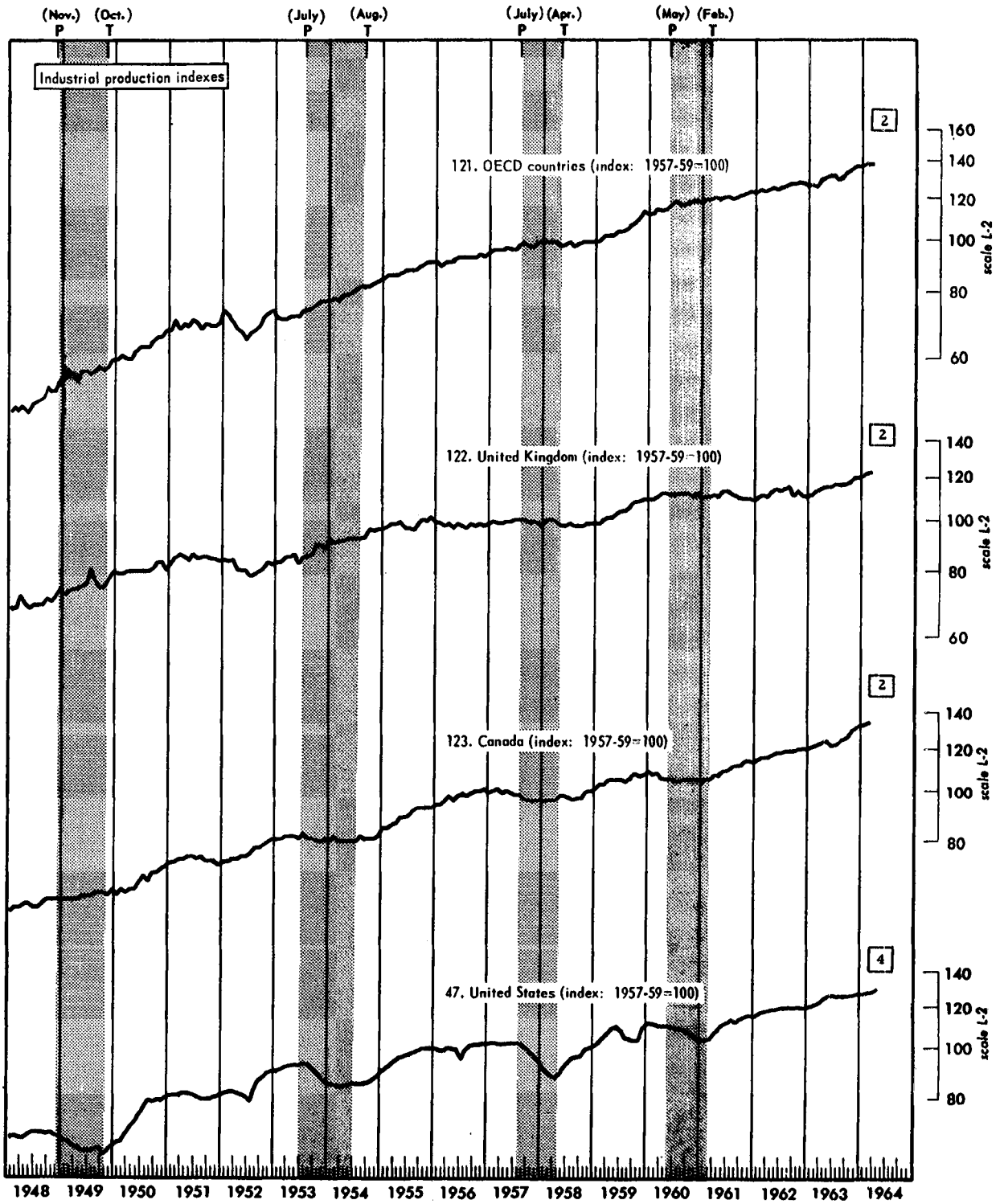


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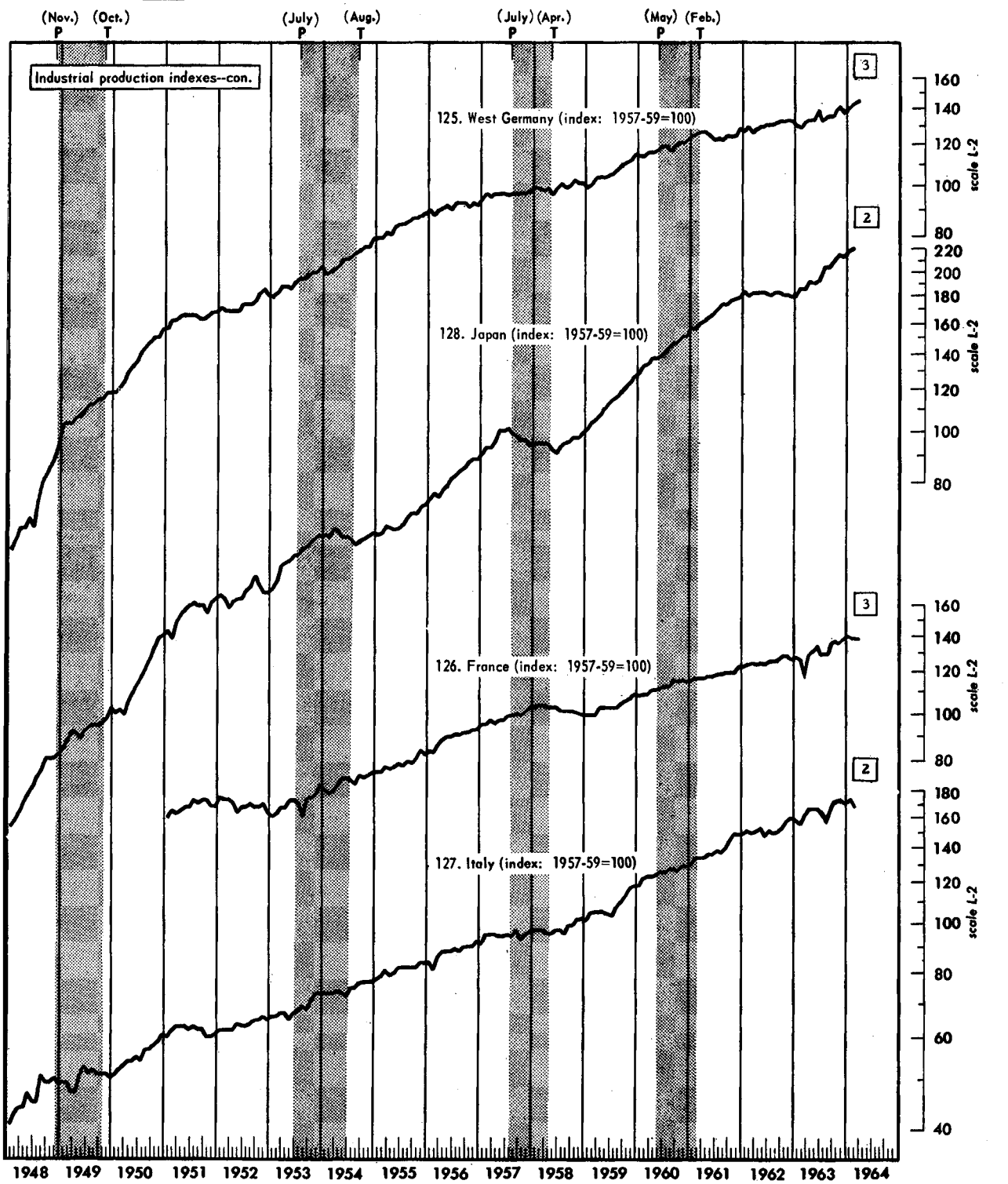
CHART 1 BUSINESS CYCLE SERIES: 1948 TO PRESENT—Con.

E International Comparisons of Industrial Production--Con.



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

Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JULY 1960 TO PRESENT

Series are seasonally adjusted except those that appear to contain no seasonal movement. Unadjusted series are indicated by an asterisk (*). Low values preceding current highs are indicated by (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. Average workweek of production workers, manufacturing	2. Accession rate, manufacturing	30. Nonagricultural placements, all industries	3. Layoff rate, manufacturing	4. Number of persons on temporary layoff, all industries[1]	5. Avg. weekly initial claims for unemployment insurance, State programs[2]	6. Value of mfrs.' new orders, durable goods industries	24. Value of mfrs.' new orders, machinery and equipment industries
	(Hours per prod. wkr.)	(Per 100 employees)	(Thous.)	(Per 100 employees)	(Thous.)	(Thous.)	(Bil. dol.)	(Bil. dol.)
1960								
July	39.8	3.6	475	2.4	177	335	15.25	2.78
August	39.6	3.8	472	2.6	154	363	15.65	2.78
September	39.5	3.9	476	2.5	153	351	15.69	2.75
October	39.6	(L)3.5	471	2.4	166	373	14.50	2.69
November	39.3	3.6	453	2.6	128	385	14.62	(L)2.60
December	(L)38.4	3.6	459	2.8	183	381	14.86	2.86
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	3.05
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	[H]3.62
February	40.6	r4.0	535	1.7	123	264	r19.54	r3.45
March	[H]40.7	p3.8	520	[H]p1.7	91	273	r19.32	r3.45
April	p40.6	(NA)	522	(NA)	122	[H]260	[H]p20.64	p3.55
May						[3]268		
June								

[1]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.

[2]Data exclude Puerto Rico which is included in figures published by source agency.

[3]Week ended May 9.

Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JULY 1960 TO PRESENT..Continued

Series are seasonally adjusted except those that appear to contain no seasonal movement. Unadjusted series are indicated by an asterisk (*). Low values preceding current highs are indicated by (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						
	9. Construction contracts awarded for commercial and industrial buildings	10. Contracts and orders for plant and equipment	11. Newly approved capital appropriations, 602 manufacturing corporations	7. New private nonfarm dwelling units started	29. Index of new private housing units authorized by local building permits	12. Net change in business population, operating businesses	13. Number of new business incorporations
	(Mil. sq. ft. floor space)	(Bil. dol.)	(Bil. dol.)	(Ann. rate, thous.)	(1957-59=100)	(Thous.)	(Number)
1960							
July	38.87	3.41	...	1,184	91.5	...	15,828
August	39.38	3.41	(L)1.78	1,285	87.8	+14	15,114
September	38.96	3.44	...	1,113	88.4	...	15,112
October	39.44	3.34	...	1,210	89.9	...	15,035
November	39.44	3.20	2.10	1,192	90.8	+10	14,264
December	38.15	3.49	...	(L)1,041	(L)87.0	...	14,097
1961							
January	36.21	3.51	...	1,216	89.5	...	(L)13,607
February	36.49	3.39	1.84	1,199	88.2	(L)+6	14,570
March	37.49	(L)3.20	...	1,305	91.3	...	14,658
April	35.62	3.28	...	1,133	91.4	...	15,327
May	(L)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	+10	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	+10	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	+12	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	[H] 3.21	1,434	111.7	+12	16,093
September	43.88	4.08	...	1,697	121.4	...	15,689
October	50.81	4.17	...	[H]1,807	124.9	...	[H]16,275
November	43.14	4.32	2.78	1,533	121.1	+12	15,759
December	44.15	[H] 4.68	...	1,518	[H]126.2	...	15,867
1964							
January	51.64	4.37	...	1,688	116.3	...	16,193
February	[H]52.47	r4.16	(NA)	r1,613	124.3	[H]+16	16,086
March	48.17	p4.09		r1,640	r122.5		16.023
April	(NA)	(NA)		p1,526	p110.5		(NA)
May							
June							

Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JULY 1960 TO PRESENT..Continued

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Year and month	NBER Leading Indicators--Continued							
	14. Current liabilities of business failures[1]	15. Business failures with liabilities of $100,000 and over	16. Corporate profits after taxes	17. Price per unit of labor cost index, manufacturing	18. Profits (before taxes) per dol. sales, all mfg. corporations	22. Ratio, profits to income originating, corporate, all industries	19. Index of stock prices, 500 common stocks*	21. Change in bus. inventories, farm and nonfarm, after valuation adjustment
	(Mil. dol.)	(Number per week)	(Ann. rate, bil. dol.)	(1957-59=100)	(Cents)	(Percent)	(1941-43=10)	(Ann. rate, bil. dol.)
1960								
July	71.04	38	...	100.4	...	...	55.84	...
August	94.66	36	20.9	99.9	7.8	8.4	56.51	+2.7
September	86.02	43	...	99.9	...	...	54.81	...
October	85.98	(L)43	...	100.0	...	...	(L)53.73	...
November	80.44	37	20.4	99.9	7.2	8.4	55.47	-2.3
December	82.78	41	...	98.9	...	...	56.80	...
1961								
January	77.79	38	...	99.2	...	...	59.72	...
February	83.73	41	(L)19.2	(L)98.9	(L)6.6	(L)7.7	62.17	(L)-4.3
March	116.17	39	...	99.0	...	...	64.12	...
April	76.88	39	...	100.0	...	...	65.83	...
May	82.96	42	21.6	100.2	7.6	8.5	66.50	+1.1
June	86.69	40	...	100.9	...	...	65.62	...
July	80.15	43	...	101.2	...	...	65.44	...
August	94.47	36	22.0	102.6	7.9	8.5	67.79	+3.5
September	126.12	39	...	102.2	...	...	67.26	...
October	72.28	42	...	102.0	...	...	68.00	...
November	119.93	39	24.3	101.7	8.6	9.3	71.08	+7.2
December	71.81	38	...	102.1	...	...	71.74	...
1962								
January	101.53	37	...	101.4	...	...	69.07	...
February	86.03	[H]32	24.2	101.5	8.2	9.1	70.22	[H]+8.1
March	77.40	36	...	101.7	...	...	70.29	...
April	107.15	38	...	101.0	...	...	68.05	...
May	89.80	38	24.6	101.0	8.1	9.1	62.99	+6.5
June	93.15	41	...	100.4	...	...	55.63	...
July	107.98	38	...	101.0	...	...	56.97	...
August	121.85	45	24.3	100.3	8.1	8.9	58.52	+3.6
September	106.02	40	...	102.1	...	...	58.00	...
October	129.87	46	...	101.0	...	...	56.17	...
November	96.62	42	25.5	101.2	8.3	9.1	60.04	+4.0
December	99.61	37	...	100.8	...	...	62.64	...
1963								
January	146.46	49	...	101.1	...	...	65.06	...
February	93.05	43	25.4	100.8	7.9	9.1	65.92	+5.1
March	94.12	42	...	101.2	...	...	65.67	...
April	88.15	40	...	101.2	...	...	68.76	...
May	115.05	51	26.8	101.9	8.5	9.5	70.14	+4.3
June	91.07	38	...	[H]102.6	...	...	70.11	...
July	144.50	39	...	101.8	...	...	69.07	...
August	[H]52.86	42	27.5	101.2	8.5	9.5	70.98	+4.2
September	94.52	43	...	101.3	...	...	72.85	...
October	99.92	42	...	101.1	...	...	73.03	...
November	255.72	38	28.6	101.1	[H]8.8	9.8	72.62	+5.4
December	87.17	39	...	100.9	...	...	74.17	...
1964								
January	87.70	41	...	r102.0	...	...	76.45	...
February	121.87	42	[H]31.1	r101.9	(NA)	[H]p10.6	77.39	r+2.1
March	107.25	37		r101.3			78.80	
April	98.50	46		p102.5			[H]79.94	
May							[2]80.86	
June								

[1] (L) = June 1960.
[2] Average for May 14, 15, and 18.

Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JULY 1960 TO PRESENT..Continued

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Year and month	NBER Leading Indicators--Continued						
	31. Change in book value of manufacturing and trade inventories, total	20. Change in book value of mfrs.' inventories, materials, and supplies	37. Purchased materials, percent reporting higher inventories	26. Buying policy, production matls., percent reporting commitments 60 days or longer*	32. Vendor performance, percent reporting slower deliveries*[1]	25. Change in manufacturers' unfilled orders, durable goods industries[2]	23. Index of industrial materials prices*
	(Ann. rate, bil. dol.) Revised[3]	(Ann. rate, bil. dol.)	(Percent reporting)	(Percent reporting)	(Percent reporting)	(Bil. dol.)	(1957-59=100)
1960							
July	+3.5	+0.3	42	54	36	-0.56	101.6
August	-3.2	-0.4	37	50	40	+0.33	102.1
September	+2.9	-2.6	41	49	41	+0.13	101.2
October	-1.8	-0.6	38	50	39	-0.75	99.7
November	+1.6	-1.9	41	50	38	-0.30	98.5
December	(L)-11.2	(L)-3.5	39	(L)48	38	-0.19	(L)96.8
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	+0.9	46	50	50	+0.96	95.5
February	+1.9	-0.1	48	55	52	+0.68	95.1
March	+2.3	-0.1	47	54	54	+0.94	94.4
April	+4.0	+0.7	50	53	60	+0.85	94.5
May	+2.1	-0.6	55	52	58	+0.33	95.2
June	+4.4	+0.5	57	57	54	-0.58	93.9
July	+5.3	+1.0	56	54	42	-0.54	94.2
August	+0.9	+1.8	50	55	48	-0.05	94.2
September	+4.0	-1.2	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	r-0.5	50	54	54	r+0.57	98.5
March	p+1.3	p-0.2	54	56	60	r+0.16	98.9
April	(NA)	(NA)	55	59	[H]60	[H]p+1.21	102.4
May							[4]100.4
June							

[1] (L) = March 1960.
[2] (L) = January 1960.
[3] See "New Features and Changes for This Issue," page ii.
[4] Average for May 14, 15, and 18.

Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JULY 1960 TO PRESENT--Continued

Series are seasonally adjusted except those that appear to contain no seasonal movement. Unadjusted series are indicated by an asterisk (*). Low values preceding current highs are indicated by (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", estimates; "a", anticipated; and "NA", not available.

Year and month	NBER Roughly Coincident Indicators							
	41. Number of employees in nonagricultural establishments	42. Total nonagricultural employment, labor force survey[1]	43. Unemployment rate, total[1]	40. Unemployment rate, married males[1]	45. Avg. weekly insured unemployment rate, State programs[2]	46. Index of help-wanted advertising in newspapers	47. Index of industrial production	50. Gross national product in 1954 dollars
	(Thous.)	(Thous.)	(Percent)	(Percent)	(Percent)	(1957-59=100)	(1957-59=100)	(Ann. rate, bil. dol.)
1960								
July	54,395	61,038	5.5	3.8	4.7	101	109.1	...
August	54,352	61,018	5.7	3.9	5.1	101	108.7	440.2
September	54,248	61,074	5.6	3.8	5.4	95	107.8	...
October	54,160	60,809	6.1	4.4	5.7	94	107.0	...
November	54,015	61,213	6.2	4.4	6.3	93	105.4	437.1
December	53,752	(L)60,740	6.6	4.8	6.3	90	103.6	...
1961								
January	53,725	61,034	6.7	4.7	6.2	88	(L)103.3	...
February	(L)53,541	60,897	6.9	4.8	6.3	(L)88	103.4	(L)434.0
March	53,615	61,229	6.9	4.7	(L)6.3	89	103.8	...
April	53,713	61,154	7.0	4.9	5.9	89	106.6	...
May	53,911	61,134	(L)7.1	(L)5.0	5.6	91	108.8	443.4
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	450.4
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	463.1
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	467.8
March	55,368	62,253	5.5	3.6	4.4	114	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	474.0
June	55,908	62,752	5.5	3.7	4.0	110	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	475.6
September	56,125	63,039	5.6	3.5	4.4	106	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	481.4
December	56,211	63,240	5.5	3.5	r4.7	e107	119.1	...
1963								
January	56,333	63,090	5.7	3.7	4.8	e107	119.2	...
February	56,458	63,227	5.9	3.7	4.6	e109	120.2	485.3
March	56,706	63,478	5.7	3.5	4.4	e108	121.3	...
April	56,873	63,770	5.7	3.3	4.2	109	122.5	...
May	57,060	63,690	5.9	3.3	4.2	105	124.5	489.4
June	57,194	63,843	5.7	3.2	4.1	104	125.8	...
July	57,340	64,092	5.6	3.2	4.1	109	126.5	...
August	57,344	64,069	5.5	3.1	4.1	105	125.7	495.1
September	57,453	64,167	5.5	3.0	4.0	107	125.7	...
October	57,646	64,128	5.6	2.9	4.0	111	126.5	...
November	57,580	64,319	5.9	3.4	4.2	112	126.7	501.7
December	57,748	64,315	5.5	3.3	4.3	118	r126.9	...
1964								
January	57,850	64,631	5.6	3.2	4.3	116	r127.4	...
February	r58,183	65,035	5.4	3.0	4.0	117	r127.8	[H]506.4
March	r58,268	65,207	5.4	2.9	3.8	r118	128.2	
April	[H]p58,471	[H]65,811	[H]5.4	[H]2.9	[H]3.8	[H]p120	[H]p129.2	
May					[3]3.7			
June								

[1]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.

[2]Data exclude Puerto Rico which is included in figures published by source agency.

[3]Week ended May 2.

Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JULY 1960 TO PRESENT--Continued

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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	52. Personal income	53. Labor income in mining, manufacturing, and construction	54. Sales of retail stores	55. Index of wholesale prices except farm products and foods
	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)	(Mil. dol.)	(1957-59=100)
1960							
July	...	...	1,714.0	402.7	108.3	18,113	101.3
August	503.5	500.7	1,771.8	403.5	107.6	18,195	101.3
September	...	...	1,766.5	404.4	107.0	18,207	101.1
October	...	...	1,738.0	405.2	106.9	18,298	101.2
November	502.1	504.4	1,758.9	404.5	105.5	18,080	101.1
December	...	...	Ⓛ1,742.3	Ⓛ403.2	103.7	18,008	101.0
1961							
January	...	...	1,786.2	404.4	104.0	17,942	101.0
February	Ⓛ500.4	504.7	1,755.0	405.3	Ⓛ103.3	17,965	101.1
March	...	...	1,785.1	410.1	104.2	17,971	101.1
April	...	...	1,781.8	411.7	106.0	Ⓛ17,811	100.9
May	512.5	511.4	1,829.3	414.5	107.1	18,003	100.9
June	...	...	1,824.0	417.3	108.5	18,098	100.7
July	...	...	1,839.9	420.8	108.9	18,234	100.7
August	521.9	518.3	1,832.7	419.1	108.5	18,373	100.8
September	...	...	1,848.2	420.5	108.3	18,371	100.8
October	...	...	1,904.6	424.3	110.1	18,494	100.7
November	537.8	530.5	1,903.8	428.4	111.7	18,775	100.8
December	...	...	1,916.9	431.3	111.8	18,879	100.9
1962							
January	...	...	2,009.7	430.1	111.3	18,990	100.8
February	544.5	536.3	1,916.6	434.0	112.8	19,139	100.7
March	...	...	1,985.3	436.4	114.0	19,320	100.7
April	...	...	2,044.4	439.5	116.1	19,389	100.7
May	552.4	546.0	2,015.0	440.8	116.0	19,585	100.9
June	...	...	2,000.2	441.7	115.9	19,311	100.8
July	...	...	2,054.8	443.5	116.6	19,658	100.9
August	556.8	553.1	2,017.0	444.6	116.8	19,671	100.8
September	...	...	1,988.5	445.5	116.7	19,844	100.9
October	...	...	2,080.9	447.7	116.5	19,837	100.9
November	565.2	561.2	2,090.5	449.9	116.9	20,112	100.8
December	...	...	2,066.9	452.1	116.5	20,253	100.7
1963							
January	...	...	2,148.0	454.0	116.4	20,387	100.5
February	571.8	566.6	2,085.5	452.9	117.1	20,374	100.5
March	...	...	2,095.6	454.8	117.8	20,350	100.5
April	...	...	2,198.1	457.4	119.4	20,276	Ⓛ100.4
May	579.6	575.4	2,150.7	460.1	120.8	20,200	100.5
June	...	...	2,105.4	462.6	121.6	20,486	100.8
July	...	...	2,276.8	464.2	122.1	20,719	100.9
August	588.7	584.5	2,189.7	465.1	121.8	20,666	100.9
September	...	...	2,275.0	467.3	122.6	20,426	100.8
October	...	...	2,316.3	471.2	123.4	20,716	100.9
November	600.1	594.8	2,246.9	472.6	123.3	20,558	100.9
December	...	...	2,320.5	476.0	124.4	21,019	101.0
1964							
January	...	...	2,355.1	478.1	124.0	21,000	101.1
February	Ⓗr608.0	Ⓗr605.9	2,239.9	478.8	125.6	Ⓗr21,533	101.1
March			2,322.5	r480.9	r125.9	r21,305	101.0
April			Ⓗp2,452.1	Ⓗp483.1	Ⓗp126.8	p21,244	Ⓗ101.1
May							[1]101.0
June							

[1]Week ended May 12.

Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JULY 1960 TO PRESENT--Continued

Series are seasonally adjusted except those that appear to contain no seasonal movement. Unadjusted series are indicated by an asterisk (*). Low values preceding current highs are indicated by (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 Lagging Indicators						
	61. Business expenditures on new plant and equipment, total	62. Index of labor cost per unit of output, total manufacturing	68. Index of labor cost per dollar of real corporate GNP	64. Book value of manufacturers' inventories, all manufacturing industries	65. Book value of mfrs.' inventories of finished goods, all manufacturing indus.	66. Consumer installment debt	67. Bank rates on short-term business loans, 19 cities*
	(Ann. rate, bil. dol.)	(1957-59=100)	(1957-59=100)	(Bil. dol.)	(Bil. dol.)	(Mil. dol.)	(Percent)
1960							
July	...	100.9	...	54.4	18.4	41,267	...
August	35.90	101.4	103.5	54.4	18.4	41,503	4.97
September	...	101.2	...	54.6	18.5	41,788	...
October	...	101.2	...	54.4	18.5	41,888	...
November	35.50	101.7	103.9	54.3	18.6	42,036	4.99
December	...	102.2	...	53.8	18.5	42,139	...
1961							
January	...	101.9	...	53.7	18.4	42,109	...
February	33.85	102.1	105.0	53.7	18.4	42,035	4.97
March	...	102.0	...	53.5	18.3	42,041	...
April	...	100.8	...	53.4	18.4	(L)41,867	...
May	(L)33.50	100.4	103.7	53.4	18.3	41,870	4.97
June	...	99.6	...	(L)53.4	18.4	41,895	...
July	...	99.3	...	53.6	(L)18.3	41,903	...
August	34.70	(L)98.1	103.8	53.9	18.5	41,987	4.99
September	...	98.4	...	53.9	18.5	42,052	...
October	...	98.5	...	54.3	18.6	42,221	...
November	35.40	99.1	(L) 102.4	54.7	18.7	42,442	(L)4.96
December	...	98.7	...	55.1	18.8	42,774	...
1962							
January	...	99.4	...	55.4	19.0	42,960	...
February	35.70	99.1	103.0	55.7	19.1	43,220	4.98
March	...	99.0	...	56.0	19.1	43,532	...
April	...	99.8	...	56.1	19.2	44,017	...
May	36.95	99.9	103.6	56.4	19.3	44,437	5.01
June	...	100.4	...	56.3	19.4	44,826	...
July	...	99.8	...	56.9	19.5	45,200	...
August	38.35	[H]100.6	104.2	57.0	19.5	45,588	4.99
September	...	99.5	...	57.3	19.7	45,838	...
October	...	99.8	...	57.4	19.7	46,206	...
November	37.95	99.5	103.3	57.6	19.8	46,689	[H]5.02
December	...	99.7	...	57.8	19.8	47,174	...
1963							
January	...	99.3	...	57.9	19.9	47,659	...
February	36.95	99.5	103.9	58.0	19.9	48,154	5.00
March	...	99.0	...	58.1	20.0	48,631	...
April	...	99.0	...	58.3	20.1	49,152	...
May	38.05	98.7	104.4	58.5	20.1	49,593	5.01
June	...	98.5	...	58.7	20.3	50,079	...
July	...	99.2	...	58.9	20.4	50,588	...
August	40.00	99.8	104.1	58.9	20.6	51,069	5.01
September	...	100.0	...	59.1	20.6	51,410	...
October	...	99.9	...	59.3	20.6	51,941	...
November	[H]41.20	99.8	[H] 104.4	59.8	21.0	52,324	5.00
December	...	99.9	...	60.1	21.2	52,784	
1964							
January	...	r99.1	...	60.0	21.2	53,212	...
February	a41.25	r99.1	p104.0	60.1	[H]21.4	53,791	4.99
March	...	r99.6		[H] p60.2	p21.3	[H] 54,315	
April	...	p98.6		(NA)	(NA)	(NA)	
May	a42.70						
June							

Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JULY 1960 TO PRESENT..Continued

Series are seasonally adjusted except those that appear to contain no seasonal movement. Unadjusted series are indicated by an asterisk (*). Low values preceding current highs are indicated by (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								
	86. Exports, excluding military aid shipments, total	87. General imports, total	88. Merchandise trade balance (series 86 minus 87)	89. Excess, receipts(+) or payments (-) in U.S. balance of payments	82. Federal cash payments to the public	83. Federal cash receipts from the public	84. Federal cash surplus(+) or deficit (-)	95. Surplus (+) or deficit (-), Federal income and product acct.	90. Defense Department obligations, procurement
	(Mil. dol.)	(Mil.dol.)	(Mil. dol.)	(Mil. dol.)	(Ann.rate, bil.dol.)	(Ann.rate, bil.dol.)	(Ann.rate, bil.dol.)	(Ann. rate, bil. dol.)	(Mil. dol.)
1960									
July	1,706.5	1,270.7	+435.8	...	91.5	93.6	+2.1	...	2,204
August	1,624.8	1,255.8	+369.0	-1,018	97.4	104.0	+6.6	+1.4	1,256
September	1,647.2	1,220.6	+426.6	...	95.0	100.5	+5.5	...	1,256
October	1,667.6	1,206.0	+461.6	...	92.7	91.7	-1.0	...	945
November	1,680.6	1,161.7	+518.9	[1]-1,257	102.0	101.4	-0.6	-1.2	1,468
December	1,645.3	1,124.8	+520.5	...	96.3	99.5	+3.2	...	1,096
1961									
January	1,622.7	1,161.4	+461.3	...	95.5	94.2	-1.3	...	1,277
February	1,711.6	1,149.8	+561.8	-472	95.4	94.1	-1.3	-6.0	1,555
March	1,750.7	1,162.9	+587.8	...	107.4	92.6	-14.8	...	1,230
April	1,661.5	1,152.0	+509.5	...	100.6	97.0	-3.6	...	1,047
May	1,585.1	1,152.9	+432.2	[2]+31	110.9	99.8	-11.1	-5.4	1,220
June	1,581.9	1,173.8	+408.1	...	106.5	97.7	-8.8	...	1,390
July	1,688.5	1,379.3	+309.2	...	97.7	91.2	-6.5	...	1,181
August	1,688.9	1,253.6	+435.3	-655	112.7	101.0	-11.7	-4.0	2,278
September	1,678.4	1,262.0	+416.4	...	104.1	99.2	-4.9	...	1,933
October	1,779.8	1,300.1	+479.7	...	109.8	99.5	-10.3	...	1,354
November	1,733.1	1,308.5	+424.6	-1,274	106.5	101.3	-5.2	-2.5	1,286
December	1,724.8	1,314.5	+410.3	...	104.3	101.7	-2.6	...	1,773
1962									
January	1,668.3	1,326.5	+341.8	...	115.1	101.7	-13.4	...	1,718
February	1,809.3	1,319.8	+489.5	-585	108.8	101.3	-7.5	-5.6	1,319
March	1,672.0	1,341.7	+330.3	...	107.4	98.1	-9.3	...	1,435
April	1,795.4	1,365.0	+430.4	...	110.1	107.8	-2.3	...	1,885
May	1,761.7	1,404.1	+357.6	-452	106.8	109.9	+3.1	-3.0	1,142
June	1,835.6	1,350.7	+484.9	...	108.9	104.4	-4.5	...	1,246
July	1,748.3	1,346.6	+401.7	...	116.3	111.2	-5.1	...	1,731
August	1,702.5	1,345.9	+356.6	-356	111.6	110.1	-1.5	-3.6	1,240
September	1,907.9	1,471.4	+436.5	...	109.9	107.6	-2.3	...	1,044
October	1,542.8	1,312.1	+230.7	...	118.6	107.8	-10.8	...	1,684
November	1,724.6	1,424.9	+299.7	-793	114.7	109.0	-5.7	-5.3	1,818
December	1,838.7	1,376.5	+462.2	...	115.2	109.0	-6.2	...	1,158
1963									
January	984.8	1,091.6	-106.8	...	115.3	108.6	-6.7	...	1,565
February	2,117.5	1,497.4	+620.1	r-1,041	109.2	110.6	+1.4	-4.6	1,325
March	1,960.4	1,486.7	+473.7	...	114.5	108.9	-5.6	...	1,258
April	1,912.7	1,417.2	+495.5	...	117.2	110.2	-7.0	...	1,304
May	1,892.6	1,420.2	+472.4	r-1,283	115.8	112.2	-3.6	-3.0	1,530
June	1,784.7	1,420.5	+364.2	...	110.2	111.9	+1.7	...	1,298
July	1,823.0	1,457.5	+365.5	...	124.7	114.9	-9.8	...	1,255
August	1,894.6	1,508.3	+386.3	r-144	118.1	114.7	-3.4	-1.8	1,512
September	1,979.6	1,450.4	+529.2	...	121.9	113.1	-8.8	...	1,221
October	1,946.4	1,458.8	+487.6	...	122.3	115.1	-7.2	...	2,038
November	1,944.6	1,471.9	+472.7	r-192	114.2	113.3	-0.9	-1.5	1,125
December	2,049.4	1,480.0	+569.4	...	122.7	118.5	-4.2	...	1,182
1964									
January	2,037.3	r1,421.8	r+615.5	...	128.6	114.8	-13.8	...	1,071
February	2,028.7	1,445.3	+583.4	-41	117.2	123.4	+6.2	-5.4	2,067
March	2,077.5	1,522.9	+554.6		120.3	115.3	-5.0		1,030
April	(NA)	(NA)	(NA)		123.2	126.6	+3.4		(NA)
May									
June									

[1]Includes single direct investment transactions of $370 million.
[2]Includes $650 million in special debt payments to the United States.

Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JULY 1960 TO PRESENT..Continued

Series are seasonally adjusted except those that appear to contain no seasonal movement. Unadjusted series are indicated by an asterisk (*). Low values preceding current highs are indicated by (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--Continued								
	91. Defense Department obligations, total	92. Military prime contract awards to U.S. business firms	85. Percent change in total U.S. money supply	98. Percent change in money supply and time deposits	93. Free reserves*	81. Index of consumer prices	94. Index of construction contracts, total value	96. Mfrs.' unfilled orders, durable goods industries	97. Backlog of capital appropriations, manufacturing
	(Mil. dol.)	(Mil.dol.)	(Percent)	(Percent)	(Mil.dol.)	(1957-59= 100)	(1957-59= 100)	(Bil.dol.)	(Bil. dol.)
1960									
July	5,305	2,231	+0.21	+0.53	+120	103.1	113	44.18	...
August	3,824	2,302	+0.36	+0.67	+247	103.3	109	44.51	...
September	3,999	2,361	+0.07	+0.38	+414	103.2	107	44.64	7.27
October	3,357	1,477	+0.07	+0.47	+480	103.5	117	43.89	...
November	4,109	2,127	-0.14	+0.28	+614	103.6	111	43.59	...
December	3,583	1,797	+0.28	+0.52	+669	103.8	120	43.40	7.02
1961									
January	3,641	1,944	+0.14	+0.56	+696	103.9	108	43.01	...
February	4,065	2,153	+0.28	+0.74	+517	104.0	95	42.94	...
March	3,537	1,757	+0.28	+0.51	+486	104.0	104	42.52	6.68
April	3,381	1,910	+0.21	+0.46	+551	103.9	103	42.88	...
May	3,727	1,530	+0.21	+0.64	+453	103.9	102	42.95	...
June	3,893	1,993	0.00	+0.36	+549	104.1	111	43.06	6.55
July	3,784	2,087	+0.07	+0.45	+530	104.4	110	43.43	...
August	5,344	2,232	0.00	+0.32	+537	104.4	116	43.85	...
September	4,874	2,158	+0.42	+0.58	547	104.5	103	43.86	6.58
October	4,296	2,651	+0.49	+0.67	+442	104.5	114	44.11	...
November	4,121	2,379	+0.49	+0.62	+517	104.5	116	44.52	...
December	4,653	2,281	+0.55	+0.57	+419	104.5	119	45.17	6.53
1962									
January	4,434	3,073	+0.14	+0.79	+555	104.7	115	45.80	...
February	4,181	2,135	-0.27	+0.57	+434	104.9	119	46.42	...
March	4,230	2,225	+0.14	+0.82	+382	105.1	131	45.75	6.82
April	4,486	2,062	+0.27	+0.69	+441	105.3	121	45.41	...
May	4,059	1,887	-0.27	+0.21	+440	105.4	117	44.95	...
June	4,024	1,930	-0.07	+0.42	+391	105.4	120	44.58	6.81
July	4,864	2,017	+0.07	+0.51	+440	105.3	117	44.33	...
August	4,300	2,149	-0.41	+0.04	+439	105.5	118	43.73	...
September	3,928	2,111	+0.14	+0.46	+375	105.9	113	43.37	6.87
October	4,553	2,983	+0.55	+0.84	+419	105.8	117	43.58	...
November	4,952	2,734	+0.55	+0.91	+473	105.8	123	43.18	...
December	3,974	1,984	+0.68	+1.03	+268	105.9	138	44.09	7.29
1963									
January	4,642	2,343	+0.54	+0.98	+375	106.1	121	45.06	...
February	4,253	2,571	-0.07	+0.44	+301	106.1	130	45.74	...
March	3,905	2,168	+0.20	+0.72	+269	106.2	118	46.68	7.06
April	4,108	1,973	+0.34	+0.52	+313	106.3	125	47.53	...
May	4,601	2,250	0.00	+0.44	+247	106.4	144	47.86	...
June	4,378	2,125	+0.27	+0.47	+138	106.7	135	47.28	7.53
July	4,834	2,506	+0.60	+0.75	+161	106.9	126	46.74	...
August	4,497	2,704	-0.13	+0.39	+133	107.1	132	46.70	...
September	4,215	2,688	+0.27	+0.51	+91	106.9	128	47.07	8.02
October	5,176	2,224	+0.80	+0.97	+94	107.0	146	47.17	...
November	4,138	1,566	+0.85	+1.19	+33	107.2	144	47.08	...
December	4,090	2,041	+0.07	+0.45	+209	107.7	148	46.68	8.48
1964									
January	4,370	2,337	+0.85	+1.21	+171	107.8	147	47.07	...
February	5,484	2,854	-0.26	+0.26	+91	107.6	143	r47.64	...
March	3,731	1,603	+0.26	+0.45	r+98	107.7	140	r47.80	(NA)
April	(NA)	(NA)	p+0.45	p+0.48	p+163	(NA)	(NA)	p49.01	
May									
June									

Table 2.--BASIC DATA FOR BUSINESS CYCLE SERIES: JULY 1960 TO PRESENT--Continued

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Year and month	International comparisons of industrial production							
	121. OECD,[1] European countries, index of industrial production	122. United Kingdom, index of industrial production	123. Canada, index of industrial production	47. United States, index of industrial production	125. West Germany, index of industrial production	126. France, index of industrial production	127. Italy, index of industrial production	128. Japan, index of industrial production
	(1957-59= 100)	(1957-59= 100)	(1957-59= 100)	(1957-59= 100)	(1957-59= 100)	(1957-59= 100)	(1957-59= 100)	(1957-59= 100)
1960								
July	118	111	104	109	118	112	125	140
August	116	112	104	109	115	112	127	142
September	116	112	105	108	118	115	127	145
October	117	112	105	107	120	114	126	146
November	118	110	105	105	120	115	129	150
December	118	112	105	104	122	114	129	150
1961								
January	117	109	104	103	124	115	130	155
February	119	110	105	103	125	116	134	154
March	119	110	105	104	126	116	134	158
April	120	111	107	107	126	116	134	159
May	119	110	107	109	124	117	136	162
June	120	113	109	111	121	117	136	165
July	120	113	109	112	122	118	138	169
August	119	111	111	113	121	118	137	172
September	120	110	112	112	124	119	140	172
October	121	109	112	114	123	119	145	175
November	122	109	114	115	124	119	149	176
December	123	109	114	116	128	122	148	177
1962								
January	122	108	113	115	126	122	149	182
February	124	110	115	116	129	123	151	178
March	123	111	116	117	125	124	149	181
April	124	110	116	118	128	123	151	181
May	125	113	117	118	129	124	153	182
June	124	114	118	118	130	123	147	180
July	125	113	118	119	130	125	151	179
August	126	114	119	119	131	125	149	180
September	127	115	119	120	132	126	150	181
October	127	110	119	119	132	128	153	179
November	128	113	120	120	133	128	158	179
December	127	110	120	119	132	126	160	178
1963								
January	127	110	120	119	129	127	158	179
February	126	111	121	120	128	125	156	r184
March	127	113	122	121	132	116	162	r184
April	130	114	123	122	133	129	166	r191
May	131	115	124	124	133	133	166	r189
June	132	115	124	126	139	134	166	191
July	132	116	122	126	133	129	164	r203
August	130	118	123	126	135	129	156	r203
September	133	117	125	126	135	136	171	r207
October	135	118	126	126	139	137	172	r210
November	136	121	129	127	141	136	172	r214
December	r136	121	131	127	137	138	171	r213
1964								
January	r138	122	132	127	r141	140	173	r218
February	p138	p123	p134	128	143	139	p168	p221
March	(NA)		(NA)	128	p145	p139	(NA)	(NA)
April				p129	(NA)	(NA)		
May								
June								

[1]Organization for Economic Cooperation and Development.

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	Jan. 1964	Feb. 1964	Mar. 1964	Apr. 1964
	NBER LEADING INDICATORS							
8 months or more	6	2	17	4	10	10	9	7
7 months	1	1	1	4	1	...	1	...
6 months	...	2	1	4	...	1	...	1
5 months	4	1	1	2	1	1	2	...
4 months	2	4	...	4	1	2	1	1
3 months	...	1	1	...	3	1	2	1
2 months	2	2	1	1	1	2	2	...
1 month	2	3	...	2	2	2	2	1
Benchmark month	1	3	1	2	4	4	4	5
Number of series used	[1]18	[2]19	23	23	23	23	23	16
Percent of series high on benchmark date	6	16	4	9	17	17	17	31
	NBER ROUGHLY COINCIDENT INDICATORS							
8 months or more	1	...	1	...	2	1	...	...
7 months	...	...	...	...	...	...	...	...
6 months	...	...	...	...	...	...	...	...
5 months	...	...	...	4	...	...	...	...
4 months	4	...	...	2	...	...	...	...
3 months	...	...	2	...	...	...	...	...
2 months	...	2	...	...	...	1	1	1
1 month	1	3	5	2	3	1	2	...
Benchmark month	5	6	3	3	6	8	8	10
Number of series used	11	11	11	11	11	11	11	11
Percent of series high on benchmark date	45	55	27	27	55	73	73	91

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

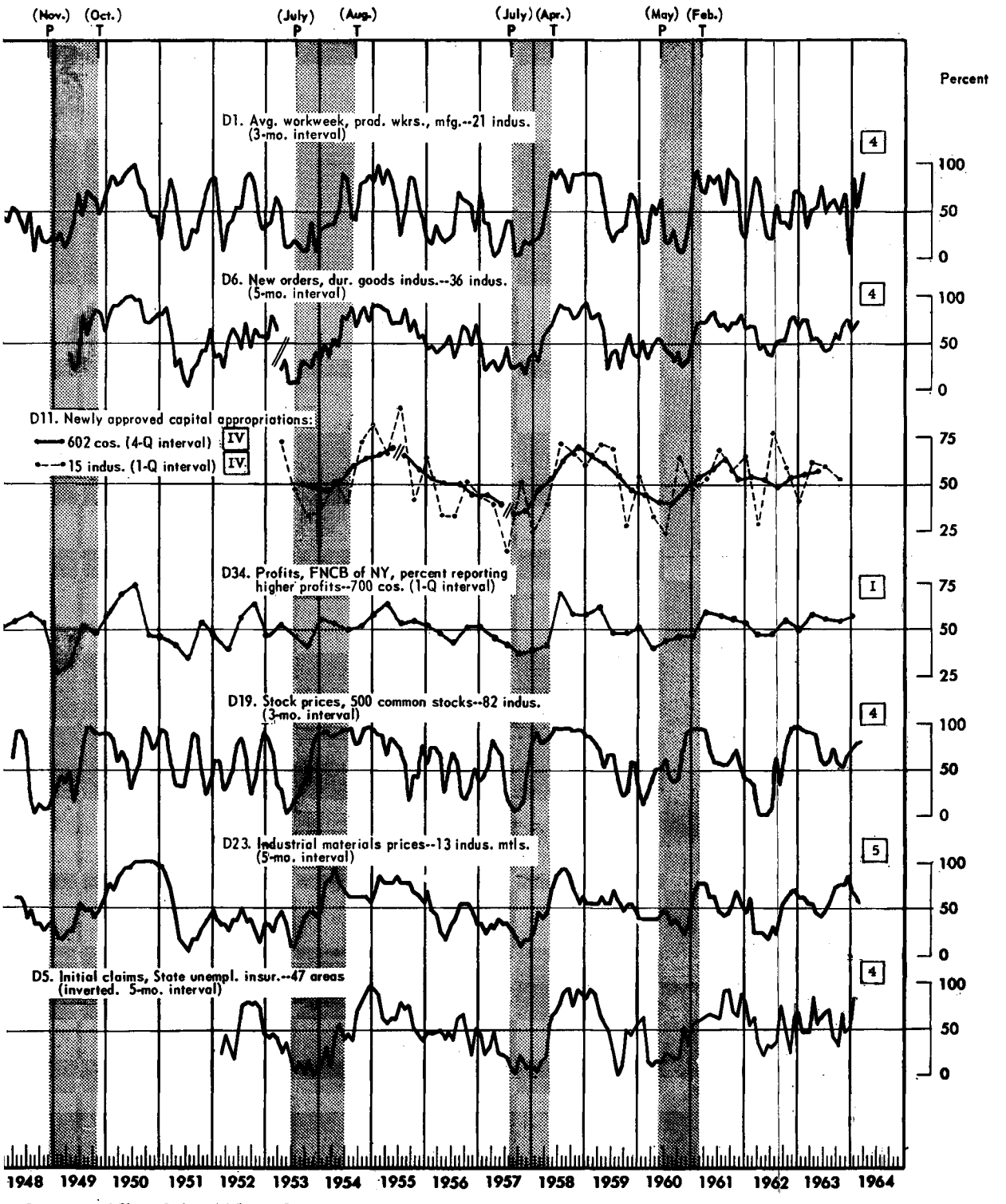
[1]5 series were not available.

[2]2 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 A

DIFFUSION INDEXES: 1948 TO PRESENT

NBER Leading Indicators

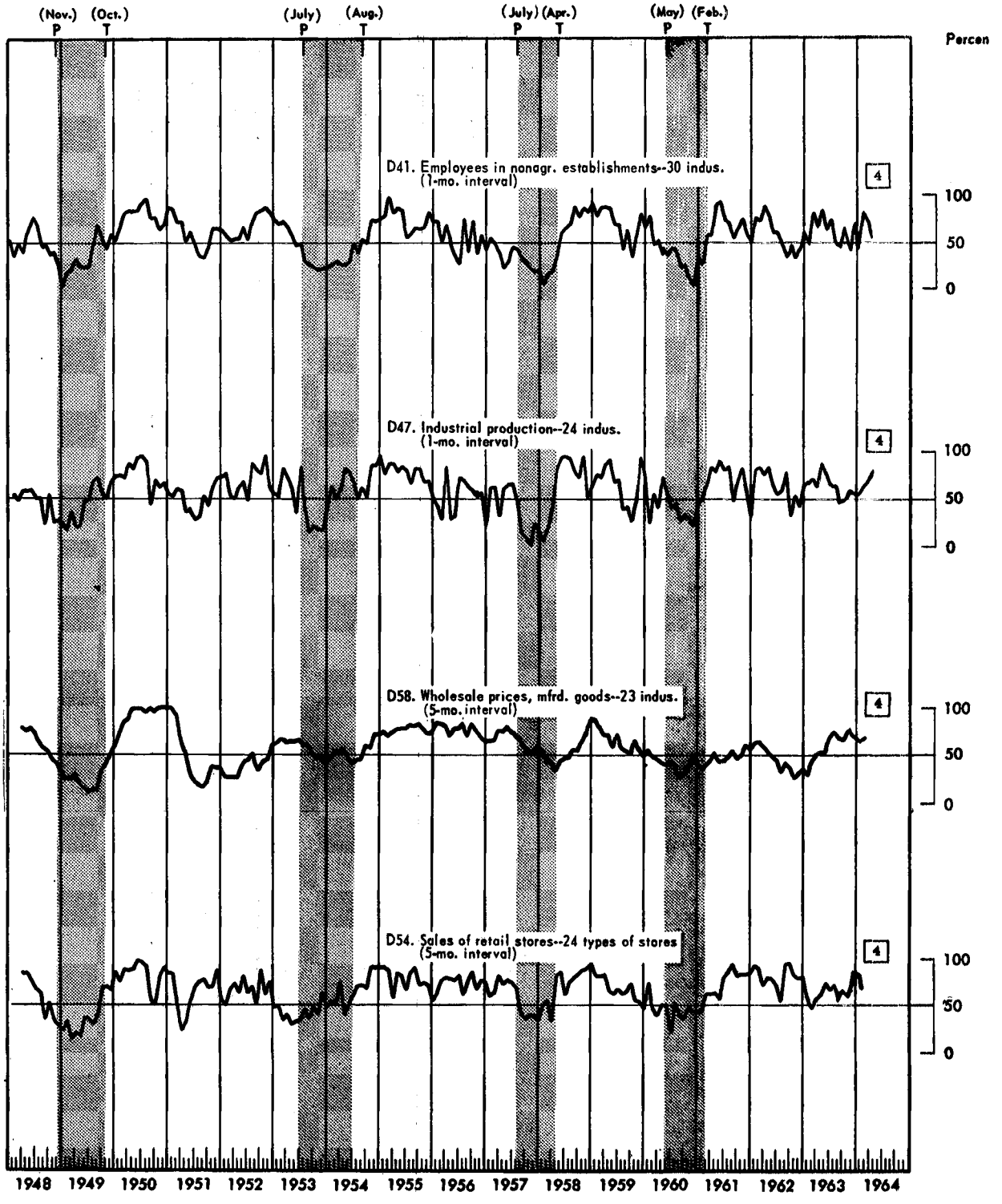


See "How to Read Charts 1, 2, and 3," page 5.

CHART 2 B

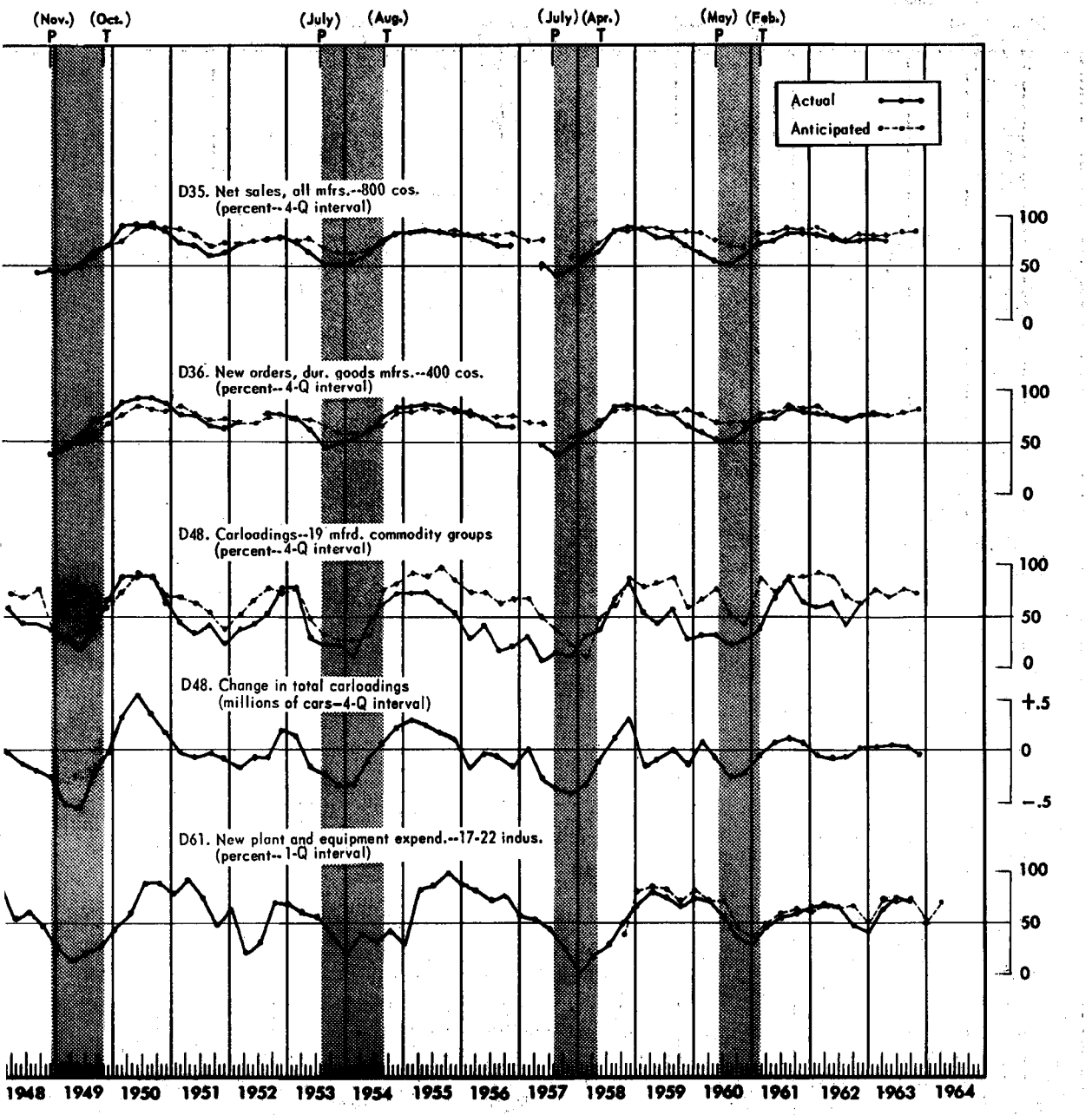
DIFFUSION INDEXES: 1948 TO PRESENT--Con.

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



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

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

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

Table 4.--DIFFUSION INDEXES FOR 11 MAJOR ECONOMIC ACTIVITIES: JULY 1960 TO PRESENT

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; 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					
	D1. Average workweek, manufacturing (21 industries)		D6. Value of manufacturers' new orders, durable goods industries (36 industries)		D11. Newly approved capital appropriations	
					a. 602 companies	b. 15 industries
	1-month interval	3-month interval	1-month interval	5-month interval	4-quarter interval	1-quarter interval
1960						
July	50.0	14.3	41.7	41.7	...	23.3
August	31.0	16.7	52.8	37.5	40	...
September	19.0	31.0	47.2	30.6	...	...
October	83.3	7.1	33.3	41.7	...	66.7
November	7.1	4.8	44.4	23.6	48	...
December	7.1	23.8	58.3	33.3	...	...
1961						
January	95.2	66.7	33.3	52.8	...	46.7
February	71.4	95.2	48.6	72.2	54	...
March	54.8	71.4	66.7	72.2	...	...
April	81.0	69.0	62.5	72.2	...	53.3
May	45.2	90.5	63.9	77.8	58	...
June	90.5	78.6	66.7	83.3	...	...
July	64.3	88.1	36.1	66.7	...	70.0
August	73.8	54.8	63.9	69.4	64	...
September	38.1	97.6	47.2	62.5	...	...
October	85.7	85.7	55.6	72.2	...	56.7
November	66.7	81.0	61.1	70.8	52	...
December	23.8	26.2	58.3	80.6	...	...
1962						
January	14.3	21.4	63.9	63.9	...	66.7
February	73.8	59.5	52.8	68.1	54	...
March	73.8	88.1	36.1	66.7	...	...
April	76.2	78.6	51.4	41.7	...	26.7
May	21.4	40.5	56.9	48.6	52	...
June	28.6	21.4	37.5	37.5	...	...
July	35.7	21.4	56.9	36.1	...	80.0
August	47.6	59.5	36.1	52.8	48	...
September	81.0	35.7	48.6	52.8	...	...
October	7.1	38.1	68.1	52.8	...	60.0
November	59.5	31.0	50.0	75.0	54	...
December	59.5	73.8	47.2	77.8	...	...
1963						
January	52.4	71.4	63.9	66.7	...	40.0
February	73.8	64.3	43.1	75.0	56	...
March	40.5	31.0	54.2	73.6	...	...
April	16.7	52.4	63.9	55.6	...	63.3
May	81.0	54.8	52.8	56.9	58	...
June	47.6	78.6	47.2	50.0	...	...
July	45.2	47.6	51.4	41.7	...	60.0
August	42.9	59.5	52.8	45.8	(NA)	...
September	66.7	64.3	52.8	62.5		...
October	57.1	47.6	69.4	54.2		53.3
November	21.4	66.7	33.3	69.4		...
December	83.3	7.1	62.5	77.8		...
1964						
January	0.0	r85.7	r55.6	r66.7		(NA
February	85.7	r52.4	r44.4	p75.0		
March	r28.6	p92.9	r52.8			
April	p52.4		p70.8			
May						
June						

Table 4.--DIFFUSION INDEXES FOR 11 MAJOR ECONOMIC ACTIVITIES: JULY 1960 TO PRESENT--Continued

ercent 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; 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
1960						Revised[2]	Revised[2]
uly.....	45	32.9	63.5	38.5	46.2	55.3	26.6
ugust.....	...	76.5	38.8	30.8	30.8	17.0	23.4
eptember.....	...	15.3	36.5	38.5	38.5	68.1	20.2
ctober.....	47	23.5	42.4	30.8	30.8	42.6	21.3
ovember.....	...	89.4	76.5	23.1	23.1	36.2	57.4
ecember.....	...	80.7	93.8	26.9	30.8	53.2	31.9
1961							
anuary.....	47	87.0	96.3	42.3	61.5	59.6	57.4
ebruary.....	...	96.3	96.3	76.9	76.9	31.9	59.6
arch.....	...	86.0	95.1	84.6	76.9	80.9	61.7
pril.....	60	72.6	93.9	73.1	76.9	40.4	66.0
ay.....	...	81.1	70.7	53.8	61.5	48.9	68.1
une.....	...	40.2	57.3	46.2	61.5	58.5	66.0
uly.....	58	42.1	57.9	53.8	46.2	51.1	61.7
ugust.....	...	81.1	54.9	46.2	42.3	61.7	93.6
eptember.....	...	39.6	55.5	61.5	46.2	46.8	93.6
ctober.....	56	45.7	62.2	38.5	53.8	78.7	68.1
ovember.....	...	87.8	72.6	15.4	69.2	74.5	63.8
ecember.....	...	56.1	52.4	61.5	53.8	23.4	91.5
1962							
anuary.....	54	26.2	39.6	76.9	46.2	57.4	74.5
ebruary.....	...	74.4	37.8	38.5	61.5	83.0	51.1
arch.....	...	48.2	32.9	38.5	23.1	46.8	66.0
pril.....	47	9.1	0.0	15.4	23.1	46.8	31.9
ay.....	...	1.2	1.2	42.3	23.1	40.4	21.3
une.....	...	1.2	1.2	26.9	15.4	14.9	34.0
uly.....	48	67.7	8.5	23.1	30.8	68.1	31.9
ugust.....	...	78.0	67.1	34.6	23.1	57.4	38.3
eptember.....	...	34.8	31.1	61.5	53.8	44.7	78.7
ctober.....	56	6.7	72.6	53.8	66.7	46.8	48.9
ovember.....	...	98.8	90.2	84.6	75.0	72.3	22.3
ecember.....	...	84.8	98.8	66.7	69.2	27.7	63.8
1963							
anuary.....	50	97.6	97.6	58.3	61.5	23.4	69.1
ebruary.....	...	79.3	93.8	58.3	61.5	85.1	48.9
arch.....	...	43.8	91.2	50.0	58.3	31.9	48.9
pril.....	59	91.2	90.0	38.5	58.3	44.7	85.1
ay.....	...	85.0	88.0	50.0	46.2	48.9	54.3
une.....	...	51.9	62.5	61.5	42.3	70.2	63.8
uly.....	56	29.4	54.4	53.8	46.2	42.6	68.1
ugust.....	...	75.0	60.2	53.8	53.8	48.9	70.2
eptember.....	...	76.9	74.4	53.8	73.1	44.7	40.4
ctober.....	55	44.9	56.4	76.9	76.9	61.7	31.9
ovember.....	...	44.9	50.6	69.2	76.9	31.9	68.1
ecember.....	...	68.4	68.4	53.8	84.6	34.0	48.9
1964							
anuary.....	57	74.7	73.7	61.5	69.2	85.1	51.1
ebruary.....		64.7	81.0	57.7	61.5	12.8	83.0
arch.....		78.2	82.1	38.5	[3]53.8	66.0	
pril.....		75.6		[3]61.5		75.5	
ay.....				38.5			
une.....							

[1]The diffusion index is based on 85 components through November 1960; on 82 components, December 1960 to February 1963; on 80 components, March 1963 to August 1963; and on 79 components thereafter. 19 components and 5 composites, representing an additional 22 components, are shown in the direction-of-change table (table 6C).

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

[3]Average for May 14, 15, and 18.

Table 4.--DIFFUSION INDEXES FOR 11 MAJOR ECONOMIC ACTIVITIES: JULY 1960 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 figure are centered in the middle quarter; 1-quarter figures are placed in the 1st month of the 2d quarter. Seasonally adjusted components are used except in indexes D11a 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
1960								
July	35.0	23.3	39.6	41.7	45.8	18.8	45.7	41.
August	35.0	26.7	45.8	20.8	45.8	56.3	30.4	39.
September	23.3	33.3	25.0	20.8	45.8	37.5	19.6	23.
October	30.0	25.0	33.3	16.7	79.2	35.4	50.0	30.
November	18.3	18.3	27.1	12.5	22.9	50.0	34.8	34.
December	13.3	20.0	20.8	20.8	37.5	43.8	56.5	47.
1961								
January	45.0	15.0	45.8	37.5	58.3	43.8	39.1	43.
February	33.3	40.0	52.1	62.5	41.7	43.8	47.8	34.
March	61.7	43.3	66.7	81.3	60.4	64.6	41.3	39.
April	56.7	78.3	83.3	83.3	22.9	62.5	65.2	43.
May	86.7	85.0	77.1	87.5	79.2	64.6	45.7	52.
June	88.3	90.0	91.7	83.3	77.1	56.3	37.0	41.
July	70.0	90.0	79.2	100.0	60.4	83.3	50.0	43.
August	70.0	66.7	83.3	79.2	68.8	87.5	56.5	47.
September	56.7	80.0	45.8	79.2	39.6	95.8	60.9	54.
October	71.7	80.0	72.9	75.0	83.3	81.3	39.1	45.
November	81.7	78.3	83.3	87.5	87.5	83.3	47.8	50.
December	63.3	76.7	56.3	41.7	60.4	83.3	56.5	60.
1962								
January	55.0	78.3	29.2	50.0	58.3	85.4	69.6	54
February	80.0	88.3	83.3	66.7	50.0	93.8	43.5	63
March	71.7	88.3	83.3	91.7	70.8	89.6	52.2	63
April	86.7	80.0	75.0	83.3	68.8	70.8	58.7	58
May	71.7	73.3	83.3	70.8	58.3	81.3	45.7	52
June	55.0	65.0	62.5	79.2	18.8	79.2	43.5	47
July	56.7	51.7	54.2	68.8	83.3	70.8	39.1	43
August	46.7	38.3	58.3	79.2	75.0	54.2	41.3	30
September	36.7	35.0	79.2	41.7	64.6	95.8	54.3	41
October	45.0	26.7	29.2	62.5	39.6	95.8	34.8	34
November	33.3	28.3	54.2	45.8	87.5	81.3	45.7	23
December	43.3	43.3	41.7	58.3	66.7	79.2	39.1	30
1963								
January	63.3	53.3	66.7	54.2	50.0	81.3	39.1	34
February	48.3	65.0	68.8	81.3	54.2	56.3	43.5	28
March	83.3	71.7	72.9	83.3	52.1	45.8	37.0	45
April	66.7	83.3	62.5	91.7	41.7	58.3	41.3	50
May	85.0	78.3	87.5	87.5	52.1	62.5	58.7	52
June	61.7	75.0	75.0	83.3	75.0	75.0	60.9	52
July	75.0	60.0	64.6	87.5	66.7	66.7	50.0	69
August	48.3	50.0	62.5	72.9	64.6	70.8	56.5	73
September	45.0	48.3	47.9	58.3	25.0	54.2	58.7	71
October	65.0	40.0	50.0	60.4	58.3	68.8	76.1	69
November	41.7	63.3	60.4	60.4	54.2	58.3	67.4	73
December	70.0	48.3	58.3	r62.5	77.1	r87.5	63.0	r71
1964								
January	43.3	r73.3	r56.3	r62.5	43.8	r83.3	58.7	r65
February	r83.3	r76.7	64.6	r66.7	70.8	p58.3	r63.0	p69
March	r73.3	p85.0	r70.8	p75.0	r45.8		r45.7	
April	p55.0		p81.3		p25.0		p67.4	
May								
June								

Table 5.–DIFFUSION INDEXES, ACTUAL AND ANTICIPATED, FOR 4 MANUFACTURING ACTIVITIES: JULY 1960 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
1960									
uly	...	...	...	...	...	...	...	56.2	71.9
ugust	50	70	50	68	21.1	50.0	-279	...	...
eptember	...	...	...	...	...	...	...	...	...
ctober	...	...	...	...	...	...	...	34.4	43.8
ovember	60	68	62	68	26.3	42.1	-212	...	...
ecember	...	...	...	...	...	...	...	...	...
1961									
anuary	...	...	...	...	...	...	...	28.1	37.5
ebruary	72	82	72	78	36.8	89.5	-28	...	...
arch	...	...	...	...	...	...	...	...	...
pril	...	...	...	...	...	...	...	46.9	53.1
ay	74	83	73	78	68.4	73.7	+79	...	...
une	...	...	...	...	...	...	...	...	...
uly	...	...	...	...	...	...	...	56.2	62.5
ugust	82	88	82	86	87.5	89.5	+125	...	...
eptember	...	...	...	...	...	...	...	...	...
ctober	...	...	...	...	...	...	...	59.4	65.6
ovember	81	86	78	82	63.2	89.5	+62	...	...
ecember	...	...	...	...	...	...	...	...	...
1962									
anuary	...	...	...	...	...	...	...	65.6	62.5
ebruary	80	88	76	84	57.9	94.7	-67	...	...
arch	...	...	...	...	...	...	...	...	...
pril	...	...	...	...	...	...	...	68.8	68.8
ay	76	80	74	74	63.2	89.5	-96	...	...
une	...	...	...	...	...	...	...	...	...
uly	...	...	...	...	...	...	...	65.6	65.6
ugust	72	74	71	70	42.1	68.4	-66	...	...
eptember	...	...	...	...	...	...	...	...	...
ctober	...	...	...	...	...	...	...	46.9	68.8
ovember	74	82	76	76	63.2	63.2	+28	...	...
ecember	...	...	...	...	...	...	...	...	...
1963									
anuary	...	...	...	...	...	...	...	40.6	50.0
ebruary	76	80	77	76	(NA)	78.9	+38	...	...
arch	...	...	...	...		...	...	...	...
pril	...	...	...	...		...	...	65.6	75.0
ay	74	80	76	76		68.4	+44	...	...
une	...	...	...	...		...	...	...	...
uly	...	...	...	...		...	...	75.0	71.9
ugust	(NA)	84	(NA)	80		78.9	+39	...	...
eptember		...		...		...	...	...	...
ctober		...		...		...	...	71.9	75.0
ovember		85		84		73.7	e-58	...	...
ecember								...	...
1964									
anuary								(NA)	50.0
ebruary									...
arch									...
pril									71.9
ay									
une									

Table 6.--DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JANUARY 1963 TO PRESENT--Continued

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

36 industry components	1-month spans																		5-month spans																	
	1963												1964						1963										1964									
	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Aug-Jan	Sep-Feb	Oct-Mar	Nov-Apr	Dec-May	Jan-Jun	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep
Percent rising	64	43	54	64	53	47	51	53	53	69	33	62	56	44	53	71			75	78	67	75	74	56	57	50	42	46	62	54	69	78	67	75						
All durable goods industries	+	-	+	+	-	-	+	-	+	+	-	-	+	-	-	+			+	+	+	+	+	-	+	-	-	-	+	-	+	+	+	+						
Primary metals:																																								
Blast furnaces, steel mills	+	+	+	+	-	-	-	-	+	+	-	-	+	+	-	+			+	+	+	+	+	-	-	-	-	-	+	+	+	+	+	+						
Nonferrous metals	+	-	+	+	-	+	-	-	+	-	-	+	+	-	+	+			+	+	-	+	+	+	+	-	-	+	+	+	+	+	-	+						
Iron and steel foundries	-	+	+	+	-	+	-	-	+	+	+	+	+	-	+	+			-	+	-	+	+	+	+	+	-	+	+	+	+	+	+	+						
Other primary metals	-	+	+	-	+	-	-	-	+	+	+	+	-	-	+	-			+	+	+	-	+	+	-	-	-	+	+	+	+	+	+	-						
Fabricated metal products:																																								
Metal cans, barrels, and drums	+	o	o	+	-	-	+	+	-	+	-	-	+	-	+	+			+	+	+	+	+	-	-	+	-	+	+	-	-	+	-	+						
Hardware, structural metal and wire prod.	+	+	-	+	-	+	-	+	-	+	-	+	+	+	-	+			+	-	-	-	+	+	-	+	-	-	-	-	+	+	+	+						
Other fabricated metal products	+	-	o	+	-	+	-	+	+	+	-	+	-	-	+	+			+	+	+	+	+	+	-	+	-	+	+	+	+	+	+	+						
Machinery, except electrical:																																								
Steam engines and turbines*	-	+	-	-	+	-	-	+	+	-	+	+	o	+	+	-			+	+	+	-	-	-	-	-	+	-	o	+	+	-	+	-						
Internal combustion engines*	+	-	-	+	+	-	+	-	-	+	-	o	+	-	-	+			+	+	-	+	+	-	+	+	+	o	-	-	+	+	-	-						
Farm machinery and equipment	-	+	-	+	-	+	+	-	+	+	-	-	-	+	-	-			-	+	-	+	-	+	-	-	+	+	+	o	+	+	-	-						
Construction, mining, and material handling*	+	-	+	-	+	+	-	+	+	+	+	+	+	-	-	+			+	+	+	+	+	+	-	-	-	-	-	+	+	+	+	+						
Metalworking machinery*	+	+	-	-	+	-	+	-	-	+	-	+	+	-	+	+			+	+	+	+	+	-	-	-	-	+	+	-	+	+	o	+						
Miscellaneous equipment*	+	-	+	+	-	-	+	+	+	-	-	+	-	-	-	+			+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	+						
Machine shops	-	+	+	+	+	+	-	+	-	-	+	-	o	+	+	+			-	+	+	+	+	+	+	-	-	-	-	-	-	+	+	+						
Special industry machinery*	+	-	+	-	+	-	+	+	+	+	-	-	+	-	+	+			-	-	+	-	+	+	+	+	+	+	+	-	+	-	-	+						
General industrial machinery*	+	+	o	+	-	-	+	-	+	o	-	+	-	+	+	-			-	+	+	+	+	-	o	-	-	-	-	+	+	+	+	+						
Office and store machines*	+	-	-	+	-	+	-	+	-	+	-	+	+	+	-	+			+	+	+	+	+	+	+	+	-	-	-	-	+	+	+	+						
Service industry machinery*	-	+	-	+	-	-	+	-	+	-	+	+	-	-	+	+			+	+	-	+	+	+	+	-	+	-	+	+	+	-	+	+						
Electrical machinery:																																								
Electrical transmission, distr. equip.*	-	+	-	-	+	-	+	+	+	o	+	+	+	-	-	-			+	-	+	+	o	-	-	-	-	-	+	+	+	+	+	-						
Electrical industrial apparatus*	+	-	-	-	+	+	+	+	-	+	-	+	-	+	-	-			+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	-						
Household appliances	-	+	+	-	+	+	+	-	-	+	-	+	-	-	+	+			-	+	+	-	+	+	+	+	+	+	+	-	-	+	+	+						
Radio and TV	+	-	+	+	+	-	-	+	-	+	+	+	-	+	-	+			+	+	+	+	+	-	-	+	-	-	-	+	-	+	+	+						
Communication equipment	+	-	+	+	-	+	-	+	-	+	+	-	+	-	+	+			+	-	+	+	+	+	+	+	-	-	-	-	+	+	+	-						
Electronic components	-	-	+	-	+	-	o	-	+	+	-	-	-	+	-	+			-	-	+	+	+	+	+	-	-	-	+	+	+	+	+	+						
Other electrical machinery*	+	+	-	+	-	+	+	-	-	+	+	-	-	-	+	o			+	+	-	+	-	-	+	+	-	+	+	-	+	+	+	-						
Transportation equipment:																																								
Motor vehicle parts	-	+	+	-	-	-	+	-	-	+	-	-	+	-	+	+			+	+	+	+	-	-	+	-	-	+	+	-	-	-	+	+						
Motor vehicle assembly operations	+	-	-	+	-	+	-	+	+	+	-	+	+	+	-	+			+	+	-	+	+	+	-	-	+	+	+	+	+	+	-	+						
Complete aircraft	+	-	+	-	+	-	+	+	-	-	+	-	+	-	-	+			+	+	+	+	-	-	+	-	+	-	+	-	+	+	+	+						
Aircraft parts	+	-	-	-	+	-	+	-	+	-	-	-	+	+	-	-			+	-	-	-	+	-	+	-	+	-	-	-	+	-	-	+						
Shipbuilding and railroad equipment*	-	-	+	+	+	+	-	+	+	-	-	+	-	-	-	+			-	-	+	-	+	+	+	+	+	-	-	+	-	-	-	+						
Other transportation equipment	+	-	+	+	+	+	-	+	-	-	-	+	+	-	+	-			+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-						
Instruments, total	-	-	+	-	+	+	-	+	-	-	-	+	-	+	+	-			+	-	-	-	+	+	+	-	+	+	+	-	-	+	+	+						
Lumber, total	+	+	-	+	+	+	+	+	-	+	-	-	+	+	-	+			-	+	+	+	+	+	-	+	+	+	+	+	-	+	+	+						
Furniture, total	+	-	+	+	+	-	-	-	+	+	-	+	-	+	+	-			+	+	+	+	+	+	+	-	-	-	-	-	+	+	o	+						
Stone, clay, and glass, total	-	-	-	+	-	-	+	-	+	+	-	+	+	-	-	+			+	+	-	+	-	-	+	-	-	+	+	-	+	+	-	+						
Other durable goods, total	+	-	-	+	-	-	+	-	-	-	+	+	-	+	-	+			+	+	-	+	-	-	-	-	-	+	+	-	+	+	+	+						

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

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

24 industry components[1]	1-month spans																		3-month spans																	
	1963												1964						1963												1964					
	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Oct-Jan	Nov-Feb	Dec-Mar	Jan-Apr	Feb-May	Mar-Jun	Apr-Jul	May-Aug	Jun-Sep	Jul-Oct	Aug-Nov	Sep-Dec	Oct-Jan	Nov-Feb	Dec-Mar	Jan-Apr	Feb-May	Mar-Jun
Percent rising[2]	98	79	44	91	85	52	29	75	77	45	45	68	75	65	78	76			99	98	94	91	90	88	62	54	60	74	56	51	68	74	81	82		
500 stock prices	+	+	-	+	+	o	-	+	+	+	-	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Mining and smelting	+	+	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			+	+	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Coal, bituminous	+	+	+	+	+	+	-	+	+	+	+	+	+	-	+	-			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-		
Food composite	+	+	-	+	+	+	-	+	+	-	+	+	+	+	+	o			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Tobacco (cigarette manufacturing)	+	-	+	+	-	-	-	+	+	+	-	+	-	+	+	+			+	-	+	+	+	-	-	-	-	+	-	+	-	+	+	+		
Textile weavers	+	+	+	+	+	-	+	+	+	-	+	+	+	-	+	-			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Paper	+	+	-	+	+	-	-	+	+	+	-	+	-	-	+	+			+	+	+	+	+	+	-	-	+	+	+	-	-	-	-	+		
Publishing	+	+	-	+	+	+	+	+	+	-	-	+	+	+	+	+			+	+	-	+	+	+	+	+	+	+	-	-	+	+	+	+		
Chemicals	+	+	-	+	+	-	-	+	+	-	+	+	+	+	+	+			+	+	+	+	+	+	-	-	+	+	+	+	+	+	+	+		
Drugs	+	+	-	+	+	-	-	+	+	-	-	+	+	+	-	-			+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	-		
Oil composite	+	+	+	+	+	+	+	+	+	-	-	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	-	-	+	+	+	+		
Building materials composite	+	+	-	+	+	-	-	+	+	-	-	-	+	+	+	+			+	+	+	+	+	+	-	-	+	+	-	-	+	+	+	+		
Steel	+	+	-	+	+	-	-	+	+	+	-	+	+	-	+	+			+	+	+	+	+	+	-	+	+	+	+	-	+	+	+	+		
Metal fabricating	+	+	-	+	+	+	-	+	+	-	-	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+		
Machinery composite	+	+	+	+	+	+	-	+	-	-	+	+	+	+	+	+			+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+		
Office and business equipment	+	+	-	+	+	-	-	+	+	+	+	+	+	+	+	+			+	+	+	+	+	+	-	-	-	+	+	+	+	+	+	+		
Electric household appliances	+	-	+	+	+	+	-	+	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Electronics	+	-	+	+	+	+	-	+	+	-	+	+	-	-	+	+			+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	+		
Automobiles	+	+	+	+	+	+	-	+	+	+	-	-	-	+	+	-			+	+	+	+	+	+	+	+	+	+	+	+	-	-	+	+		
Radio and television broadcasters	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Telephone companies	+	+	-	+	+	-	-	+	+	+	+	+	+	+	-	+			+	+	+	+	+	+	-	-	+	+	+	+	+	+	+	-		
Electric companies	+	+	-	+	+	-	-	+	+	-	-	+	+	o	-	+			+	+	+	+	+	+	-	+	+	+	-	-	+	+	+	-		
Natural gas distributors	+	-	-	+	+	+	-	+	-	-	-	+	+	-	-	+			+	+	+	+	+	+	+	-	+	-	-	-	-	-	-	-		
Retail stores composite	+	+	+	+	+	+	-	+	+	-	-	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+		
Life insurance	+	+	+	+	+	+	o	+	+	-	-	-	+	+	+	+			+	+	+	+	+	+	+	+	+	+	-	-	+	+	+	+		

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

[1]The 24 components shown here include 19 of the more important industries and 5 composites representing an additional 22 of the industries used in computing the diffusion index in table 4.

[2]Based on 82 industries to February 1963; 80 industries, March to August 1963; and on 79 industries thereafter.

Table 6.--DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JANUARY 1963 TO PRESENT--Continued

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

13 industrial materials components	1-month spans																		5-month spans															
	1963												1964						1963										1964					
	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May[1]	May-Jun	Aug-Jan	Sep-Feb	Oct-Mar	Nov-Apr	Dec-May	Jan-Jun	Feb-Jul	Mar-Aug	Apr-Sep	May-Oct	Jun-Nov	Jul-Dec	Aug-Jan	Sep-Feb	Oct-Mar	Nov-Apr	Dec-May[1]	Jan-Jun
Percent rising	58	58	50	38	50	62	54	54	54	77	69	54	62	58	38	62	38		75	69	62	62	58	58	46	42	46	54	73	77	77	85	69	62	54	
All industrial materials	-	-	-	+	+	-	+	o	-	+	+	+	+	o	+	+	-		+	+	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	
Copper scrap (lb.)	+	-	o	+	-	+	+	-	+	+	-	+	+	+	+	+	-		+	+	+	+	+	+	+	-	-	+	+	+	+	+	+	+	+	
Lead scrap (lb.)	+	+	-	-	-	+	+	+	+	+	+	+	+	-	-	+	-		+	+	+	+	-	-	-	+	+	+	+	+	+	+	+	+	-	
Steel scrap (ton)	-	+	-	+	+	-	-	+	+	+	+	-	+	-	-	+	+		+	+	+	+	+	+	-	-	-	-	+	+	+	+	-	+	+	
Tin (lb.)	+	-	+	+	+	+	-	-	+	+	+	+	+	+	-	-	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Zinc (lb.)	+	+	+	+	o	+	+	+	-	-	-	+	+	+	+	+	+		-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Burlap (yd.)	NA	NA	-	-	+	-	+	+	-	-	-	-	+	-	+	+	-		NA	-	-	-	NA	NA	-	-	+	-	-	-	-	-	-	+	+	
Cotton (lb.), 15 market average	+	+	+	-	-	-	-	+	+	+	+	-	+	-	-	-	-		+	+	+	+	+	-	-	-	-	-	o	+	+	+	-	-	-	
Print cloth (yd.), average	+	+	+	-	-	-	+	+	+	+	+	+	-	o	-	-	-		+	+	+	+	+	+	+	o	+	+	+	+	+	+	+	-	-	
Wool tops (lb.)	+	+	+	-	-	+	-	+	-	+	+	+	+	+	-	-	-		+	+	+	+	-	-	-	-	+	+	+	+	+	+	-	-		
Hides (lb.)	-	-	-	-	+	-	-	-	-	+	+	+	-	+	-	+	-		-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	
Rosin (100 lb.)	-	-	+	+	+	+	-	-	-	-	-	-	-	+	+	+	+		-	-	-	-	+	+	+	+	-	-	-	-	-	-	+	+	+	
Rubber (lb.)	-	-	-	-	-	+	+	-	-	+	+	-	-	+	+	+	-		+	+	-	-	-	-	-	-	-	+	-	-	-	+	+	-	-	
Tallow (lb.)	-	+	-	-	+	+	+	-	+	+	+	-	-	-	-	-	+		+	+	-	-	-	+	+	+	+	+	+	+	+	+	-	-	-	

+ = rising; o = unchanged; - = falling. Series components are seasonally adjusted (except for all-industry totals) by the Bureau of the Census before the direction of change is determined. NA = not available.

[1]Average for May 14, 15, and 18.

Table 6.--DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JANUARY 1963 TO PRESENT--Continued

E.--(D5) Initial Claims for Unemployment Insurance, State Programs

Labor market size rank	26 area components	1-month spans																	5-month spans															
		1963												1964						1963										1964					
		Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Aug-Jan	Sep-Feb	Oct-Mar	Nov-Apr	Dec-May	Jan-Jun	Feb-Jul	Mar-Aug	Apr-Sep	May-Oct	Jun-Nov	Jul-Dec	Aug-Jan	Sep-Feb	Oct-Mar	Nov-Apr	Dec-May	Jan-Jun
	Percent rising	23	85	32	45	49	70	43	49	45	62	32	34	85	13	66	76			22	64	69	49	49	85	54	64	68	70	40	32	68	49	51	83		
	47 labor market areas[1]	-	+	-	+	-	+	-	-	-	+	-	-	+	-	+	+			-	+	+	+	-	+	-	-	-	+	-	-	+	+	+	+		
	NORTHEAST REGION																																				
7	Boston	-	+	-	-	-	+	-	+	-	+	+	-	+	-	-	+			+	+	+	-	-	+	-	+	-	+	-	-	-	+	-	-		
16	Buffalo*	+	+	-	+	-	+	+	-	+	+	+	-	+	-	+	+			-	+	-	+	-	+	+	-	+	+	+	+	+	-	-	+		
11	Newark*	-	+	-	-	-	+	+	+	-	+	-	+	+	-	+	+			-	+	+	-	-	+	-	+	+	+	-	-	-	+	-	+		
1	New York	-	+	-	+	-	+	-	+	-	+	+	+	+	-	-	+			-	+	+	+	+	+	-	-	-	-	-	+	+	+	+	+		
21	Paterson*	-	+	-	-	-	+	+	-	+	-	-	+	+	-	-	+			+	+	+	-	-	-	-	-	+	+	-	-	+	-	-	+		
4	Philadelphia*	-	+	-	+	-	+	-	-	-	+	-	+	+	-	+	+			-	-	-	+	-	+	o	+	-	+	-	-	+	+	+	+		
8	Pittsburgh**	-	+	+	-	+	+	-	-	-	-	+	-	+	-	+	+			+	+	+	+	+	+	+	+	+	+	-	-	-	-	+	+		
23	Providence**	-	+	-	+	-	+	+	-	+	-	+	-	+	-	+	-			-	+	-	+	-	+	-	+	+	+	+	-	+	+	+	-		
	NORTH CENTRAL REGION																																				
3	Chicago	-	+	-	-	+	+	-	+	-	+	-	+	+	-	+	-			-	+	-	-	-	+	-	+	-	+	-	-	+	-	+	+		
18	Cincinnati	-	+	-	-	+	+	+	-	+	-	-	-	+	-	+	-			-	+	+	-	+	+	+	-	+	+	-	-	+	-	+	+		
10	Cleveland	+	+	-	+	-	+	+	-	+	-	-	-	+	-	-	+			-	+	+	+	+	+	+	+	+	+	+	-	+	-	-	+		
26	Columbus	-	+	+	-	+	-	+	-	-	+	-	-	+	-	+	-			-	-	+	-	+	+	+	+	+	+	+	-	+	-	-	-		
5	Detroit	+	-	+	-	-	+	-	-	+	-	+	-	+	-	-	-			+	-	+	+	-	-	+	-	+	+	+	+	+	+	+	+		
25	Indianapolis	-	-	-	-	-	+	+	-	+	+	-	-	+	-	+	+			-	-	+	-	-	+	+	+	+	+	-	-	+	+	-	+		
22	Kansas City	-	+	-	-	-	+	+	-	+	-	+	-	+	-	+	-			-	-	o	-	-	+	+	-	+	+	-	-	+	-	+	+		
15	Milwaukee	-	+	-	+	+	+	+	+	-	+	-	-	+	-	+	+			-	-	+	-	+	+	+	+	+	+	-	-	-	+	-	+		
13	Minneapolis	-	+	-	-	-	+	+	-	+	+	-	-	+	-	-	+			+	+	-	-	-	-	-	-	+	+	-	-	+	+	-	+		
9	St. Louis	-	+	+	-	-	+	-	-	+	+	-	-	+	-	+	+			-	+	+	+	-	+	-	-	-	+	+	-	+	-	-	+		
	SOUTH REGION																																				
20	Atlanta	+	+	-	+	+	+	-	-	+	+	-	-	+	+	+	+			-	+	+	+	+	+	+	+	+	-	-	-	-	-	+	+		
12	Baltimore	-	+	-	+	+	+	+	-	+	+	-	-	+	-	+	-			+	+	+	-	-	+	-	+	+	+	-	-	+	-	-	-		
17	Dallas	-	-	+	+	-	-	+	+	-	+	-	-	+	-	+	+			-	+	-	+	-	+	+	+	-	+	-	-	+	+	+	+		
14	Houston	-	+	-	+	-	+	+	-	-	-	+	-	+	-	+	+			-	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+		
	WEST REGION																																				
2	Los Angeles	-	-	+	-	+	+	-	-	+	+	-	+	+	+	-	+			-	-	-	-	-	+	+	+	-	+	+	-	+	+	-	+		
24	Portland	-	-	+	-	+	-	-	+	-	+	-	-	-	+	-	+			-	-	+	-	-	+	+	+	+	+	+	+	-	-	-	+		
6	San Francisco	+	-	+	-	+	-	-	+	-	-	-	+	-	+	-	+			-	-	-	-	+	-	+	+	+	-	-	+	-	-	-	+		
19	Seattle*	-	+	-	-	+	-	-	+	-	+	+	+	+	-	-	+			-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+		

- = rising; o = unchanged; + = falling. Because this series usually rises when general business activity falls and falls when business rises, it is inverted to show a comparable activity pattern. The direction of change is shown for the week ending nearest the 22d of the month. Series components are seasonally adjusted by the Bureau of the Census before the direction of change is determined.

*Designated by Bureau of Employment Security as an area of substantial unemployment (6 percent or more) in April 1964.

**Designated by Bureau of Employment Security as an area of substantial (6 percent or more) and persistent unemployment in April 1964.

[1]The percent rising is based on 47 labor market areas. Directions of change are shown separately for only the largest 26.

Table 6.--DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JANUARY 1963 TO PRESENT--Continued

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

30 industry components	1-month spans																		3-month spans																	
	1963												1964						1963												1964					
	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Oct-Jan	Nov-Feb	Dec-Mar	Jan-Apr	Feb-May	Mar-Jun	Apr-Jul	May-Aug	Jun-Sep	Jul-Oct	Aug-Nov	Sep-Dec	Oct-Jan	Nov-Feb	Dec-Mar	Jan-Apr	Feb-May	Mar-Jun
Percent rising	63	48	83	67	85	62	75	48	45	65	42	70	43	83	73	55			43	53	65	72	83	78	75	60	50	48	40	63	48	73	77	85		
All nonagricultural establishments	+	+	+	+	+	+	+	o	+	+	-	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Ordnance and accessories	o	-	-	-	+	+	-	o	o	+	-	+	o	-	-	-			-	-	-	-	-	+	+	o	-	+	-	-	-	-	-	-		
Lumber and wood products	+	-	+	-	+	-	+	+	+	+	+	+	-	+	+	-			+	+	+	-	-	-	-	-	+	+	+	+	+	+	+	-		
Furniture and fixtures	+	-	+	o	+	+	+	o	o	-	o	+	+	+	+	o			+	+	+	-	+	+	+	+	+	-	-	+	+	+	+	+		
Stone, clay, and glass products	+	-	+	+	+	+	+	-	-	+	+	-	-	+	+	-			-	-	+	+	+	+	+	-	-	-	-	+	+	+	+	+		
Primary metal industries	-	+	+	+	+	+	+	-	-	-	+	+	+	+	+	+			+	+	+	+	+	+	+	-	-	-	-	+	+	+	+	+		
Fabricated metal products	-	+	+	+	+	+	+	o	+	o	-	+	-	+	+	+			-	+	+	+	+	+	+	+	+	+	o	+	-	+	+	+		
Machinery	+	-	o	+	-	+	+	+	+	+	o	+	+	-	+	+			-	-	-	-	+	+	+	+	+	+	+	+	+	-	+	+		
Electrical equipment	-	-	+	+	+	-	-	-	-	+	-	+	-	-	+	+			-	-	-	+	+	+	-	-	-	-	-	-	-	o	-	+		
Transportation equipment	+	+	+	+	-	+	-	-	+	+	-	+	-	+	+	+			-	+	+	+	+	+	-	-	+	+	+	-	-	+	+	+		
Instruments and related products	+	o	+	+	+	+	+	-	-	o	+	o	-	+	+	+			+	+	+	+	+	+	+	+	-	-	-	+	o	o	+	+		
Miscellaneous manufacturing industries	o	o	+	o	+	-	+	+	-	-	+	-	-	+	o	-			-	-	+	+	+	-	+	+	+	o	-	-	o	+	+	+		
Food and kindred products	-	-	+	-	+	-	-	+	-	+	-	+	-	o	-	-			-	+	+	-	-	-	-	-	-	+	-	+	-	+	-	-		
Tobacco manufactures	-	o	o	+	-	-	o	+	-	+	+	-	-	+	-	-			-	-	-	+	o	-	-	+	-	+	+	+	-	-	-	+		
Textile mill products	-	-	+	o	-	-	+	-	o	+	+	-	+	+	+	-			-	-	-	o	-	-	-	-	-	-	+	+	+	+	+	+		
Apparel and related products	+	+	+	+	+	-	+	-	+	+	-	+	+	+	o	o			-	+	+	+	+	+	+	-	-	-	-	-	-	+	+	+		
Paper and allied products	+	-	+	-	+	+	+	o	-	o	o	+	-	+	+	-			o	+	+	-	+	+	+	+	-	-	-	+	o	+	+	+		
Printing and publishing	+	-	+	+	+	-	o	o	-	-	-	+	-	+	+	+			-	-	o	+	+	+	+	-	-	-	-	+	+	+	+	+		
Chemicals and allied products	+	+	o	+	+	+	o	o	-	+	-	+	-	+	+	o			o	+	+	+	+	+	+	-	o	-	-	-	-	+	+	+		
Petroleum and related products	-	+	o	+	o	-	+	o	o	o	-	-	-	o	o	o			-	-	-	+	+	o	o	o	+	o	-	-	-	-	-	o		
Rubber and plastics products	+	-	+	+	+	-	-	-	-	-	+	-	+	+	+	+			+	-	+	+	+	+	-	-	-	-	+	+	+	+	+	+		
Leather and leather products	-	o	o	-	+	-	+	-	+	o	-	-	-	+	+	o			-	-	-	-	o	-	+	-	+	-	-	-	-	-	+	+		
Mining	-	o	o	+	+	-	+	-	-	-	+	o	-	+	o	+			-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	+		
Contract construction	+	-	+	+	+	+	+	+	-	-	-	+	-	+	-	-			+	-	+	+	+	+	+	+	-	-	-	-	-	+	+	+		
Transportation and public utilities	-	+	-	-	+	+	+	+	+	-	-	-	+	+	-	+			-	+	-	+	+	+	+	+	+	o	-	-	-	+	+	+		
Wholesale trade	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Retail trade	+	+	+	-	+	+	+	+	o	+	o	+	+	+	-	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Finance, insurance, real estate	+	+	+	+	+	o	+	+	o	+	o	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Services and miscellaneous	+	+	+	-	+	+	+	+	+	+	-	+	+	+	+	-			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Federal government	+	-	+	o	+	+	+	-	o	+	-	+	o	-	+	-			+	-	-	-	+	+	+	-	o	o	+	-	-	-	-	-		
State and local government	+	+	+	+	+	+	-	+	+	+	-	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		

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

Table 6.--DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JANUARY 1963 TO PRESENT--Continued

G.--(D47) Index of Industrial Production

24 industry components	1-month spans																		3-month spans																	
	1963												1964						1963										1964									
	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Oct-Jan	Nov-Feb	Dec-Mar	Jan-Apr	Feb-May	Mar-Jun	Apr-Jul	May-Aug	Jun-Sep	Jul-Oct	Aug-Nov	Sep-Dec	Oct-Jan	Nov-Feb	Dec-Mar	Jan-Apr	Feb-May	Mar-Jun
Percent rising[1]	67	69	73	62	88	75	65	62	48	50	60	58	56	65	71	81			58	54	81	83	92	88	83	88	73	58	60	60	62	62	67	75		
All industrial production	+	+	+	+	+	+	+	-	o	+	+	+	+	+	+	+			o	+	+	+	+	+	+	+	-	o	+	+	+	+	+	+	+	+
DURABLE GOODS																																				
Primary and fabricated metals	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Primary metal products	-	+	+	+	+	-	-	-	-	+	+	+	+	+	+	+			+	+	+	+	+	+	+	-	-	-	+	+	+	+	+	+	+	+
Fabricated metal products	+	+	+	+	+	+	+	+	-	+	-	-	+	-	+	+			+	+	+	+	+	+	+	+	+	+	-	o	+	+	+	+		
Machinery and related products	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Machinery, except electrical	+	+	-	-	+	+	+	+	+	+	+	+	+	-	+	+			-	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+		
Electrical machinery	-	+	o	+	+	+	-	+	-	-	+	-	+	+	+	+			-	+	o	+	+	+	+	+	-	+	-	-	+	+	+	+		
Transportation equipment	+	-	-	+	+	+	-	-	+	+	o	-	-	+	-	+			+	+	+	+	+	+	+	-	+	+	+		-	-	-	+		
Instruments and related products	+	+	+	-	+	+	+	-	+	-	-	+	-	+	+	+			+	+	+	+	+	+	+	+	+	-	-	-	-	+	-	+		
Clay, glass, and lumber	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	-			..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	+		
Clay, glass, and stone	+	-	+	+	+	+	+	-	+	+	+	+	+	+	+	-			+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Lumber and products	-	+	+	-	+	-	-	+	-	-	+	+	-	+	-	NA			+	+	+	+	+	-	-	+	+	+	+	+	+	+	+	NA		
Furniture and miscellaneous	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Furniture and fixtures	+	-	+	+	+	+	+	o	+	-	+	+	-	o	+	+			+	-	-	+	+	+	+	+	+	-	+	+	+	+	+	+		
Miscellaneous	+	-	+	+	+	-	+	+	-	-	+	-	+	+	+	+			-	-	+	+	+	+	+	+	+	-	-	-	+	+	+	+		
NONDURABLE GOODS																																				
Textile, apparel, and leather	..	..	..	..	..	..	..	..	..	..	..	..	..	..	o	+			..	..	..	..	..	..	..	..	..	..	..	..	..	..	-	+		
Textile mill products	+	-	+	+	+	+	+	+	+	+	+	-	-	+	-	NA			-	-	+	+	+	+	+	+	+	+	+	+	-	-	-	NA		
Apparel products	+	+	-	+	-	+	+	+	-	+	+	+	+	+	NA	NA			+	+	+	+	-	+	+	+	+	+	+	+	+	+	NA	NA		
Leather and products	-	+	+	-	+	+	-	+	+	-	-	+	-	-	NA	NA			-	-	-	-	-	+	+	+	+	+	+	-	-	-	NA	NA		
Paper and printing	..	..	..	..	..	..	..	..	..	..	..	..	..	..	+	+			..	..	..	..	..	..	..	..	..	..	..	..	..	..	+	+		
Paper and products	+	+	+	-	+	+	+	o	-	+	+	-	+	-	NA	NA			-	+	+	+	+	+	+	+	+	+	+	+	+	-	NA	NA		
Printing and publishing	-	+	-	+	+	+	-	+	+	-	+	+	-	+	+	+			-	-	-	+	+	+	+	+	o	-	o	+	+	+	-	+		
Chemicals, petroleum, and rubber	..	..	..	..	..	..	..	..	..	..	..	..	..	..	+	+			..	..	..	..	..	..	..	..	..	..	..	..	..	..	+	+		
Chemicals and products	+	+	+	+	+	+	+	+	+	+	+	-	-	+	+	NA			+	+	+	+	+	+	+	+	+	+	+	+	-	-	+	NA		
Petroleum products	+	o	+	+	+	+	+	-	-	+	-	-	-	+	+	NA			+	+	+	+	+	+	+	+	-	-	+	-	-	+	+	NA		
Rubber and plastics products	-	+	+	-	+	-	-	+	-	-	+	-	o	-	NA	NA			-	-	+	+	+	-	-	+	+	+	+	+	+	-	NA	NA		
Foods, beverages, and tobacco	..	..	..	..	..	..	..	..	..	..	..	..	..	..	-	+			..	..	..	..	..	..	..	..	..	..	..	..	..	..	-	-		
Food and beverages	+	-	+	-	+	+	+	+	-	+	-	+	+	+	-	NA			+	+	+	-	+	+	+	+	+	+	-	+	+	+	+	NA		
Tobacco products	+	+	-	-	+	-	+	-	o	-	+	+	-	-	NA	NA			+	-	+	-	+	+	+	-	+	-	-	-	-	-	NA	NA		
MINERALS																																				
Coal	-	+	-	+	-	+	o	+	-	-	-	+	+	-	-	+			+	-	-	+	+	+	-	+	-	-	-	-	-	-	-	-		
Crude oil and natural gas	-	+	+	+	+	+	+	-	-	-	-	-	+	+	-	+			-	-	+	+	+	+	+	+	-	-	-	-	-	-	+	+		
Metal, stone, and earth minerals	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	-			..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	+		
Metal mining	+	+	+	-	+	-	-	+	+	-	-	+	+	+	+	NA			+	+	+	+	+	-	-	-	+	-	-	-	+	+	+	NA		
Stone and earth minerals	+	-	+	+	-	+	+	-	+	+	-	+	+	-	+	NA			-	-	+	+	+	+	+	+	-	+	+	+	+	+	+	NA		

+ = rising; o = unchanged; - = falling. Series components are seasonally adjusted by issuing agency before the direction of change is determined.
NA = not available.

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

Table 6.—DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JANUARY 1963 TO PRESENT—Continued

H.--(D54) Sales of Retail Stores

24 retail store components	1-month spans																		5-month spans															
	1963												1964						1963										1964					
	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Aug-Jan	Sep-Feb	Oct-Mar	Nov-Apr	Dec-May	Jan-Jun	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Jul-Dec	Aug-Jan	Sep-Feb	Oct-Mar	Nov-Apr	Dec-May	Jan-Jun
Percent rising	50	54	52	42	52	75	67	65	25	58	54	77	44	71	46	25			81	79	81	56	46	58	62	75	67	71	54	69	58	87	83	58		
All retail sales	+	-	-	-	-	+	+	-	-	+	-	+	-	+	-	-			+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+		
Grocery stores	+	-	-	o	+	+	+	-	-	+	+	+	+	-	+	-			+	+	-	o	-	-	+	+	+	+	+	-	+	+	+	+		
Other food stores	-	o	-	+	+	-	+	-	-	+	+	+	+	-	+	-			+	+	o	+	+	+	+	+	-	-	-	-	+	+	+	+		
Eating places	+	+	+	+	-	+	-	+	-	+	-	+	+	-	-	+			+	+	+	+	+	+	+	+	-	+	-	+	+	+	+	+		
Department stores	-	+	+	-	+	+	-	+	-	-	+	+	+	+	-	-			+	+	+	-	-	+	+	+	+	-	-	+	-	+	+	+		
Mail-order stores	+	o	+	-	-	+	+	+	-	-	+	-	-	+	-	-			-	-	+	+	-	+	+	+	+	+	+	-	-	+	+	-		
Variety stores	-	+	+	-	+	+	-	+	-	+	-	+	+	-	-	-			o	-	+	+	+	+	+	+	+	-	+	+	+	+	+	-		
Other general stores	-	+	+	-	+	+	+	-	-	+	o	+	-	+	-	-			+	+	+	-	-	-	+	+	+	-	+	-	-	+	+	-		
Men's wear stores	-	+	-	o	-	+	+	+	-	-	+	+	-	+	-	-			+	o	+	o	-	-	+	+	+	-	+	o	-	+	+	+		
Women's apparel stores	-	-	+	-	+	+	+	+	-	-	+	+	+	+	-	-			+	-	+	-	-	+	+	+	+	+	-	+	+	+	+	-		
Family apparel stores	+	-	-	-	-	+	+	+	-	-	+	+	-	+	-	-			+	+	+	-	-	-	-	+	+	+	+	+	-	+	+	-		
Shoe stores	-	-	+	-	o	-	+	+	-	-	+	+	-	-	+	-			o	+	+	-	-	-	-	-	-	-	+	+	+	+	+	-		
Furniture stores	+	+	-	+	-	+	+	-	+	+	-	-	+	+	-	-			+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+		
Appliance and radio stores	+	-	-	-	+	-	+	-	+	+	-	+	-	+	+	+			+	+	+	-	+	-	+	-	+	+	+	+	+	+	+	+		
Building material dealers	+	-	+	+	+	+	-	+	-	+	-	-	+	+	-	-			-	-	+	+	+	+	+	+	+	+	+	-	-	+	-	-		
Hardware stores	-	-	-	+	-	+	o	+	-	+	+	-	-	+	-	-			+	+	-	o	-	-	-	+	-	+	+	+	-	+	-	-		
Farm equipment dealers	-	+	+	-	-	+	+	+	+	+	+	-	-	+	+	+			+	+	+	+	-	-	-	-	+	+	+	+	+	-	-	-		
Motor vehicle dealers	+	-	-	+	-	+	+	-	-	+	-	+	+	+	-	+			+	+	+	+	+	-	+	-	-	+	-	-	+	+	-	+		
Tire and battery dealers	-	-	-	+	+	+	-	-	+	+	+	+	-	-	+	+			+	+	-	-	-	+	+	+	o	+	-	+	+	+	+	+		
Gasoline stations	+	-	+	-	-	+	+	+	-	+	+	+	-	+	-	-			+	+	+	+	-	-	-	-	+	+	+	+	+	+	+	+		
Drug and proprietary stores	-	+	-	-	+	-	o	+	+	-	-	+	o	-	+	-			o	+	+	-	+	+	-	+	+	+	+	+	+	-	+	+		
Jewelry stores	+	+	o	-	-	+	-	o	-	+	-	+	-	+	+	-			+	+	+	+	-	+	-	-	o	+	-	+	-	+	+	+		
Liquor stores	-	+	+	+	-	+	+	-	-	+	-	+	-	+	+	-			-	o	-	+	+	+	+	+	-	+	-	+	-	+	+	+		
Other durable goods stores	+	+	+	+	+	-	+	-	-	-	-	+	+	+	+	+			+	+	+	+	+	+	+	+	-	-	-	-	+	+	+	+		
Other nondurable goods stores	+	+	-	-	+	-	-	+	+	-	-	+	-	+	+	-			+	+	+	-	+	+	-	+	+	-	-	+	-	-	+	-		

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

Table 6.--DIRECTION OF CHANGE IN SERIES COMPONENTS OVER SPECIFIED TIME SPANS AND PERCENT OF SERIES RISING: JANUARY 1963 TO PRESENT--Continued

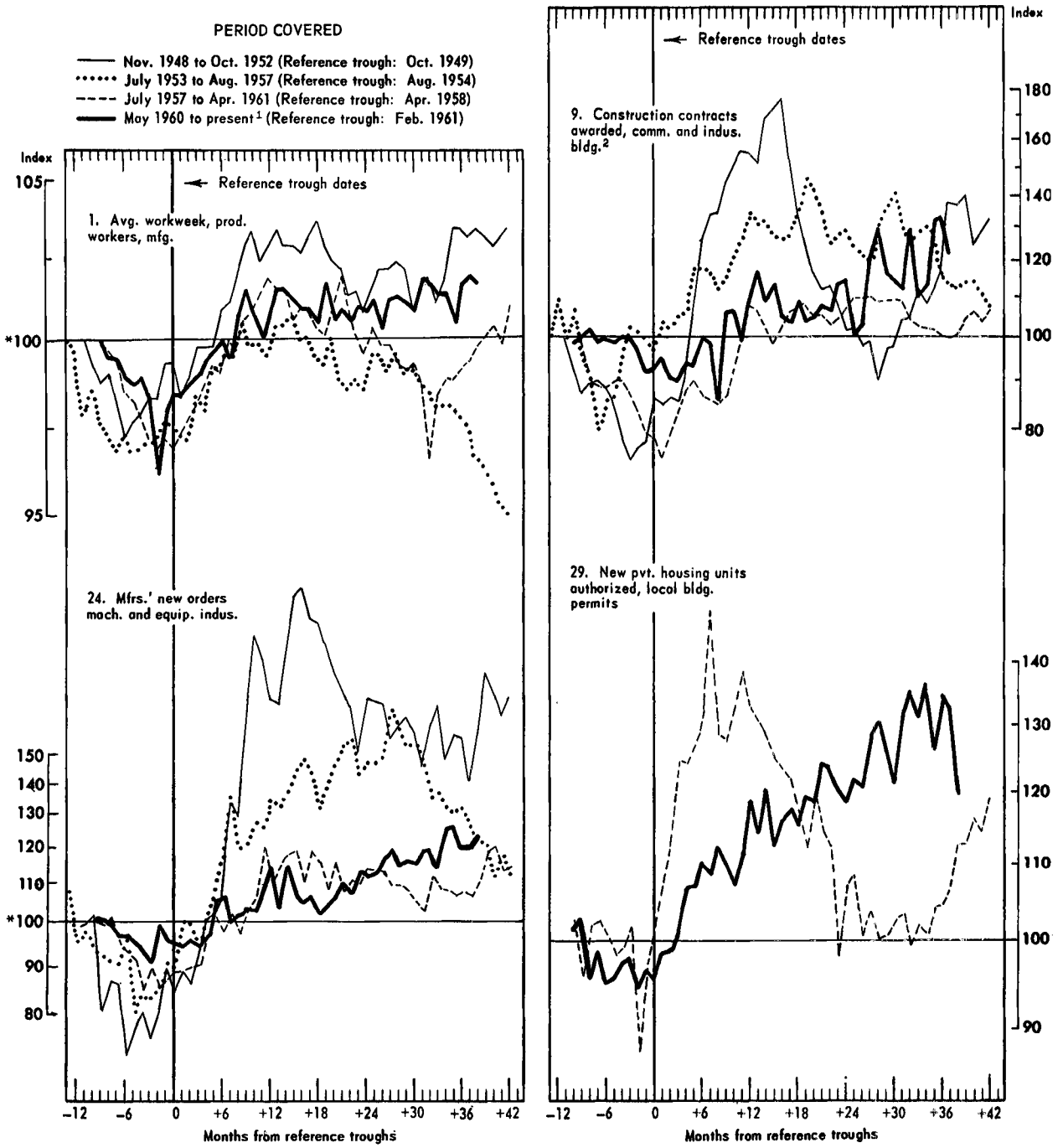
I.--(D58) Index of Wholesale Prices, All Manufacturing

23 manufacturing industries	1-month spans																	5-month spans																	
	1963												1964						1963												1964					
	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Aug-Jan	Sep-Feb	Oct-Mar	Nov-Apr	Dec-May	Jan-Jun	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Jul-Dec	Aug-Jan	Sep-Feb	Oct-Mar	Nov-Apr	Dec-May	Jan-Jun
Percent rising	39	44	37	41	59	61	50	57	59	76	67	63	59	63	46	67			24	30	35	28	46	50	52	52	70	74	72	70	74	72	65	70		
All manufacturing industries	-	-	-	o	+	+	o	o	-	+	-	o	+	-	-	+			-	-	-	-	o	+	+	+	+	+	-	-	+	+	-	+		
DURABLE GOODS																																				
Lumber and wood products	+	-	o	-	o	+	+	+	-	-	+	+	-	+	+	+			-	-	-	-	-	+	+	+	+	+	+	-	-	+	+	+		
Furniture and other household durables	o	-	o	-	-	+	-	+	o	-	-	o	+	+	o	+			-	-	-	-	-	-	-	-	o	+	-	o	+	+	+	+		
Nonmetallic mineral products	-	-	-	-	o	o	-	o	+	o	o	+	-	-	-	+			-	-	-	-	-	-	-	-	o	o	o	+	+	-	-	-		
Iron and steel	-	-	o	+	+	-	o	-	+	+	+	+	-	+	+	+			-	-	-	o	+	+	+	+	+	+	+	+	+	+	+	+		
Nonferrous metals	+	+	+	o	-	+	+	+	+	+	+	+	+	+	+	+			-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Fabricated structural metal products	+	o	-	-	+	o	+	o	+	+	o	o	+	+	-	+			-	-	-	-	+	+	+	+	+	+	+	+	+	+	o	+		
Fabricated nonstructural metal products	-	+	-	o	+	+	+	+	+	+	+	+	+	+	-	-			-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+		
General purpose machinery and equipment	o	-	-	+	+	+	+	-	+	+	+	+	-	+	o	+			+	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+		
Miscellaneous machinery	o	o	+	-	o	o	-	o	+	+	+	o	+	+	-	+			o	+	+	o	o	o	-	-	+	+	+	+	+	+	+	+		
Electrical machinery and equipment	-	-	-	+	+	+	-	+	-	+	o	o	-	-	+	+			-	-	-	-	-	-	-	+	o	-	-	-	-	-	+			
Motor vehicles	o	+	-	-	-	-	+	-	-	+	+	o	-	+	+	+			-	-	+	-	-	-	-	-	-	-	+	+	+	+	+	+		
Miscellaneous products	+	+	-	-	+	+	+	+	+	+	-	-	-	-	-	-			+	+	-	-	-	+	+	+	+	+	+	o	-	-	-	-		
NONDURABLE GOODS																																				
Processed foods	-	-	-	+	+	+	-	-	-	+	+	-	+	-	-	+			-	-	-	-	+	+	+	+	+	-	-	-	+	-	-	-		
Tobacco products and bottled beverages	o	+	+	+	+	+	+	+	o	o	o	+	+	-	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	-	o	+		
Cotton products	-	-	-	-	-	o	o	-	+	+	+	o	-	-	-	-			-	-	-	-	-	-	-	-	o	+	+	+	+	+	+	-		
Wool products	+	+	+	-	-	o	-	+	o	+	+	+	+	+	o	-			+	+	+	+	+	+	-	-	-	+	+	+	+	+	+	+		
Manmade fiber textile products	o	+	+	o	-	o	-	+	+	+	+	+	o	+	+	o			-	-	+	+	-	-	-	-	+	+	+	+	+	+	+	+		
Apparel	-	+	o	o	+	+	+	o	+	+	-	o	+	o	o	+			-	+	+	o	+	+	+	+	+	+	+	+	+	+	+	+		
Pulp, paper and allied products	-	o	-	+	+	+	-	o	-	+	o	o	+	o	-	-			-	-	-	-	+	+	+	+	+	+	-	-	+	+	-	-		
Chemicals and allied products	-	-	o	-	+	-	o	o	+	o	o	o	-	+	o	+			-	-	-	-	-	-	-	-	+	o	+	+	-	o	o	+		
Petroleum products, refined	-	o	+	+	+	-	-	-	-	-	-	+	+	-	-	-			-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-		
Rubber and rubber products	+	-	-	o	-	-	+	+	-	+	o	-	+	o	+	-			+	+	+	+	-	-	-	-	-	+	+	+	+	+	+	-		
Hides, skins, leather, and leather products	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	+			-	-	-	-	-	-	-	-	-	-	-	-	-	+	o	+		

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

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.



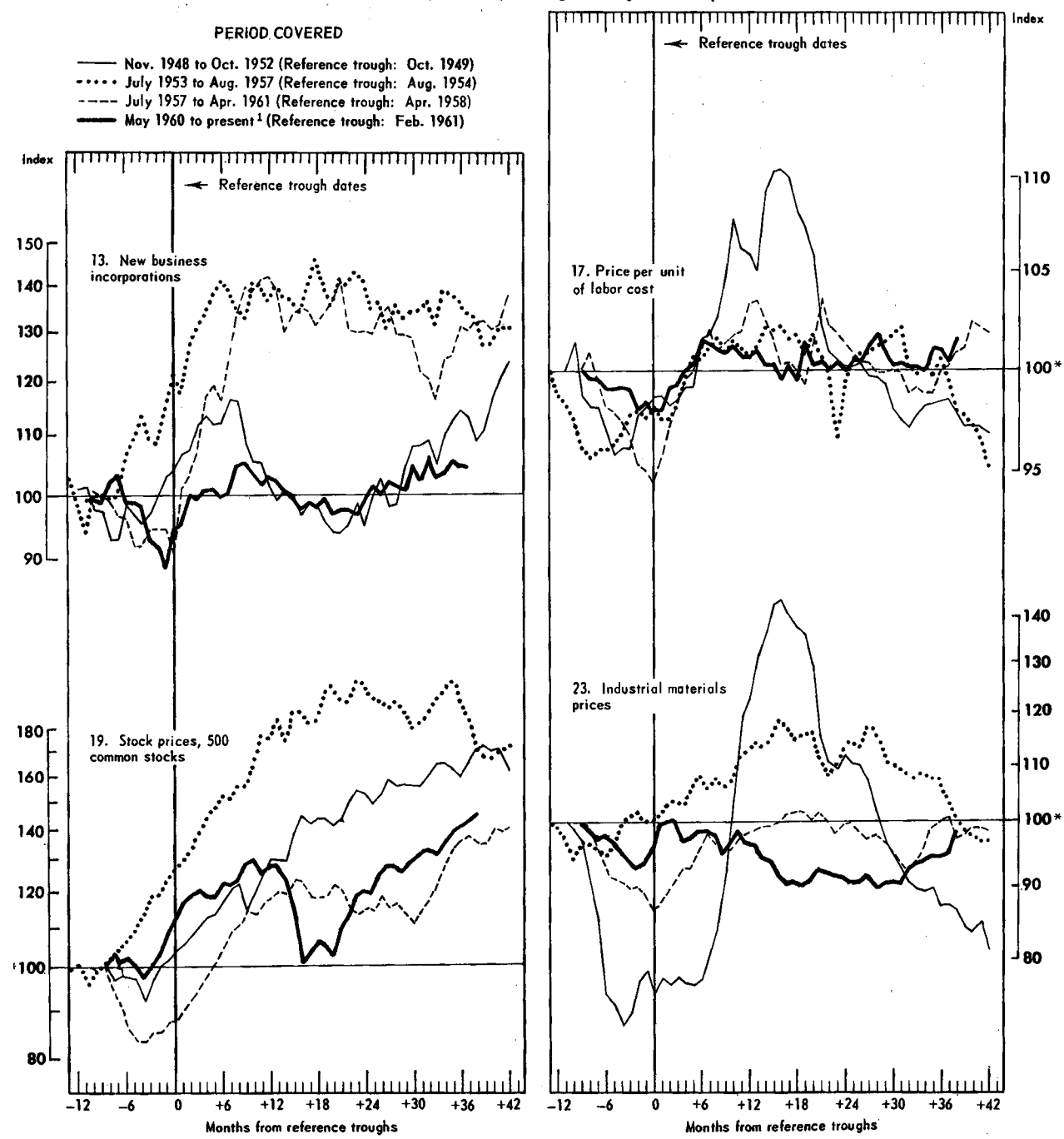
*Reference peak level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the reference peak is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the reference peak month is set at "100". For quarterly series, the reference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

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

[2]For 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.

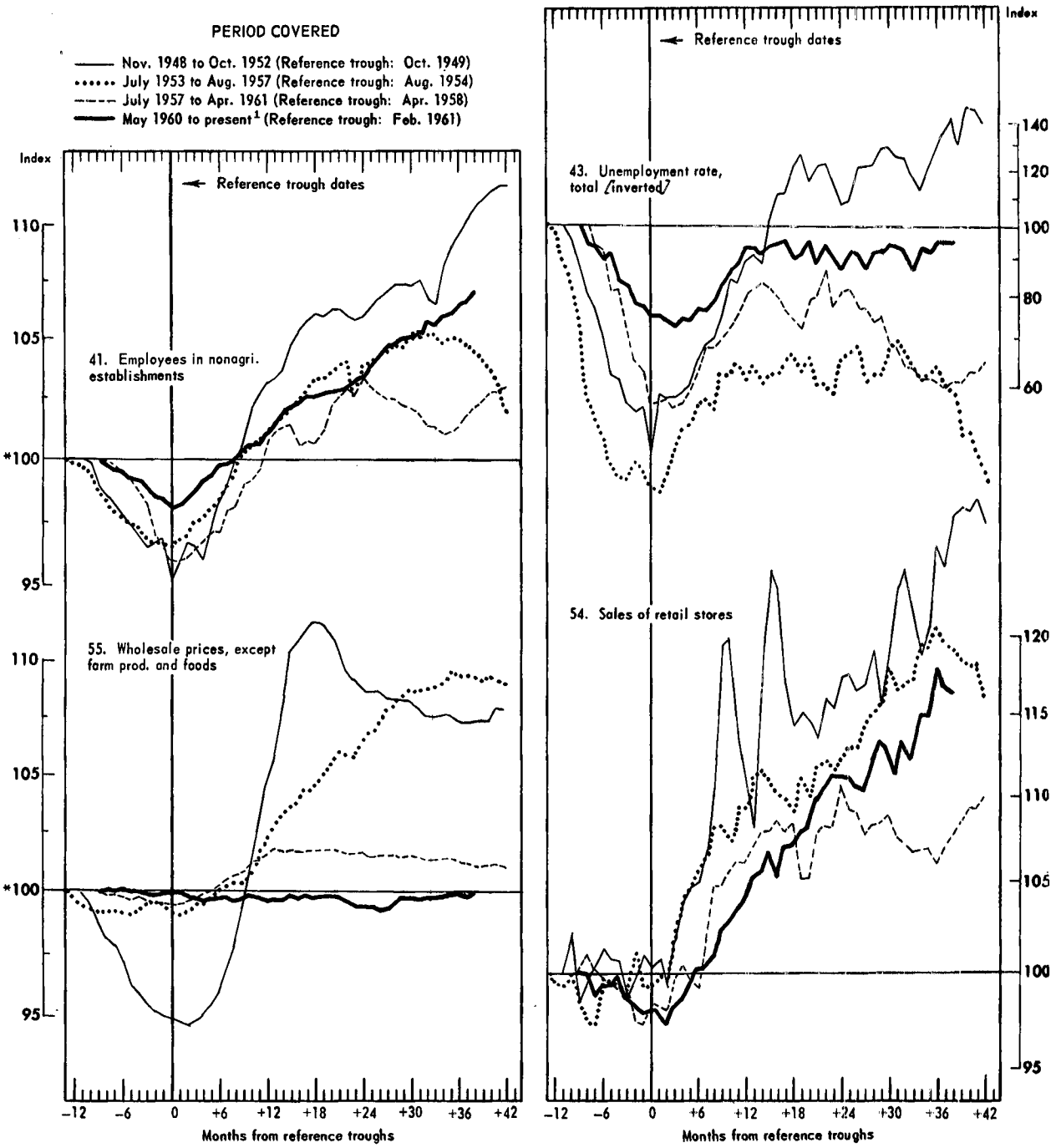


*Reference peak level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the reference peak is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the reference peak month is set at "100". For quarterly series, the reference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

[1]See 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.

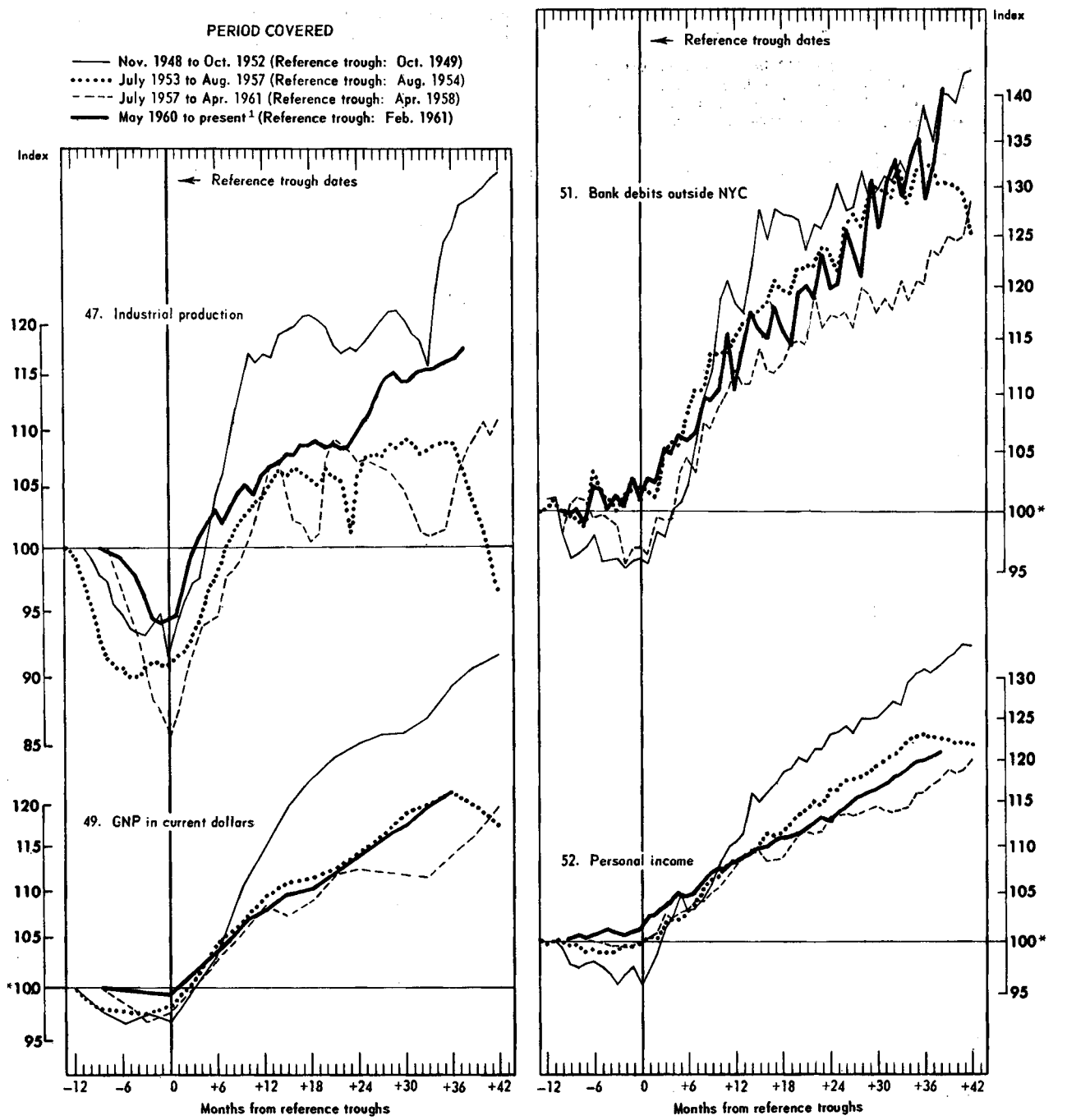


*Reference peak level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the reference peak is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the reference peak month is set at "100". For quarterly series, the reference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

[1]See 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.

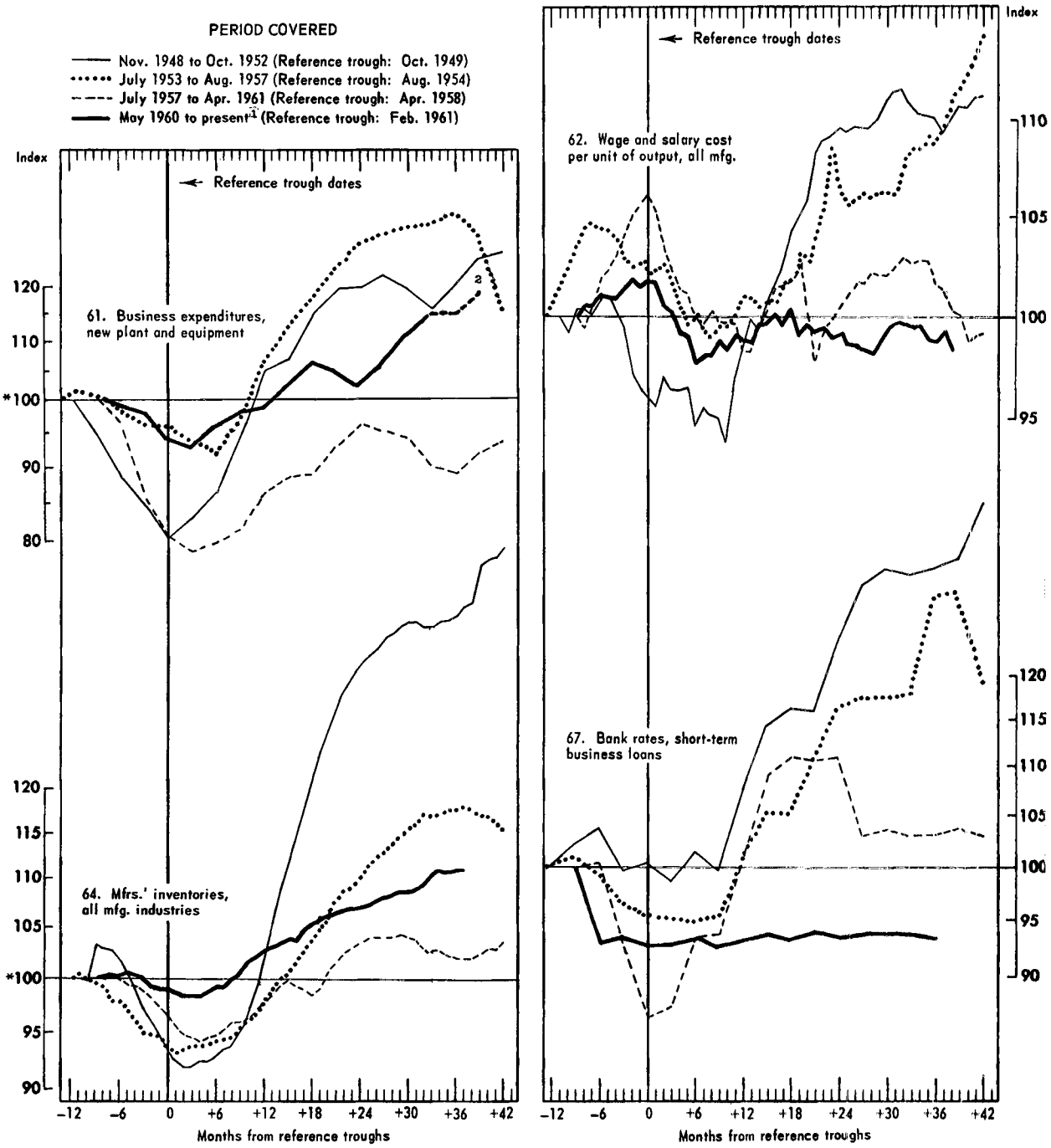


*Reference peak level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the reference peak is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the reference peak month is set at "100". For quarterly series, the reference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

[1]See 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.



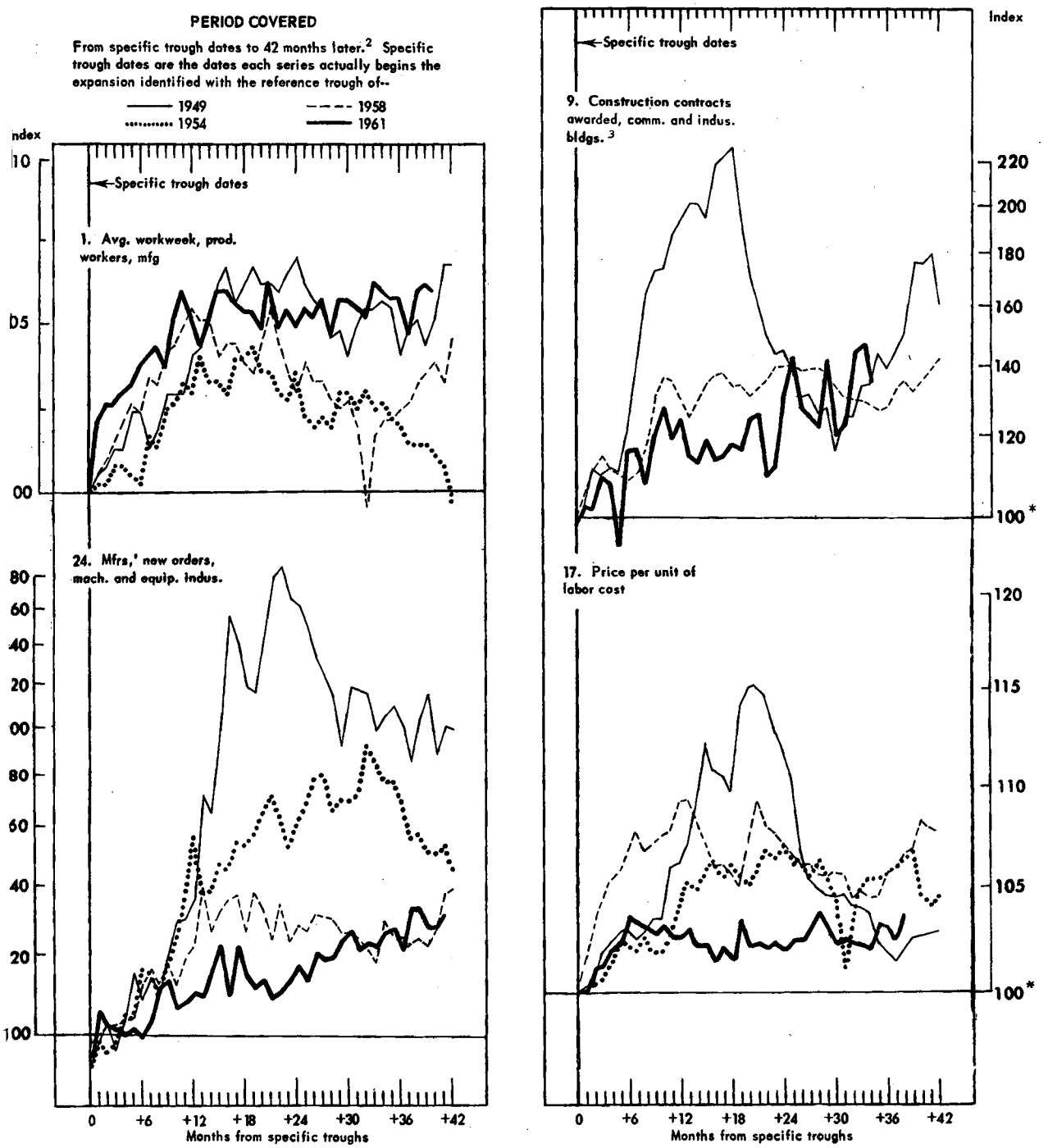
*Reference peak level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the reference peak is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the reference peak month is set at "100". For quarterly series, the reference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

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

[2]Last 2 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 date[1] of each series for each expansion.

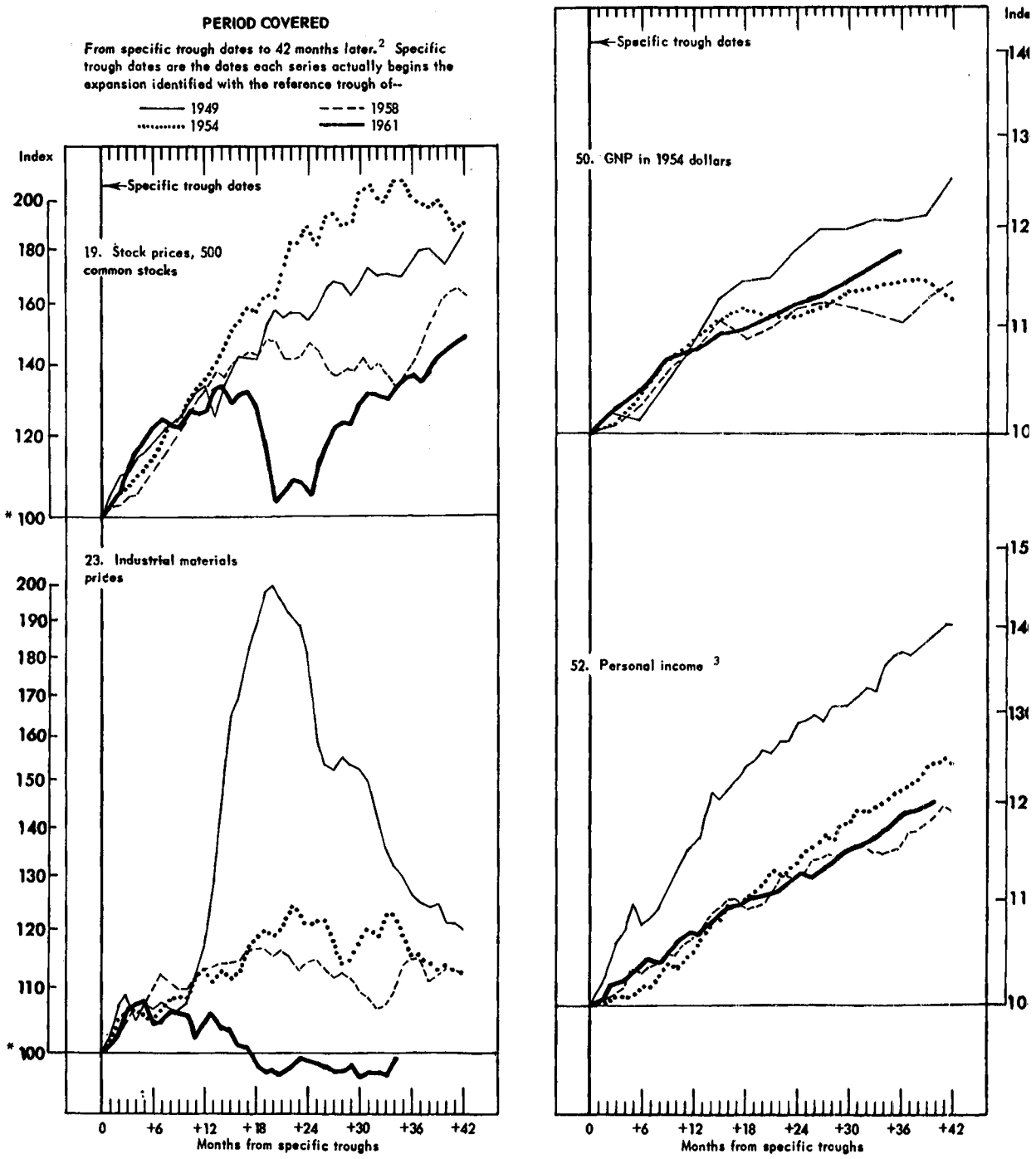


*Specific trough level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the specific trough is set at "100". For series with an MCD of "3" or more, the average of the 3 months centered on the specific trough month is set at "100". For quarterly series, the specific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

[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 date[1] of each series for each expansion.

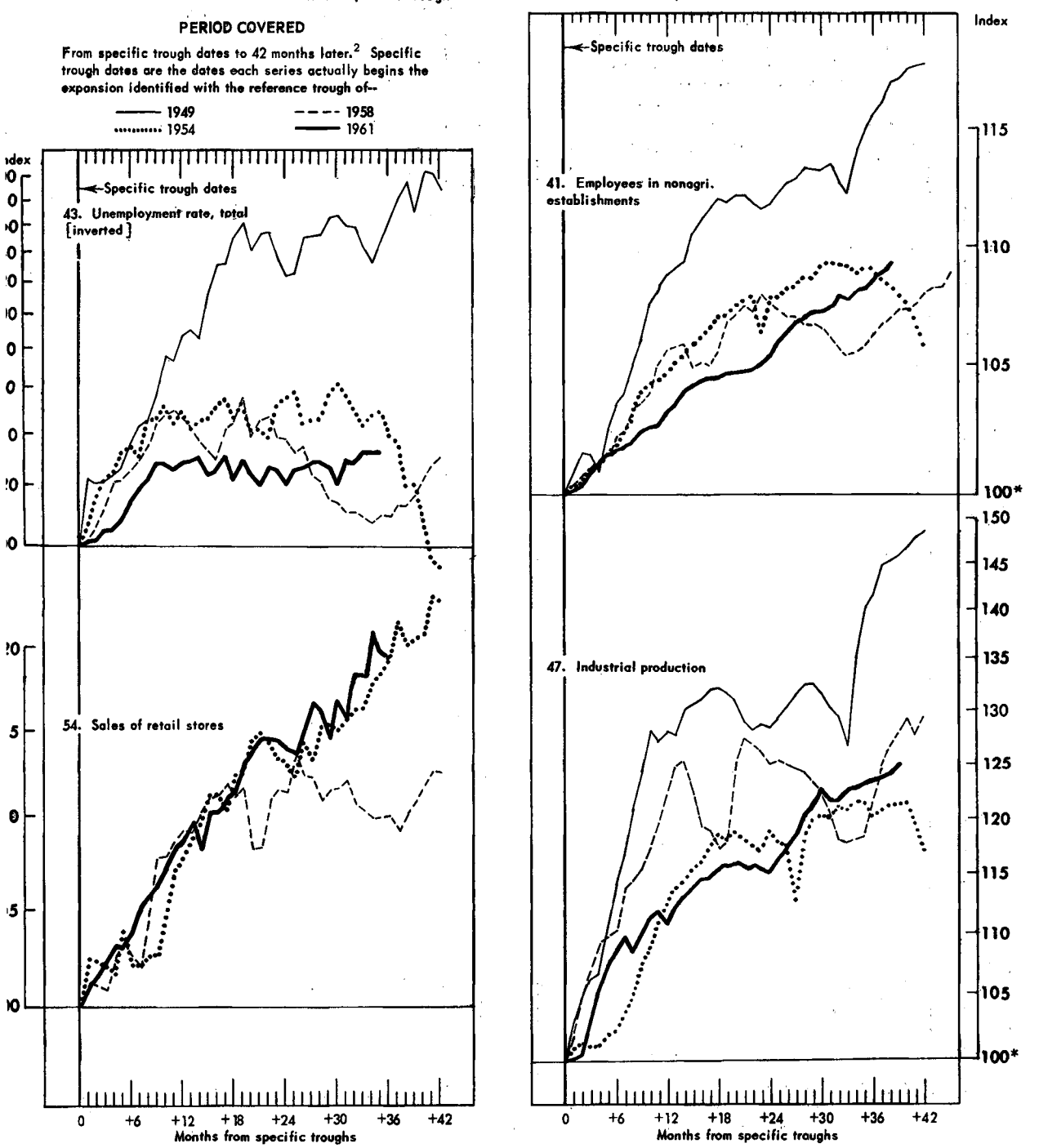


*Specific trough level. For series with a "months for cyclical dominance" (MCD) of "1" or "2", the figure for the specific trough is set at "100". For series w an MCD of "3" or more, the average of the 3 months centered on the specific trough month is set at "100". For quarterly series, the specific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

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 date[1] 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 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 "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.

Table 7.--PERCENT OF REFERENCE PEAK LEVELS AS MEASURED AT DESIGNATED MONTHS AFTER THE REFERENCE TROUGH DATE 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, 62, 64, and 66), the figure for the reference peak month is used as the base. For series with an MCD of "3" or mo (series 2, 3, 6, 7, 9, 13, 14, 24, 29, and 51), the average of the 3 months centered on the reference peak month used as the base. The base for quarterly series (series 16, 49, 50, 61, and 67) is the reference peak quarter. S 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 196
NBER LEADING INDICATORS										
1. Average workweek of production workers, manufacturing	38	NA	95.6	82.3	72.6	102.8	103.3	96.6	99.7	101
2. Accession rate, manufacturing	37	21.8	25.5	28.0	57.4	138.0	113.3	67.8	114.5	102
3. Layoff rate, manufacturing (inverted)	37	11.9	24.6	47.9	61.5	127.1	229.2	58.3	86.4	141
6. Value of manufacturers' new orders, durable goods industries	38	192.4	105.0	42.1	62.9	213.9	160.1	106.7	114.3	135
7. New private nonfarm dwelling units started	38	153.2	124.4	38.9	52.0	271.3	135.9	98.2	117.8	122
9. Construction contracts awarded for commercial and industrial bldgs., floor space[2]	37	29.0	97.0	39.5	34.6	208.0	137.1	113.5	99.9	122
13. Number of new business incorporations	37	59.2	101.3	100.5	66.4	79.2	113.0	133.5	131.1	104
14. Current liabilities of bus. failures (inv.)	38	18.0	104.3	55.7	NA	120.7	116.3	68.2	56.1	91
16. Corporate profits after taxes (Q)	36	56.0	78.8	9.4	41.2	197.7	88.6	115.3	95.6	137
17. Price per unit of labor cost index	38	NA	NA	NA	NA	NA	97.9	98.0	100.8	101
19. Index of stock prices, 500 common stocks	38	104.8	195.4	122.7	46.8	62.8	170.3	169.8	135.3	144
23. Index of industrial materials prices	38	60.6	83.0	62.2	74.5	104.1	86.4	100.6	97.3	98
24. Value of manufacturers' new orders, machinery and equipment industries	38	NA	NA	NA	NA	NA	155.7	121.4	110.4	123
29. Index of new private housing units authorized by local building permits	38	NA	NA	NA	NA	NA	NA	NA	112.2	119
NBER ROUGHLY COINCIDENT INDICATORS										
41. Number of employees in nonagricultural establishments	38	79.8	94.0	80.8	88.7	117.5	110.8	104.6	102.1	107
43. Unemployment rate, total (inverted)	38	NA	NA	NA	NA	NA	141.0	57.8	60.9	96
47. Index of industrial production	38	98.9	102.8	81.5	88.9	137.8	132.6	105.4	108.5	117
49. Gross national product in current dollars(Q)	36	NA	113.6	90.1	74.0	130.1	134.9	121.6	114.3	120
50. Gross national product in 1954 dollars (Q)	36	NA	116.1	98.7	92.1	NA	121.9	110.1	107.9	114
51. Bank debits outside NYC, 343 centers	38	94.2	126.4	93.1	59.5	128.8	140.3	130.0	123.5	141
52. Personal income	38	NA	114.2	90.9	75.1	132.1	131.4	122.3	117.5	120
54. Sales of retail stores	38	106.3	105.9	91.9	84.2	138.9	127.8	119.1	107.7	116
55. Index of wholesale prices, all commodities other than farm products and foods	38	63.1	87.5	79.7	86.2	105.3	107.1	109.2	101.1	99
NBER LAGGING INDICATORS										
61. Business expenditures on new plant and equipment, total (Q):[3]										
a	33	51.3	96.2	75.7	47.8	NA	115.2	131.8	39.7	113
b	39	48.0	90.8	54.3	55.4	NA	125.1	128.9	91.9	117
62. Index of labor cost per unit of output, total manufacturing	38	77.8	91.5	86.4	81.7	107.5	110.0	111.3	100.4	98
64. Manufacturers' inventories, book value	37	NA	NA	NA	80.1	NA	143.0	138.0	102.1	110
66. Consumer installment debt	37	NA	NA	NA	98.8	160.0	NA	151.8	127.7	133
67. Bank rates on short-term business loans, 19 cities (Q)	36	78.9	89.0	93.8	57.3	NA	133.0	129.5	102.9	93

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

NA Not available.

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

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

[3]Comparisons are made for this series on the basis of (a) the period 33 months after the February 1961 trough (actu expenditures) and (b) the period 39 months after the same period (anticipated expenditures for 2nd 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

r 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 reference 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										
. Average workweek of production workers, manufacturing	38	+1.3	+4.6	-16.1	+7.7	+17.8	+4.1	-1.0	+3.1	+3.0
. Accession rate, manufacturing	37	NA	+18.8	-61.7	+40.2	+54.5	+27.6	-6.6	+24.8	-5.0
Layoff rate, manufacturing (inverted)	37	NA	-20.6	-32.4	+66.7	+156.3	+241.7	-9.7	+45.5	+60.8
. Value of manufacturers' new orders, durable goods industries	38	+172.6	-6.3	-57.9	NA	NA	+84.8	+19.1	+29.6	+44.7
. New private nonfarm dwelling units started	38	+56.5	+25.7	-62.6	NA	+188.8	-5.6	-17.8	+22.8	+23.1
. Construction contracts awarded for commercial and industrial bldgs., floor space[2]	37	+6.5	+39.7	-54.5	+188.9	NA	+58.9	+17.1	+27.1	+31.1
. Number of new business incorporations	37	-18.1	+36.8	-3.2	-16.1	-8.0	+8.1	+13.0	+37.3	+12.2
.. Current liabilities of bus. failures (inv.)	38	+6.6	+15.7	-39.4	NA	+64.1	-0.8	-28.4	-25.4	-6.0
). Corporate profits after taxes (Q)	36	NA	+46.4	-87.2	+16.7	NA	+13.3	+35.3	+26.3	+62.0
'. Price per unit of labor cost index	38	NA	NA	NA	NA	NA	-0.9	-0.2	+6.5	+3.6
'. Index of stock prices, 500 common stocks	38	+41.7	+87.6	-6.3	+126.2	0.0	+63.9	+34.2	+55.0	+28.6
. Index of industrial materials prices	38	+44.7	-1.1	-36.2	+79.6	+53.9	+15.0	+0.6	+12.0	+3.1
.. Value of manufacturers' new orders, machinery and equipment industries	38	NA	NA	NA	NA	NA	+77.6	+30.4	+25.0	+29.7
'. Index of new private housing units authorized by local building permits	38	NA	NA	NA	NA	NA	-5.6	-24.2	+10.3	+23.2
NBER ROUGHLY COINCIDENT INDICATORS										
Number of employees in nonagricultural establishments	38	+15.9	+8.1	-15.9	+29.7	+31.1	+16.8	+8.2	+6.5	+9.2
. Unemployment rate, total (inverted)	38	NA	NA	NA	+72.9	NA	+194.8	+33.6	+7.2	+27.8
'. Index of industrial production	38	+44.8	+25.2	-13.4	+84.4	+101.7	+44.9	+15.9	+26.3	+25.0
9. Gross national product in current dollars(Q)	36	+22.3	+16.3	-10.2	+46.8	+47.8	+39.5	+23.8	+17.2	+21.5
). Gross national product in 1954 dollars (Q)	36	+24.9	+16.4	-3.5	+27.8	NA	+23.7	+13.5	+12.2	+16.7
1. Bank debits outside NYC, 343 centers	38	+21.5	+30.5	-14.3	+55.9	+54.2	+46.1	+28.0	+27.5	+38.1
2. Personal income	38	+35.5	+14.2	-9.8	+52.6	+48.3	+37.4	+22.6	+17.8	+19.2
4. Sales of retail stores	38	+13.3	+5.9	-8.1	+59.9	+70.4	+27.8	+19.9	+9.5	+18.3
5. Index of wholesale prices, all commodities other than farm products and foods	38	-0.2	-4.2	-14.4	+19.0	+11.5	+12.8	+10.1	+1.6	0.0
NBER LAGGING INDICATORS										
1. Business expenditures on new plant and equipment, total (Q):[3]										
a	33	+49.5	+37.9	-13.9	+178.6	NA	+44.0	+38.0	+11.6	+21.7
b	39	+39.8	+30.2	-38.2	+223.1	NA	+56.3	+35.0	+14.4	+26.1
2. Index of labor cost per unit of output, total manufacturing	38	-13.6	-11.0	-12.3	+11.4	+3.6	+14.3	+9.1	-5.5	-3.4
4. Manufacturers' inventories, book value	37	NA	NA	NA	+35.2	NA	+53.2	+26.3	+6.0	+12.1
6. Consumer installment debt	37	NA	NA	NA	+106.6	+71.7	+72.0	+46.8	+26.7	+29.2
7. Bank rates on short-term business loans, 19 cities (Q)	36	-26.8	+1.4	-2.5	-26.4	NA	+32.5	+35.7	+19.2	+0.4

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

NA Not available.

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

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

[3]Comparisons are made for this series on the basis of (a) the period 33 months after the February 1961 trough (actual xpenditures) and (b) the period 39 months after the same period (anticipated expenditures for 2nd 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, a 54), the figure for the specific peak (trough) month is used as the base. For series with an MCD of "3" or mo (series 9, 13, 24, and 29), the average of the 3 months centered on the specific peak (trough) month is used as t base. The base for quarterly series (series 49 and 50) is the specific peak (trough) quarter. See also MCD footno 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
NBER LEADING INDICATORS		Percent of specific peak prior to reference expansion beginning in year shown								
1. Average workweek of production workers, manufacturing	40	NA	*97.8	*100.0	70.1	99.3	NSC	*99.8	*99.0	100
9. Construction contracts awarded for commercial and industrial bldgs., floor space[2]	34	*45.2	*114.6	*108.2	19.3	186.9	42.3	NSC	87.8	[3]125.
13. Number of new business incorporations	38	*86.3	*106.8	*110.5	*70.4	36.6	67.4	NSC	*138.1	97.
17. Price per unit of labor cost index	38	NA	NA	NA	NA	NA	*107.2	*90.3	*101.0	98.
19. Index of stock prices, 500 common stocks	42	*99.2	150.7	NSC	41.7	54.3	154.8	*186.3	*122.5	133.
23. Index of industrial materials prices	40	*71.3	*100.8	*76.6	74.7	102.7	*135.1	*65.1	*92.9	96.
24. Value of manufacturers' new orders, machinery and equipment industries	41	NA	NA	NA	NA	NA	*211.6	*106.2	*99.2	120.
29. Index of new private housing units authorized by local building permits	40	NA	NA	NA	NA	NA	NA	NA	*96.5	92.
NBER ROUGHLY COINCIDENT INDICATORS										
41. Number of employees in nonagricultural establishments	38	*91.3	*96.6	*105.6	88.7	116.9	110.7	*105.4	*103.0	106.
43. Unemployment rate, total (inverted)	35	NA	NA	NA	NA	160.4	NA	*67.5	*78.2	90.
47. Index of industrial production	39	*112.3	*108.2	*116.2	81.3	137.8	130.9	*109.2	*109.0	115.
49. Gross national product in current dollars(Q)	36	NA	NSC	NSC	74.0	123.9	128.4	119.9	*112.4	120.
50. Gross national product in 1954 dollars (Q)	36	NA	NSC	NSC	85.3	NA	117.5	109.9	*107.6	114.
52. Personal income	40	NA	*111.1	*112.9	83.3	131.5	132.6	122.3	117.2	[3]119.
53. Labor income in mining, mfg., and construc.	38	NA	NA	NA	71.6	150.0	142.5	*116.1	*108.3	116.
54. Sales of retail stores	36	102.9	NSC	NSC	79.5	127.4	NSC	113.3	*109.4	114.
NBER LEADING INDICATORS		Percent change from specific trough related to reference expansion beginning in year shown								
1. Average workweek of production workers, manufacturing	40	*+15.4	*+7.9	*+4.5	+3.6	+19.0	+4.9	*+4.1	*+5.2	+5.
9. Construction contracts awarded for commercial and industrial bldgs., floor space[2]	34	*+118.5	*+82.6	*+40.1	+99.6	NA	+35.6	NSC	+28.3	[3]+34.
13. Number of new business incorporations	38	*+23.6	*+42.9	*+20.5	*+12.8	-54.1	+13.9	NSC	*+51.7	+13.
17. Price per unit of labor cost index	38	NA	NA	NA	NA	NA	*+15.2	*+6.8	*+9.4	+3.
19. Index of stock prices, 500 common stocks	42	*+46.2	+77.0	NSC	+173.4	-0.6	+86.4	*+109.6	*+48.1	+48.
23. Index of industrial materials prices	40	*+75.0	*+36.7	*+7.3	+101.0	+58.9	*+100.3	*+24.7	*+17.4	+5.
24. Value of manufacturers' new orders, machinery and equipment industries	41	NA	NA	NA	NA	NA	*+180.1	*+89.9	*+36.7	+30.
29. Index of new private housing units authorized by local building permits	40	NA	NA	NA	NA	NA	NA	NA	*+56.3	+24.
NBER ROUGHLY COINCIDENT INDICATORS										
41. Number of employees in nonagricultural establishments	38	*+32.6	*+12.0	*+11.5	+29.7	+31.1	+16.8	*+9.1	*+7.6	+9
43. Unemployment rate, total (inverted)	35	NA	NA	NA	+64.4	+192.4	+146.1	*+61.9	*+54.2	+31.
47. Index of industrial production	39	*+66.1	*+31.7	*+24.9	+74.3	+103.8	+45.4	*+21.3	*+27.2	+25.
49. Gross national product in current dollars(Q)	36	NA	NSC	NSC	+46.8	+47.8	+33.1	+23.2	*+16.4	+21.
50. Gross national product in 1954 dollars (Q)	36	NA	NSC	NSC	+26.6	NA	+20.3	+14.0	*+12.5	+16.
52. Personal income	40	*+32.8	*+15.3	*+15.9	+69.3	+50.5	+39.0	+23.8	+18.5	[3]+19.
53. Labor income in mining, mfg., and construc.	38	NA	NA	NA	+101.4	+105.1	+63.0	*+25.6	*+17.6	+22.
54. Sales of retail stores	36	+20.7	NSC	NSC	+54.9	+57.7	NSC	+19.1	*+13.7	+19.

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 mon indicated in the first column. The figure shown represents the change to the specific peak and the period covered shorter than that of the current expansion (col. 1). See appendix B for specific peak dates.

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

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

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

Technical Papers and Background Materials

Census Trading-Day Adjustment Method

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INTRODUCTION

An important source of month-to-month variation n many monthly economic time series is trading-lay variation.[1] In activities such as production, ales, and shipments in domestic and foreign trade, he monthly rate of activity is related to the num-ıer of working or trading days in the month. A amiliar example is retail sales where more sales .re made on Fridays and Saturdays than on other lays; therefore, months that contain five Fridays nd/or Saturdays have higher sales than months vith four.

By making a trading-day adjustment, the month-o-month variation in seasonally adjusted data can ıe reduced and the trend-cycle component revealed nore clearly.[2]

The importance of trading-day variation relative o other types of month-to-month variation is shown n table 1 for seven series adjusted for trading-day ariation by the Bureau of the Census. In each eries, trading-day variation is several times as arge as the monthly variation in the trend-cycle omponent. For imports, trading-day variation is onsiderably more important than seasonal varia-ion, and for wholesale sales, those two compo-ents are almost equal. In both cases, about half he total variation is accounted for by trading-day ariation. Trading-day variation is of prime con-ern when attempting to assess the underlying cy-lical movement over short spans of 1 or 2 months.)ver longer spans, trading-day variation is of less importance since it frequently reverses direction over time and does not cumulate as do the seasonal and cyclical movements.

Techniques for making trading-day adjustments in the past have often relied heavily upon observation or a priori information concerning the daily activity, referred to as external evidence. The customary practice has been to establish a rate of activity for each day of the week. Such a practice is usually limited by the available information and the cost of obtaining it. Usually, some fairly simple pattern of daily activity is assumed after examining the available information which often consists only of the weekly schedule of hours of work. For example, in a manufacturing activity the assumption might be a 5-day week with the same rate of activity for each weekday and zero for Saturday and Sunday.

The variation actually found in monthly economic series usually does not arise solely from one simple pattern of daily activity, but from a mixture of many factors related to the numbers of each day of the week in the month (i.e., to the calendar composition of the month). These sources of variation include the following: Different rates of daily activity in various processes, some of which are in continuous operation seven days a week; practices

[1] The term "trading-day variation" can be con-idered interchangeable with the terms "working-lay variation" and "calendar variation." Earlier tudies that have considered estimating trading-day ariation from the monthly time series are dis-ussed by Marris in reference 2 (see end of paper). The Eisenpress method (reference 1) is compared vith the Census method in reference 5.

[2] A familiarity with seasonal-adjustment tech-ıiques is assumed. At times reference is made to pecific measures provided by the Census Method I ratio-to-moving-average method of seasonal ad-ustment. Details concerning Census methods can ıe found in references 3 and 4 (see end of paper).

NOTE: Several people have made substantial contributions to the recent development of trading-day adjustment techniques. The work at the Bureau of the Census was carried on under the supervision and encouragement of Julius Shiskin. John Musgrave developed much of the mathematical formulation and made many other valuable contributions. Gerald Donahoe advised and assisted in the application of the method to Census series. Morton Somer, Norman Bakka, Richard Bartlett, and Barry Beckman provided programing and other assistance. Marie Wann and Geraldine Censky provided editorial review.

Much of the work draws upon Stephen Marris' earlier work at the Organization for Economic Co-operation and Development. James Nettles and David Staiger of the Federal Reserve Board made helpful suggestions.

Table 1.--PERCENT DISTRIBUTION OF COMPONENTS OF MONTH-TO-MONTH VARIATION FOR INDICATED TIME PERIODS AND SELECTED BUSINESS ACTIVITY

(Percent)

Business activity	Time period	Components of variation				
		Total	Trading day	Seasonal	Irregular	Trend-cycle
Retail sales	1953-62	100.0	7.0	[1]91.8	0.8	0.4
Wholesale sales	1956-62	100.0	47.2	49.4	2.5	0.9
Mfrs.' shipments	1953-62	100.0	20.1	71.9	5.6	2.5
Mfrs.' new orders	1953-62	100.0	19.3	62.6	14.3	3.8
U.S. exports	1953-63	100.0	18.3	63.1	15.8	2.8
U.S. imports	1953-63	100.0	50.3	38.2	10.0	1.5
Building permits	1954-62	100.0	21.2	69.1	7.8	1.9

[1] Includes a slight contribution from variation in sales of selected kinds of business in March and April because of shifting date of Easter.

Reference 5, appendix C (see end of paper for citation) will show the derivation of these measures from Census Method II summary measures of monthly change, $\bar{O}$, $\bar{S}$, $\bar{I}$, $\bar{C}$.

concerning overtime work; contracts and schedules specifying a fixed amount of activity each month regardless of the calendar composition; and bookkeeping practices that modify actual variations. In many instances the effect of these factors is to reduce the variation that might be expected after cursory examination of external evidence of the daily rate of activity. Although the variations arising from this mixture of factors often cannot be estimated from external evidence, their net effect can be estimated from the monthly data using techniques that have been developed and tested at the Bureau of the Census and elsewhere.[3] Such techniques, in general, yield better trading-day and seasonal adjustments and are preferable to earlier techniques.

A regression routine, described briefly below, is being added to the Census Method II seasonal adjustment program. This routine (1) tests for significant trading-day variation in the monthly data, (2) adjusts the original observations, if significant variation exists, and (3) develops seasonal factors and other Census Method II measures. More complete information will be available in forthcoming specifications for new seasonal programs.

The regression routine provides estimates of seven daily weights. In the absence of a complex of various factors, these estimated daily weights correspond to the actual daily rates of activity. When there are various factors at work, the estimates cannot be interpreted as representing actual daily rates of activity, but only as statistical weights that represent the net effect of several variables.

[3] Notably at the Organization for Economic Cooperation and Development. See reference 2 at end of paper.

DEFINITION OF TRADING-DAY VARIATION

In adjusting for trading-day variation, two type of variation in the calendar are often considered The first is differences in the length of the month i.e., differences between 28-, 29-, 30- and 31 day months. On average, the longer months tend to have a higher volume of activity than the shorter months. Variations in the volume of activity arising from months of different length, however, can not be statistically separated from seasonal influences that also cause differences between months Length-of-month variation, therefore, is defined and estimated as part of the seasonal component.

The second type of variation is referred to a calendar composition variation. The number Mondays, Tuesdays, etc., in a given month varies from year to year. For example, a 31-day month in 1 year may contain five Fridays, Saturdays, and Sundays and four of each of the other four days the week, while in another year it may contain five Mondays, Tuesdays, and Wednesdays and four of the other days. If some days are more important the economic activity than others, this variation gives rise to variation in the monthly volume activity. Such variation, which is not included the definition or estimation of the seasonal variation, can be estimated statistically by relating the monthly economic series to the calendar. Our definition of trading-day variation is, therefore that it is the variation in the monthly series related to the calendar composition variation.

METHOD OF ESTIMATING TRADING-DAY VARIATION

If no allowance is made for trading-day variation prior to seasonal adjustment, the trading-day variation is left as a residual in the irregular component. Therefore, the sequence of steps in estimating trading-day variation in the Census Method II seasonal adjustment program is (1) to separate the trading-day and other irregular variations from the seasonal and trend-cycle, seasonally adjust the original series; (2) from the combined irregular and trading-day variations, estimate the trading day variation in terms of seven daily weights (see below); (3) from the seven daily weights, derive monthly trading-day adjustment factors and adjust the original series for trading-day variation; and (4) using the trading-day adjusted data, make a second seasonal adjustment.[4]

The seven daily weights are estimated by regressing the irregular component upon seven independent variables, representing the number of times each day of the week occurs in a particular month as follows:

$$I_i = \frac{X_{1i} B_1 + X_{2i} B_2 + \ldots X_{7i} B_7 + E_i}{N_i}$$

where I_i is the estimate of the irregular compone for month i that includes both the "true" irregul

[4] There are several possible variations upon the sequence and upon the regression form used to estimate the trading-day variation. (See reference at end of paper.) For example, it is possible incorporate the trading-day estimation with a simultaneous rather than sequential Method II solution for the seasonal and trend-cycle components.

ariations and the trading-day variations. The ıean of I_i is 1.

N_i is 31, 30, or 28.25 depending upon whether ıonth i is a 31- or 30-day month or February;

X_{ji} is the number of times the day-of-the-week occurs in month i;

B_j's are seven daily weights, totaling 7;

E_i is the "true" irregular component for month i.

The method yields estimates, b_j, of seven daily eights, B_j, and estimates of the standard errors f the b_j. Thus, one may perform a standard t-test) determine whether a weight is significantly dif- :rent from any specified value and an F-test to etermine the significance of the regression (i.e., ıe existence of significant trading-day variation in ıe irregular).

INTERPRETATION OF DAILY WEIGHTS

The regression routine is designed to provide even daily weights that total "7". A 5-day week here the weekdays are of equal importance and aturday and Sunday are "0" is expressed as Mon., .., Fri. = 1.4; Sat., Sun. = 0.0. A series with o trading-day variation would yield equal weights or all seven days, Mon., ..., Sun. = 1.0. Alter- ative formulations, such as expressing each day f the week as a percent of the total for all days of ıe week can also be used.

There are two general types of variation which ıodify the actual daily rates and create a complex f variations. The first type arises from economic ransactions that are independent of calendar com- osition.[5]

When a portion of a series represents activity ıdependent of calendar composition, the estimated aily weights can be considered as composed of wo parts, one part consisting of equal weights for ach day and the other having differential weights. onsider the following hypothetical set of daily eights:

	Mon.	Tues	Wed.	Thurs	Fri.	Sat.	Sun.	Total of weights	Per- cent
1)	1.00	1.10	1.20	1.30	1.40	0.50	0.50	7.00	100

hese weights (1) can be separated into two parts:

1a)	.50	.60	.70	.80	.90	0.0	0.0	3.5	50
1b)	.50	.50	.50	.50	.50	.50	.50	3.5	50

art (1a) reflects the part of the series that varies ith the number of different type days and accounts or 50 percent of the series, and (1b) is independent f calendar composition and accounts for 50 per- ent of the total series.[6]

[5] Some transactions that are independent of calen- ar composition are also independent of the length f the month. For example, monthly rental pay- ıents are independent of both calendar composition nd the length of the month while the consumption f heating fuel is more or less independent of cal- ndar composition but not length of the month.

[6] Although it is useful for illustration to separate he hypothetical set of daily weights into two parts, (1a) and (1b), such a technique has limited use- fulness. From information contained in monthly data no reliable conclusions can be made concern- ing the actual daily rates of activity. For example, the activity represented by the (1b) Sunday weight may not actually take place on Sunday, but be dis- tributed over the other days. What does corre- spond is the variation in the monthly series and the trading-day adjustment factors derived from the daily weights.

The second general type of variation that modi- fied the actual daily rates are the variations in- duced by bookkeeping practices. Suppose a firm that operates on a 6-day week (Monday, ..., Satur- day = 1.17, Sunday = 0.0) follows the practice of closing its books for the month on Friday whenever the month ends on Saturday (which occurs only about twice a year) and includes the Saturday ac- tivity in the following month. This practice would apply to 31-day months beginning on Thursday and 30-day months beginning on Friday. For such months, reported sales would be decreased by al- most 4 percent. Conversely, reported sales are increased by almost 4 percent for the following months which always begin on Sunday. Reporting sales in this manner results in a monthly series which yields a weight pattern of Monday, ..., Fri- day = 1.17, Saturday = 0.0 and Sunday = 1.17 rather than the actual daily rate which had a zero Sunday.[7]

Another bookkeeping practice, followed by some firms, that affects trading-day variation is the plan known as the 4-4-5 plan where the first and second months of each quarter always contain exactly four weeks and the third month five weeks. This prac- tice eliminates trading-day variation since each period has exactly the same number of each type of day of the week as the corresponding periods in earlier years. When some activity is reported under such plans and other is reported on a strict calendar month basis, the combined variation can be represented with the above example where the (1b) weights represent the portion of the series that contains no trading-day variation.

There are three types of possible variation re- lated to the calendar which are not included in the formulation of the daily weights. They are the vari- ation related to holidays, changes in the trading-day pattern over time and changes in the trading-day pattern from one season to another. Experience at Census[8] suggests that these three possible varia-

[7] The effect upon the Sunday weight may appear extreme since the Saturday is only 1/30 or 1/31 of the month. However, 4 full weeks, 28 days, are found in all months, and only 2 or 3 days are unique to each month. The shift of one day's activity is 1/2 or 1/3 of the monthly variation attributable to trading-day differences.

[8] The only Census series in which significant holi- day variation has been found are retail sales where for sales of some kinds of business, the date of Easter affects March and April and the dates of Labor Day and Thanksgiving slightly affect August- September and November-December. Series based upon a survey covering 1 week of the month, al- though not containing trading-day variation may contain holiday variation. For example, the series on the average workweek can be affected by holidays that fall in the survey week. A change, over time, in the trading-day pattern of Canadian retail sales is discussed in reference 2.

Table 2.--COMPARISON OF ALTERNATIVE TRADING-DAY ADJUSTMENTS FOR SELECTED BUSINESS ACTIVITY

Item	Daily weights								$\bar{I}$ Avg. monthly change, without regard to sign, in irregular component		Rank (lowest $\bar{I}$ = "1")	
	Total	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Sun.	Historical	Current	Historical	Current
RETAIL SALES									1953-61	1962-63	1953-61	1962-63
Furniture stores:												
Regression, 1953-61...	7.00	1.24	0.91	0.84	1.23	1.10	1.11	0.57	1.25	1.61	1	1
Regression, 1957-61...	7.00	1.23	0.89	0.97	1.14	1.15	1.07	0.55	1.27	1.66	2	3
1962 daily sales.....	7.00	1.30	1.04	0.95	1.13	1.18	1.39	0.01	1.45	1.62	3	2
No adjustment[1].....	...	...	...	...	...	...	...	...	1.75	1.86	4	4
Lumber and building materials dealers:												
Regression, 1953-61...	7.00	1.13	1.11	1.16	1.22	1.15	0.67	0.56	1.69	0.87	1	1
Regression, 1957-61...	7.00	1.00	0.99	1.39	1.11	1.24	0.64	0.63	1.77	1.05	2	2
1962 daily sales.....	7.00	1.29	1.26	1.16	1.22	1.19	0.87	0.01	1.81	1.43	3	3
No adjustment[1].....	...	...	...	...	...	...	...	...	2.86	2.30	4	4
Hardware stores:												
Regression, 1953-61...	7.00	1.08	0.96	0.78	1.29	1.23	1.15	0.51	1.58	1.92	1	1
Regression, 1957-61...	7.00	0.96	0.84	0.96	1.19	1.44	0.90	0.71	1.62	2.22	2	3
1962 daily sales.....	7.00	1.11	1.04	1.10	1.05	1.22	1.48	0.00	2.22	2.18	3	2
No adjustment[1].....	...	...	...	...	...	...	...	...	2.79	2.67	4	4
BUILDING PERMITS									1954-61	1962-63	1954-61	1962-63
Regression, 1954-61.....	7.00	1.20	1.11	1.48	1.25	1.60	-0.32	0.69	3.17	2.92	2	1
A priori.....	7.00	1.40	1.40	1.40	1.40	1.40	0.00	0.00	3.13	3.72	1	2
No adjustment[1].....	...	...	...	...	...	...	...	...	5.19	5.23	3	3
MANUFACTURERS' SHIPMENTS									1953-61	1962-63	1953-61	1962-63
Tobacco:												
Regression, 1953-61...	7.00	1.89	0.96	1.42	1.18	1.24	0.00	0.31	1.54	1.58	1	1
A priori.....	7.00	1.40	1.40	1.40	1.40	1.40	0.00	0.00	2.68	2.31	2	2
A priori.....	7.00	1.17	1.17	1.17	1.17	1.17	0.58	0.58	2.92	3.13	3	3
No adjustment[1].....	...	...	...	...	...	...	...	...	4.35	4.96	4	4
Kitchen articles and pottery:												
Regression, 1953-61...	7.00	0.39	1.30	1.43	1.07	1.01	0.91	0.89	4.96	5.56	1	3
A priori.....	7.00	1.40	1.40	1.40	1.40	1.40	0.00	0.00	5.78	5.21	3	2
A priori.....	7.00	1.17	1.17	1.17	1.17	1.17	0.58	0.58	5.75	5.57	2	4
No adjustment[1].....	...	...	...	...	...	...	...	...	6.23	4.71	4	1
Radio and TV:												
Regression, 1953-61...	7.00	0.46	0.93	1.41	0.94	1.15	0.89	1.22	5.00	3.96	1	2
A priori.....	7.00	1.40	1.40	1.40	1.40	1.40	0.00	0.00	6.79	4.56	4	4
A priori.....	7.00	1.17	1.17	1.17	1.17	1.17	0.58	0.58	5.77	3.61	3	1
No adjustment[1].....	...	...	...	...	...	...	...	...	5.40	4.20	2	3
Engines and turbines:												
Regression, 1953-61...	7.00	1.19	0.36	1.00	2.41	0.34	0.73	0.97	8.50	23.61	1	1
A priori.....	7.00	1.40	1.40	1.40	1.40	1.40	0.00	0.00	9.35	25.78	4	4
A priori.....	7.00	1.17	1.17	1.17	1.17	1.17	0.58	0.58	9.20	23.65	3	2
No adjustment[1].....	...	...	...	...	...	...	...	...	9.06	23.79	2	3

[1]Shown without weights. An alternative would be to show a weight of 1.0 for each day of the week.

ions are usually insignificant and rarely impair the sefulness of the trading-day adjustment technique.

TESTS OF ALTERNATIVE TRADING-DAY ADJUSTMENTS

The regression method has been tested with real conomic series and artificial series that contain a nown trading-day pattern. Table 2 presents the esults of a few of the tests upon economic series.

The criterion used to evaluate alternative trad-ng-day adjustments of economic series is that the est method is the one resulting in the smallest nonth-to-month change, without regard to sign, in he irregular or unexplained variation (referred to s $\bar{I}$). It is not sufficient, however, to make this etermination only for the "historical" period from hich the estimates were made. A "historical" omparison is biased if the estimates of one or the ther method, by fitting the data too closely, ex-lain not only the trading-day variation, but part of he irregular variation. A more sufficient test is o apply the estimates made for the "historical" eriod to the "current period," where methods that re too sensitive to the historical irregular fluc-uations and those which inadequately allow for the haracteristics of trading-day variation will both ield large fluctuations that will be included in the omputed $\bar{I}$.

Evaluation, therefore, consists of the following teps: (1) estimate trading-day variation with each ethod from an historical period; (2) make the rading-day adjustment to the historical and cur-ent data with the historical estimate; (3) obtain an rregular component by seasonally adjusting the ombined historical and current data and compute $\bar{I}$ or each period; and (4) compare the $\bar{I}$'s from the arious methods giving particular attention to the urrent period.

Results of the following tests are shown in table .

Retail sales.—For the period 1953-63, sales of iree retail kinds of business were adjusted for rading-day variation by regression estimates com-uted from the period 1953-61 and also 1957-61. hese regression adjustments are compared with rading-day adjustments based upon average rates f sales on each day of the week computed from un-ublished daily retail sales for 1962 that are avail-ble at the Census Bureau. They also are com-ared with series not adjusted for trading days.

The regression estimates for 1953-61 yield the mallest $\bar{I}$'s, even for the current period of 1962-63 here we might expect the results to be biased in avor of the 1962 daily sales rates. The 1957-61 stimates are next best, followed by the daily sales ates and no adjustment.

Even though the unpublished estimates of the 962 daily sales are not up to the usual Census ublication standards,[9] the seven average daily rates are based on more evidence than is often available for an external adjustment and they appear to be reasonably close to what our experience would suggest as the daily sales pattern (see table 2). This comparison strongly suggests that external observation of the daily pattern of activity does not provide an adequate basis for a trading-day adjustment.

Building permits.—For U.S. building permits, regression estimates computed from the period 1954-61 are compared with a 5-day week which might be selected a priori and with the series not adjusted for trading days. The regression estimates and the 5-day-week adjustment yield approximately the same results for the historical period and for the current period of 1962-63. They substantially reduce the irregular fluctuations found in the series not adjusted for trading days.

Manufacturers' shipments.—For manufacturers' shipments in four selected industries, regression estimates computed from the period 1953-61 are compared with two sets of weights that might be selected a priori: (1) Weights for a 5-day week, and (2) weights where Saturday and Sunday receive partial weights. The regression estimates are also compared with the series not adjusted for trading days. The a priori weights where Saturday and Sunday receive partial weights have been found to be appropriate for the aggregate shipment series and they might be expected to be appropriate for each component.

The regression estimates yield the smallest $\bar{I}$ in the historical period for each of the four series. In the current period 1962-63, they are best for two series while the a priori weights where Saturday and Sunday receive partial weight are best for one series and no adjustment for trading days is best for one series.

These four selected manufacturer's shipments series contain larger irregular variations than do the retail sales data. The differences between alternative adjustments are small relative to the magnitude of $\bar{I}$ and the results are less conclusive. This test illustrates the fact that for highly irregular series the possible gain in trading-day adjustment of a series is small.

Reference 5 (see end of paper) will give a further discussion of the value of adjusting highly irregular series for trading-day variation.

These tests (and other tests on real and artificial series shown in reference 5) suggest that the regression method performs quite well in comparison to other alternatives.

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[9] The 1962 daily sales were voluntarily reported y about a fourth of the 1,600 respondents in the weekly survey of stores with 10 or less outlets. The number of reports by kind of business is quite small, 27 for furniture stores, 36 for lumber and building materials dealers, and 17 for hardware stores and the daily data, therefore, contains some inaccuracies.

REFERENCES

1. Eisenpress, Harry, "Regression Techniques Applied to Seasonal Corrections and Adjustments for Calendar Shifts," Journal of the American Statistical Association, vol. 51, No. 276, December 1956, pp. 615-620.

2. Marris, Stephen N., "The Measurement of Calendar Variation," Seasonal Adjustment on Electronic Computers, Organization for Economic Cooperation and Development, 1960, pp. 345-360.

3. Shiskin, Julius, Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, Inc., 1957, (reprinted from Journal of Business, October 1957).

4. Specifications for the X-9 version of Census Method II seasonal adjustment program are available from the Chief Economic Statistician, Bureau of the Census, Washington, D.C. 20244.

5. Young, Allan, "The Estimation of Trading-Day Variation in Monthly Economic Time Series," (in preparation).

Appendixes

(Standard appendixes A through E are omitted from this issue)

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.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	3. Layoff rate, manufacturing (Per 100 employees)											
1948.....	1.4	1.9	1.4	1.4	1.1	1.3	1.6	1.8	1.4	1.5	1.7	2.3
1949.....	2.8	2.5	3.3	3.2	3.5	3.1	3.0	2.6	2.6	2.8	2.8	2.1
1950.....	1.9	1.9	1.7	1.4	1.2	1.1	0.8	0.8	1.0	1.1	1.2	1.2
1951.....	1.0	1.0	1.0	1.1	1.3	1.3	1.8	1.9	1.8	1.7	1.8	1.5
1952.....	1.5	1.5	1.4	1.5	1.3	1.5	3.1	1.3	1.0	0.9	0.8	1.0
1953.....	0.9	1.0	1.0	1.0	1.3	1.2	1.4	1.6	2.0	2.3	2.6	2.5
1954.....	2.9	2.5	2.8	2.8	2.3	2.3	2.1	2.2	2.2	2.0	1.8	1.7
1955.....	1.5	1.3	1.5	1.5	1.3	1.7	1.8	1.7	1.4	1.5	1.3	1.5
1956.....	1.7	2.1	1.8	1.6	2.0	1.9	1.7	1.6	1.8	1.6	1.7	1.5
1957.....	1.5	1.6	1.6	1.8	2.0	1.7	1.8	2.2	2.4	2.6	2.9	2.9
1958.....	3.6	3.1	3.4	3.3	2.9	2.5	2.6	2.4	2.1	2.0	1.8	2.0
1959.....	1.9	1.7	1.7	1.7	1.6	1.8	1.9	2.0	2.1	2.7	2.4	1.9
1960.....	1.6	1.9	2.3	2.4	2.3	2.5	2.4	2.6	2.5	2.4	2.6	2.8
	6. Value of manufacturers' new orders, durable goods industries (Bil. dol.)											
1948.....	7.33	7.31	7.76	7.97	8.25	8.86	8.80	8.89	8.37	8.58	7.90	7.67
1949.....	7.17	7.04	6.61	6.22	6.10	5.75	6.02	6.69	6.89	6.93	7.05	7.13
1950.....	7.47	7.57	7.78	8.56	9.24	9.35	11.71	13.85	11.94	12.16	10.84	12.40
1951.....	15.10	13.98	14.71	13.84	13.28	13.05	12.58	11.13	11.08	11.92	11.44	11.72
1952.....	10.85	10.55	13.11	12.66	11.06	13.16	11.82	11.94	12.53	11.81	12.32	12.89
1953.....	14.45	14.21	13.34	13.69	13.58	13.20	12.35	10.89	9.71	9.99	9.94	9.96
1954.....	9.99	10.31	9.72	10.17	9.75	10.29	10.50	10.45	11.69	12.64	11.14	12.60
1955.....	13.48	13.92	14.96	14.24	14.51	14.84	14.98	15.04	15.74	15.74	15.74	16.42
1956.....	15.72	14.61	15.04	15.69	15.16	15.06	14.75	17.73	14.78	14.84	15.78	15.73
1957.....	15.16	15.64	15.14	14.11	14.58	14.23	13.43	14.03	13.64	12.96	13.58	12.54
1958.....	11.62	11.67	12.66	11.69	12.44	13.13	13.40	13.32	13.64	14.63	15.36	14.62
1959.....	15.52	16.90	16.98	17.08	16.30	16.72	16.08	14.62	15.25	15.48	14.57	15.76
1960.....	15.68	15.52	15.27	14.92	15.36	15.43	15.25	15.65	15.69	14.50	14.62	14.86
	11. Newly approved capital appropriations, 602 manufacturing corporations (Bil. dol.)											
1948.....	...	...	...	...	...	...	...	...	...	...	...	...
1949.....	...	...	...	...	...	...	...	...	...	...	...	...
1950.....	...	...	...	...	...	...	...	...	...	...	...	...
1951.....	...	...	...	...	...	...	...	...	...	...	...	...
1952.....	...	...	...	...	...	...	...	...	...	...	...	...
1953.....	...	1.43	...	...	1.64	...	...	1.81	...	...	1.67	...
1954.....	...	1.47	...	...	1.45	...	...	1.48	...	...	1.79	...
1955.....	...	2.19	...	...	2.68	...	...	3.25	...	...	3.35	...
1956.....	...	3.34	...	...	3.05	...	...	2.71	...	...	2.65	...
1957.....	...	2.84	...	...	2.43	...	...	1.90	...	...	1.82	...
1958.....	...	1.52	...	...	1.51	...	...	1.70	...	...	1.73	...
1959.....	...	2.15	...	...	2.32	...	...	2.44	...	...	2.53	...
1960.....	...	2.27	...	...	2.02	...	...	1.78	...	...	2.10	...

All data are seasonally adjusted.

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.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	D1. Diffusion index for Average workweek, manufacturing--21 industries (3-month interval)											
1948.....	42.9	38.1	54.8	50.0	38.1	26.2	50.0	4.8	35.7	16.7	26.2	21.4
1949.....	19.0	26.2	9.5	21.4	38.1	71.4	42.9	73.8	64.3	61.9	45.2	61.9
1950.....	76.2	88.1	76.2	81.0	90.5	95.2	100.0	76.2	71.4	50.0	42.9	42.9
1951.....	19.0	57.1	85.7	64.3	35.7	7.1	11.9	31.0	26.2	50.0	71.4	83.3
1952.....	85.7	45.2	4.8	35.7	40.5	54.8	52.4	85.7	90.5	81.0	47.6	28.6
1953.....	35.7	38.1	66.7	52.4	9.5	11.9	19.0	14.3	7.1	7.1	40.5	4.8
1954.....	31.0	33.3	35.7	35.7	50.0	92.9	81.0	40.5	40.5	81.0	81.0	88.1
1955.....	81.0	100.0	76.2	95.2	81.0	59.5	21.4	50.0	88.1	83.3	54.8	40.5
1956.....	19.0	14.3	35.7	21.4	16.7	21.4	26.2	73.8	61.9	59.5	54.8	26.2
1957.....	73.8	35.7	35.7	0.0	7.1	21.4	40.5	38.1	0.0	4.8	19.0	14.3
1958.....	19.0	21.4	28.6	61.9	92.9	83.3	95.2	83.3	69.0	90.5	88.1	90.5
1959.....	88.1	88.1	90.5	85.7	54.8	28.6	16.7	28.6	31.0	35.7	71.4	61.9
1960.....	38.1	14.3	19.0	59.5	45.2	64.3	14.3	16.7	31.0	7.1	4.8	23.8
	D6. Diffusion index for Value of mfrs.' new orders, durable goods indus.--36 indus. materials (9-mo. int.)											
1948.....	...	...	...	...	...	...	...	...	...	...	...	...
1949.....	...	...	...	38.1	21.4	28.6	83.3	57.1	78.6	85.7	81.0	61.9
1950.....	81.0	90.5	90.5	95.2	100.0	100.0	95.2	95.2	71.4	71.4	76.2	81.0
1951.....	81.0	88.1	61.9	23.8	33.3	9.5	4.8	23.8	28.6	42.9	42.9	66.7
1952.....	33.3	38.1	23.8	54.8	66.7	57.1	42.9	76.2	42.9	66.7	57.1	57.1
1953.....	54.8	81.0	66.7	19.4	33.3	6.9	8.3	8.3	31.9	27.8	23.6	41.7
1954.....	33.3	50.0	34.7	56.9	47.2	80.6	75.0	88.9	65.3	80.6	88.9	72.2
1955.....	91.7	90.3	87.5	83.3	69.4	72.2	70.8	87.5	61.1	75.0	54.2	58.3
1956.....	43.1	47.2	38.9	44.4	50.0	58.3	33.3	48.6	69.4	63.9	47.2	70.8
1957.....	48.6	19.4	27.8	31.9	19.4	27.8	47.2	20.8	25.0	29.2	16.7	36.1
1958.....	40.3	30.6	56.9	63.9	69.4	81.9	91.7	86.1	86.1	75.0	79.2	88.9
1959.....	93.1	75.0	77.8	81.9	63.9	19.4	41.7	43.1	22.2	47.2	61.1	36.1
1960.....	34.7	54.2	31.9	48.6	55.6	51.4	41.7	37.5	30.6	41.7	23.6	33.3
	D23. Diffusion index for Index of industrial materials prices--13 industrial materials (9-month interval)											
1948.....	...	...	...	61.5	61.5	53.8	38.5	46.2	30.8	30.8	23.1	30.8
1949.....	30.8	15.4	15.4	23.1	23.1	46.2	53.8	46.2	46.2	38.5	46.2	61.5
1950.....	76.9	69.2	76.9	84.6	92.3	92.3	100.0	100.0	100.0	100.0	100.0	92.3
1951.....	92.3	84.6	69.2	46.2	15.4	7.7	0.0	15.4	15.4	23.1	38.5	46.2
1952.....	38.5	30.8	30.8	23.1	38.5	38.5	50.0	34.6	38.5	23.1	11.5	30.8
1953.....	30.8	23.1	38.5	46.2	30.8	7.7	7.7	23.1	38.5	46.2	46.2	38.5
1954.....	46.2	76.9	80.8	92.3	76.9	69.2	61.5	61.5	61.5	61.5	61.5	53.8
1955.....	69.2	84.6	76.9	76.9	76.9	84.6	76.9	76.9	76.9	69.2	61.5	53.8
1956.....	69.2	46.2	42.3	23.1	15.4	30.8	38.5	53.8	53.8	53.8	46.2	30.8
1957.....	30.8	23.1	30.8	26.9	38.5	30.8	30.8	23.1	15.4	7.7	15.4	15.4
1958.....	23.1	46.2	38.5	46.2	69.2	76.9	92.3	92.3	84.6	69.2	53.8	61.5
1959.....	53.8	53.8	53.8	61.5	53.8	53.8	69.2	57.7	46.2	53.8	53.8	46.2
1960.....	38.5	38.5	38.5	38.5	38.5	46.2	46.2	30.8	38.5	30.8	23.1	30.8

Seasonally adjusted components are used for the indexes.

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SERIES INDEX TO CHARTS, TABLES, AND APPENDEXES

(Page numbers)

Series number[1]	Charts					Tables									Appendixes						
	1	2	3	4	5	1	2	3	4	5	6	7	8	9	A[2]	B[2]	C[2]	D[2]	E[3]	F[4] page	F[4] issue
1....	8	..	..	48	53	6	22	..	..	..	..	56	57	58	..	62	63	..	..	66	Jan. '64
2....	8	..	..	..	..	6	22	..	..	..	..	56	57	..	..	..	63	..	..	66	Feb. '64
3....	8	..	..	..	..	6	22	..	..	..	..	56	57	..	..	..	63	..	..	65	May '64
4....	8	..	..	..	..	6	22	..	..	..	..	..	..	..	..	..	63	65	..	66	Nov. '63
5....	8	..	..	..	..	6	22	..	..	..	..	..	..	..	..	..	63	65	..	66	July '63
6....	9	..	..	..	..	6	22	..	..	..	..	56	57	..	..	..	63	..	..	65	May '64
7....	9	..	..	..	..	6	23	..	..	..	..	56	57	..	..	..	63	..	..	..	..
9....	9	..	..	48	53	6	23	..	..	..	..	56	57	58	..	62	63	..	..	..	..
10....	9	..	..	..	..	6	23	..	..	..	..	..	..	..	..	..	63	..	..	..	..
11....	9	..	..	..	..	6	23	..	..	..	..	..	..	..	..	..	64	..	..	65	May '64
12....	10	..	..	..	..	6	23	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13....	10	..	..	49	..	6	23	..	..	..	..	56	57	58	..	62	63	65	..	66	Aug. '63
14....	10	..	..	..	..	6	24	..	..	..	..	56	57	..	..	..	63	65	..	66	Nov. '63
15....	10	..	..	..	..	6	24	..	..	..	..	..	..	..	..	..	63	65	..	66	Mar. '64
16....	11	..	..	..	..	6	24	..	..	..	..	56	57	..	..	..	64	..	..	..	..
17....	11	..	..	49	53	6	24	..	..	..	..	56	57	58	..	62	63	65	..	68	June '63
18....	11	..	..	..	..	6	24	..	..	..	..	..	..	..	..	..	64	65	..	..	..
19....	11	..	..	49	54	6	24	..	..	..	..	56	57	58	..	62	63	..	..	..	..
20....	12	..	..	..	..	6	25	..	..	..	..	..	..	..	..	..	..	..	..	66	Dec. '63
21....	12	..	..	..	..	6	24	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22....	11	..	..	..	..	6	24	..	..	..	..	..	..	..	..	..	64	..	..	..	..
23....	12	..	..	49	54	6	25	..	..	..	..	56	57	58	..	62	63	..	..	66	Jan. '64
24....	9	..	..	48	53	6	22	..	..	..	..	56	57	58	..	62	63	..	..	66	Dec. '63
25....	12	..	..	..	..	6	25	..	..	..	..	..	..	..	..	..	..	..	..	66	Dec. '63
26....	12	..	..	..	..	6	25	..	..	..	..	..	..	..	..	..	63	..	..	..	..
29....	9	..	..	48	..	6	23	..	..	..	..	56	57	58	..	62	63	..	..	..	..
30....	8	..	..	..	..	6	22	..	..	..	..	..	..	..	..	..	63	65	..	66	Oct. '63
31....	12	..	..	..	..	6	25	..	..	..	..	..	..	..	..	..	..	..	..	66	Jan. '64
32....	12	..	..	..	..	6	25	..	..	..	..	..	..	..	..	..	63	..	..	66	Mar. '64
37....	12	..	..	..	..	6	25	..	..	..	..	..	..	..	..	..	63	65	..	68	June '63
40....	13	..	..	..	..	6	26	..	..	..	..	..	..	..	..	..	63	..	..	..	..
41....	13	..	..	50	55	6	26	..	..	..	..	56	57	58	..	62	63	..	68	..	..
42....	13	..	..	..	..	6	26	..	..	..	..	..	..	..	..	..	63	..	..	..	..
43....	13	..	..	50	55	6	26	..	..	..	..	56	57	58	..	62	63	..	68	66	Feb. '64
45....	13	..	..	..	..	6	26	..	..	..	..	..	..	..	..	..	63	..	..	66	Mar. '64
46....	13	..	..	..	..	6	26	..	..	..	..	..	..	..	..	..	63	..	..	66	Feb. '64
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50....	14	..	..	..	54	7	26	..	..	..	..	56	57	58	..	62	64	..	68	..	..
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62....	16	..	..	52	..	7	28	..	..	..	..	56	57	..	..	..	63	65	..	68	June '64
64....	16	..	..	52	..	7	28	..	..	..	..	56	57	..	..	..	63	..	..	..	..
65....	16	..	..	..	..	7	28	..	..	..	..	..	..	..	..	..	63	..	..	..	..
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[1]See back cover for series titles and sources.
[2]Page number shown is for the April 1964 issue.
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[4]Before May 1964, this appendix was "G".

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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; seasonal 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 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, 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 merce, Office of Business Economics

7 NBER LAGGING INDICATORS

*61. Business expenditures on new plant and equipment, total (Q).--Department of Commerce, Office of Business Economics; and the Securities and Exchange Commission

*62. Index of labor cost per unit of output, total 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

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

18 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 Re-System

86. **Exports, excluding military aid shipments, total (M).**--Department of Commerce, Bureau of the Census
87. **General imports, total (M).**--Department of Commerce, Bureau of the Census
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

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).**--Organization for Economic Cooperation and Development
123. **Canada, index of industrial production (M).**--Dominion Bureau of Statistics, Ottawa
125. **West Germany, index of industrial production (M).**--Organization for Economic Cooperation and Development
126. **France, index of industrial production (M).**--Organization for Economic Cooperation and Development
127. **Italy, index of industrial production (M).**--Organization for Economic Cooperation and Development
128. **Japan, index of industrial production (M).**--Ministry of International Trade and Industry (Japan); 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