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Larry Moran: (202) 523-0777
Recorded Message: (202) 898-2450

BEA 88-36

COMPOSITE INDEXES OF LEADING, COINCIDENT, AND LAGGING
INDICATORS: JUNE 1988

The composite index of leading indicators increased 1.4 percent in June to 194.0 (1967=100), according to preliminary estimates released today by the Commerce Department's Bureau of Economic Analysis.

On the basis of more complete data, the index decreased 0.8 percent in May and increased 0.3 percent in April. A month ago, the bureau reported estimates that showed the index decreased 0.1 percent in May and increased 0.5 percent in April. Change in credit outstanding was the major contributor to both the May and April revisions.

Seven of 9 indicators available for June contributed to the increase in the index. They were, ordered from the largest positive contributor to the smallest: stock prices, vendor performance (i.e., companies receiving slower deliveries from vendors), contracts and orders for plant and equipment in 1982 dollars, average weekly initial claims for state unemployment insurance, building permits, change in sensitive materials prices, and money supply in 1982 dollars.

One of 9 indicators made a negative contribution: manufacturers' new orders for consumer goods and materials in 1982 dollars.

One indicator was unchanged: average workweek.

The composite index of coincident indicators, a monthly approximation of aggregate economic activity, increased 0.7 percent in June to 177.5 (1967=100). On the basis of more complete data, the index increased 0.2 percent in May and decreased 0.1 percent in April.

The composite index of lagging indicators increased 0.8 percent in June to 147.8 (1967=100). On the basis of more complete data, the index decreased 0.1 percent in May and increased 0.8 percent in April.

The leading index is designed to predict monthly movements in aggregate economic activity, which is approximated by the coincident index. The lagging index is expected to move, after a time lag, in the same direction as the coincident index and thus to confirm the movements in the coincident index.

These concepts are explained more fully in the 1984 edition of Handbook of Cyclical Indicators (price \$5.50, stock number 003-010-00127-5), which is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

More data on the composite indexes, as well as other important measures of economic activity, appear each month in Business Conditions Digest, also available from the Superintendent of Documents. Annual subscription: \$44.00.

This and other news releases are available electronically at the time of public release through the Commerce Department's Economic Bulletin Board at a nominal charge to users. For information, call (202) 377-1986.

Four telephone lines carry short recorded messages providing BEA estimates immediately upon their release:

- (202) 898-2450 Leading indicators
 - 2451 Gross national product
 - 2452 Personal income and outlays
 - 2453 The most recently released of the following series:
 - Merchandise trade, balance of payments basis, or
 - Summary of international transactions, or
 - Plant and equipment expenditures.

Next release date: August 30 for the July composite indexes.

Table 1. Composite Indexes of Leading, Coincident, and Lagging Indicators

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	IQ	IIQ	IIIQ	IVQ
Leading index (1967=100)																
1979	147.7	147.5	149.3	146.4	147.6	146.5	145.2	144.5	144.5	141.7	140.1	140.5	148.2	146.8	144.7	140.8
1980	141.4	140.4	137.4	133.4	130.9	132.0	135.1	138.3	141.2	142.4	143.4	143.0	139.7	132.1	138.2	142.9
1981	142.1	140.4	141.7	144.6	144.5	143.2	142.9	142.4	139.3	136.9	137.0	136.2	141.4	144.1	141.5	136.7
1982	135.1	135.7	134.7	136.0	136.2	135.5	136.2	136.1	137.5	138.6	139.4	140.9	135.2	135.9	136.6	139.6
1983	145.2	147.4	150.2	152.5	154.4	157.3	158.2	158.9	160.0	162.4	162.5	163.4	147.6	154.7	159.0	162.8
1984	164.6	166.7	166.7	167.6	167.9	166.6	163.8	163.4	164.1	163.6	164.4	163.8	166.0	167.4	163.8	163.9
1985	165.5	166.5	167.2	165.9	166.9	167.3	168.5	169.3	170.2	171.2	171.1	174.0	166.4	166.7	169.3	172.1
1986	174.1	175.0	176.4	178.1	178.5	178.3	179.9	180.3	179.9	181.2	182.7	186.7	175.2	178.3	180.0	183.5
1987	185.5	186.0	187.6	187.6	188.6	190.5	190.9r	191.7r	191.9r	192.0r	190.0r	190.9r	186.4	188.9	191.5r	191.0r
1988	190.4r	191.9r	192.4r	192.9r	191.3r	194.0p							191.6r	192.7p		
Leading index--percent change from preceding month (quarter)																
1979	.3	-.1	1.2	-1.9	.8	-.7	-.9	-.5	.0	-1.9	-1.1	-.3	.4	-.9	-1.4	-2.7
1980	.6	-.7	-2.1	-2.9	-1.9	.8	2.3	2.4	-2.1	.8	-.7	-.3	-.8	-5.4	4.6	3.4
1981	-.6	-1.2	-.9	2.0	-.1	-.9	-.2	-3.3	-2.2	-1.7	.1	-.6	-1.0	1.9	-1.8	-3.4
1982	-.8	.4	-.7	1.0	.1	-.5	.5	-.1	1.0	.8	.6	1.1	-1.1	.5	.5	2.2
1983	3.1	1.5	1.9	1.5	1.2	1.9	.6	.4	.7	1.5	.1	.6	5.7	4.8	2.8	2.4
1984	.7	1.3	.0	.5	.2	-.8	-1.7	-2.2	.4	-.3	.5	-.4	2.0	.8	-2.2	.1
1985	1.0	.6	.4	-.8	.6	.2	.7	.5	.5	.6	-.1	1.7	1.5	.2	1.6	1.7
1986	-.1	.5	.8	1.0	.2	-.1	.9	.2	-.2	.7	.8	2.2	1.8	1.8	1.0	1.9
1987	-.6	.3	.9	.0	.5	1.0	.2r	.4	.1	.1	-1.0r	.5r	1.6	1.3	1.4	-.3r
1988	-.3r	.8	.3r	.3r	-.8r	1.4p							.3r	.6p		
Coincident index (1967=100)																
1979	149.3	149.4	151.2	149.1	150.6	150.6	151.0	150.6	150.4	150.3	149.9	150.0	150.0	150.1	150.7	150.1
1980	150.7	149.6	148.1	145.1	142.4	141.1	140.8	141.2	142.7	144.2	145.3	146.1	149.5	142.9	141.6	145.2
1981	146.8	147.2	147.2	147.1	146.9	147.5	147.6	147.3	146.5	144.5	143.0	140.9	147.1	147.2	147.1	142.8
1982	138.4	139.9	139.2	138.0	138.8	137.3	136.4	135.2	134.5	132.9	132.7	132.6	139.2	138.0	135.4	132.7
1983	134.3	133.5	134.6	135.6	137.9	139.8	140.7	140.8	143.3	145.0	145.9	147.5	134.1	137.8	141.6	146.1
1984	149.5	150.6	151.1	152.6	153.9	155.4	155.7	156.0	156.5	156.5	157.7	158.8	150.4	154.0	156.1	157.7
1985	158.4	159.0	159.3	160.5	160.2	159.5	159.7	160.9	160.9	160.8	161.6	163.0	158.9	160.1	160.5	161.8
1986	162.9	163.4	162.9	165.6	164.3	163.7	164.4	164.8	165.8	165.4	165.8	167.4	163.1	164.5	165.0	166.2
1987	165.6	168.2	168.0	168.0	167.6	168.2	169.8r	170.6r	170.7r	173.1r	172.6r	174.4r	167.3	167.9	170.4r	173.4r
1988	173.8r	175.2r	176.1r	175.9r	176.3r	177.5p							175.0r	176.6p		
Coincident index--percent change from preceding month (quarter)																
1979	-.3	.1	1.2	-1.4	1.0	.0	-.3	-.3	-.1	-.1	-.3	.1	1.0	-.1	-.4	-.4
1980	.5	-.7	-1.0	-2.0	-1.9	-.9	-.2	-.3	1.1	1.1	-.8	-.6	-.4	-4.1	-.9	-2.5
1981	.5	.3	-.5	-.1	-.1	-.4	-.7	-.2	-.5	-1.4	-1.0	-1.5	-1.3	-.1	-.1	-2.9
1982	-1.8	1.1	-.5	-.9	.6	-1.1	-.7	-.9	-1.5	-1.2	-.2	-.1	-2.5	-.9	-1.9	-2.0
1983	1.3	-.6	.8	.7	1.7	1.4	.6	.1	1.8	1.2	.6	1.1	1.1	2.8	2.8	3.2
1984	1.4	.7	.3	1.0	.9	1.0	.2	.2	.3	.0	.8	.7	2.9	2.4	1.4	1.0
1985	-.3	.4	-.2	.8	-.2	-.4	.1	.8	.0	-.1	.5	.9	.8	.8	.2	.8
1986	-.1	.3	-.3	1.7	-.8	-.4	.4	.2	.6	-.2	.2	1.0	.8	.9	.3	.7
1987	-1.1	1.6	-.1	-.0	-.2	.4	1.0r	.5r	.1	1.4r	-.3	1.0r	.7	.4	1.5r	1.8r
1988	-.3r	.8r	.5r	-.1	.2	.7p							.9	.9p		
Lagging index (1967=100)																
1979	119.2	119.7	118.8	121.7	121.0	122.3	122.3	123.0	124.7	125.8	126.3	126.1	119.2	121.7	123.3	126.1
1980	126.2	127.1	130.2	132.3	129.6	125.5	121.8	120.5	119.4	119.0	120.1	123.0	127.8	129.1	120.6	120.7
1981	121.7	120.7	119.0	119.0	122.2	122.4	122.5	123.3	124.7	125.0	124.5	124.4	120.5	121.2	123.5	124.6
1982	126.5	125.6	125.8	126.3	126.3	126.5	125.8	124.0	123.4	122.1	120.5	119.2	126.0	126.4	124.4	120.6
1983	117.8	117.9	116.9	115.9	114.2	113.8	113.6	114.6	114.4	114.1	115.1	116.0	117.5	114.6	114.2	115.1
1984	115.0	116.7	118.1	120.6	122.9	124.9	125.8	127.6	128.9	130.1	130.1	130.1	116.6	122.8	127.4	130.1
1985	131.6	131.9	132.9	133.3	134.9	134.9	135.3	135.6	137.1	138.5	138.5	139.5	132.1	134.4	136.0	138.8
1986	140.5	141.1	142.3	140.5	141.4	141.6	141.8	142.2	141.6	143.7	143.4	142.4	141.3	141.2	141.9	143.2
1987	144.6	142.1	141.3	141.8	142.0	142.6	141.8r	141.6	143.0r	142.5	143.3	142.7r	142.7	142.1	142.1r	142.8r
1988	144.5r	144.9r	145.7	146.8r	146.6r	147.8p							145.0r	147.1p		
Lagging index--percent change from preceding month (quarter)																
1979	1.0	.4	-.8	2.4	-.6	1.1	-.0	-.6	1.4	-.9	.4	-.2	2.1	2.1	1.3	2.3
1980	1.1	-.7	2.4	1.6	-2.0	-3.2	-2.9	-1.1	-.9	-.3	-.9	2.4	1.3	1.0	-6.6	.1
1981	-1.1	-.8	-1.4	.0	2.7	.2	.1	.7	1.1	.2	-.4	-.1	-.2	.6	1.9	.9
1982	1.7	-.7	-.2	-.4	.0	-.2	-.6	-1.4	-.5	-1.1	-1.3	-1.1	1.1	-.3	-1.6	-3.1
1983	-1.2	.1	-.8	-.9	-1.5	-.4	-.2	.9	-.2	-.3	.9	.8	-2.6	-2.5	-.3	.8
1984	-.9	1.5	1.2	2.1	1.9	1.6	.7	1.4	1.0	.9	.0	.0	1.3	5.3	3.7	2.1
1985	1.2	.2	.8	.3	1.2	.0	.3	.2	1.1	1.0	.0	.7	1.5	1.7	1.2	2.1
1986	.7	.4	.9	-1.3	.6	.1	.1	.3	-.4	1.5	-.2	-.7	1.8	-.1	.5	.9
1987	1.5	-1.7	-.6	.4	.1	.4	-.6r	-.1r	1.0r	-.3r	.6	-.4r	-.3	-.4	.0r	.5r
1988	1.3r	.3r	.6r	.8r	-.1r	.8p							1.5r	1.4p		

p, preliminary. r, revised.

NOTE: Quarterly data are averages of monthly figures. Quarterly percent changes are computed from quarterly data. See tables 2 and 3 for composition of the indexes.

Table 2. Recent Data and Net Contributions for the Components of the Leading Index

Component	1987							1988					
	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Leading Index Data													
Average workweek, production workers, mfg. (hours).....	41.0	41.0	41.0	40.6	41.2	41.2	41.0	41.1	41.0	40.9	41.2	41.0r	41.0p
Average weekly initial claims, state unemployment insurance (thous.)*..	327	327	297	286	284	293	312	351	321	304	296	307	292
New orders, mfg., consumer goods and materials ind. (billion 1982 dollars)....	85.66r	84.19r	83.69	85.71	85.96	85.89	86.66	84.81	86.14r	86.46	87.46r	88.60r	87.56p
Vendor performance, companies receiving slower deliveries (percent).....	57	62	60	69	70	66	71	68	66	69	62	66	70
Contracts and orders, plant and equipment (billion 1982 dollars)....	38.80r	40.18r	38.25	38.28	39.12	37.53	41.75r	43.42r	42.72r	40.89r	41.51r	39.98r	42.93p
Building permits (index: 1967=100).....	122.7	120.4	120.7	119.7	115.9	116.3	109.4	99.5	114.0	117.7	115.6	114.5	119.1
Change in inventories on hand and on order (ann. rate, billion 1982 dol.)#.	39.33r	38.95r	30.33r	20.18r	27.22r	42.57r	54.39r	54.32r	51.34r	44.76r	31.05r	19.41p	NA
Change in sensitive materials prices (pct.)#..	1.48	1.73	1.51	1.27	1.30	1.11	.76	.36	.13r	.13r	.21	.32r	.46
Stock prices, 500 common stocks (index: 1941-43=10)	301.38	310.09	329.36	318.66	280.16	245.01	240.96	250.48	258.13	265.74	262.61	256.12	270.68
Money supply M2 (billion 1982 dollars)....	2424.9	2424.3	2423.6	2425.0	2428.4	2423.9	2423.6	2435.5	2448.9	2454.5	2462.3r	2463.6r	2466.6p
Change in credit--business and consumer borrowing (ann. rate, percent).....	7.9	1.6	4.1	8.9	9.1r	5.8	11.4r	13.2	10.1r	6.4r	12.4r	5.5p	NA
COMPOSITE LEADING INDEX.....	190.5	190.9r	191.7r	191.9r	192.0r	190.0r	190.9r	190.4r	191.9r	192.4r	192.9r	191.3r	194.0p
Leading Index Net Contributions													
Average workweek, production workers, mfg. (hours).....	.00	.00	.00	-.33	.50	.00	-.16	.08	-.08	-.08	.25	-.16	.00
Average weekly initial claims, state unemployment insurance (thous.)*..	-.01	.00	.29	.11	.02	-.09	-.19	-.35	.27	.16	.08	-.11	.18
New orders, mfg., consumer goods and materials ind. (billion 1982 dollars)....	.11	-.09	-.03	.13	.02	-.00	.05	-.12	.08	.02	.06	.07	-.08
Vendor performance, companies receiving slower deliveries (percent).....	-.13	.22	-.09	.39	.04	-.18	.22	-.13	-.09	.13	-.31	.18	.21
Contracts and orders, plant and equipment (billion 1982 dollars)....	-.01	.08	-.12	.00	.05	-.10	.25	.09	-.04	-.10	.04	-.09	.21
Building permits (index: 1967=100).....	.07	-.06	.01	-.03	-.10	.01	-.20	-.31	.44	.10	-.06	-.03	.16
Change in inventories on hand and on order (ann. rate, billion 1982 dol.)#.	.11	-.01	-.23	-.27	.18	.40	.31	-.00	-.08	-.17	-.36	-.31	NA
Change in sensitive materials prices (pct.)#..	.31	.11	-.09	-.10	.01	-.08	-.15	-.17	-.10	.00	.03	.05	.07
Stock prices, 500 common stocks (index: 1941-43=10)	.28	.19	.41	-.22	-.87	-.91	-.11	.26	.20	.20	-.08	-.17	.46
Money supply M2 (billion 1982 dollars)....	-.06	-.01	-.01	.02	.05	-.06	-.00	.17	.19	.08	.11	.02	.05
Change in credit--business and consumer borrowing (ann. rate, percent).....	.19	-.36	.14	.27	.01	-.19	.32	.10	-.18	-.21	.34	-.39	NA
PCT. CHANGE IN LEADING INDEX	1.01	.21r	.42	.10	.05	-1.04r	.47r	-.26r	.79	.26r	.26r	-.83r	1.41p

* Series is inverted in calculating the composite index: a decrease in this series is considered an upward movement.

Smoothed by a weighted 4-month moving average (with weights 1,2,2,1) placed at the terminal month of the span.

NA, not available. p, preliminary. r, revised. e, estimated.

NOTE.--The net contribution of an individual component is that component's share in the composite movement of the group. The percent change in the index equals (except for rounding differences) the sum of the net contributions of the individual components plus the trend adjustment factor (0.139 for the leading index).

Table 3. Recent Data and Net Contributions for the Components of the Coincident and Lagging Indexes

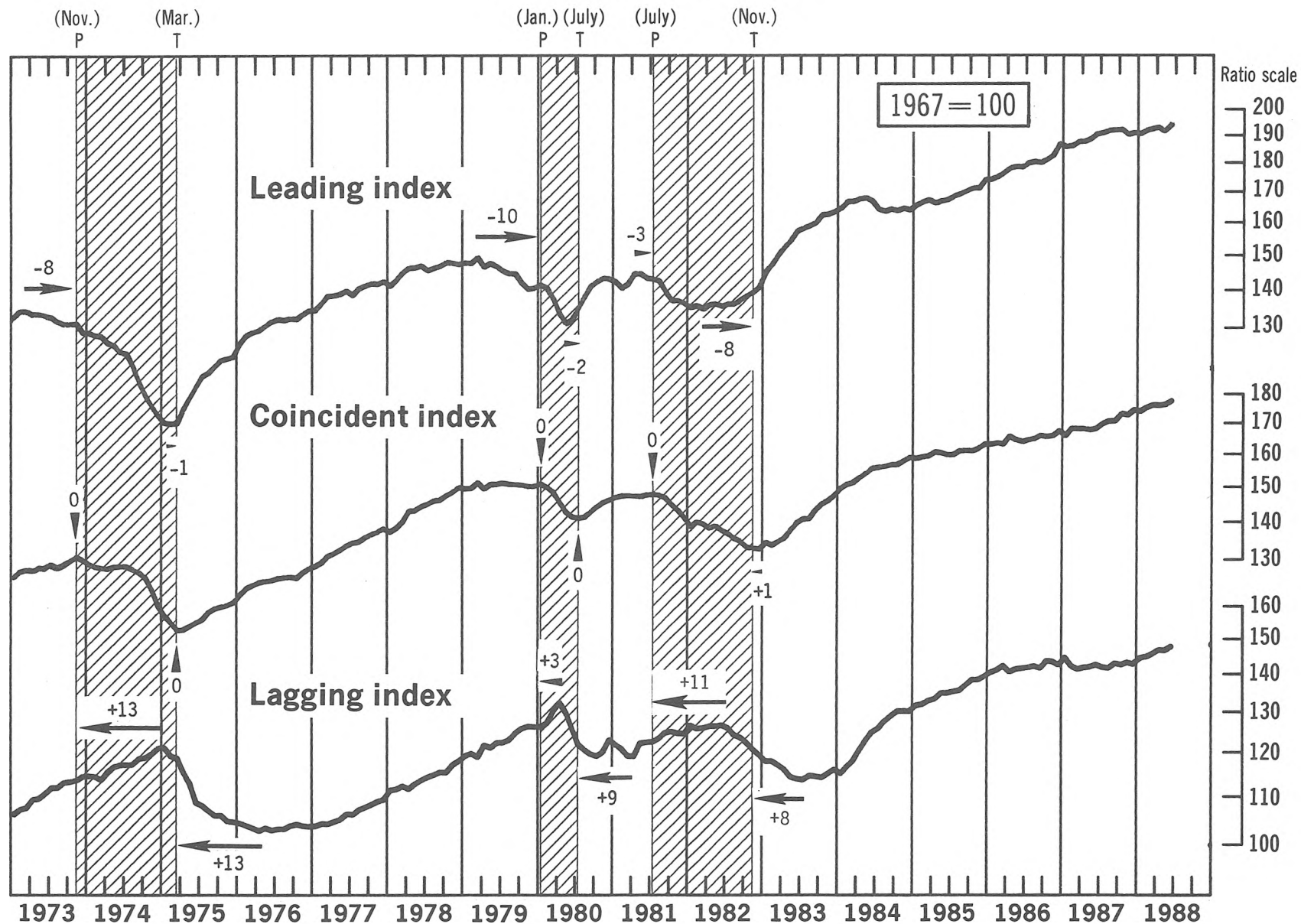
Component	1987							1988					
	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Coincident Index Data													
Employees on nonagricultural payrolls (thous.)...	102078	102430	102672	102906	103371	103678	104001	104262	104729	105020	105281r	105502r	105848p
Personal income less transfer payments (ann. rate, billion 1982 dol.)..	2678.7r	2698.7r	2707.8r	2705.4r	2754.2r	2736.8r	2778.2r	2745.6r	2764.0r	2776.3r	2768.0r	2769.7r	2784.1p
Industrial production, total (index: 1967=100)...	129.1	130.6	131.2	131.0	132.5	133.2	133.9	134.4	134.4	134.7	135.4r	136.1r	136.6p
Manufacturing and trade sales (million 1982 dol.)..	430962r	434097r	437021r	439795r	439116r	435424r	437090r	438866r	444117r	448202r	445467r	446418p	NA
COMPOSITE COINCIDENT INDEX..	168.2	169.8r	170.6r	170.7r	173.1r	172.6r	174.4r	173.8r	175.2r	176.1r	175.9r	176.3r	177.5p
Coincident Index Net Contributions													
Employees on nonagricultural payrolls (thous.)...	.20	.29	.20	.19	.37	.25	.26	.21	.37	.23	.21	.17	.35
Personal income less transfer payments (ann. rate, billion 1982 dol.)..	.00	.37	.17	-.04	.90	-.32	.75	-.59	.33	.22	-.15	.03	.34
Industrial production, total (index: 1967=100)...	.19	.32	.13	-.04	.32	.15	.15	.10	.00	.06	.14	.14	.13
Manufacturing and trade sales (million 1982 dol.)..	.10	.16	.15	.14	-.03	-.19	.08	.09	.26	.20	-.14	.05	NA
PERCENT CHANGE IN INDEX.....	.36	.95r	.47r	.06r	1.41r	-.29	1.04r	-.34r	.81r	.51r	-.11	.23r	.68p
Lagging Index Data													
Average duration of unemployment (weeks)*.....	14.7	14.2	14.3	14.2	14.1	14.0	14.2	14.4	14.4	13.7	13.4	13.8	12.9
Ratio, deflated inventories to sales, mfg. and trade (ratio).....	1.53	1.52	1.51r	1.50	1.52r	1.54r	1.54r	1.55r	1.54r	1.53r	1.54r	1.54p	NA
Labor cost per unit of output, mfg. (actual as percent of trend).....	99.3r	98.5r	99.0r	100.1r	99.4r	99.5r	98.8r	99.1r	99.4r	100.5r	99.8r	99.6r	100.0p
Average prime rate charged by banks (percent).....	8.25	8.25	8.25	8.70	9.07	8.78	8.75	8.75	8.51	8.50	8.50	8.84	9.00
Commercial and industrial loans outstanding (million 1982 dollars)....	354015	348139	344383	346503	348215	348281	353161	356180	360713r	361185	367391r	365925r	363358p
Ratio, consumer installment credit to personal income (percent).....	15.69r	15.71r	15.73r	15.78r	15.57r	15.67r	15.56r	15.79r	15.82r	15.79r	15.85r	15.84p	NA
COMPOSITE LAGGING INDEX.....	142.6	141.8r	141.6	143.0r	142.5	143.3	142.7r	144.5r	144.9r	145.7	146.8r	146.6r	147.8p
Lagging Index Net Contributions													
Average duration of unemployment (weeks)*.....	.05	.25	-.05	.05	.05	.05	-.10	-.10	.00	.36	.16	-.21	.71
Ratio, deflated inventories to sales, mfg. and trade (ratio).....	.00	-.13	-.13	-.13	.26	.26	.00	.13	-.13	-.13	.13	.00	NA
Labor cost per unit of output, mfg. (actual as percent of trend).....	-.18	-.29	.18	.40	-.26	.04	-.26	.11	.11	.40	-.26	-.07	.22
Average prime rate charged by banks (percent).....	.08	.00	.00	.32	.26	-.20	-.02	.00	-.17	-.01	.00	.24	.16
Commercial and industrial loans outstanding (million 1982 dollars)....	-.15	-.44	-.29	.16	.13	.00	.37	.22	.33	.03	.45	-.11	-.27
Ratio, consumer installment credit to personal income (percent).....	.58	.08	.08	.19	-.81	.38	-.42	.88	.12	-.12	.23	-.04	NA
PERCENT CHANGE IN INDEX.....	.42	-.56r	-.14r	.99r	-.35r	.56	-.42r	1.26r	.28r	.55r	.75r	-.14r	.82p

* Series is inverted in calculating the composite index: a decrease in this series is considered an upward movement.

NA, not available. p, preliminary. r, revised. e, estimated.

NOTE.--The net contribution of an individual component is that component's share in the composite movement of the group. The percent change in the index equals (except for rounding differences) the sum of the net contributions of the individual components plus the trend adjustment factor of -0.175 for the coincident index and 0.018 for the lagging index.

COMPOSITE INDEXES



NOTE: P (peak) indicates the end of general business expansion and the beginning of recession; T (trough) indicates the end of general business recession and the beginning of expansion. Thus, the shaded areas represent recessions. The arrows indicate the length of leads (-) and lags (+), in months, from the business cycle turning dates.