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Volume Title: Indicators of Business Expansions and Contractions

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Volume Publisher: NBER

Volume ISBN: 0-87014-444-8

Volume URL: <http://www.nber.org/books/moor67-2>

Publication Date: 1967

Chapter Title: Appendix B: Eighty-eight Selected Indicators Classified by Timing and Economic Process: Timing Characteristics for Peaks and Troughs Separately

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Chapter URL: <http://www.nber.org/chapters/c1272>

Chapter pages in book: (p. 94 - 101)

Appendix B
Eighty-eight Selected Indicators Classified by Timing and Economic Process:
Timing Characteristics for Peaks and Troughs Separately

Classification and Series Title (1)	Number of											Median Lead(-) or Lag(+) in Months (10)	Timing Class ^b (11)	% in Timing Class (12)			
	At Peaks (P) or Troughs (T)	Busi- ness Cycle Turns Cov- ered (3)	Leads (4)	Rough Coinci- dences ^a (5)	Lags (6)	Timing Com- pari- sons (7)	Busi- ness Cycle Turns Skipped (8)	Extra Specific Cycle Turns (9)									
LEADING INDICATORS (36 SERIES)																	
1. Employment and unemployment <i>Marginal employment adjustments</i>																	
*1. Avg. workweek, prod. workers, mfg.	P	9	7	1(0)	1	8	1	1	1	8	1	1	1	-6	L	78	
	T	10	6	3(2)	1	9	1	1	1	9	1	1	1	-4	L	60	
*30. Nonagri. placements, BES	P	5	4	0(0)	0	4	1	1	2	4	1	2	2	-11	L	80	
	T	5	4	4(0)	1	5	0	2	0	5	0	2	2	-1	C	80	
2. Accession rate, mfg.	P	10	10	2(0)	0	10	0	2(0)	0	10	0	3	3	-10	L	100	
	T	11	9	4(2)	0	11	0	4(2)	0	11	0	3	3	-4	L	82	
5. Initial claims, unempl. insur. (inv.)	P	5	4	0(0)	0	4	1	0(0)	0	4	1	1	1	-18	L	80	
	T	5	2	4(2)	1	5	0	4(2)	1	5	0	1	1	0	C	80	
3. Layoff rate, mfg. (inv.)	P	10	10	2(0)	0	10	0	2(0)	0	10	0	2	2	-10	L	100	
	T	11	9	4(1)	0	10	1	4(1)	0	10	1	2	2	-6	L	82	
3. Fixed capital investment <i>Formation of business enterprises</i>																	
*38. Index of net business formation	P	5	4	0(0)	0	4	1	0(0)	0	4	1	0	0	-20	L	80	
	T	5	4	3(1)	0	5	0	3(1)	0	5	0	0	0	-3	L	80	
13. New business incorporations	P	25	15	8(1)	4	20	5	8(1)	4	20	5	8	8	-4	L	60	
	T	25	18	5(1)	3	22	3	5(1)	3	22	3	7	7	-6	L	72	
<i>New investment commitments</i>																	
*6. New orders, dur. goods indus.	P	10	8	1(0)	0	8	2	1(0)	0	8	2	1	1	-8	L	80	
	T	10	8	6(1)	0	9	1	6(1)	0	9	1	1	1	-2	L	80	
94. Construction contracts, total, value	P	13	9	3(0)	1	10	3	3(0)	1	10	3	5	5	-8	L	69	
	T	13	10	5(1)	0	11	2	5(1)	0	11	2	5	5	-4	L	77	
*10. Contracts and orders, plant and equip.	P	4	4	0(0)	0	4	0	0(0)	0	4	0	0	0	-8	L	100	
	T	4	3	2(0)	1	4	0	2(0)	1	4	0	0	0	-3	L	75	
*11. New capital appropriations, mfg., Q	P	3	2	1(0)	1	3	0	1(0)	1	3	0	0	0	-6	U		
	T	3	2	2(0)	1	3	0	2(0)	1	3	0	0	0	-3	U		

24. New orders, mach. and equip. indus.	P	4	4	4	0(0)	0	4	0	4	0	0	-8	L	100
9. Constr. contracts, comm. and indus., floor area	T	4	4	2(0)	0	0	4	0	4	0	0	-4	L	100
7. Private nonfarm housing starts	P	10	6	2(0)	1	3	7	3	2	2	2	-9	L	60
*29. New building permits, private housing units	T	11	5	6(1)	2	8	8	2	3	3	2	-2	U	73
4. Inventories and inventory investment	P	11	8	1(0)	1	9	9	2	3	3	3	-13	L	82
<i>Inventory investment and purchasing</i>	T	11	9	4(1)	0	10	10	1	3	3	3	-5	L	82
21. Change in business inventories, all indus., Q	P	11	8	1(0)	1	9	9	2	4	4	4	-13	L	73
*31. Change in book value, mfg. and trade inventories	T	11	9	4(1)	0	10	10	1	4	4	4	-5	L	82
37. Purchased materials, % reptg. higher inventories	P	9	6	4(0)	3	9	9	0	2	2	2	-3	L	67
20. Change in bk. val., mfrs.' inventories of mat. and supp.	T	10	4	4(1)	5	10	10	0	2	2	2	0	U	100
26. Buying policy, mater., % reptg. commitments 60+ days	P	5	5	0(0)	0	5	5	0	2	2	2	-14	L	100
32. Vendor performance, % reptg. slower deliveries	T	5	4	2(1)	0	5	5	0	2	2	2	-6	L	80
25. Change in unfilled orders, dur. goods indus.	P	4	4	0(0)	0	4	4	0	2	2	2	-8	L	100
5. Prices, costs, and profits	T	4	2	3(1)	1	4	4	0	2	2	2	-2	C	75
<i>Sensitive commodity price indexes</i>	P	5	4	1(0)	0	4	4	1	2	2	2	-16	L	80
*23. Industrial materials prices	T	5	4	3(0)	1	5	5	0	1	1	1	-3	L	80
<i>Stock price indexes</i>	P	3	3	0(0)	0	3	3	0	2	2	2	-12	L	100
*19. Stock prices, 500 common stocks	T	3	3	3(0)	0	3	3	0	2	2	2	-2	L	100
<i>Profits and profit margins</i>	P	4	4	1(0)	0	4	4	0	1	1	1	-10	L	100
*16. Corporate profits after taxes, Q	T	4	4	0(0)	0	4	4	0	2	2	2	-8	L	100
22. Ratio, profits to income orig., corp., all indus., Q	P	5	5	0(0)	0	5	5	0	1	1	1	-19	L	100
18. Profits per dollar of sales, corporate, mfg., Q	T	5	5	2(0)	0	5	5	0	1	1	1	-6	L	100
*17. Ratio, price to unit labor cost, mfg.	P	4	3	2(1)	0	4	4	0	1	1	1	-4	L	75
	T	10	9	4(0)	1	10	10	0	1	1	1	-11	L	90
	P	11	8	6(1)	2	11	11	0	1	1	1	-3	L	73

Appendix B (Continued)

Classification and Series Title (1)	Number of											% in Timing Class (12)
	At Peaks (P) or Troughs (T) (2)	Busi- ness Cycle Turns Cov- ered (3)	Busi- ness Cycle Turns Cov- ered (3)	Rough Coinci- dences ^a Lags (4)	(5)	(6)	Timing Com- pari- sons (7)	Busi- ness Cycle Turns Skipped (8)	Extra Specific Cycle Turns (9)	Median Lead(-) or Lag(+) in Months (10)	Timing Class ^b (11)	
LEADING INDICATORS (CONCLUDED)												
6. Money and credit												
<i>Flows of money and credit</i>												
98. Change in money supply and time deposits ^c	P	13	12	0(0)	0	12	1	2	-20	L	92	
	T	14	12	0(0)	1	13	1	2	-11	L	86	
85. Change in money supply ^c	P	11	10	0(0)	0	10	1	1	-20	L	91	
	T	12	9	1(0)	1	10	2	1	-10	L	75	
110. Total private borrowing, Q	P	3	3	0(0)	0	3	0	0	-12	L	100	
	T	3	1	2(1)	1	3	0	0	0	U		
*113. Change in consumer instalment debt	P	7	6	1(0)	0	6	1	2	-12	L	86	
	T	7	5	3(0)	1	6	1	2	-4	L	71	
112. Change in bank loans to businesses	P	5	4	0(0)	0	4	1	1	-22	L	80	
	T	6	2	4(2)	1	5	1	1	0	C	67	
33. Change in mortgage debt	P	2	2	0(0)	0	2	0	0	-18 ⁱ	L	100	
	T	2	1	1(1)	0	2	0	0	-4 ⁱ	U		
<i>Credit difficulties</i>												
14. Liabilities of bus. failures (inv.)	P	21	15	3(1)	2	18	3	1	-10	L	71	
	T	22	16	2(1)	1	18	4	1	-7	L	73	
39. Delinquency rate, instal. loans, 30+ days (inv.)	P	4	4	2(0)	0	4	0	0	-6	L	100	
	T	4	2	3(0)	2	4	0	0	0	C	75	
ROUGHLY COINCIDENT INDICATORS (25 SERIES)												
1. Employment and unemployment												
<i>Job vacancies</i>												
301. Nonagri. job openings, number pending, BES	P	4	3	0(0)	0	3	1	1	-8	L	75	
	T	4	0	4(2)	2	4	0	1	0	C	100	
46. Help-wanted advertising	P	10	5	4(2)	2	9	1	0	-3	L	50	
	T	11	1	10(5)	4	10	1	0	0	C	91	

<i>Comprehensive employment series</i>												
501. Man-hours in nonfarm establishments.	P	5	5	3(0)	0	5	0	0	0	-1	U	100
employees	T	5	1	5(2)	2	5	0	0	0	0	C	100
*41. Employees in nonagri. establishments ^d	P	7	5	5(1)	1	7	0	0	0	-2	L	71
	T	7	1	7(5)	1	7	0	0	0	0	C	100
42. Total nonagri. employment	P	5	3	2(0)	2	5	0	0	0	-4	U	100
	T	5	4	5(1)	0	5	0	0	0	-1	C	100
<i>Comprehensive unemployment series</i>												
*43. Unemployment rate, total (inv.)	P	7	4	2(1)	1	6	1	0	0	-4	L	57
	T	7	0	6(2)	5	7	0	0	0	+2	Lg	71
45. Insured unemployment rate (inv.)	P	3	3	1(0)	0	3	0	2	2	-11	L	100
	T	4	0	4(2)	2	4	0	2	2	0	C	100
40. Unemployment rate, married males (inv.)	P	2	2	0(0)	0	2	0	0	0	-15 ^j	L	100
	T	2	0	2(0)	2	2	0	0	0	+2 ^j	Lg	100
2. Production, income, consumption, and trade												
<i>Comprehensive production series</i>												
49. GNP in current dollars, expenditure estimate, Q	P	9	1	7(3)	3	7	2	0	0	0	C	78
	T	10	5	7(0)	3	8	2	2	0	-1	C	70
*50. GNP in constant dollars, expenditure estimate, Q	P	8	2	6(2)	2	6	2	0	0	0	C	75
	T	9	5	3(1)	1	7	2	0	0	-3	L	56
*47. Industrial production ^e	P	10	5	5(3)	2	10	0	0	0	0	U	73
	T	11	4	8(6)	1	11	0	0	0	0	C	73
<i>Comprehensive income series</i>												
*52. Personal income	P	9	2	5(1)	5	8	1	0	0	+1	U	80
	T	10	8	7(1)	0	9	1	0	0	-2	L	86
53. Labor income in mining, mfg., and constr.	P	7	3	6(3)	1	7	0	0	0	0	C	86
	T	7	1	6(3)	3	7	0	0	0	0	C	86
<i>Comprehensive consumption and trade series</i>												
57. Final sales in current dollars, Q	P	9	1	2(0)	6	7	2	0	0	+4	Lg	67
	T	10	5	5(0)	3	8	2	0	0	-2	U	75
*816. Mfg. and trade sales	P	4	3	2(1)	0	4	0	1	1	-4	L	100
	T	4	1	4(3)	0	4	0	1	1	0	C	100
*54. Sales of retail stores	P	10	2	3(0)	4	6	4	0	0	+1	U	75
	T	11	3	4(1)	2	6	5	0	0	0	U	100
3. Fixed capital investment												
<i>Backlog of investment commitments</i>												
96. Mfrs.' unfilled orders, dur. goods indus.	P	5	5	0(0)	0	5	0	1	1	-7	L	100
	T	5	1	4(1)	3	5	0	1	1	+1	C	80
97. Backlog of cap. appropriations, mfg., Q	P	3	2	1(0)	0	2	1	0	0	-6 ^j	U	100
	T	3	0	1(0)	3	3	0	0	0	+7	Lg	100

Appendix B (Continued)

Classification and Series Title (1)	Number of											% in Timing Class (12)
	At Peaks (P) or Troughs (T) (2)	Busi- ness Cycle Turns Cov- ered (3)	Busi- ness Cycle Turns Cov- ered (4)	Rough Coinci- dences ^a Lags (5)	Lags (6)	Timing Com- pari- sons (7)	Busi- ness Cycle Turns Skipped (8)	Extra Specific Cycle Turns (9)	Median Lead(-) or Lag(+) in Months (10)	Timing Class ^b (11)		
ROUGHLY COINCIDENT INDICATORS (CONCLUDED)												
5. Prices, costs, and profits <i>Comprehensive wholesale price indexes</i>												
55. Wholesale prices exc. farm products and foods	P	12	2	4(1)	3	6	6	1	0	U		
	T	12	0	6(1)	6	7	5	1	+1	U		
58. Wholesale price index, mfd. goods	P	12	4	2(0)	3	7	5	1	-1	U		
	T	12	3	5(1)	4	8	4	1	0	U		
6. Money and credit <i>Money market interest rates</i>												
114. Treasury bill rate	P	10	7	5(0)	1	8	2	1	-2	L		70
	T	10	3	5(0)	5	8	2	1	+2	U		
116. Corporate bond yields	P	4	3	3(0)	1	4	0	0	-2	L		75
	T	4	1	1(0)	3	4	0	0	+4	Lg		75
115. Treasury bond yields	P	10	6	4(1)	2	9	1	2	-1	U		
	T	11	1	5(2)	6	9	2	2	+3	Lg		55
117. Municipal bond yields ^c	P	10	5	3(0)	5	10	0	2	0	U		
	T	11	2	5(1)	8	11	0	2	+4	Lg		73
<i>Bank reserves</i>												
93. Free reserves (inv.) ^d	P	7	4	3(0)	1	5	2	1	-1	U		
	T	7	1	3(1)	2	4	3	2	+2	U		
LAGGING INDICATORS (11 SERIES)												
1. Employment and unemployment <i>Long-duration unemployment</i>												
*502. Unempl. rate, persons unempl. 15+ weeks (inv.)	P	4	1	3(1)	2	4	0	0	+1	C		75
	T	4	0	2(0)	4	4	0	0	+2	Lg		100
3. Fixed capital investment <i>Investment expenditures</i>												
*61. Bus. expend., new plant and equip., Q	P	10	1	9(4)	5	10	0	0	0	C		90
	T	10	1	7(1)	8	10	0	0	+2	Lg		80

505. Mach. and equip. sales and bus. constr. expend.	P	4	2	3(0)	2	4	0	0	-1	C	75
	T	4	0	4(0)	4	4	0	0	+2	Lg	100
4. Inventories and inventory investment											
<i>Inventories</i>											
*71. Book value, mfg. and trade inventories	P	5	1	3(0)	4	5	0	1	+2	Lg	80
	T	5	1	4(0)	4	5	0	1	+2	Lg	80
65. Book value of mfrs.' inventories, finished goods	P	5	1	1(0)	4	5	0	1	+5	Lg	80
	T	6	1	2(0)	5	6	0	1	+4	Lg	83
5. Prices, costs, and profits											
<i>Unit labor costs</i>											
68. Labor cost per dollar of real corp. GNP, Q ^a	P	4	1	1(0)	3	4	0	0	+6	Lg	75
	T	4	0	0(0)	4	4	0	0	+7	Lg	100
*62. Labor cost per unit of output, mfg. ^a	P	10	0	0(0)	7	7	3	1	+8	Lg	70
	T	11	0	1(0)	7	7	4	1	+9	Lg	64
6. Money and credit											
<i>Outstanding debt</i>											
66. Consumer instalment debt	P	7	0	1(0)	5	5	2	2	+6	Lg	71
	T	7	1	3(0)	4	5	2	2	+3	U	
*72. Comm. and indus. loans outstanding	P	6	1	3(0)	3	4	2	1	+2	U	
	T	6	0	3(0)	4	4	2	1	+2	Lg	67
<i>Interest rates on business loans and mortgages</i>											
*67. Bank rates on short-term bus. loans, Q ^a	P	10	2	2(1)	6	9	1	1	+5	Lg	60
	T	11	0	3(0)	9	9	2	1	+5	Lg	82
118. Mortgage yields, residential ^a	P	4	1	3(0)	3	4	0	0	+2	Lg	75
	T	4	0	0(0)	3	3	1	0	+6	Lg	75
OTHER SELECTED SERIES (16 SERIES)											
5. Prices, costs, and profits											
<i>Comprehensive retail price indexes</i>											
81. Consumer price index	P	12	2	2(1)	4	7	5	0	+4	U	
	T	12	0	3(0)	7	7	5	0	+10	Lg	58
7. Foreign trade and payments											
89. U.S. balance of payments, Q	P	5	2	0(0)	0	2	3	6	-6 ^j	U	
	T	5	1	1(0)	1	2	3	6	+6 ^j	U	
88. Merchandise trade balance (inv.)	P	23	8	11(4)	6	18	5	16	0	U	
	T	24	6	5(0)	7	13	11	21	+1	U	
86. Exports, exc. military aid	P	23	5	2(0)	4	9	14	14	-4	U	
	T	24	4	4(2)	5	11	13	13	0	U	
861. Export orders, durable goods ^c	P									U	
	T									U	
862. Export orders, machinery	P	2	0	0(0)	0	0	2	0	-	U	
	T	2	0	0(0)	1	1	1	0	+4 ^f	U	

No timing comparisons

Appendix B (Concluded)

Classification and Series Title (1)	Number of											% in Timing Class (12)
	At Peaks (P) or Troughs (T) (2)	Busi- ness Cycle Turns Cov- ered (3)	Leads (4)	Rough Coinci- dences ^a (5)	Lags (6)	Timing Com- pari- sons (7)	Busi- ness Cycle Turns Skipped (8)	Extra Specific Cycle Turns (9)	Median Lead(-) or Lag(+) in Months (10)	Timing Class ^b (11)		
OTHER SELECTED SERIES (CONCLUDED)												
87. General imports	P	23	6	11(2)	10	18	5	5	+1	U	U	100
	T	24	11	12(2)	6	19	5	5	-2	U	U	
8. Federal government activities												
95. Fed. surplus or deficit, inc. and prod. acct., Q	P	4	4	1(0)	0	4	0	1	-14	L	L	100
	T	4	1	1(0)	3	4	0	1	+2	Lg	Lg	75
84. Fed. cash surplus or deficit	P	21	8	5(2)	7	17	4	3	0	U	U	
	T	22	7	8(1)	10	18	4	3	+2	U	U	
83. Fed. cash receipts from public	P	21	8	9(5)	5	18	3	0	0	U	U	
	T	22	7	8(2)	9	18	4	0	0	U	U	
82. Fed. cash payments to public	P	21	4	5(2)	5	11	10	6	0	U	U	
	T	22	6	2(0)	4	10	12	7	-4	U	U	
101. Natl. defense purch., GNP component, current dollars, Q	P	4	1	1(0)	1	2	2	2	+4 ^j	U	U	
	T	4	0	0(0)	2	2	2	3	+10 ^j	U	U	
91. Defense Dept. oblig., total	P	3	2	0(0)	0	2	1	2	-17 ^j	U	U	100
	T	3	3	0(0)	0	3	0	2	-10	L	L	
90. Defense Dept. oblig., procurement	P	3	2	0(0)	0	2	1	2	-18 ^j	U	U	100
	T	3	3	0(0)	0	3	0	2	-9	L	L	
99. New orders, defense products	P	3	1	0(0)	0	1	2	0	-11 ^j	U	U	
	T	3	2	0(0)	0	2	1	0	-10 ^j	U	U	
92. Military contract awards in U.S.	P	3	2	0(0)	0	2	1	1	-14 ^j	U	U	100
	T	3	3	0(0)	0	3	0	1	-10	L	L	

- * On short list of indicators (25 series).
- ^a Rough coincidences include exact coincidences (shown in parentheses) and leads and lags of 3 months or less. Leads (lags) include leads (lags) of 1 month or more. The total number of timing comparisons, which can be less than the number of business cycle turns covered by the series, is the sum of the leads, exact coincidences, and lags. Leads and lags of quarterly series are expressed in terms of months.
- ^b The classification for individual series is based on the median lead or lag plus a probability test applied to the number of leads, rough coincidences, or lags relative to the number of business cycle turns covered.
- ^c Also analyzed invertedly, in which case the series is classed as lagging.
- ^d Earlier segment omitted, 1914-28 (production worker employment).
- ^e Earlier segment omitted, 1890-1918 (volume of business activity, Babson).
- ^f Earlier segment omitted, 1857-1918.
- ^g Also analyzed positively, in which case the series is classed as lagging.
- ^h Also analyzed invertedly, in which case the series is classed as leading.
- ⁱ Data not available before October 1962.
- ^j Based on fewer than 3 timing comparisons.