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Chapter Author: Geoffrey H. Moore

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A Tentative List of Current Indicators

One goal of this investigation is a brief list of current statistical indicators, systematically selected and properly annotated. We have not reached this goal. But we have gone a considerable distance toward it, and it may be helpful to take a jump ahead and set forth the best brief list we can devise at present. No doubt it will be revised as the investigation proceeds, and criteria besides timing and conformity are systematically applied to the National Bureau's collection of series. The list we offer (Table 12 and Chart 6) is not based on any such systematic weeding; hence it is highly tentative. In making it we have not held strictly to the historical series actually analyzed in the investigation, even when they are currently available, but whenever possible have substituted essentially similar series of broader coverage.

Our best guides to a selection are the broad indications of Table 5 and the detailed list of series in Appendix B. Since our list is short, we confine it to series with similar timing at peaks and troughs, classifying them in three groups: leading, roughly coincident, and lagging. The series are arranged in Table 12 and Chart 6, however, according to the average timing they (or their nearest equivalents) exhibited at both peaks and troughs up to 1938. The averages present a more or less continuous array from long leads to long lags, rather than three sharply defined groups.

For leaders, Table 5 points to new orders, private construction contracts and permits, average hours worked per week, stock exchange transactions and prices, security issues, and business failures. That is to say, since in each of these groups leading series predominate, the chances are good that any particular series we select will have the indirect support of related series. Representatives of each of these groups as well as of others are in the Leading group, Appendix B.

New orders are represented in our short list by the current Department of Commerce series on the value of new orders for durable goods placed with manufacturers. This compilation begins in 1939, but the similar series by the National Industrial Conference Board beginning 1929, and several series on the physical volume of orders for certain types of durable goods, available for a longer period, give some indication of how it might have be-

TABLE 12 Record of Timing of Selected Statistical Indicators at Business Cycle Turns

SELECTED INDICATOR[a]	SERIES USED FOR RECORD OF TIMING	REF. PERIOD COVERED	NUMBER OF REF. TURNS COVERED[b]	Leads[b]	Exact coin.	Lags	Rough coin.	AVERAGE LEAD(−) OR LAG(+), MONTHS[b]
A LEADING GROUP								
1 Bus. failures, liab., indus. & comm., Dun's[1]	Same as prec. col.	1879-1938[w]	14 / 16	11 / 14	1 /	1 / 1	2 / 1	−10.5 / −7.5
2 Indus. common stock price index, Dow-Jones	Same as prec. col.	1899-1938	11 / 11	8 / 8	/ 1	2 / 1	6 / 4	−6.0 / −7.2
3 New orders, dur. goods indus., value, D.ofC.	5 series, physical vol.[c]	1919-38	25 / 30	21 / 24	1 / 1	2 / 4	9 / 10	−6.9 / −4.7
4 Resid. bldg. contracts, fl. space, Dodge	Same as prec. col.	1919-38	5 / 6	4 / 5	1 /	1 /	1 / 2	−6.2 / −4.5
5 Comm. & indus. bldg. contracts, fl. space, Dodge	Same as prec. col.	1919-38	5 / 6	4 / 4	/ 1	1 / 1	2 / 4	−5.2 / −1.7
6 Av. hours worked per week, mfg, BLS	Av. hours worked per week, mfg, NICB	1921-38	4 / 5	3 / 3	1 / 1	1 / 1	1 / 1	−3.8 / −2.6
7 New incorporations, no, Dun's	New incorp., no., Evans	1860-1938	20 / 20	12 / 15	1 / 1	4 / 3	8 / 4	−2.5 / −3.5
8 Whol. price index, 28 basic commod., BLS	Whol. price index, Bradstreet's	1893-1937[w]	11 / 11	7 / 8	/ 1	2 / 1	5 / 5	−2.6 / −3.2
B ROUGHLY COINCIDENT GROUP								
9 Employ. in nonagric. establishments, BLS	Factory employ, index, Jerome (to 1914), BLS	1890-1938	14 / 14	3 / 7	1 / 4	8 / 1	7 / 7	−0.2 / −3.3
10 Unemployment, D.ofC.[1]	See text							
11 Corporate profits, quarterly, D.ofC.	Corp. profits, quarterly, Barger	1920-38[w]	4 / 5	2 / 3	1 / 1	1 / 1	3 / 4	−1.5 / −1.8
12 Bank debits outside NYC, FRB	Clearings outside NYC, C & FC (to 1919); debits outside NYC, FRB	1879-1938[w]	14 / 16	3 / 13	1 / 1	9 / 1	9 / 9	+2.0 / −4.3
13 Freight car loadings, AAR	Same as prec. col.	1918-38	6 / 6	1 / 2	3 / 4	2 /	5 / 5	−0.3 / −1.3
14 Industrial production index, FRB	Same as prec. col.	1919-38	5 / 6	/ 4	3 / 2	2 /	5 / 5	+0.6 / −2.2

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TABLE 12 (CONCL.)

SELECTED INDICATOR[a]	SERIES USED FOR RECORD OF TIMING	REF. PERIOD COVERED	NUMBER OF REF. TURNS COVERED	Leads[b]	Exact coin.	Lags	Rough coin.	AVERAGE LEAD(−) OR LAG(+), MONTHS[b]
15 Gross national product, quarterly, D.ofC.	See text	1914-38[w]	4	3			2	−3.5
			6	1	1	3	3	+3.7
16 Whol. price index, excl. farm products & foods, BLS	Same as prec. col.		4		2	3	2	+4.0
			5	1		1	4	−0.2
C LAGGING GROUP								
17 Personal income, D.ofC.	Income payments, Barger (to 1929), D.ofC.	1921-38	5	1	1	4	3	+3.8
			6		1	3	4	+1.8
18 Sales by retail stores, D.ofC.	Department store sales index, FRB	1919-38	5			4	3	+5.0
			6			3	4	+3.5
19 Consumer instalment debt, FRB	Same as prec. col.	1929-38	2			2	1	+5.5
			2		1	2	3	+4.8
20 Bank rates on bus. loans, quarterly, FRB	Same as prec. col.	1919-38	5		1	3	1	+5.5
			6			5	3	+4.8
21 Mfrs'. inventories, in current prices, D.ofC.	Mfrs'. inventories, in current prices, NICB	1929-38	2			2	1	+6.5
			2		1	2		+7.5

[a] Numbers and titles identify the series plotted in Chart 6, except as follows: The initial segments (in Chart 6) of series 3, 10, and 21 are compilations of the National Industrial Conference Board. The initial segment of series 7 (4 states) is compiled by the Corporation Trust Co. For series 11 the Department of Commerce series (beginning 1939) was extended back to 1936 by the use of data for 242 corporations compiled by Thor Hultgren. All series except 2, 3 since 1939, 8, 16, 20 are adjusted for seasonal variations. Series 1, 4, 5, 6, 7, 10, 12, 13, 19 were adjusted by the National Bureau.

[b] Entry on first line is for reference peaks, second line for reference troughs.

[c] The five series are new orders for southern pine lumber, oak flooring, architectural terra cotta, fabricated structural steel, and machine tools & forging machinery. The timing entries are totals for the 5 series; the averages are simple averages of the average timing of each series. See also note 34.

[i] Inverted; see note 9.   [w] War cycle observations are omitted.

AAR: Association of American Railroads
Barger: Harold Barger, *Outlay and Income in the United States, 1921-38* (NBER, 1942)
BLS: U.S. Bureau of Labor Statistics
Bradstreet's: The Bradstreet Co. (after 1933, Dun & Bradstreet, Inc.)
C & FC: *Commercial and Financial Chronicle* (1879-83, *The Public*)
D. of C.: U.S. Department of Commerce

Dodge: F. W. Dodge Corporation
Dow-Jones: Dow-Jones & Co., Inc.
Dun's: R. G. Dun & Co. (after 1933, Dun & Bradstreet, Inc.)
Evans: G. Heberton Evans, Jr., *Business Incorporations in the United States, 1800-1943* (NBER, 1948)
FRB: Board of Governors of the Federal Reserve System
Jerome: Harry Jerome, *Migration and Business Cycles* (NBER, 1926)
NICB: National Industrial Conference Board

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haved earlier.[34] Two series on building contracts are included (residential, and commercial and industrial), each in terms of floor space rather than value since the physical dimension is of greater interest and more relevant to the physical volume of industrial activity such contracts call forth. For hours of work we use the Bureau of Labor Statistics series for manufacturing, which begins in 1932. Its prior behavior presumably resembled that of the similar compilation by the National Industrial Conference Board, which was discontinued after July 1948. We omit stock exchange transactions and security issues, because the erratic movements in such series make it difficult to judge their cyclical course currently. Stock prices are somewhat less erratic, and we include a stock price index. Liabilities of business failures, taken, of course, on an inverted basis, completes the list of leaders suggested by the timing classification of Table 5. We add two other series: number of new incorporations (see App. B) and the BLS index of wholesale prices of 28 basic commodities. The latter, which begins in 1935, seems to be roughly equivalent, in terms of composition and effective weighting, to Bradstreet's index (see App. B), which had an extraordinarily consistent cyclical record before it was discontinued in 1937.[35]

For roughly coincident series Table 5 defines four areas in which most of the series display roughly coincident timing with a tendency to lead (transportation, profits, bank clearings and debits, and indexes of business activity); three without marked leading or lagging tendency (production, employment, and commodity prices); and two in which the series display both roughly coincident and lagging tendencies (payrolls and retail sales), which we shall consider in connection with our lagging group. Our selections for transportation and profits are freight carloadings and total corporate profits, both being listed in the Roughly Coincident section of Appendix B. Bank debits outside New York City, our third selection, is not listed in Appendix B, though both New York City and total clearings and debits are. The reason is that the outside clearings and debits series is classed as a lagger at peaks and a leader at troughs. But in recent cycles this difference has practically disappeared, and in 1919-38 out-

[34] The NICB series leads the reference turns in 1937 and 1938 (see Chart 6), is coincident at the 1933 trough. Its timing at the 1929 peak is uncertain.

[35] Nevertheless, the two indexes are very differently constructed, Bradstreet's being the aggregate price per pound of some 96 commodities, the BLS' an unweighted geometric mean of relatives for 28 products.

side debits is classed as a rough coincider at both turns while neither the New York City component nor the total meet our acceptance levels for conformity and timing.

In the roughly coincident group we include gross national product, the most comprehensive value of output aggregate available on a quarterly basis since 1939, and the Federal Reserve Board index of industrial production. The timing of the former is probably fairly close to that of clearings and debits outside New York City. Employment is represented by the BLS series for non-agricultural establishments, which begins in 1935 and is seasonally adjusted by the Federal Reserve Board. The Bureau of the Census publishes the monthly unemployment estimates, beginning 1940, which we have adjusted for seasonal variations. The timing of both the employment and the unemployment series can be only roughly judged from factory employment, the most comprehensive historical employment series in monthly form, but there is no reason to doubt that they both belong in the roughly coincident category. The commodity price series that appears to be most suitable for this group is the BLS index of wholesale prices of all commodities other than farm products or foods.

As laggers, interest rates and bond yields, payrolls, and retail sales are the most promising groups, according to Table 5. In recent years both short- and long-term interest rates have conformed to business cycles less well than they did formerly; nevertheless, we include bank rates on business loans. This series did not quite meet our minimum standard of conformity in 1919-38, hence it is not listed in Appendix B; yet its timing was fairly consistent, as Table 12 reveals. Instead of an index of factory payrolls we use the more comprehensive, albeit less sensitive, Department of Commerce series on personal income. Wages are, of course, a large element in the latter, and many of the other components, such as salaries, rent, dividends, and interest payments may be expected to lag. For retail sales we select the comprehensive retail stores series which begins in 1935.

The two other lagging series in Table 12 were selected on the basis of other information than that in Table 5 or Appendix B. The tendency for manufacturers' total inventories to lag is demonstrated and analyzed in Abramovitz' forthcoming study, *Inventories and Business Cycles*.[36] Consumer instalment debt

[36] See also Moses Abramovitz, The Role of Inventories in Business Cycles, *Occasional Paper 26* (National Bureau of Economic Research, May 1948). Note, however, that this essay deals solely with the physical volume of inventories, whereas our monthly series is in terms of book value.

series are not covered in Table 5 because they are too short; nevertheless, their lagging tendency seems to be well established.[37]

Our tentative list of indicators (Table 12), then, consists of 8 leaders, 8 rough coinciders, and 5 laggers, 21 in all. Fourteen cover the processes represented by the 21 selected indicators of revivals in *Bulletin 69* (cf. Table 2). The other seven (new orders, incorporations, unemployment, incomes, inventories, bank rates, and instalment debt) are not represented in the earlier list, a circumstance that in part reflects the growth in the statistical material at our disposal in the last decade.

Obviously many other series compete for the analyst's attention, and it would have been easy to expand our list. In interpreting the behavior of the comprehensive series listed it will often be helpful to examine series of narrower scope. The recent study of manufacturers' inventories by Abramovitz, cited above, illustrates how enlightening this may be. On the other hand, more comprehensive aggregates than some of those we have selected have a bearing on the course of business; e.g., total construction contracts, or total consumer debt outstanding. Where value aggregates are listed the analyst may wish to compile physical volume series, and vice versa. Moreover, series that are similar in coverage may be needed for certain comparisons. For example, many of the series in our list that differ in coverage can be restricted to manufacturing industries alone. Finally, considerable interest attaches to series that are, at least to an approximation, first differences of the series on our list. Examples are the gross and net labor accession rate, inventory investment, and gross and net changes in consumer debt.

What sort of picture do our 21 indicators draw of business conditions in recent years? In Chart 6 we attempt to identify specific cycle peaks and troughs in each series since 1936, comparing each new possible specific cycle expansion or contraction with earlier phases in the same or equivalent series, following the procedure laid down in *Measuring Business Cycles* (pp. 56-66). Since the most recent phases are nearly always incomplete, this may result in an undercount of recent specific cycle turns, which must be allowed for in interpreting the series as a group.

In the 1937-38 contraction the three groups of series behaved in rather characteristic fashion. The leading group tended to lead, both at the May 1937 reference peak and the June 1938

[37] See Gottfried Haberler, *Consumer Instalment Credit and Economic Fluctuations* (National Bureau of Economic Research, 1942), pp. 54-69.

trough. The turns in the roughly coincident group are distributed within a narrow range on both sides of the reference dates. The lagging group tended to lag. With the advent of war, however, the fairly orderly sequence was violently disturbed. There is no need here to describe the course of events or to analyze the various factors that influenced the movement of each series. It is more important to consider whether, since the war, the prewar pattern of relationships has been restored.

We think the behavior of the series in the vicinity of the business contraction that began in the autumn of 1948 indicates there has been a substantial restoration. Considering first the roughly coincident group we find that most of these series expanded rather rapidly in 1946, made smaller gains in 1947, and reached peaks in 1948 (Table 13). The declines recorded during 1948-49, according to Chart 6, were not so large as in 1937-38, but the recent declines exceed those in some of the milder business contractions of the past.[38]
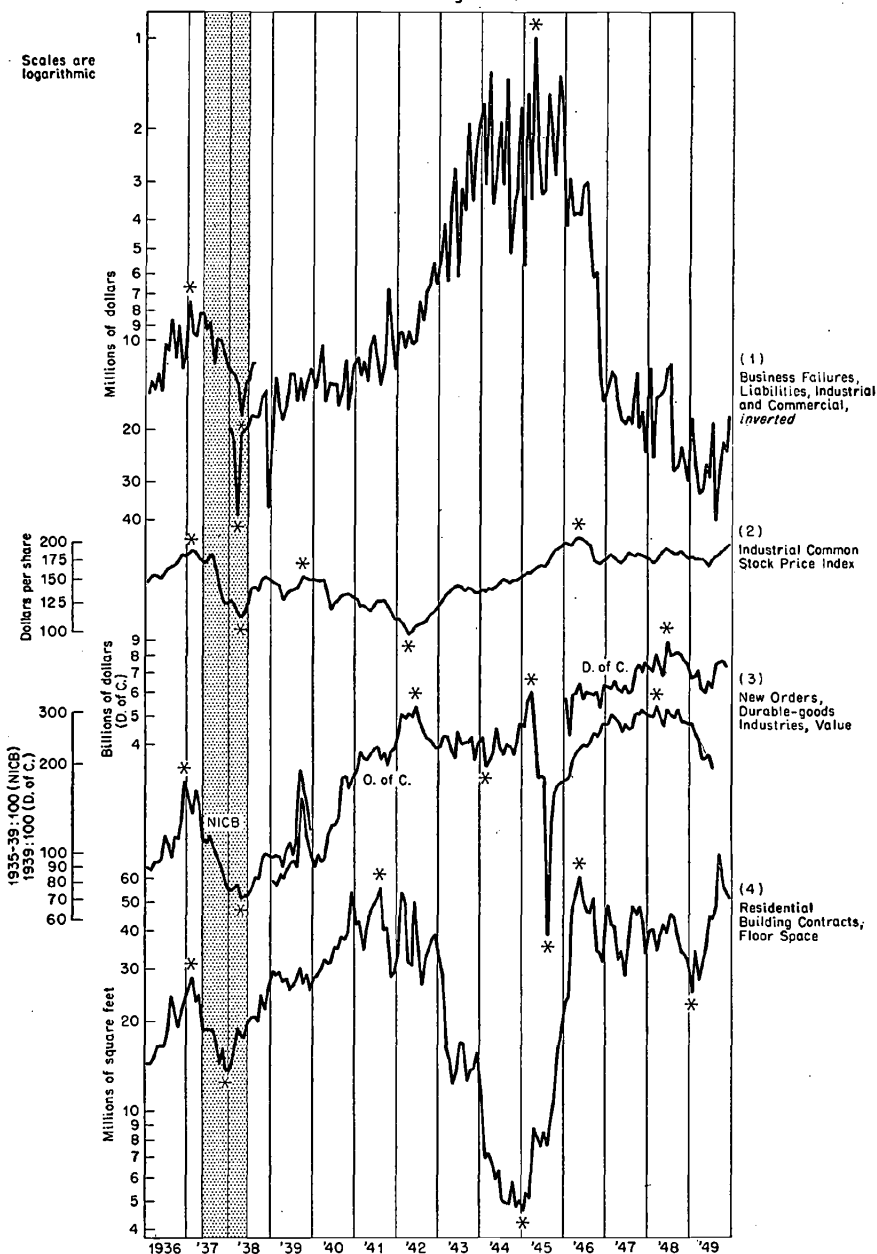
All the series in the leading group were contracting by June 1948. In sharp contrast to the concentration of peaks in this group in 1936 and 1937, the postwar peaks are scattered over several years, owing partly to special circumstances connected with the war. Business failures began to increase even before the postwar business expansion got under way, but leveled off in 1947. Stock prices, residential building contracts, new incorporations, and commercial and industrial building contracts began to decline early in 1946, fluctuated narrowly about a horizontal level through 1947 and part of 1948, then declined further. Average hours worked per week in manufacturing, after declining sharply from the wartime peak, did not rise sufficiently in 1946-47 for the movement to be considered a specific cycle expansion, but the high point was reached in December 1947.[39] The basic

[38] The percentage decline in the FRB industrial production index between 3-month averages centered on November 1948 and July 1949 was 14. In 1937-38 the percentage decline from peak to trough was 32; in 1929-33, 53; in 1926-27, 5; in 1923-24, 16; and in 1920-21, 32. A similar comparison based on the average relative change in three indexes of business activity (AT&T, Barron's, and Cleveland Trust Co.) that cover 16 business cycle contractions 1882-1938 shows that 6 of the contractions were smaller, 10 larger, than the 1948-49 decline.

[39] The series compiled by the National Industrial Conference Board on average hours in 25 manufacturing industries, discontinued after July 1948, shows a specific cycle expansion from February 1946 (39.0 hours) to December 1947 (41.2 hours).

Chart 6

Behavior of Selected Statistical Indicators, 1936-1949
A. Leading Series

Scales are logarithmic

(1) Business Failures, Liabilities, Industrial and Commercial, *inverted*

(2) Industrial Common Stock Price Index

(3) New Orders, Durable-goods Industries, Value

(4) Residential Building Contracts, Floor Space

Note: Shaded area represents the 1937-38 reference contraction. Asterisks identify peaks and troughs of specific cycles. Series are adjusted for seasonal variations, except (2), (3) since 1939, (8), (16), and (20). For sources see *Table 12*.

Chart 6 (cont.)

A. Leading Series

Scales are logarithmic

Millions of square feet

Hours

Thousands of corporations

August 1939 : 100

(5) Commercial and Industrial Building Contracts, Floor Space

(6) Average Hours per Week, Manufacturing

(7) New Incorporations, Number

48 states

4 states

(8) Wholesale Price Index, Basic Commodities

1936 '37 '38 '39 '40 '41 '42 '43 '44 '45 '46 '47 '48 '49

71
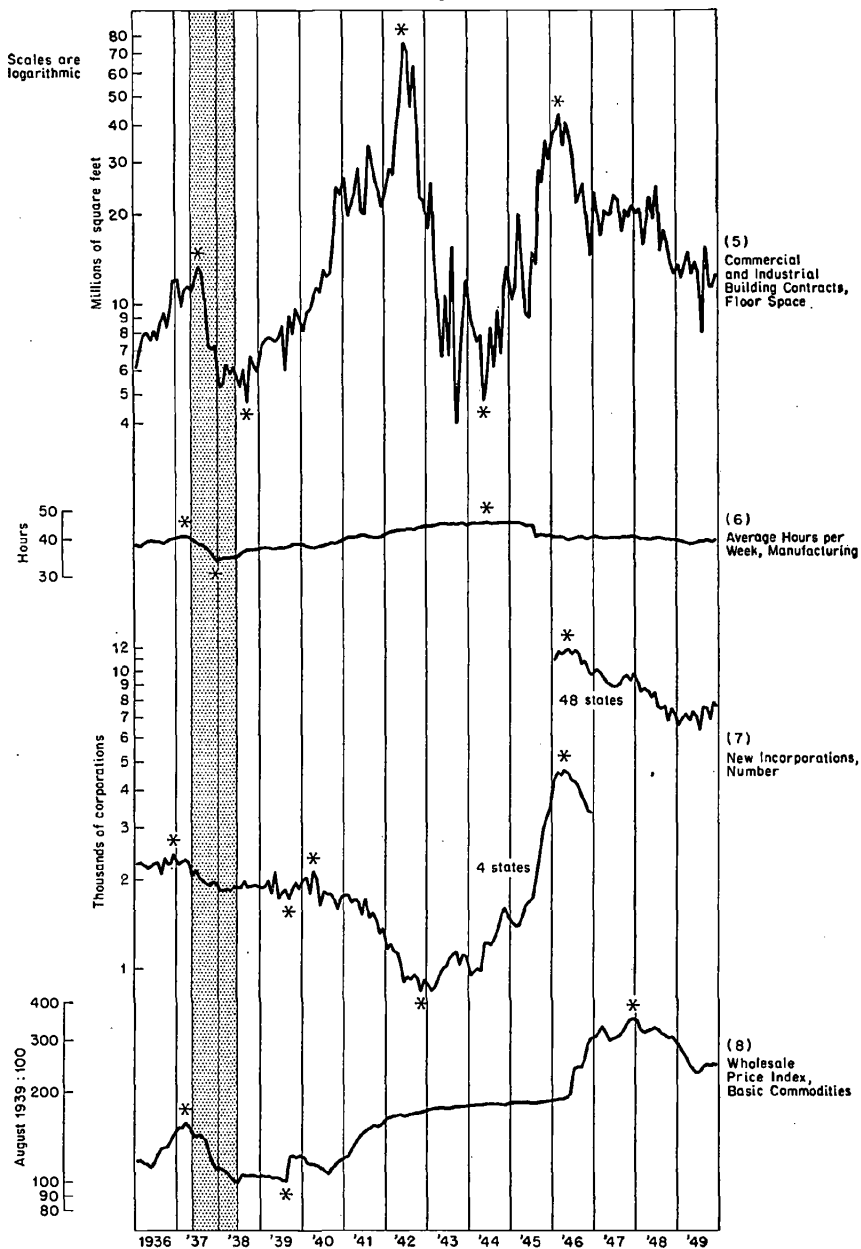
Chart 6 (cont.)

B. Roughly Coincident Series

Scales are logarithmic

Millions of persons

.5
.6
.7
.8
.9
1

Millions of persons

Billions of dollars (annual rate)

Billions of dollars

Thousands of cars per week

900
800
700
600
500

1935-39:100

250
200
150

100
90
80

Billions of dollars (annual rate)

300
250
200
150
100
90
80

1926:100

140
120
100
90
80
70

50
40
30

20

2

3
4
5
6
7
8
9
10
12

60
50
40
30

20

15

(9)
Employment in
Nonagricultural
Establishments

(10)
Unemployment,
inverted

(11)
Corporate Profits
(Quarterly)

(12)
Bank Debits Outside
New York City

(13)
Freight Carloadings

(14)
Industrial Production
Index, FRB

(15)
Gross National
Product
(Quarterly)

(16)
Wholesale Price
Index, excluding
farm products
and foods

D. of C.

NICB

a. Annual total.

1936 '37 '38 '39 '40 '41 '42 '43 '44 '45 '46 '47 '48 '49

Chart 6 (concl.)

C. Lagging Series

Scales are
logarithmic

Billions of dollars (annual rate)

250
200
150
100
90
80
70
60

(17)
Personal Income

Billions of dollars

12
10
9
8
7
6
5
4
3
2

(18)
Sales of
Retail Stores

Billions of dollars

12
10
9
8
7
6
5
4
3
2
1

(19)
Consumer
Installment Debt

Percent

3
2
1

(20)
Bank Rates on
Business Loans
(Quarterly)

Billions of dollars (D. of C.)

40
30
20
10

D. of C.

NICB

(21)
Manufacturers'
Inventories in
Current Prices

1935-39:100
(NICB)

140
120
100
90
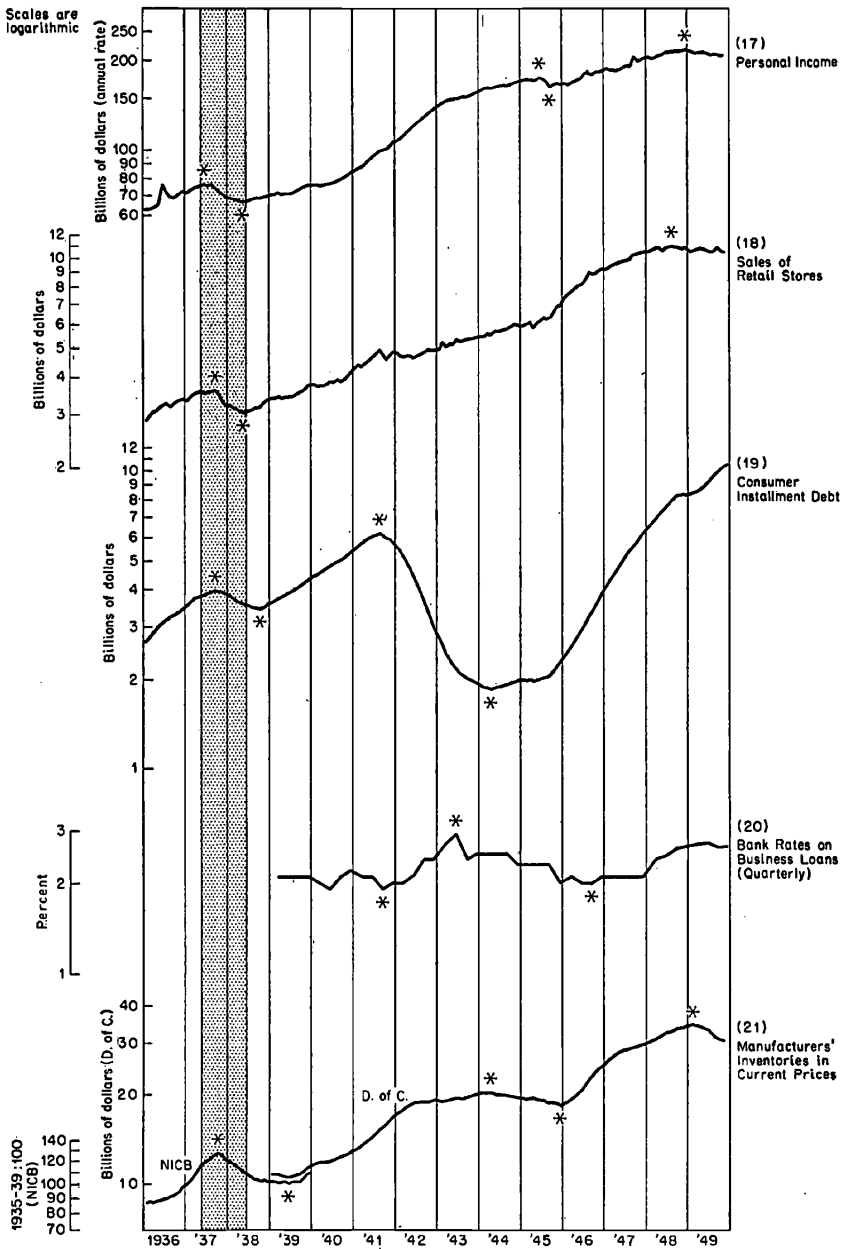80
70

1936 '37 '38 '39 '40 '41 '42 '43 '44 '45 '46 '47 '48 '49

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TABLE 13

Chronology of Postwar Peaks in Selected Statistical Indicators

		Leading Group[a]	Roughly Coincident Group	Lagging Group[b]
Mar.	1946	Comm. & indus. bldg. contracts		
May	1946	Resid. bldg. contracts New incorporations Industrial stock prices		
Dec.	1947	Basic commodity price index'	Freight carloadings	
May	1948		Unemployment (inv.)	
June	1948	New orders, durables		
Aug.	1948		Corp. profits (quart.)	Retail Sales
Sep.	1948		Nonagric. employ.	
Nov.	1948		Indus. prod. index Gross nat. prod. (quart.) Debits outside NYC Wh. price index excl. farm & food prod.	
Dec.	1948			Pers. income
Feb.	1949			Mfrs'. invent.

[a] Average hours worked per week and liabilities of business failures (inverted) reached peaks in June 1944 and April 1945, respectively.

[b] Consumer instalment debt had not reached a peak by December 1949. Bank interest rates in September and December 1949 were only slightly below the peak figure reached in June 1949.

commodity price index began to fall in January 1948, and new orders for durable goods followed in June. There is hardly any question, then, that the prewar tendency for declines in the leading group of series to precede those in the roughly coincident group has reasserted itself.

Like the roughly coincident series, all the lagging series rose in 1946-48, some continuing an expansion that, by 1948, had lasted ten years with hardly an interruption. The peak in retail sales came in August 1948, personal income in December, and manufacturers' inventories in February 1949. Bank interest rates declined slightly after the second quarter of 1949, but consumer instalment debt continued to rise throughout the year. Thus the behavior of this group of series is somewhat mixed, but the lagging tendency clearly prevails.

In concluding this examination of the recent behavior of our tentatively selected list of indicators, it is well to underline some limitations on their use. It is perhaps unnecessary to point out that all of our analysis has been directed toward revivals and recessions in general business activity. This is not always the mat-

ter of chief interest; cyclical developments in a particular indus-
try, line of activity, or area may properly claim the analyst's at-
tention. Although he may find that some of our results can be
adapted to such ends, obviously each such question requires
careful examination and a fresh approach.

In attempting to judge the course of cyclical movements in
the economy as a whole the user of statistical indicators will not
find his task easy. The cautions Mitchell and Burns voiced in
1938 (*Bulletin 69*, pp. 10-12) bear repeating. Most of them are
as applicable to recessions as to revivals.

"A person who attempts to determine by studying the series we
have listed whether or not any trustworthy indications of a cyclical
revival exist at a given time will find that he must equip himself with
a great deal of additional information before he can reach a
reasoned judgment.

"The first obstacle he will encounter is that monthly statistical
records are never up to date. The monthly series may tell him what
the status of business was a month or two ago; they cannot tell him
what the status of business is today. The only way to meet the ob-
stacle of tardy monthly reports is to use weekly or daily figures when
available. Although data by such short time units are likely to be of
little direct use in judging cyclical turns, they make it possible to
estimate the standing of individual series in the current month.

"A second difficulty arises in treating seasonal components. When
seasonal variations change from year to year, the problem of making
satisfactory adjustments for current months is hard to solve. . . . A
poor seasonal adjustment may produce an upturn that is readily
misinterpreted as cyclical or may cancel for a month or more a
genuine cyclical upturn. We know no protection against this danger
other than a careful comparison of the original and seasonally-ad-
justed data, plotted on the same chart.

"Even when a series is free of seasonal variations, it is difficult to
recognize a cyclical turn at the time it actually occurs. A series that
has made cyclical upturns usually, if not consistently, some months
before our reference dates for revival seems to have high prognostic
value, but the chances are fair that it has merely historical value.
The reason is that the cyclical movements of economic series are
diversified by erratic fluctuations. . . .

"Another difficulty is that no sequence of average leads of time
series in past cyclical revivals can tell what the exact sequence will
be at the next revival. . . . The variations are at times irregular; at
others they reflect secular or structural changes. . . . Such changes in

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cyclical timing are full of instruction to the student of business cycles. They are important also to the man of affairs; he must be alert to changes in the making, eschew simple formulas, test his judgments by study of numerous statistical series, and stand ready to revise his list of indicators as the economic environment changes.

"The chief hazard in forming judgments [about cyclical revivals] is that cyclical depressions not uncommonly end in a 'double bottom'. Several of the depressions of which we have fair statistical knowledge show two troughs about equally low separated by a mild upturn. The behavior of general business in 1932-33 is a notable example. . . . A large proportion of the most trustworthy indicators of business conditions participated in the abortive upturn of the autumn of 1932 and in the relapse that followed.

"So far as we know, there is no certain way of telling at the time it begins whether an incipient revival will suffer a relapse or develop into a cyclical expansion. Yet the occasions are frequent when speculation about the future course of business is demanded by pressing present needs. Those whose hard duty it is to make these guesses have the best chance of being substantially right if they combine analysis of current business data with some knowledge of the history of business cycles, such information as is available concerning important factors arising outside the realm of business, and a firm determination not to let their hopes and fears color their judgments more than is inevitable."

While this study has, we hope, contributed something to render guesses about the future course of business less hazardous, we find little to justify more optimism than Mitchell and Burns expressed. Our impression is that forecasts of revivals and recessions by means of the materials and approaches described in this paper will be subject to all the difficulties mentioned above. Nevertheless, there is some ground for confidence that objective use of these methods will at least reduce the usual lag in recognizing revivals or recessions *that have already begun.*[40] If, after an ex-

[40] Though difficult to measure, this lag is clearly not negligible. If the user of statistical indicators could do no better than recognize contemporaneously the turns in general economic activity denoted by our reference dates, he would have a better record than most of his fellows. For example, the reference peaks preceding the severe contractions of 1920-21, 1929-33, and 1937-38 come in January 1920, June 1929, and May 1937, respectively. But it was not until autumn in each of those years that economic difficulties received general notice. The contraction of 1948-49 began in the autumn of 1948; but it was not until the spring of 1949 that most observers were convinced that a recession was underway.

pansion in a group of roughly coincident series, several begin to decline, careful study of the recent behavior of a group of leading series may yield convincing evidence that the decline is or is not cyclical, and that a recession is or is not under way. True, this is forecasting of a sort. But it is forecasting with a highly important element of confirmation, which works in two directions. The behavior of the roughly coincident series confirms or fails to confirm that of the leading series, and vice versa. Some clue to the prospect that the emerging expansion or contraction will be comparable in magnitude to previous cyclical movements may be given by the extent to which it is already diffused among the processes being examined. Perhaps other aids to interpretation, such as those we describe in Appendix A, can be developed. In any case, if errors are to be minimized, painstaking study of the current and past behavior of the individual series, intelligent analysis of the factors that underlie their interrelationships, and judgment of the changing political and economic environment, will be required.