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periods

X	Average duration of cycles in months (sum of av. intervals)
	47.7
	47.6
	48.6
	46.9
	47.6
	44.4
	42.4
	42.9
	43.4
	43.9
	44.6
	44.9
	45.0
	44.9
	45.1
	46.8
	45.8
	50.0
	47.0
	46.9
	47.8
	46.1
	46.7
	43.2
	41.0
	41.5
	41.8
	42.3
	42.9
	43.0
	42.9
	42.4
	42.3
	43.8
	41.8
	48.0
	48.0
	49.4
	47.0
	48.0
	42.9
	39.4
	40.0
	40.4
	41.0
	42.0
	42.0

reference cycles.

APPENDIX B

Some Supporting Data

THIS APPENDIX is restricted to the barest essentials. If we attempted to present in full detail the cyclical measures of all series considered in the text, this volume would grow to unmanageable proportions.

Tables B1-B4 present cycle-by-cycle measures of the seven series analyzed in Chapters 9-12. Several of these series are analyzed also in Chapters 5-8. Tables B5-B9 show in detail the classifications of cycles carried through in Chapters 11 and 12.

The arrangement and content of Tables B1-B4 are governed, in the main, by the analysis of Chapters 11 and 12. In Tables B1 and B3 the cycles are treated on a positive basis, in Tables B2 and B4 on an inverted basis. Since the inverted analysis is restricted to the outer boundaries of the positive analysis, some inverted cycles are sacrificed. Our results, however, would not be altered appreciably by lifting this restriction.

TABLE B1
Measures of Successive Specific Cycles Treated on Positive Plan
Seven American Series

Cycle no. (1)	Dates of specific cycles (2)	Duration of specific cycles in months		Ratio of expansion to full cycle (6)	Amplitude in specific-cycle relatives			Ratio of rise to total rise & fall (10)	Average in specific-cycle relatives at stage*									
		Expansion (3)	Contraction (4)		Full cycle (5)	Rise (7)	Fall (8)		Rise & fall (9)	I Initial trough (11)	Expansion			V Peak (15)	Contraction			IX Terminal trough (19)
											First third (12)	Middle third (13)	Last third (14)		First third (16)	Middle third (17)	Last third (18)	
Deflated clearings																		
1	Mar.78-June 81-Jan. 82	39	7	46	59.5	10.2	69.7	.85	72.2	78.2	97.3	109.2	131.7 ^a	126.9	130.2	124.6	121.5	
2	Jan. 82-June 83-Nov. 84	17	17	34	6.3	11.9	18.2	.35	98.0	97.0	100.9	101.3	104.3	103.2	103.5	93.5	92.4	
3	Nov. 84-June 87-Mar. 88	31	9	40	36.6	6.5	43.1	.85	80.4	84.2	96.0	108.1	117.0	114.6	113.1	110.4	110.5	
4	Mar. 88-Sep. 90-Mar. 91	30	6	36	28.5	8.0	36.5	.78	85.5	90.6	96.4	107.4	114.0	112.7	105.2	106.4	106.0	
5	Mar. 91-Feb. 93-Aug. 93	23	6	29	16.9	26.0	42.9	.39	91.5	95.5	99.1	105.6	108.4	106.9	107.4	93.0	82.4	
6	Aug. 93-Oct. 95-Aug. 96	26	10	36	22.0	9.7	31.7	.69	87.9	91.6	98.5	104.5	109.9	108.0	102.3	103.8	109.2	
7	Aug. 96-Sep. 99-Sep. 00	37	12	49	35.6	6.2	41.8	.85	81.2	82.8	95.5	109.9	116.8	113.3	110.4	111.4	110.6	
8	Sep. 00-July 03-May 04	34	10	44	21.2	5.9	27.1	.78	85.2	95.3	100.4	102.7	106.4	104.3	100.3	101.7	100.5	
9	May 04-Oct. 07-Dec. 07	41	2	43	26.8	25.0	51.8	.52	83.5	91.7	101.2	108.0	110.3 ^a	(96.8)	90.0	(88.4)	85.3 ^b	
10	Dec. 07-Mar. 10-Oct. 10	27	7	34	31.0	3.3	34.3	.90	79.0 ^b	89.4	98.3	106.8	110.0	107.4	107.9	106.5	106.7	
11	Oct. 10-Feb. 13-Nov. 14	28	21	49	11.1	11.9	23.0	.48	93.8	95.3	97.9	102.6	104.9	102.8	103.9	99.3	93.0	
12	Nov. 14-Aug. 18-Dec. 18	45	4	49	39.7	4.9	44.6	.89	77.3	86.2	101.2	108.9	117.0	113.4	116.8	112.3	112.1	
13	Dec. 18-Jan. 20-May 21	13	16	29	11.9	10.9	22.8	.52	93.3	93.9	102.7	104.1	105.2	102.0	101.4	96.1	94.3	
14	May 21-May 23-Sep. 23	24	4	28	19.2	5.7	24.9	.77	90.6	92.9	98.3	105.2	109.8	110.0	104.4	105.6	104.1	
15	Sep. 23-Nov. 29-Mar. 33	74	40	114	36.6	54.7	91.3	.40	86.5	92.4	103.8	116.2	123.1	108.0	93.9	74.8	68.4	

Fig iron production

1	Jan. 79-Feb. 83-Jan. 85	49	23	72	64.0	24.6	88.6	.72	55.7	78.3	97.6	111.9	119.7	117.4	104.3	106.4	95.1
2	Jan. 85-Oct. 87-Mar. 88	33	5	38	64.8	25.5	90.3	.72	67.0	74.5	104.2	113.1	131.8	130.0	120.8	105.2	106.3
3	Mar. 88-May 90-Apr. 91	26	11	37	50.2	47.4	97.6	.51	74.0	83.5	95.2	109.9	124.2	122.6	117.3	87.2	76.8
4	Apr. 91-Feb. 92-Oct. 93	10	20	30	45.4	63.7	109.1	.42	67.5	92.3	111.9	112.1	112.9	106.0	101.8	89.1	49.2
5	Oct. 93-Nov. 95-Oct. 96	25	11	36	87.2	60.8	148.0	.59	51.5	65.0	98.6	116.4	138.7	131.1	120.1	94.9	77.9

Fig iron production - Continued

6	Oct. 96-Dec. 99-Oct. 00	38	10	48	76.0	30.5	106.5	.71	52.3	74.5	97.7	112.5	128.3	127.4	125.1	109.1	97.8
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3	Mar. 88-May 90-Apr. 91	26	11	37	.70	50.2	47.4	97.6	.51	74.0	83.5	95.2	109.9	124.2	122.6	117.3	87.2	76.8
4	Apr. 91-Feb. 92-Oct. 93	10	20	30	.33	45.4	63.7	109.1	.42	67.5	92.3	111.9	112.1	112.9	106.0	101.8	89.1	49.2
5	Oct. 93-Nov. 95-Oct. 96	25	11	36	.69	87.2	60.8	148.0	.59	51.5	65.0	98.6	116.4	138.7	131.1	120.1	94.9	77.9

Pig iron production—Continued

6	Oct. 96-Dec. 99-Oct. 00	38	10	48	.79	76.0	30.5	106.5	.71	52.3	74.5	97.7	112.5	128.3	127.4	125.1	109.1	97.8
7	Oct. 00-June 03-Dec. 03	32	6	38	.84	49.0	50.0	99.0	.49	69.0	87.8	101.2	109.6	118.0	114.8	116.8	89.2	68.0
8	Dec. 03-July 07-Jan. 08	43	6	49	.88	73.6	62.7	136.3	.54	51.1	76.4	106.5	116.3	124.7	122.2	122.0	83.7	62.0
9	Jan. 08-Jan. 10-Dec. 10	24	11	35	.69	78.6	41.7	120.3	.65	59.8	64.0	89.8	120.4	138.4	132.2	118.0	104.3	96.7
10	Dec. 10-Jan. 13-Dec. 14	25	23	48	.52	45.0	56.8	101.8	.44	82.7	86.0	95.7	114.5	127.7	120.3	99.5	83.9	70.9
11	Dec. 14-Sep. 18-May 19	45	8	53	.85	61.9	40.3	102.2	.61	52.5	87.4	107.3	125.1	114.4	112.6	109.6	90.2	74.1
12	May 19-Sep. 20-July 21	16	10	26	.62	40.7	91.1	131.8	.31	90.2	95.6	115.9	122.4	130.9	119.2	80.6	46.9	39.8
13	July 21-May 23-July 24	22	14	36	.61	108.3	58.6	166.9	.65	38.9	54.6	84.9	124.7	147.2	137.9	113.5	105.5	88.6
14	July 24-July 26-Nov. 27	24	16	40	.60	36.5	18.7	55.2	.66	73.5	88.8	101.5	103.8	110.0	109.4	102.6	99.5	91.3
15	Nov. 27-July 29-Mar. 33	20	44	64	.31	50.0	148.9	198.9	.25	123.3	129.2	147.6	154.7	173.3	136.6	71.1	31.0	24.4

Freight car orders

1	4Q 70-4Q 71-4Q 73	12	24	36	.33	385.8	396.8	782.6	.49	14.8	30.2	57.1	30.2	400.6	54.1	107.1	121.4	3.8
2	4Q 73-4Q 74-4Q 77	12	36	48	.25	269.7	218.3	488.0	.55	3.2	40.2	37.4	11.7	272.9	123.1	94.6	108.1	54.6
3	4Q 77-2Q 81-4Q 84	42	42	84	.50	268.0	263.3	531.3	.50	10.4	54.5	104.2	158.0	278.4	125.0	80.5	58.7	15.1
4	4Q 84-1Q 88-1Q 89	39	12	51	.76	141.6	67.4	209.0	.68	12.2	49.7	91.1	128.8	153.8	141.0	146.9	130.8	86.4
5	1Q 89-1Q 90-1Q 91	12	12	24	.50	106.2	122.4	228.6	.46	57.8	86.5	128.4	104.8	164.0	131.8	91.9	42.9	41.6
6	1Q 91-1Q 92-4Q 94	12	33	45	.27	117.3	166.4	283.7	.41	75.2	79.9	149.1	172.9	192.5	130.1	83.0	44.3	26.1
7	4Q 94-2Q 95-4Q 96	6	18	24	.25	121.6	101.4	223.0	.55	19.4	(71.4)	97.4	(111.9)	141.0	120.5	131.4	79.9	39.6
8	4Q 96-3Q 99-1Q 00	33	6	39	.85	179.5	115.5	295.0	.61	22.9	44.0	97.2	142.5	202.4	(130.4)	94.4	(91.9)	86.9
9	1Q 00-2Q 02-4Q 03	27	18	45	.60	121.5	169.3	290.8	.42	62.2	94.2	91.0	116.4	183.7	115.1	109.3	62.4	14.4
10	4Q 03-3Q 05-1Q 08	21	30	51	.41	200.6	202.0	402.6	.50	11.6	46.2	81.9	120.6	212.2	143.9	136.6	46.0	10.2
11	1Q 08-3Q 09-3Q 10	18	12	30	.60	175.8	158.7	334.5	.53	17.1	54.8	47.0	69.1	192.9	180.2	185.6	120.8	34.2
12	3Q 10-4Q 12-4Q 14	27	24	51	.53	177.3	191.9	369.2	.48	33.0	51.9	101.4	123.0	210.3	122.4	115.7	72.3	18.4
13	4Q 14-4Q 16-1Q 18	24	15	39	.62	259.8	280.6	540.4	.48	25.5	109.0	121.5	123.0	285.3	51.8	46.8	25.7	4.7
14	1Q 18-2Q 18-3Q 19	3	15	18	.17	584.9	591.0	1175.9	.50	6.1	(152.3)	(298.6)	(444.8)	591.0	0.0	3.0	0.0	0.0
15	3Q 19-2Q 20-2Q 21	9	12	21	.43	238.0	214.8	432.8	.53	0.0	(24.0)	90.6	(166.7)	238.0	141.2	80.1	47.8	23.2
16	2Q 21-2Q 22-2Q 23	12	12	24	.50	173.0	148.9	321.9	.54	7.0	19.3	48.5	100.0	180.0	133.3	133.9	166.0	31.1
17	2Q 23-1Q 24-2Q 25 ⁶	9	15	24	.38	136.1	136.2	272.3	.50	42.5	(51.6)	62.0	(88.7)	178.6	100.0	152.4	50.0	42.4
18	1Q 25 ⁴ -4Q 25-1Q 28	9	27	36	.25	139.4	133.9	273.3	.51	48.4	(91.8)	106.4	(124.9)	187.8	95.2	84.4	98.0	53.9
19	1Q 28-4Q 29-1Q 33	21	39	60	.55	250.1	341.3	591.4	.42	91.3	109.0	174.6	261.6	341.4	100.5	25.9	4.2	0.1

TABLE B1—Continued
Measures of Successive Specific Cycles Treated on Positive Plan
Seven American Series

Cycle no.	Dates of specific cycles Trough - Peak - Trough (2)	Duration of specific cycles in months			Ratio of expansion to full cycle (6)	Amplitude in specific-cycle relatives			Ratio of rise to total rise & fall (10)	Average in specific-cycle relatives at stage*									
		Expansion (3)	Contraction (4)	Full cycle (5)		Rise (7)	Fall (8)	Rise & fall (9)		Expansion			Peak			Contraction			Terminal trough (19)
										First third (12)	Middle third (13)	Last third (14)	First third (15)	Middle third (16)	Last third (17)	First third (18)	Middle third (18)	Last third (18)	
1	Oct. 57-Mar. 58-May 59	5	14	19	.26	17.9	13.0	30.9	.58	89.3	92.1	97.3	107.8	107.2	103.1	100.6	98.4	94.2	
2	May 59-Sep. 60-May 61	16	8	24	.67	23.8	21.9	45.7	.52	91.6	92.9	94.2	106.7	115.4	107.4	101.0	102.3	93.5	
3	May 61-Apr. 64-Apr. 65	35	12	47	.74	84.7	33.0	117.7	.72	57.5	60.6	85.9	122.0	142.2	140.4	129.4	120.9	109.2	
4	Apr. 65-Apr. 72-June 77	84	62	146	.58	42.0	54.9	96.9	.43	78.4	84.2	99.5	109.8	120.4	114.4	105.1	89.7	65.5	
5	June 77-June 81-June 85	48	48	96	.50	78.0	44.2	122.2	.64	56.1	65.1	82.8	115.2	134.1	124.4	116.9	95.1	89.9	
6	June 85-May 87-Apr. 89	23	23	46	.50	28.4	16.6	45.0	.63	83.0	93.4	100.5	108.3	111.4	103.5	97.4	97.0	94.8	
7	Apr. 89-May 90-Dec. 90	13	7	20	.65	8.1	15.1	23.2	.35	96.7	98.3	101.6	101.3	104.8	105.1	101.0	92.4	89.7	
8	Dec. 90-Mar. 92-Mar. 95	15	36	51	.29	17.8	30.2	48.0	.37	97.3	100.6	103.2	112.7	115.1	112.3	91.9	88.1	84.9	
9	Mar. 95-Sep. 95-Aug. 96	6	11	17	.35	13.2	18.1	31.3	.42	94.4	99.2	104.1	106.7	107.6	102.5	98.0	95.5	89.5	
10	Aug. 96-Apr. 00-Sep. 00	44	5	49	.90	45.4	5.1	50.5	.90	75.6	81.9	95.1	117.6	121.0	118.5	115.2	116.0	115.9	
11	Sep. 00-Sep. 02-Oct. 03	24	13	37	.65	46.5	30.1	76.6	.61	70.3	86.4	101.3	109.7	116.8	111.2	104.5	90.8	86.7	
12	Oct. 03-Sep. 06-Nov. 07	35	14	49	.71	44.3	37.7	82.0	.54	75.5	79.1	103.7	113.4	119.8	118.3	100.1	91.6	82.1	
13	Nov. 07-Aug. 09-July 10	21	11	32	.66	37.8	15.2	53.0	.71	76.5	81.9	95.6	107.2	114.3	113.7	111.0	105.8	99.1	
14	July 10-Aug. 12-Feb. 15	25	30	55	.45	6.5	26.9	33.4	.19	101.9	104.5	105.4	105.7	108.4	102.4	92.9	86.0	81.5	
15	Feb. 15-Oct. 16-Dec. 17	20	14	34	.59	14.7	29.6	44.3	.33	93.9	96.3	105.1	105.8	108.6	105.0	97.5	87.5	79.0	
16	Dec. 17-June 19-June 21	18	24	42	.43	14.5	23.1	37.6	.39	97.5	99.8	106.3	106.8	112.0	101.0	94.4	94.6	88.9	
17	June 21-Sep. 22-Oct. 23	15	13	28	.54	26.4	15.2	41.6	.63	86.6	88.9	93.0	105.6	113.0	107.5	106.6	98.8	97.8	
18	Oct. 23-Sep. 29-June 32	71	33	104	.68	90.3	141.8	232.1	.39	67.5	78.2	103.9	132.2	157.8	132.4	94.7	41.8	16.0	

Railroad stock prices

Shares traded

39	47	86	45	103.2	61.6	164.8	.63	31.8	51.4	87.7	118.3	135.0	120.4	110.4	103.6	73.4
39	47	86	45	103.2	61.6	164.8	.63	31.8	51.4	87.7	118.3	135.0	120.4	110.4	103.6	73.4
39	47	86	45	103.2	61.6	164.8	.63	31.8	51.4	87.7	118.3	135.0	120.4	110.4	103.6	73.4

SUPPORTING DATA

16	Dec. 17-June 19	18	24	42	43	14.5	23.1	37.6	.39	97.5	99.8	106.3	106.8	112.0	101.0	94.4	94.6	88.9
17	June 21-Sep. 22	15	13	28	.54	26.4	15.2	41.6	.63	86.6	88.9	93.0	105.6	113.0	107.5	106.6	98.8	97.8
18	Oct. 23-Sep. 29	32	33	104	.68	90.3	141.8	232.1	.39	67.5	78.2	103.9	132.2	157.8	132.4	94.7	41.8	16.0

Shares traded

1	Feb. 78-May 81-Apr. 85	39	47	86	45	103.2	61.6	164.8	.63	31.8	51.4	87.7	118.3	135.0	120.4	110.4	103.6	73.4
2	Apr. 85-Nov. 85-Feb. 88	7	27	34	.21	62.0	83.0	145.0	.43	73.8	67.1	120.5	110.2	135.8	103.5	114.5	84.1	52.8
3	Feb. 88-June 89-Mar. 91	16	21	37	.43	51.1	37.8	88.9	.57	69.3	103.0	101.7	98.0	120.4	105.1	99.6	94.6	82.6
4	Mar. 91-Feb. 92-Jan. 95	11	35	46	.24	94.5	115.4	209.9	.45	79.9	95.6	110.6	121.3	174.4	105.0	105.0	67.4	59.0
5	Jan. 95-May 95-May 97	4	24	28	.14	61.5	67.8	129.3	.48	72.3	68.6	99.9	103.9	133.8	120.0	97.1	83.6	66.0*
6	May 97-Jan. 99-Aug. 00	20	19	39	.51	129.4	107.8	237.2	.55	29.4*	80.6	82.0	89.1	158.8	138.4	109.0	98.9	51.0
7	Aug. 00-May 01-May 04	9	36	45	.20	182.5	176.1	358.6	.51	35.2	76.3	145.6	181.9	217.7	100.3	91.9	78.7	41.6
8	May 04-Jan. 06-Nov. 07	20	22	42	.48	112.6	84.8	197.4	.57	32.4	93.6	113.0	98.6	145.0	114.7	106.9	71.6	60.2
9	Nov. 07-June 09-Apr. 11	19	22	41	.46	44.7	78.6	123.3	.36	81.5	92.5	109.3	107.9	126.2	124.8	100.3	64.2	47.6
10	Apr. 11-Sep. 11-Dec. 14	5	39	44	.11	71.0	110.2	181.2	.39	80.0	112.7	109.8	150.5	151.0	121.5	88.9	71.7*	40.8*
11	Dec. 14-Sep. 16-Apr. 18	21	19	40	.52	129.2	83.8	213.0	.61	23.3*	71.9	117.1	89.4	152.5	142.3	101.7	80.0	68.7
12	Apr. 18-July 19-Oct. 21	15	27	42	.36	143.9	134.7	278.6	.52	57.2	62.6	70.8	134.0	201.1	138.7	84.3	78.6	66.4
13	Oct. 21-Feb. 23-Oct. 23	16	8	24	.67	63.1	45.5	108.6	.58	62.0	86.8	120.4	101.2	125.1	101.8	97.9	77.8	79.6
14	Oct. 23-Nov. 25-May 26	25	6	31	.81	101.6	57.8	159.4	.64	51.8	61.3	104.5	117.1	153.4	133.7	117.2	112.0	95.6
15	May 26-Oct. 29-Mar. 33	41	41	82	.50	120.6	141.1	261.7	.46	50.7	71.9	104.9	163.3	171.3	118.4	80.9	57.9	30.2*

Call money rates

1	Oct. 58-Sep. 60-Oct. 62	23 ¹	25	48	.48	51.3	31.9	83.2	.62	68.1	81.6	108.0	102.6	119.4	107.9	105.6	93.3	87.5
2	Oct. 62-Aug. 64-Oct. 66	22	26	48	.46	44.2	47.6	91.8	.48	79.9	94.0	107.5	107.8	124.1	104.6	99.2	87.6	76.5
3	Oct. 66-June 69-Mar. 71	32	21	53	.60	136.6	141.6	278.2	.49	64.5	79.7	92.6	121.5	201.1	122.8	72.2	81.2	59.5
4	Mar. 71-Sep. 73-Jan. 75	30	16	46	.65	315.8	337.3	653.1	.48	53.8	74.0	95.1	124.7	369.6	90.3	46.1	36.9	52.3
5	Jan. 75-Jan. 76-Sep. 76	12	8	20	.60	48.3	51.9	100.2	.48	78.6	92.3	106.4	97.7	126.9	104.9	107.0	87.4	75.0
6	Sep. 76-Jan. 78-Sep. 78	16	8	24	.67	86.8	66.5	153.3	.57	63.2	90.1	70.4	124.9	150.0	115.5	111.6	69.4	83.5
7	Sep. 78-Aug. 79-Oct. 80	11	14	25	.44	86.4	80.4	166.8	.52	67.0	75.4	68.5	94.1	153.4	148.9	104.8	76.6	73.0
8	Oct. 80-Feb. 81-May 82	4	15	19	.21	98.0	89.4	187.4	.52	64.8	91.8	154.5	73.0	162.8	87.4	100.3	77.2	73.4
9	May 82-Sep. 82-Jan. 85	4	28	32	.12	60.1	130.7	190.8	.31	105.5	132.3	123.8	153.4	165.6	128.1	61.4	90.4	34.9
10	Jan. 85-June 87-Aug. 88	29	14	43	.67	173.5	155.7	329.2	.53	38.6	43.2	89.2	152.4	212.1	140.7	103.4	64.3	56.4
11	Aug. 88-Aug. 90-May 92	24	21	45	.53	142.1	142.8	284.9	.50	46.8	71.0	111.0	141.8	188.9	103.4	87.3	64.3	46.1
12	May 92-June 93-Nov. 94	13	17	30	.43	159.6	192.0	351.6	.45	62.5	80.4	147.9	162.1	222.1	138.9	39.2	34.9	30.1
13	Nov. 94-Oct. 96-July 97	23	9	32	.72	199.1	170.7	369.8	.54	34.4	65.8	99.6	130.7	233.5	103.6	71.7	60.2	62.8
14	July 97-Oct. 99-Sep. 00	27	11	38	.71	151.0	129.1	280.1	.54	52.8	67.6	69.3	142.4	203.8	163.3	98.4	66.2	74.7
15	Sep. 00-Sep. 02-July 04	24	22	46	.52	149.0	173.0	322.0	.46	60.0	97.0	108.0	118.7	209.0	121.6	81.1	51.7	36.0

TABLE B1 - Continued
Measures of Successive Specific Cycles Treated on Positive Plan
Seven American Series

Cycle no.	Dates of specific cycles Trough - Peak - Trough (2)	Duration of specific cycles in months			Ratio of expansion to full cycle (6)	Amplitude in specific-cycle relatives			Ratio of rise to total rise & fall (10)	Average in specific-cycle relatives at stage*											
		Expansion (3)	Contraction (4)	Full cycle (5)		Rise (7)	Fall (8)	Rise & fall (9)		Expansion (11-13)			Peak (14-16)			Contraction (17-19)			Terminal trough (18)		
										First third (12)	Middle third (13)	Last third (14)	First third (15)	Middle third (16)	Last third (17)	First third (18)	Middle third (19)	Last third (18)			
16	July 04-Oct. 07-Nov. 08	39	13	52	.75	211.0	210.9	421.9	.50	31.6	55.9	133.7	120.7	242.6	131.9	43.2	33.5	31.7			
17	Nov. 08-May 10-Nov. 11	18	18	36	.50	87.3	61.4	148.7	.59	51.0	73.5	110.9	119.9	138.3	99.4	87.8	104.4	76.9			
18	Nov. 11-Dec. 12-Nov. 15	13	35	48	.27	83.7	101.6	185.3	.45	70.8	77.3	102.7	144.6	154.5	102.9	114.8	68.6	52.9			
19	Nov. 15-Aug. 18-Dec. 18	33	4	37	.89	120.1	31.0	151.1	.79	43.7	65.7	85.7	129.9	163.8	153.1	146.3	132.9	132.8			
20	Dec. 18-Nov. 19-June 22	11	31	42	.26	61.1	77.4	138.5	.44	76.0	81.0	93.5	99.6	137.1	126.0	105.1	74.9	59.7			
21	June 22-Aug. 23-Sep. 24	14	13	27	.52	33.0	74.6	107.6	.31	90.6	100.4	110.7	117.1	123.6	112.0	101.3	57.4	49.0			
22	Sep. 24-Feb. 26-Sep. 27	17	19	36	.47	66.2	27.0	93.2	.71	50.0	72.6	98.4	112.3	116.2	104.6	110.0	101.5	89.2			
23	Sep. 27-Mar. 29-May 31	18	26	44	.41	102.4	145.5	247.9	.41	73.6	83.4	121.3	142.4	176.0	158.2	71.0	36.2	30.5			

Call money rates - Continued

Railroad bond yields

1	Aug. 60-Oct. 61-Feb. 63	14	16	30	.47	10.6	32.9	43.5	.24	99.2	103.5	106.0	108.4	109.8	105.2	95.2	84.5	76.9
2	Feb. 63-Jan. 64-July 64	11	6	17	.65	11.6	12.7	24.3	.48	93.9	96.8	100.6	102.6	105.5	104.0	98.5	97.4	92.8
3	July 64-Mar. 66-Nov. 66	20	8	28	.71	35.5	6.1	41.6	.85	75.3	83.8	100.5	107.4	110.8	109.6	106.7	104.8	104.7
4	Nov. 66-Dec. 67-July 68	13	7	20	.65	2.7	3.2	5.9	.46	98.7	100.1	100.9	100.3	101.4	99.8	99.1	98.4	98.2
5	July 68-Dec. 69-July 72	17	31	48	.35	7.9	8.8	16.7	.47	96.9	99.0	101.3	102.9	104.8	100.4	99.8	98.0	96.0
6	July 72-Nov. 73-Aug. 76	16	33	49	.33	5.3	22.5	27.8	.19	105.7	107.3	106.6	106.7	111.0	103.1	95.8	90.5	88.5
7	Aug. 76-Apr. 77-June 81	8	50	58	.14	2.4	24.5	26.9	.09	106.1	107.0	106.7	107.8	108.5	106.5	99.9	90.3	84.0
8	June 81-Sep. 83-July 86	27	34	61	.44	4.6	14.5	19.1	.24	99.2	101.7	102.4	103.1	103.8	102.0	99.9	92.6	89.3
9	July 86-Oct. 87-June 89	15	20	35	.43	5.1	9.3	14.4	.35	98.9	100.1	100.7	101.7	104.0	101.8	99.4	96.8	94.7
10	June 89-Aug. 91-July 92	26	11	37	.70	10.7	5.6	16.3	.66	94.3	95.8	98.9	103.2	105.0	103.9	101.1	99.9	99.4

Railroad bond yields - Continued

11	July 92-Aug. 93-Aug. 95	13	24	37	.35	8.1	15.7	23.8	.34	100.4	101.2	101.4	104.2	108.5	102.1	97.6	95.8	92.8
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8	June 81-Sep. 83-July 86	27	34	61	.44	4.6	14.5	19.1	.24	106.1	107.0	106.7	107.8	106.5	106.5	99.9	92.6	89.3
9	July 86-Oct. 87-June 89	15	20	35	.43	5.1	9.3	14.4	.35	98.9	100.1	100.7	101.7	104.0	101.8	99.4	96.8	94.7
10	June 89-Aug. 91-July 92	26	11	37	.70	10.7	5.6	16.3	.66	94.3	95.8	98.9	103.2	105.0	103.9	101.1	99.9	99.4

Railroad bond yields—Continued

11	July 92-Aug. 93-Aug. 95	13	24	37	.35	8.1	15.7	23.8	.34	100.4	101.2	101.4	104.2	108.5	102.1	97.6	95.8	92.8
12	Aug. 95-Aug. 96-June 99	12	34	46	.26	6.0	15.9	21.9	.27	102.0	102.4	104.4	104.0	108.0	102.2	98.6	95.0	92.1
13	June 99-Sep. 03-Feb. 05	51	17	68	.75	14.9	3.8	18.7	.80	93.0	95.8	96.1	101.6	107.9	106.5	105.0	104.1	104.1
14	Feb. 05-Nov. 07-Feb. 09	33	15	48	.69	14.5	9.9	24.4	.59	94.7	95.2	97.7	102.1	109.2	105.7	103.2	100.5	99.3
15	Feb. 09-Dec. 13-June 14	58	6	64	.91	12.8	2.4	15.2	.84	93.4	96.4	99.3	103.0	106.2	104.1	103.8	103.7	103.8
16	June 14-Sep. 15-Jan. 17	15	16	31	.48	5.7	7.0	12.7	.45	97.9	98.5 ^a	102.0	102.3	103.6	99.2	98.8	98.2	96.6
17	Jan. 17-Sep. 18-Nov. 18	20	2	22	.91	18.6	8.2	26.8	.69	88.2	92.6	101.3	105.1	106.8 ^b	(105.4)	104.7	(102.7)	98.6 ^a
18	Nov. 18-May 20-Sep. 22	18	28	46	.39	20.0	23.1	43.1	.46	91.7 ^a	94.7	98.3	103.9	111.7	106.2	104.0	91.4	88.6
19	Sep. 22-Oct. 23-Dec. 27	13	50	63	.21	7.6	12.9	20.5	.37	97.2	100.2	103.5	104.1	104.8	102.5	99.9	95.7	91.9
20	Dec. 27-Sep. 29-May 31	21	20	41	.51	11.5	11.8	23.3	.49	94.4	96.7	101.3	104.7	105.9	102.8	98.6	95.9	94.1

* Entries in parentheses are interpolated.

^a Average of two months.

^b One month.

^c Based on the first segment of the series (see Ch. 9, note 2), which we use through cycle 17.

^d Based on the second segment (see preceding note).

^e Omits Aug.-Nov. 1914. No data (N. Y. Stock Exchange closed).

TABLE B2
Measures of Successive Specific Cycles Treated on Inverted Plan
Seven American Series

Cycle no.	Dates of specific cycles Peak - Trough - Peak (2)	Duration of specific cycles		Amplitude in specific-cycle relatives			Ratio of rise to total fall & rise (8)	Average in specific-cycle relatives at stage*										IX Terminal peak (17)
		Full cycle (mos.) (3)	Ratio of expansion to full cycle (4)	Fall (5)	Rise (6)	Fall & rise (7)		Contraction			Trough (13)	Expansion						
								First third (10)	Middle third (11)	Last third (12)		First third (14)	Middle third (15)	Last third (16)				
Deflated clearings																		
1	June 81 - Jan. 82 - June 83	24	.71	8.1	6.3	14.4	.44	101.5	104.2	99.7	97.3	96.3	100.2	100.6	103.6			
2	June 83 - Nov. 84 - June 87	48	.65	11.1	39.3	50.4	.78	97.6	96.8	87.5	86.5	90.6	103.2	116.2	125.8			
3	June 87 - Mar. 88 - Sep. 90	39	.77	5.3	29.7	35.0	.85	94.6	92.7	89.2	89.3	94.6	100.7	112.2	119.0			
4	Sep. 90 - Mar. 91 - Feb. 93	29	.79	6.9	17.1	24.0	.71	99.6	98.5	93.0	92.7	96.8	100.4	107.0	109.8			
5	Feb. 93 - Aug. 93 - Oct. 95	32	.81	27.8	22.0	49.8	.44	115.9	114.3	99.5	88.1	91.8	98.7	104.7	110.1			
6	Oct. 95 - Aug. 96 - Sep. 99	47	.79	8.3	37.9	46.2	.82	95.0	93.4	89.8	86.7	88.3	101.9	117.2	124.6			
7	Sep. 99 - Sep. 00 - July 03	46	.74	5.0	22.1	27.1	.82	93.8	91.0	88.7	89.4	88.8	99.3	104.6	110.9			
8	July 03 - May 04 - Oct. 07	51	.80	5.0	27.5	32.5	.85	90.9	89.1	85.7	86.8	85.9	94.3	104.0	111.1			
9	Oct. 07 - Dec. 07 - Mar. 10	29	.93	23.7	31.8	55.5	.57	104.9 ^a	(92.0)	85.6	(84.1)	91.8	100.9	109.7	113.0			
10	Mar. 10 - Oct. 10 - Feb. 13	35	.80	2.9	11.3	14.2	.80	98.9	96.5	95.8	96.0	97.4	100.1	104.9	107.3			
11	Feb. 13 - Nov. 14 - Aug. 18	66	.68	10.5	42.3	52.8	.80	92.5	90.6	87.6	82.0	91.5	107.4	115.6	124.3			
12	Aug. 18 - Dec. 18 - Jan. 20	17	.76	4.1	12.0	16.1	.75	98.4	95.4	98.2	94.4	94.3	103.8	105.2	106.3			
13	Jan. 20 - May 21 - May 23	40	.60	10.7	19.6	30.3	.65	103.4	100.3	99.8	94.5	92.7	100.6	107.7	112.3			
14	May 23 - Sep. 23 - Nov. 29	78	.95	4.5	35.4	39.9	.89	88.2	88.4	83.9	83.7	89.4	100.4	112.4	119.1			
Fig iron production																		
1	Feb. 83 - Jan. 85 - Oct. 87	56	.59	19.5	73.0	92.5	.79	95.0	93.2	82.8	84.5	83.9	117.3	127.5	148.5			
2	Oct. 87 - Mar. 88 - May 90	31	.84	18.9	53.4	72.3	.74	97.5	96.2	89.3	77.8	88.7	101.1	116.8	132.0			
3	May 90 - Apr. 91 - Feb. 92	21	.48	41.9	45.8	87.7	.52	109.7	108.3	103.6	77.1	67.8	92.9	112.5	113.6			
4	Feb. 92 - Oct. 93 - Nov. 95	45	.56	68.4	89.5	157.9	.57	121.2	113.7	109.2	95.5	52.8	101.1	119.4	142.3			
5	Nov. 95 - Oct. 96 - Dec. 99	49	.78	45.0	83.7	128.7	.65	102.5	96.9	88.7	70.1	57.5	107.5	123.8	141.2			

Pig iron production - Continued

6	Dec. 99 - Oct. 00 - June 03	42	.76	22.4	51.0	73.4	.69	94.4	93.8	92.1	80.3	72.0	91.6	105.6	114.3	123.0
								84.5	80.9	80.8	58.3	52.0	79.0	110.2	120.2	128.9

SUPPORTING DATA

2	Oct. 87 - Mar. 88	88 - May 90	31	.84	18.9	53.4	72.3	.74	97.5	96.2	89.3	77.8	78.6	88.7	101.1	116.8	132.0
3	May 90 - Apr. 91	91 - Feb. 92	21	.48	41.9	45.8	87.7	.52	109.7	108.3	103.6	77.1	67.8	92.9	112.5	112.7	113.6
4	Feb. 92 - Oct. 93	93 - Nov. 95	45	.56	68.4	89.5	157.9	.57	121.2	113.7	109.2	95.5	52.8	66.7	101.1	119.4	142.3
5	Nov. 95 - Oct. 96	96 - Dec. 99	49	.78	45.0	83.7	128.7	.65	102.5	96.9	88.7	70.1	57.5	82.0	107.5	123.8	141.2

Pig iron production - Continued

6	Dec. 99 - Oct. 00	00 - June 03	42	.76	22.4	51.0	73.4	.69	94.4	93.8	92.1	80.3	72.0	91.6	105.6	114.3	123.0
7	June 03 - Dec. 03	03 - July 07	49	.88	38.8	76.0	114.8	.66	91.7	89.2	90.8	69.3	52.9	79.0	110.2	120.2	128.9
8	July 07 - Jan. 08	08 - Jan. 10	30	.80	64.6	84.1	148.7	.57	128.6	126.1	125.9	86.4	64.0	96.1	128.8	148.1	
9	Jan. 10 - Dec. 10	10 - Jan. 13	36	.69	35.7	45.1	80.8	.56	118.8	113.5	101.3	89.5	83.1	86.3	96.1	115.0	128.2
10	Jan. 13 - Dec. 14	14 - Sep. 18	68	.66	46.1	67.9	114.0	.60	103.8	97.8	80.9	68.2	57.7	96.0	117.8	115.3	125.6
11	Sep. 18 - May 19	19 - Sep. 20	24	.67	42.4	35.0	77.4	.45	120.2	118.3	115.1	94.7	77.8	82.5	99.9	105.5	112.8
12	Sep. 20 - July 21	21 - May 23	32	.69	103.6	126.1	229.7	.55	149.0	135.6	91.7	53.3	45.4	63.6	98.9	145.3	171.5
13	May 23 - July 24	24 - July 26	38	.63	49.8	37.4	87.2	.43	124.9	117.0	96.3	89.5	75.1	90.8	103.7	106.1	112.5
14	July 26 - Nov. 27	27 - July 29	36	.56	17.8	35.1	52.9	.66	104.4	103.8	97.4	94.4	86.6	90.7	103.6	108.6	121.7

Freight car orders

1	4Q 71 - 4Q 73	73 - 4Q 74	36	.33	413.4	342.4	755.8	.45	417.4	56.4	111.6	126.5	4.0	51.0	47.5	14.9	346.4
2	4Q 74 - 4Q 77	77 - 2Q 81	78	.54	60.7	392.3	453.0	.87	75.9	34.2	26.3	30.1	15.2	79.8	152.5	231.3	407.5
3	2Q 81 - 4Q 84	84 - 1Q 88	81	.48	261.0	174.0	435.0	.40	276.0	123.9	79.8	58.2	15.0	61.0	112.0	158.2	189.0
4	1Q 88 - 1Q 89	89 - 1Q 90	24	.50	45.6	107.3	152.9	.70	104.1	95.4	99.4	88.5	58.5	87.5	129.8	105.9	165.8
5	1Q 90 - 1Q 91	91 - 1Q 92	24	.50	147.0	78.0	225.0	.35	197.0	158.3	110.4	51.6	50.0	53.1	99.1	115.0	128.0
6	1Q 92 - 4Q 94	94 - 2Q 95	39	.15	179.7	176.9	356.6	.50	207.9	140.5	89.6	47.8	28.2	(103.9)	141.7	(162.8)	205.1
7	2Q 95 - 4Q 96	96 - 3Q 99	51	.65	70.0	214.9	284.9	.75	97.4	83.3	90.8	55.2	27.4	52.7	116.3	170.6	242.3
8	3Q 99 - 1Q 00	00 - 2Q 02	33	.82	82.0	120.8	202.8	.60	143.7	(92.6)	67.0	(65.2)	61.7	93.5	90.4	115.6	182.5
9	2Q 02 - 4Q 03	03 - 3Q 05	39	.54	166.9	245.1	412.0	.59	181.1	113.5	107.8	61.5	14.2	56.5	100.1	147.4	259.3
10	3Q 05 - 1Q 08	08 - 3Q 09	48	.38	243.2	126.1	369.3	.34	255.5	173.2	164.5	55.4	12.3	39.3	33.7	49.6	138.4
11	3Q 09 - 3Q 10	10 - 4Q 12	39	.69	139.3	161.5	300.8	.54	169.3	158.1	163.0	106.0	30.0	47.2	92.4	112.0	191.5
12	4Q 12 - 4Q 14	14 - 4Q 16	48	.50	196.7	192.1	388.8	.49	215.6	125.5	118.6	74.1	18.9	80.6	89.9	91.0	211.0
13	4Q 16 - 1Q 18	18 - 2Q 18	18	.17	306.5	498.9	805.4	.62	311.7	56.6	51.1	28.1	5.2	(129.9)	(254.6)	(379.4)	504.1
14	2Q 18 - 3Q 19	19 - 2Q 20	24	.38	1017.2	223.0	1240.2	.18	1017.2	0.0	5.1	0.0	0.0	(22.5)	84.8	(156.1)	223.0
15	2Q 20 - 2Q 21	21 - 2Q 22	24	.50	135.2	363.3	498.5	.73	149.8	88.9	50.4	30.1	14.6	40.5	101.8	209.8	377.9
16	2Q 22 - 2Q 23	23 - 1Q 24	21	.43	146.9	98.0	244.9	.40	177.5	131.4	132.0	163.6	30.6	(37.2)	44.7	(63.8)	128.6
17	1Q 24 - 2Q 25	25 - 1Q 26	24	.38	122.4	110.5	232.9	.47	160.5	89.9	136.9	44.9	38.1	(69.7)	99.3	(126.9)	148.6
18	4Q 25 - 1Q 28	28 - 4Q 29	48	.44	130.5	143.9	274.4	.52	183.1	92.8	82.4	95.6	52.6	62.8	100.5	150.6	196.5

TABLE B2-Continued
Measures of Successive Specific Cycles Treated on Inverted Plan
Seven American Series

Cycle no.	Dates of specific cycles (2) Peak - Trough - Peak	Duration of specific cycles		Amplitude in specific-cycle relatives			Ratio of rise to total fall & rise (8)	Average in specific-cycle relatives at stage*								
		Full cycle (mos.) (3)	Ratio of expansion to full cycle (4)	Fall (5)	Rise (6)	Fall & rise (7)		Contraction			Trough			Expansion		
								First third (10)	Middle third (11)	Last third (12)	First third (13)	Middle third (14)	Last third (15)	First third (16)	Middle third (17)	Last third (18)
Railroad stock prices																
1	Mar. 58 - May 59 - Sep. 60	30	.53	12.8	24.3	37.1	.65	106.1	102.1	99.6	97.4	93.3	94.7	96.0	108.8	117.6
2	Sep. 60 - May 61 - Apr. 64	43	.81	15.8	99.8	115.6	.86	83.6	77.8	73.1	74.1	67.8	71.4	101.3	143.8	167.6
3	Apr. 64 - Apr. 65 - Apr. 72	96	.88	24.3	43.2	67.5	.64	104.9	103.6	95.5	89.2	80.6	86.6	102.3	112.9	123.8
4	Apr. 72 - June 77 - June 81	110	.44	53.4	88.5	141.9	.62	117.1	111.3	102.2	87.2	63.7	73.9	94.0	130.8	152.2
5	June 81 - June 85 - May 87	71	.32	39.7	27.7	67.4	.41	120.7	112.0	105.2	85.7	81.0	91.1	98.1	105.7	108.7
6	May 87 - Apr. 89 - May 90	36	.36	16.7	8.0	24.7	.32	112.4	104.5	98.3	97.9	95.7	97.3	100.5	100.3	103.7
7	May 90 - Dec. 90 - Mar. 92	22	.68	15.4	16.7	32.1	.52	107.0	107.3	103.1	94.3	91.6	94.7	97.1	106.1	108.3
8	Mar. 92 - Mar. 95 - Sep. 95	42	.14	31.1	12.3	43.4	.28	118.8	115.8	94.8	90.9	87.7	92.2	96.7	99.1	100.0
9	Sep. 95 - Aug. 96 - Apr. 00	55	.80	16.1	47.8	63.9	.75	95.5	91.0	87.0	84.8	79.4	86.1	99.9	123.6	127.2
10	Apr. 00 - Sep. 00 - Sep. 02	29	.83	3.3	49.4	52.7	.94	78.1	76.5	74.4	74.9	74.8	92.0	107.7	116.7	124.2
11	Sep. 02 - Oct. 03 - Sep. 06	48	.73	27.2	46.1	73.3	.63	105.7	100.7	94.6	82.2	78.5	82.3	107.8	117.9	124.6
12	Sep. 06 - Nov. 07 - Aug. 09	35	.60	36.9	39.7	76.6	.52	117.2	115.7	97.9	89.6	80.3	86.0	100.3	112.5	120.0
13	Aug. 09 - July 10 - Aug. 12	36	.69	14.4	6.0	20.4	.29	109.2	108.7	106.2	101.1	94.8	97.2	98.0	98.3	100.8
14	Aug. 12 - Feb. 15 - Oct. 16	50	.40	29.1	13.9	43.0	.32	117.3	110.9	100.5	93.1*	88.2	90.4	98.7	99.4	102.1
15	Oct. 16 - Dec. 17 - June 19	32	.56	33.0	13.1	46.1	.28	121.1	117.0	108.7	97.5	88.1	90.2	96.1	96.5	101.2
16	June 19 - June 21 - Sep. 22	39	.38	23.7	27.8	51.5	.54	114.8	103.5	96.7	96.9	91.1	93.5	97.8	111.1	118.9
17	Sep. 22 - Oct. 23 - Sep. 29	84	.85	10.4	90.5	100.9	.90	78.1	74.4	73.7	68.3	67.7	78.4	104.1	132.4	158.2
Shares traded																
1	May 81 - Apr. 85 - Nov. 85	54	.13	56.0	56.2	112.2	.50	122.7	109.4	100.3	94.1	66.7	60.7	109.0	99.7	122.9
2	Nov. 85 - Feb. 88 - June 89	43	.37	90.9	42.7	133.6	.32	148.8	113.4	125.4	92.1	57.9	86.0	85.0	81.9	100.6
3	June 89 - Mar. 91 - Feb. 92	32	.34	36.0	93.1	129.1	.72	114.6	100.0	94.7	90.0	78.6	94.1	108.8	119.4	171.7
4	Feb. 92 - Jan. 95 - May 95	39	.10	122.2	53.1	175.3	.30	184.6	118.9	111.1	71.4	62.4	59.3	86.3	89.8	115.5
5	May 95 - May 97 - Jan. 99	44	.45	47.8	204.8	252.6	.81	94.3	84.6	68.5	59.0	46.5*	127.5	129.8	140.9	251.3

Shares traded - Continued

6	Jan. 99 - Aug. 00 - May 01	28	.32	76.8	187.9	264.7	.71	113.1	98.6	77.6	70.4	36.3	78.6	149.9	187.3	224.2
7	May 01 - May 04 - Jan. 06	56	.36	166.6	136.9	303.5	.45	205.9	94.8	86.9	74.4	39.3	113.7	137.3	119.8	176.2
8	Jan. 06 - Nov. 07 - June 09	41	.46	96.2	37.5	133.7	.28	164.4	130.0	121.3	81.2	68.2	77.5	91.5	90.3	105.7

1	May 81 - Apr. 85 - Nov. 85	54	.13	56.0	56.2	112.2	.50	122.7	109.4	100.3	94.1	66.7	60.7	109.0	99.7	122.9
2	Nov. 85 - Feb. 88 - June 89	43	.37	90.9	42.7	133.6	.32	148.8	113.4	125.4	92.1	57.9	86.0	85.0	81.9	100.6
3	June 89 - Mar. 91 - Feb. 92	32	.34	36.0	93.1	129.1	.72	114.6	100.0	94.7	90.0	78.6	94.1	108.8	119.4	171.7
4	Feb. 92 - Jan. 95 - May 95	39	.10	122.2	53.1	175.3	.30	184.6	118.9	111.1	71.4	62.4	59.3	86.3	89.8	115.5
5	May 95 - May 97 - Jan. 99	44	.45	47.8	204.8	252.6	.81	94.3	84.6	68.5	59.0	46.5*	127.5	129.8	140.9	251.3

Shares traded - Continued

6	Jan. 99 - Aug. 00 - May 01	28	.32	76.8	187.9	264.7	.71	113.1	98.6	77.6	70.4	36.3	78.6	149.9	187.3	224.2
7	May 01 - May 04 - Jan. 06	56	.46	166.6	136.9	303.5	.45	205.4	94.8	86.9	74.4	39.3	113.7	137.3	119.8	176.2
8	Jan. 06 - Nov. 07 - June 09	41	.36	96.2	37.5	133.7	.28	164.9	130.0	121.3	81.2	68.2	77.5	91.5	90.3	105.7
9	June 09 - Apr. 11 - Sep. 11	27	.19	85.4	45.9	131.3	.35	137.1	135.6	109.0	69.7	51.7	72.8	71.0	97.3	97.6
10	Sep. 11 - Dec. 14 - Sep. 16	60	.35	90.8	186.8	277.6	.67	124.5	100.2	73.3	59.1*	33.7*	103.9	169.3	129.2	220.5
11	Sep. 16 - Apr. 18 - July 19	34	.44	75.8	156.2	232.0	.67	138.0	128.7	92.0	72.4	62.2	68.0	76.9	145.4	218.4
12	July 19 - Oct. 21 - Feb. 23	43	.37	127.4	64.0	191.4	.33	190.2	131.1	79.7	74.3	62.8	88.0	122.0	102.6	126.8
13	Feb. 23 - Oct. 23 - Nov. 25	33	.76	34.1	117.1	151.2	.77	93.8	76.4	73.4	58.4	59.7	70.7	120.5	135.0	176.8
14	Nov. 25 - May 26 - Oct. 29	47	.87	28.6	112.5	141.1	.80	75.8	66.1	57.9	55.3	47.2	67.1	97.8	152.3	159.7

Call money rates

1	Sep. 60 - Oct. 62 - Aug. 64	47	.47	29.7	45.2	74.9	.60	111.3	100.6	98.5	87.0	81.6	96.1	109.8	110.2	126.8
2	Aug. 64 - Oct. 66 - June 69	58	.55	43.4	147.5	190.9	.77	113.0	95.3	90.3	79.8	69.6	86.1	100.0	131.1	217.1
3	June 69 - Mar. 71 - Sep. 73	51	.59	126.5	312.5	439.0	.71	179.7	109.7	64.6	72.6	53.2	73.2	94.1	123.4	365.7
4	Sep. 73 - Jan. 75 - Jan. 76	28	.43	526.0	31.0	557.0	.06	576.3	140.8	71.9	57.5	50.3	59.1	68.2	62.6	81.3
5	Jan. 76 - Sep. 76 - Jan. 78	24	.67	46.8	93.0	139.8	.67	114.4	94.5	96.4	78.8	67.6	96.4	75.3	133.6	160.6
6	Jan. 78 - Sep. 78 - Aug. 79	19	.58	63.3	102.3	165.6	.62	142.7	109.8	106.1	66.0	79.4	89.3	81.1	111.4	181.7
7	Aug. 79 - Oct. 80 - Feb. 81	18	.22	68.1	93.4	161.5	.58	129.8	125.9	88.6	64.8	61.7	87.4	147.3	69.6	155.1
8	Feb. 81 - May 82 - Sep. 82	19	.21	94.5	44.2	138.7	.32	172.1	92.4	106.1	81.7	77.6	97.2	91.0	112.8	121.8
9	Sep. 82 - Jan. 85 - June 87	57	.51	144.3	172.6	316.9	.54	182.7	141.3	67.7	99.7	38.4	43.0	88.8	151.6	211.0
10	June 87 - Aug. 88 - Aug. 90	38	.63	126.5	139.1	265.6	.52	172.3	114.3	84.0	52.2	45.8	69.6	108.6	138.9	184.9
11	Aug. 90 - May 92 - June 93	34	.38	154.6	127.4	282.0	.45	204.5	111.9	94.6	69.7	49.9	64.2	118.0	129.3	177.3
12	June 93 - Nov. 94 - Oct. 96	40	.58	230.6	209.4	440.0	.48	266.7	166.7	47.1	41.8	36.1	69.2	104.7	137.4	245.5
13	Oct. 96 - July 97 - Oct. 99	36	.75	157.3	165.5	322.8	.51	215.2	95.5	66.1	55.5	57.9	74.1	75.9	156.2	223.4
14	Oct. 99 - Sep. 00 - Sep. 02	35	.69	99.8	143.5	243.3	.59	157.6	126.3	76.1	51.2	57.8	93.4	104.1	114.4	201.3
15	Sep. 02 - July 04 - Oct. 07	61	.64	158.5	220.4	378.9	.58	191.5	111.4	74.3	47.4	33.0	58.3	139.6	126.1	253.4
16	Oct. 07 - Nov. 08 - May 10	31	.58	297.3	76.6	373.9	.20	342.0	185.9	60.8	47.2	44.7	64.5	97.3	105.1	121.3
17	May 10 - Nov. 11 - Dec. 12	31	.42	57.3	84.8	142.1	.60	129.1	92.8	82.0	97.4	71.8	78.3	104.0	146.5	156.6
18	Dec. 12 - Nov. 15 - Aug. 18	68	.49	96.7	138.0	234.7	.59	147.0	97.9	109.1	65.3	50.3	75.6	98.6	149.3	188.3
19	Aug. 18 - Dec. 18 - Nov. 19	15	.73	19.4	67.2	86.6	.78	102.9	96.2	91.9	83.5	83.5	89.0	102.8	109.5	150.7
20	Nov. 19 - June 22 - Aug. 23	45	.31	83.3	23.4	106.7	.22	147.7	135.7	113.2	80.7	64.4	71.3	78.6	83.2	87.8
21	Aug. 23 - Sep. 24 - Feb. 26	30	.57	81.8	71.0	152.8	.46	135.5	122.8	111.1	63.0	53.7	77.9	105.6	120.5	124.7
22	Feb. 26 - Sep. 27 - Mar. 29	37	.49	22.1	101.2	123.3	.82	94.8	85.3	89.7	82.8	72.7	82.4	119.8	140.6	173.9

TABLE B 2—Continued
Measures of Successive Specific Cycles Treated on Inverted Plan
Seven American Series

Cycle no.	Dates of specific cycles Peak - Trough - Peak (2)	Duration of specific cycles		Amplitude in specific-cycle relatives			Ratio of rise to total fall & rise (8)	Average in specific-cycle relatives at stage*									
		Full cycle (mos.) (3)	Ratio of expansion to full cycle (4)	Fall (5)	Rise & rise (6)			Fall & rise (7)	I Initial peak (9)	Contraction (10-12)			V Trough (13)	Expansion (14-16)			IX Ter-minal peak (17)
					Fall (5)	Rise (6)				First third (10)	Middle third (11)	Last third (12)		First third (14)	Middle third (15)	Last third (16)	
Railroad bond yields																	
1	Oct. 61 - Feb. 63 - Jan. 64	27	.41	36.8	10.7	47.5	.23	122.6	117.5	106.3	94.3	85.8	88.5	92.0	93.8	96.5	
2	Jan. 64 - July 64 - Mar. 66	26	.77	11.0	38.0	49.0	.78	91.5	90.2	85.4	84.5	80.5	89.7	107.6	114.9	118.5	
3	Mar. 66 - Nov. 66 - Dec. 67	21	.62	5.7	2.7	8.4	.32	103.8	102.7	100.0	98.2	98.1	99.5	100.3	99.7	100.8	
4	Dec. 67 - July 68 - Dec. 69	24	.71	3.1	7.9	11.0	.72	99.8	98.3	97.6	96.9	96.7	98.8	101.1	102.8	104.6	
5	Dec. 69 - July 72 - Nov. 73	47	.34	8.9	4.9	13.8	.36	106.2	101.8	101.1	99.3	97.3	98.8	98.2	98.2	102.2	
6	Nov. 73 - Aug. 76 - Apr. 77	41	.20	23.7	2.2	25.9	.08	116.6	108.3	100.6	95.1	92.9	93.8	93.5	94.5	95.1	
7	Apr. 77 - June 81 - Sep. 83	77	.35	25.9	4.1	30.0	.14	114.7	112.6	105.6	95.5	88.8	91.0	91.7	92.3	92.9	
8	Sep. 83 - July 86 - Oct. 87	49	.31	15.2	4.8	20.0	.24	108.2	106.3	104.1	96.5	93.0	94.2	94.7	95.7	97.8	
9	Oct. 87 - June 89 - Aug. 91	46	.57	9.4	10.9	20.3	.54	104.5	102.3	99.8	97.2	95.1	96.7	99.8	104.1	106.0	
10	Aug. 91 - July 92 - Aug. 93	24	.54	5.6	8.0	13.6	.59	103.4	102.3	99.6	98.3	97.8	98.7	98.9	101.6	105.8	
11	Aug. 93 - Aug. 95 - Aug. 96	36	.33	16.1	5.6	21.7	.26	111.6	105.0	100.4	98.5	95.5	95.8	97.8	101.1	101.1	
12	Aug. 96 - June 99 - Sep. 03	85	.60	16.3	15.1	31.4	.48	110.6	104.7	100.9	97.2	94.3	97.2	97.5	103.0	109.4	
13	Sep. 03 - Feb. 05 - Nov. 07	50	.66	3.5	14.8	18.3	.81	100.3	99.4	98.9	97.6	96.8	97.3	99.9	104.4	111.6	
14	Nov. 07 - Feb. 09 - Dec. 13	73	.79	9.4	12.9	22.3	.58	103.7	100.4	98.0	95.5	94.3	97.3	100.2	104.0	107.2	
15	Dec. 13 - June 14 - Sep. 15	21	.71	2.3	5.7	8.0	.71	99.7	97.8	97.4	97.3	97.4	98.0 ^a	101.5	101.9	103.1	
16	Sep. 15 - Jan. 17 - Sep. 18	36	.56	6.7	19.5	26.2	.74	99.1	94.9	94.5	93.9	92.4	97.0	106.1	110.1	111.9 ^a	
17	Sep. 18 - Nov. 18 - May 20	20	.90	7.7	20.2	27.9	.72	100.4 ^a	(99.1)	98.4	(96.5)	92.7 ^a	95.7	99.4	105.0	112.9	
18	May 20 - Sep. 22 - Oct. 23	41	.32	23.5	7.0	30.5	.23	113.7	108.0	105.8	93.0	90.2	92.9	96.0	96.6	97.2	
19	Oct. 23 - Dec. 27 - Sep. 29	71	.30	13.0	11.3	24.3	.47	105.8	103.6	100.9	96.7	92.8	95.0	99.6	102.9	104.1	

* Entries in parentheses are interpolated.
^a Based on the first segment of the series (see Ch. 9, note 2), which we use through cycle 17.
^b Based on the second segment (see preceding note).
^c Average of two months.
^d One month.
^e Omits Aug.-Nov. 1914. No data (N.Y. Stock Exchange closed).
Average change

TABLE B 3
Measures of Successive Reference Cycles Treated on Positive Plan
Seven American Series

Average in reference cycle relatives at stage ^a																
Average change																

TABLE B3
Measures of Successive Reference Cycles Treated on Positive Plan
Seven American Series

Cycle no.	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																																																																																																																																																																																																																							
	May 20	Oct 23	Mar 22	Aug 23	Jan 23	Jun 23	Nov 23	Apr 24	Jul 24	Oct 24	Jan 25	Apr 25	Jul 25	Oct 25	Jan 26	Apr 26	Jul 26	Oct 26	Jan 27	Apr 27	Jul 27	Oct 27	Jan 28	Apr 28	Jul 28	Oct 28	Jan 29	Apr 29	Jul 29	Oct 29	Jan 30	Apr 30	Jul 30	Oct 30	Jan 31	Apr 31	Jul 31	Oct 31	Jan 32	Apr 32	Jul 32	Oct 32	Jan 33	Apr 33	Jul 33	Oct 33	Jan 34	Apr 34	Jul 34	Oct 34	Jan 35	Apr 35	Jul 35	Oct 35	Jan 36	Apr 36	Jul 36	Oct 36	Jan 37	Apr 37	Jul 37	Oct 37	Jan 38	Apr 38	Jul 38	Oct 38	Jan 39	Apr 39	Jul 39	Oct 39	Jan 40	Apr 40	Jul 40	Oct 40	Jan 41	Apr 41	Jul 41	Oct 41	Jan 42	Apr 42	Jul 42	Oct 42	Jan 43	Apr 43	Jul 43	Oct 43	Jan 44	Apr 44	Jul 44	Oct 44	Jan 45	Apr 45	Jul 45	Oct 45	Jan 46	Apr 46	Jul 46	Oct 46	Jan 47	Apr 47	Jul 47	Oct 47	Jan 48	Apr 48	Jul 48	Oct 48	Jan 49	Apr 49	Jul 49	Oct 49	Jan 50	Apr 50	Jul 50	Oct 50	Jan 51	Apr 51	Jul 51	Oct 51	Jan 52	Apr 52	Jul 52	Oct 52	Jan 53	Apr 53	Jul 53	Oct 53	Jan 54	Apr 54	Jul 54	Oct 54	Jan 55	Apr 55	Jul 55	Oct 55	Jan 56	Apr 56	Jul 56	Oct 56	Jan 57	Apr 57	Jul 57	Oct 57	Jan 58	Apr 58	Jul 58	Oct 58	Jan 59	Apr 59	Jul 59	Oct 59	Jan 60	Apr 60	Jul 60	Oct 60	Jan 61	Apr 61	Jul 61	Oct 61	Jan 62	Apr 62	Jul 62	Oct 62	Jan 63	Apr 63	Jul 63	Oct 63	Jan 64	Apr 64	Jul 64	Oct 64	Jan 65	Apr 65	Jul 65	Oct 65	Jan 66	Apr 66	Jul 66	Oct 66	Jan 67	Apr 67	Jul 67	Oct 67	Jan 68	Apr 68	Jul 68	Oct 68	Jan 69	Apr 69	Jul 69	Oct 69	Jan 70	Apr 70	Jul 70	Oct 70	Jan 71	Apr 71	Jul 71	Oct 71	Jan 72	Apr 72	Jul 72	Oct 72	Jan 73	Apr 73	Jul 73	Oct 73	Jan 74	Apr 74	Jul 74	Oct 74	Jan 75	Apr 75	Jul 75	Oct 75	Jan 76	Apr 76	Jul 76	Oct 76	Jan 77	Apr 77	Jul 77	Oct 77	Jan 78	Apr 78	Jul 78	Oct 78	Jan 79	Apr 79	Jul 79	Oct 79	Jan 80	Apr 80	Jul 80	Oct 80	Jan 81	Apr 81	Jul 81	Oct 81	Jan 82	Apr 82	Jul 82	Oct 82	Jan 83	Apr 83	Jul 83	Oct 83	Jan 84	Apr 84	Jul 84	Oct 84	Jan 85	Apr 85	Jul 85	Oct 85	Jan 86	Apr 86	Jul 86	Oct 86	Jan 87	Apr 87	Jul 87	Oct 87	Jan 88	Apr 88	Jul 88	Oct 88	Jan 89	Apr 89	Jul 89	Oct 89	Jan 90	Apr 90	Jul 90	Oct 90	Jan 91	Apr 91	Jul 91	Oct 91	Jan 92	Apr 92	Jul 92	Oct 92	Jan 93	Apr 93	Jul 93	Oct 93	Jan 94	Apr 94	Jul 94	Oct 94	Jan 95	Apr 95	Jul 95	Oct 95	Jan 96	Apr 96	Jul 96	Oct 96	Jan 97	Apr 97	Jul 97	Oct 97	Jan 98	Apr 98	Jul 98	Oct 98	Jan 99	Apr 99	Jul 99	Oct 99	Jan 100	Apr 100	Jul 100	Oct 100

* Entries in parentheses are interpolated.
 * Average of two months.
 * One month.

Cycle no.	Dates of reference cycles (2)	No. of months lead (-) or lag (+) of corresponding specific-cycle turn at reference		Average in reference-cycle relatives at stage*									Average change per month in reference-cycle relatives during stages ^b matched with reference		
		Peak (3)	Trough ^a (4)	I	II	III	IV	V	VI	VII	VIII	IX	Expansion (14)	Contraction (15)	
(1)	Trough - Peak - Trough	Peak	Trough ^a	Initial trough	First third	Middle third	Last third	Peak	First third	Middle third	Last third	Terminal trough	Expansion	Contraction	
1	Mar. 79 - Mar. 82 - May 85	+15	-12	71.1	82.5	91.6	107.4	103.3	107.1	109.8	101.2	102.8	+0.79	-0.07	
2	May 85 - Mar. 87 - Apr. 88	+3	-6	81.0	87.3	93.6	101.2	110.2	113.0	110.5	106.3	107.9	+1.07	-0.37	
3	Apr. 88 - July 90 - May 91	+2	-1	85.8	90.5	95.2	104.6	111.5	113.2	106.8	105.2	105.5	+0.92	-0.79	
4	May 91 - Jan. 93 - June 94	+1	-2	94.9	100.0	103.0	108.9	112.4	109.0	87.0	90.8	91.6	+0.81	-1.54	
5	June 94 - Dec. 95 - June 97	-2	-10	92.4	96.7	99.4	106.7	105.6	100.5	97.7	97.8	102.1	+0.67	-0.54	
6	June 97 - June 99 - Dec. 00	+3	-3	80.3	89.5	90.8	103.9	108.2	109.2	104.8	105.8	110.7	+1.14	-0.17	
7	Dec. 00 - Sep. 02 - Aug. 04	+10	-3	89.1	96.8	97.7	100.8	102.3	100.9	103.0	99.9	104.1	+0.70	-0.13	
8	Aug. 04 - May 07 - June 08	+5	-6	87.2	93.4	101.2	105.8	108.9	108.6	96.0	93.7	97.1	+0.68	-1.45	
9	June 08 - Jan. 10 - Jan. 12	+2	-15	85.9	89.9	95.8	101.9	103.4	102.9	102.3	104.6	106.5	+0.95	+0.06	
10	Jan. 12 - Jan. 13 - Dec. 14	+1	-1	96.7	98.9	98.9	101.6	103.8	101.5	102.4	95.8	92.6	+0.54	-0.42	
11	Dec. 14 - Aug. 18 - Apr. 19	0	-4	77.1	85.6	100.2	107.6	115.5	113.6	110.6	110.6	112.2	+0.74	-0.75	
12	Apr. 19 - Jan. 20 - Sep. 21	0	-4	94.3	101.9	104.5	103.4	104.9	102.0	99.2	94.2	97.2	+1.13	-0.65	
13	Sep. 21 - May 23 - July 24	0	-10	91.2	92.3	96.6	103.9	106.9	102.8	102.9	103.7	103.6	+0.79	-0.28	
14	July 24 - Oct. 26 - Dec. 27	87.6	92.9	97.9	101.2	99.5	102.5	106.3	107.4	108.1	+0.40	+0.69	
15	Dec. 27 - June 29 - Mar. 33	+5	0	107.6	112.4	109.6	118.4	115.5	113.7	95.3	75.5	67.5	+0.41	-1.08	
Deflated clearings															
1	Mar. 79 - Mar. 82 - May 85	+11	-2	55.5	77.9	94.3	102.5	111.0	114.0	108.7	102.7	100.2	+1.54	-0.28	
2	May 85 - Mar. 87 - Apr. 88	+7	-4	68.9	73.9	97.3	109.4	116.2	101.5	123.5	108.7	106.1	+2.15	-0.78	
3	Apr. 88 - July 90 - May 91	-2	-1	76.4	87.0	95.1	114.8	122.5	120.2	108.8	77.7	87.4	+1.71	-3.51	
4	May 91 - Jan. 93 - June 94	-11	-8	82.9	117.1	118.9	108.1	111.0	115.8	66.3	72.5	62.3	+1.40	-2.86	
5	June 94 - Dec. 95 - June 97	-1	-8	55.8	89.7	93.5	119.2	125.7	113.8	81.6	97.8	104.1	+3.88	-1.20	
Pig iron production															
1	Mar. 79 - Mar. 82 - May 85	+11	-2	55.5	77.9	94.3	102.5	111.0	114.0	108.7	102.7	100.2	+1.54	-0.28	
2	May 85 - Mar. 87 - Apr. 88	+7	-4	68.9	73.9	97.3	109.4	116.2	101.5	123.5	108.7	106.1	+2.15	-0.78	
3	Apr. 88 - July 90 - May 91	-2	-1	76.4	87.0	95.1	114.8	122.5	120.2	108.8	77.7	87.4	+1.71	-3.51	
4	May 91 - Jan. 93 - June 94	-11	-8	82.9	117.1	118.9	108.1	111.0	115.8	66.3	72.5	62.3	+1.40	-2.86	
5	June 94 - Dec. 95 - June 97	-1	-8	55.8	89.7	93.5	119.2	125.7	113.8	81.6	97.8	104.1	+3.88	-1.20	

* Based on the first segment of the series (see Ch. 9, note 2), which we use through cycle 17.
 * Based on the second segment (see preceding note).
 * Omits Aug.-Nov. 1914. No data (N.Y. Stock Exchange closed).

TABLE B 3 - Continued
Measures of Successive Reference Cycles Treated on Positive Plan
Seven American Series

Cycle no. (1)	Dates of reference cycles (2) Trough - Peak - Trough	No. of months lead (-) or lag (+) of corresponding specific-cycle turn at reference		Average in reference-cycle relatives at stage*									Average change per month in reference-cycle relatives during stages' matched with reference																	
		Peak (3)	Trough ^a (4)	I			II			III			IV			V			VI			VII			VIII			IX		
				Initial trough (5)			First third (6)			Middle third (7)			Last third (8)			Peak (9)			First third (10)			Middle third (11)			Last third (12)			Terminal trough (13)		
Fig iron production - Continued																														
6	June 97 - June 99 - Dec. 00	+6	-2	71.3	85.5	91.7	96.7	106.1	117.5	119.1	101.5	99.8	+1.45	-0.35																
7	Dec. 00 - Sep. 02 - Aug. 04	+9	-8	74.9	91.0	99.2	104.6	107.9	109.1	103.7	93.5	90.5	+1.57	-0.76																
8	Aug. 04 - May 07 - June 08	+2	-5	66.9	91.3	108.4	114.0	120.0	121.9	85.6	61.5	62.7	+1.61	-4.41																
9	June 08 - Jan. 10 - Jan. 12	0	-13	58.2	73.7	91.1	120.4	131.3	115.7	96.7	96.6	106.1	+3.85	-1.05																
10	Jan. 12 - Jan. 13 - Dec. 14	0	0	91.4	100.0	106.6	112.6	122.1	115.0	95.1	80.2	67.8	+2.56	-2.36																
11	Dec. 14 - Aug. 18 - Apr. 19	+1	+1	52.3	85.7	106.7	103.9	114.6	113.9	111.4	101.3	82.4	+1.42	-4.02																
12	Apr. 19 - Jan. 20 - Sep. 21	+8	-2	105.6	94.2	113.9	96.6	122.7	128.5	119.7	48.4	45.7	+1.90	-3.85																
13	Sep. 21 - May 23 - July 24	0	0	41.1	61.5	85.1	123.9	142.0	133.0	109.5	101.8	85.5	+5.04	-4.04																
14	July 24 - Oct. 26 - Dec. 27	-3	-1	73.7	89.8	102.0	107.3	110.8	104.9	103.4	95.7	92.1	+1.37	-1.34																
15	Dec. 27 - June 29 - Mar. 33	+1	0	124.6	132.2	148.4	153.1	169.3	139.8	73.2	32.1	24.5	+2.48	-3.22																
Freight car orders																														
1	4Q 70 - 3Q 73 - 1Q 79	-23	-1	10.1	26.7	108.5	90.5	26.6	71.9	84.7	173.0	350.5	+2.14	+1.38																
2	1Q 79 - 1Q 82 - 2Q 85	+10	-6	76.7	105.5	143.3	162.2	157.6	90.5	64.8	38.9	53.0	+3.07	-3.16																
3	2Q 85 - 2Q 87 - 1Q 88	+11	+10	44.7	60.8	79.0	130.2	146.3	(117.2)	117.8	(129.0)	153.8	+3.61	-0.11																
4	1Q 88 - 3Q 90 - 2Q 91	-5	-3	111.2	100.9	98.2	144.2	99.3	(55.2)	45.6	(45.4)	47.7	+1.92	-7.90																
5	2Q 91 - 1Q 93 - 2Q 94	-11	+5	70.9	142.9	164.2	94.3	140.8	70.1	41.8	49.7	35.2	+1.42	-2.70																
6	2Q 94 - 4Q 95 - 2Q 97	-7	-7	37.4	29.9	123.9	174.0	137.8	154.9	60.6	52.0	74.8	+7.34	-6.78																
7	2Q 97 - 3Q 99 - 4Q 00	+2	-10	29.6	74.6	89.8	124.3	176.5	82.3	77.4	125.4	140.2	+4.07	+0.06																
8	4Q 00 - 4Q 02 - 3Q 04	-4	-9	121.5	96.2	123.1	170.7	96.1	91.6	39.7	60.6	112.4	+2.76	-5.24																
9	3Q 04 - 2Q 07 - 2Q 08	-21	-4	81.9	101.7	153.8	130.5	73.4	47.2	11.2	9.7	11.2	+2.74	-8.05																
10	2Q 08 - 1Q 10 - 4Q 11	-5	-17	21.2	73.5	74.2	200.3	199.3	83.2	56.7	71.4	143.1	+9.33	-6.14																
Freight car orders - Continued																														
11	4Q 11 - 1Q 13 - 4Q 14	-2	-1	111.0	105.7	106.6	181.6	162.4	102.9	71.5	62.4	15.9	+7.65	-6.11																
12	4Q 14 - 3Q 18 - 2Q 19	-3	+4	26.0	118.6	148.4	119.2	0.0	(0.0)	2.4	(3.9)	0.0	+0.42	-7.44																
13	2Q 19 - 1Q 20 - 3Q 21	+4	-4	0.0	(0.0)	17.4	(59.8)	184.4	229.5	96.9	43.0	77.8	+6.52	-1.05																
14	3Q 21 - 2Q 23 - 3Q 24	-12	+7	20.0	76.9	162.3	155.3	32.2	40.4	94.3	75.7	128.0	+6.87	-4.82																

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7	2Q 97 - 3Q 99 - 4Q 00	29.6	89.8	123.9	174.0	137.8	154.9	80.6	52.0	74.8	+7.34	-6.78
8	4Q 00 - 4Q 02 - 3Q 04	121.5	123.1	123.1	124.3	176.5	82.3	77.4	125.4	140.2	+4.07	+0.06
9	3Q 04 - 2Q 07 - 2Q 08	81.9	101.7	153.8	170.7	96.1	91.6	39.7	60.6	112.4	+2.76	-5.24
10	2Q 08 - 1Q 10 - 4Q 11	21.2	73.5	74.2	200.3	199.3	83.2	56.7	71.4	143.1	+2.74	-8.05
											+9.33	-6.14

Freight car orders - Continued

11	4Q 11 - 1Q 13 - 4Q 14	111.0	105.7	106.6	181.6	162.4	102.9	71.5	62.4	15.9	+7.65	-6.11
12	4Q 14 - 3Q 18 - 2Q 19	26.0	118.6	148.4	119.2	0.0	(0.0)	2.4	(3.9)	0.0	+0.42	-7.44
13	2Q 19 - 1Q 20 - 3Q 21	0.0	(0.0)	17.4	(59.8)	184.4	229.5	96.9	43.0	77.8	+6.52	-1.05
14	3Q 21 - 2Q 23 - 3Q 24	20.0	76.9	162.3	155.3	32.2	40.4	94.3	75.7	128.0	+6.87	-4.82
15	3Q 24 - 2Q 26 - 4Q 27	292.4	95.7	116.7	79.1	91.4	78.0	81.3	80.0	84.0	+0.36	+0.05
16	4Q 27 - 2Q 29 - 1Q 33	160.8	104.2	97.0	172.4	232.8	185.6	45.5	5.3	0.1	+1.18	-4.13

Railroad stock prices

1	Dec. 58 - Oct. 60 - June 61	-14	98.7	94.6	108.0	112.1	99.0	106.0	95.6	93.6	+0.41	-1.18
2	June 61 - Apr. 65 - Dec. 67	-32	52.8	60.1	122.4	101.2	105.8	110.8	111.2	116.6	+1.74	-0.32
3	Dec. 67 - June 69 - Dec. 70	...	87.6	92.6	100.7	106.6	102.4	103.1	105.1	103.9	+0.86	-0.24
4	Dec. 70 - Oct. 73 - Mar. 79	-21	108.2	112.7	118.4	117.9	100.9	91.6	77.5	87.6	+0.27	-0.67
5	Mar. 79 - Mar. 82 - May 85	+1	67.7	83.5	102.1	108.7	110.8	103.8	83.9	81.4	+1.41	-0.88
6	May 85 - Mar. 87 - Apr. 88	+12	81.9	90.3	98.7	106.1	109.7	101.2	98.6	96.1	+0.88	-0.52
7	Apr. 88 - July 90 - May 91	-5	100.2	100.6	99.8	103.9	105.6	91.0	93.9	94.8	+0.04	-0.77
8	May 91 - Jan. 93 - June 94	+9	98.2	102.4	111.0	109.0	107.5	86.1	87.2	84.4	+0.63	-1.25
9	June 94 - Dec. 95 - June 97	-3	99.6	100.5	98.7	109.1	101.7	94.2	95.7	98.0	+0.36	-0.74
10	June 97 - June 99 - Dec. 00	+10	75.4	84.2	87.0	103.3	107.8	111.8	109.9	125.6	+1.29	+0.35
11	Dec. 00 - Sep. 02 - Aug. 04	0	81.9	95.4	102.6	111.2	117.5	109.8	91.2	96.9	+1.93	-0.91
12	Aug. 04 - May 07 - June 08	-8	81.5	97.9	110.1	109.9	94.4	80.9	85.5	92.7	+1.10	-1.48
13	June 08 - Jan. 10 - Jan. 12	-18	85.5	92.0	102.2	109.5	107.0	98.7	98.5	97.4	+1.71	-0.48
14	Jan. 12 - Jan. 13 - Dec. 14	+2	105.7	107.6	109.2	109.4	105.2	93.6	89.4	82.6	+0.18	-0.93
15	Dec. 14 - Aug. 18 - Apr. 19	-16	98.9	105.3	110.0	89.5	91.5	92.4	90.1	92.4	-0.43	+0.04
16	Apr. 19 - Jan. 20 - Sep. 21	-3	111.3	115.4	106.7	103.1	97.9	100.5	91.8	94.0	-0.64	-0.61
17	Sep. 21 - May 23 - July 24	-8	87.6	90.6	106.4	105.3	102.6	97.5	100.5	107.3	+0.98	-0.32
18	July 24 - Oct. 26 - Dec. 27	...	76.9	83.8	90.9	98.8	104.8	118.3	125.4	126.1	+1.09	+1.61
19	Dec. 27 - June 29 - Mar. 33	-9	129.4	131.4	133.4	143.8	144.2	83.7	27.8	27.3	+0.89	-2.86

Shares traded

1	Mar. 79 - Mar. 82 - May 85	-13	53.3	80.9	107.8	126.4	107.8	101.8	89.9	59.5	+1.61	-0.55
2	May 85 - Mar. 87 - Apr. 88	-2	65.3	114.6	104.5	111.2	99.5	96.2	54.9	88.1	+0.51	-3.88
3	Apr. 88 - July 90 - May 91	-13	114.2	97.7	105.3	106.4	88.7	110.4	82.3	98.5	+1.44	-1.85
4	May 91 - Jan. 93 - June 94	+7	89.8	94.4	126.0	95.4	120.6	84.8	65.2	60.1	+1.10	-1.73
5	June 94 - Dec. 95 - June 97	-1	81.2	85.9	102.7	125.6	92.7	108.7	76.0	133.0	+2.14	-2.76

TABLE B3-Continued
Measures of Successive Reference Cycles Treated on Positive Plan
Seven American Series

Cycle no.	Dates of reference cycles (2)	No. of months lead (-) or lag (+) of corresponding specific-cycle turn at reference		Average in reference-cycle relatives at stage*										Average change per month in reference-cycle relatives during stages ^b matched with reference							
		Peak (3)	Trough* (4)	I		II		III		IV		V		VI		VII		VIII		IX	Ter- minal trough (13)
				Initial trough		First third (6)	Middle third (7)	Last third (8)	Peak (9)		First third (10)	Middle third (11)	Last third (12)	Contraction		Expansion (14)	Contraction (15)				
Shares traded—Continued																					
6	June 97 - June 99 - Dec. 00	-5	-4	56.0	79.6	84.3	131.6	122.2	107.3	102.2	84.9	194.6	+4.33	-2.46							
7	Dec. 00 - Sep. 02 - Aug. 04	-16	-3	137.9	178.5	86.9	96.9	114.6	84.7	88.1	58.4	99.1	+1.80	-1.67							
8	Aug. 04 - May 07 - June 08	-16	-7	78.3	117.3	114.2	111.0	75.0	67.0	63.7	72.0	80.6	+2.09	-2.36							
9	June 08 - Jan. 10 - Jan. 12	-7	-9	111.2	124.7	116.7	127.4	129.4	97.7	63.8	80.3	61.8	+1.56	-2.05							
10	Jan. 12 - Jan. 13 - Dec. 14	-16	0	107.8	151.1	103.0	131.8	113.5	88.9	79.7	76.3 ^c	44.0 ^d	-0.58	-2.58							
11	Dec. 14 - Aug. 18 - Apr. 19	-23	-12	24.0 ^e	96.2	121.5	89.5	61.9	81.6	80.4	116.4	163.6	+1.18	+1.92							
12	Apr. 19 - Jan. 20 - Sep. 21	-6	+1	117.2	180.1	127.9	124.3	113.8	95.6	77.9	69.8	58.5	+4.81	-2.95							
13	Sep. 21 - May 23 - July 24	-3	-9	62.9	83.0	119.6	108.9	99.4	89.0	105.5	77.3	130.0	+1.70	-2.11							
14	July 24 - Oct. 26 - Dec. 27	-11	-19	64.2	78.0	103.2	96.7	87.9	96.9	115.6	133.0	146.5	+2.39	+2.20							
15	Dec. 27 - June 29 - Mar. 33	+4	0	93.6	106.3	139.6	141.9	150.6	133.3	78.9	55.9	45.3	+3.35	-2.12							
Call money rates																					
1	Dec. 58 - Oct. 60 - June 61	-1	+16	64.9	92.2	103.4	101.6	114.6	112.0	95.6	106.2	109.3	+2.26	-0.66							
2	June 61 - Apr. 65 - Dec. 67	-8	-14	104.9	92.2	100.9	111.1	103.6	101.3	89.1	105.0	97.5	-0.03	-0.19							
3	Dec. 67 - June 69 - Dec. 70	0	+3	74.6	86.8	97.5	115.6	186.1	120.3	69.4	66.7	87.3	+6.19	-5.49							
4	Dec. 70 - Oct. 73 - Mar. 79	-1	-6	119.7	91.5	133.3	268.5	524.9	64.8	57.8	70.6	63.1	+11.92	-7.10							
5	Mar. 79 - Mar. 82 - May 85	-13	-4	80.0	135.6	125.2	110.5	89.7	115.7	60.6	62.3	32.6	+0.27	-1.50							
6	May 85 - Mar. 87 - Apr. 88	+3	+4	38.2	45.3	78.3	128.3	143.5	184.9	107.5	91.9	68.2	+4.79	-5.79							
7	Apr. 88 - July 90 - May 91	+1	+12	60.8	53.4	87.0	137.5	186.9	165.6	104.2	79.8	99.7	+4.67	-8.72							
8	May 91 - Jan. 93 - June 94	+5	+5	130.7	101.8	66.1	111.7	124.4	174.7	113.4	36.6	40.1	-0.32	-4.96							
9	June 94 - Dec. 95 - June 97	+10	+1	53.3	40.0	78.4	61.4	137.3	152.7	212.3	70.4	64.1	+4.67	-4.07							
10	June 97 - June 99 - Dec. 00	+4	-3	50.6	62.9	80.7	97.1	147.9	195.2	103.3	80.0	99.2	+4.05	-2.71							
Call money rates - Continued																					
11	Dec. 00 - Sep. 02 - Aug. 04	0	-1	78.6	116.4	94.9	121.1	209.1	121.6	81.1	45.0	36.9	+6.21	-7.49							
12	Aug. 04 - May 07 - June 08	+5	+5	29.8	52.3	123.1	118.2	65.0	98.3	209.9	41.1	39.4	+1.07	-1.97							
13	June 08 - Jan. 10 - Jan. 12	+4	-2	73.5	56.8	84.0	121.8	136.2	123.1	95.4	103.9	86.8	+3.30	-2.06							
14	Jan. 12 - Jan. 13 - Dec. 14	-1	+11	66.9	84.2	88.7	146.3	119.2	92.6	79.3	123.0	94.9	+4.36	-1.06							

SUPPORTING DATA

Call money rates—Continued

8	May 91 - Jan. 93	101.8	66.1	111.7	124.4	107.2	73.8	77.7	74.07	67.2
9	June 94 - Dec. 95	40.0	78.4	61.4	137.3	174.7	113.4	40.1	-0.32	-4.96
10	June 97 - June 99	62.9	80.7	97.1	147.9	152.7	212.3	64.1	+4.67	-4.07
		50.6			195.2	103.3	80.0	99.2	+4.05	-2.71
11	Dec. 00 - Sep. 02	116.4	94.9	121.1	209.1	121.6	81.1	36.9	+6.21	-7.49
12	Aug. 04 - May 07	52.3	123.1	118.2	65.0	98.3	209.9	39.4	+1.07	-1.97
13	June 08 - Jan. 10	56.8	84.0	121.8	136.2	123.1	95.4	86.8	+3.30	-2.06
14	Jan. 12 - Jan. 13	84.2	88.7	146.3	119.2	92.6	79.3	94.9	+4.36	-1.06
15	Dec. 14 - Aug. 18	56.6	88.7	133.5	174.9	159.9	141.9	157.2	+1.84	-2.21
16	Apr. 19 - Jan. 20	85.7	82.0	122.8	124.6	112.2	101.5	76.7	+5.47	-2.40
17	Sep. 21 - May 23	106.3	92.4	106.6	110.9	115.5	100.9	47.5	-0.63	-4.53
18	July 24 - Oct. 26	75.9	108.5	111.9	116.3	112.3	107.3	100.4	+2.35	-1.14
19	Dec. 27 - June 29	130.0	167.3	211.1	215.5	119.3	43.8	47.6	+6.38	-3.73

Railroad bond yields

1	Dec. 58 - Oct. 60	100.7	101.6	96.5	96.8	102.5	100.1	102.9	104.2	+0.07	-0.83
2	June 61 - Apr. 65	99.4	84.4	87.6	103.9	109.8	111.2	111.0	111.9	+0.89	0.00
3	Dec. 67 - June 69	112.5	97.4	101.0	100.7	103.0	100.8	99.6	100.7	+0.42	-0.20
4	Dec. 70 - Oct. 73	99.6	109.0	108.6	112.4	102.6	92.0	89.8	85.3	-0.23	-0.35
5	Mar. 79 - Mar. 82	112.8	109.5	96.6	98.2	97.8	97.5	96.7	93.3	-0.17	-0.28
6	May 85 - Mar. 87	106.3	98.1	98.2	98.8	98.9	101.4	99.5	98.9	+0.06	-0.22
7	Apr. 88 - July 90	102.3	96.7	98.7	100.3	101.8	104.0	104.0	105.8	+0.33	+0.03
8	May 91 - Jan. 93	102.3	98.9	98.6	98.8	99.5	103.2	96.9	95.9	+0.05	-0.24
9	June 94 - Dec. 95	103.6	102.1	101.6	99.4	99.6	102.7	96.9	94.8	-0.16	-0.19
10	June 97 - June 99	103.1	102.9	98.1	96.0	98.3	98.9	99.6	98.7	-0.30	+0.07
11	Dec. 00 - Sep. 02	94.6	94.5	96.4	98.5	101.0	105.6	105.7	104.2	+0.35	+0.10
12	Aug. 04 - May 07	96.6	95.9	99.8	102.7	104.7	109.0	105.5	104.4	+0.42	-0.22
13	June 08 - Jan. 10	100.3	98.2	96.4	99.3	101.4	101.8	102.4	102.2	+0.36	+0.08
14	Jan. 12 - Jan. 13	96.4	97.5	98.3	98.4	101.7	101.8	100.8 ^f	105.2 ^f	+0.42	0.00
15	Dec. 14 - Aug. 18	97.3 ^f	96.3	106.1	111.1	110.5	103.5	106.6	107.6	+0.71	+0.19
16	Apr. 19 - Jan. 20	92.4	92.4	96.6	99.0	105.4	100.5	101.7	99.0	+1.09	-0.72
17	Sep. 21 - May 23	109.8	102.2	95.6	101.3	101.3	101.9	100.6	98.4	+0.46	-0.12
18	July 24 - Oct. 26	102.7	102.8	99.9	99.5	98.4	96.7	95.0	93.4	-0.26	+0.07
19	Dec. 27 - June 29	93.1	94.7	101.9	103.8	100.5	95.0	105.8	99.8	+0.06	-0.31

* Entries in parentheses are interpolated.
 * The entries relate to the terminal trough shown on the same line in col. (2).
 * The stages matched with reference expansion are as follows:
 Deflated clearings (VIII-V)
 Railroad stock prices (VIII-IV)
 Shares traded (VIII-IV)
 Freight car orders (VIII-IV)
 Call money rates (I-V)
 Railroad bond yields (III-VI)
 * Col. (3)-(4) for this series compare the timing of specific cycles with the monthly reference dates, not with the quarterly reference dates given here.
 * Based on the first segment of the series (see Ch. 9, note 2), which we use through cycle 14.
 * Based on the second segment; the corresponding entry for the first segment is +10. See the preceding note.
 * Omits Aug.-Nov. 1914. No data (N.Y. Stock Exchange closed).

TABLE B4
Patterns of Successive Reference Cycles Treated on Inverted Plan
Seven American Series

Cycle no. (1)	Dates of reference cycles Peak - Trough - Peak (2)	Average in reference-cycle relatives at stage*								
		I Initial peak (3)	Contraction			V Trough (7)	Expansion			IX Terminal peak (11)
			II	III	IV		VI	VII	VIII	
			First third (4)	Middle third (5)	Last third (6)		First third (8)	Middle third (9)	Last third (10)	
Deflated clearings										
1	Mar.82-May 85-Mar.87	93.1	96.6	99.0	91.2	92.7	99.9	107.1	115.8	126.2
2	Mar.87-Apr. 88-July 90	93.4	95.7	93.6	90.1	91.4	96.4	101.4	111.5	118.9
3	July 90-May 91-Jan. 93	98.6	100.0	94.5	93.0	93.3	98.3	101.3	107.0	110.4
4	Jan. 93-June 94-Dec. 95	114.9	111.4	88.9	92.8	93.7	98.1	100.8	108.1	107.1
5	Dec. 95-June 97-June 99	94.8	90.2	87.7	87.8	91.6	102.2	103.6	118.6	123.5
6	June 99-Dec. 00-Sep. 02	94.0	94.8	91.0	91.9	96.2	104.5	105.5	108.8	110.5
7	Sep. 02-Aug. 04-May 07	91.2	90.0	91.9	89.1	92.8	99.5	107.8	112.7	116.0
8	May 07-June 08-Jan. 10	103.9	103.6	91.5	89.4	92.6	97.0	103.4	110.0	111.6
9	Jan. 10-Jan. 12-Jan. 13	97.9	97.5	96.9	99.0	100.8	103.2	103.1	106.0	108.2
10	Jan. 13-Dec. 14-Aug. 18	93.1	91.0	91.9	85.9	83.0	92.2	107.9	115.9	124.4
11	Aug. 18-Apr. 19-Jan. 20	98.4	96.8	94.3	94.2	95.6	103.2	105.9	104.8	106.3
12	Jan. 20-Sep. 21-May 23	103.4	100.6	97.8	92.9	95.8	96.9	101.5	109.2	112.3
13	May 23-July 24-Oct. 26	96.3	92.6	92.7	93.4	93.3	99.0	104.3	107.8	106.0
14	Oct. 26-Dec. 27-June 29	90.3	93.0	96.5	97.5	98.1	102.4	99.9	107.9	105.3
Pig iron production										
1	Mar.82-May 85-Mar.87	93.7	96.3	91.8	86.7	84.6	90.7	119.4	134.3	142.6
2	Mar.87-Apr. 88-July 90	90.1	78.7	95.8	84.3	81.9	93.6	102.3	123.5	131.8
3	July 90-May 91-Jan. 93	107.3	105.3	95.3	68.1	76.5	108.1	109.8	99.8	102.5
4	Jan. 93-June 94-Dec. 95	113.1	117.9	67.5	73.9	63.4	101.9	106.2	135.4	142.8
5	Dec. 95-June 97-June 99	105.8	95.8	68.7	82.4	87.6	105.2	112.8	119.0	130.5
6	June 99-Dec. 00-Sep. 02	87.1	96.4	97.8	83.3	81.9	99.6	108.5	114.4	118.1
7	Sep. 02-Aug. 04-May 07	86.5	87.4	83.0	74.9	72.5	98.9	117.5	123.5	130.1
8	May 07-June 08-Jan. 10	123.4	125.3	88.0	63.2	64.5	81.7	101.0	133.5	145.5
9	Jan. 10-Jan. 12-Jan. 13	118.8	104.7	87.5	87.4	96.0	105.0	111.9	118.3	128.2
10	Jan. 13-Dec. 14-Aug. 18	104.2	98.2	81.2	68.4	57.9	94.9	118.2	115.0	126.9
11	Aug. 18-Apr. 19-Jan. 20	123.5	122.8	120.0	109.2	88.8	79.2	95.8	81.2	103.2
12	Jan. 20-Sep. 21-May 23	123.2	129.0	120.2	48.6	45.8	68.6	94.9	138.2	158.4
13	May 23-July 24-Oct. 26	123.6	115.8	95.4	88.7	74.4	90.8	103.0	108.4	112.0
14	Oct. 26-Dec. 27-June 29	106.1	100.5	99.0	91.6	88.2	93.5	105.0	108.4	119.8
Freight car orders										
1	3Q 73-1Q 79-1Q 82	9.2	24.7	29.1	59.5	120.5	165.8	225.1	254.8	247.6
2	1Q 82-2Q 85-2Q 87	191.3	109.9	78.7	47.2	64.3	87.5	113.8	187.6	210.7
3	2Q 87-1Q 88-3Q 90	97.2	(77.9)	78.2	(85.8)	102.2	92.8	90.3	132.6	91.3
4	3Q 90-2Q 91-1Q 93	127.8	(71.0)	58.8	(58.4)	61.4	123.9	142.3	81.8	122.1
5	1Q 93-2Q 94-4Q 95	177.4	88.3	52.6	62.6	44.3	35.4	146.6	206.0	163.0
6	4Q 95-2Q 97-3Q 99	73.8	82.9	32.4	27.9	40.0	100.9	121.4	168.1	238.8
7	3Q 99-4Q 00-4Q 02	135.9	63.4	59.6	96.6	108.0	85.4	109.3	151.7	85.4
8	4Q 02-3Q 04-2Q 07	72.3	68.9	29.8	45.6	84.5	104.8	158.6	134.6	75.7
9	2Q 07-2Q 08-1Q 10	150.1	96.6	22.9	19.9	23.0	79.6	80.5	217.1	216.1
10	1Q 10-4Q 11-1Q 13	169.0	70.6	48.0	60.6	121.3	115.5	116.5	198.6	177.6
11	1Q 13-4Q 14-3Q 18	215.0	136.2	94.7	82.7	21.0	96.1	120.2	96.6	0.0
12	3Q 18-2Q 19-1Q 20	0.0	(0.0)	28.2	(47.1)	0.0	(0.0)	74.6	(255.8)	788.7
13	1Q 20-3Q 21-2Q 23	60.7	75.6	31.9	14.2	25.6	98.6	208.2	199.2	41.3
14*	2Q 23-3Q 24-3Q 26	43.3	54.4	127.0	101.9	172.3	94.6	89.5	114.6	16.9
15	3Q 26-4Q 27-2Q 29	118.2	100.8	105.1	103.4	108.6	70.4	65.6	116.4	157.3

Patterns of

Cycle no. (1)	Dates of reference cycle Peak - Trough - (2)
1	Oct. 60-June 61
2	Apr. 65-Dec. 67
3	June 69-Dec. 70
4	Oct. 73-Mar. 79
5	Mar. 82-May 85
6	Mar. 87-Apr. 88
7	July 90-May 91
8	Jan. 93-June 94
9	Dec. 95-June 97
10	June 99-Dec. 00
11	Sep. 02-Aug. 04
12	May 07-June 08
13	Jan. 10-Jan. 12
14	Jan. 13-Dec. 14
15	Aug. 18-Apr. 19
16	Jan. 20-Sep. 21
17	May 23-July 24
18	Oct. 26-Dec. 27
1	Mar. 82-May 88
2	Mar. 87-Apr. 88
3	July 90-May 91
4	Jan. 93-June 94
5	Dec. 95-June 99
6	June 99-Dec. 00
7	Sep. 02-Aug. 04
8	May 07-June 08
9	Jan. 10-Jan. 12
10	Jan. 13-Dec. 14
11	Aug. 18-Apr. 19
12	Jan. 20-Sep. 21
13	May 23-July 24
14	Oct. 26-Dec. 27
1	Oct. 60-June 61
2	Apr. 65-Dec. 67
3	June 69-Dec. 70
4	Oct. 73-Mar. 79
5	Mar. 82-May 85
6	Mar. 87-Apr. 88
7	July 90-May 91
8	Jan. 93-June 94
9	Dec. 95-June 97
10	June 99-Dec. 00

TABLE B4 - Continued
Patterns of Successive Reference Cycles Treated on Inverted Plan
Seven American Series

Inverted Plan

Cycles at stage*		
VII	VIII	IX
Expansion		Terminal peak (11)
Middle third (9)	Last third (10)	

107.1	115.8	126.2
101.4	111.5	118.9
101.3	107.0	110.4
100.8	108.1	107.1
103.6	118.6	123.5
105.5	108.8	110.5
107.8	112.7	116.0
103.4	110.0	111.6
103.1	106.0	108.2
107.9	115.9	124.4
105.9	104.8	106.3
101.5	109.2	112.3
104.3	107.8	106.0
99.9	107.9	105.3

119.4	134.3	142.6
102.3	123.5	131.8
109.8	99.8	102.5
106.2	135.4	142.8
112.8	119.0	130.5
108.5	114.4	118.1
117.5	123.5	130.1
101.0	133.5	145.5
11.9	118.3	128.2
118.2	115.0	126.9
95.8	81.2	103.2
94.9	138.2	158.4
103.0	108.4	112.0
105.0	108.4	119.8

5.1	254.8	247.6
3.8	187.6	210.7
1.3	132.6	91.3
2.3	81.8	122.1
3.6	206.0	163.0
1.4	168.1	238.8
1.3	151.7	85.4
1.6	134.6	75.7
1.5	217.1	216.1
1.5	198.6	177.6
1.2	96.6	0.0
1.6	(255.8)	788.7
2	199.2	41.3
1.5	114.6	16.9
1.6	116.4	157.3

Cycle no. (1)	Dates of reference cycles Peak - Trough - Peak (2)	Average in reference-cycle relatives at stage*								
		I Initial peak (3)	Contraction			V Trough (7)	Expansion			IX Terminal peak (11)
			II	III	IV		VI	VII	VIII	
			First third (4)	Middle third (5)	Last third (6)		First third (8)	Middle third (9)	Last third (10)	

Railroad stock prices

1	Oct. 60-June 61-Apr. 65	71.6	63.2	67.8	61.1	59.8	68.2	112.7	138.9	114.8
2	Apr. 65-Dec. 67-June 69	87.2	91.1	95.4	95.7	100.4	106.2	109.7	115.5	122.2
3	June 69-Dec. 70-Oct. 73	98.1	94.2	94.8	96.7	95.6	99.6	104.6	104.2	89.2
4	Oct. 73-Mar. 79-Mar. 82	95.8	100.5	87.0	73.5	83.2	102.6	125.4	143.9	133.5
5	Mar. 82-May 85-Mar. 87	110.0	112.1	105.0	85.0	82.4	90.8	99.3	106.7	108.4
6	Mar. 87-Apr. 88-July 90	108.5	110.5	101.9	99.4	96.9	97.2	96.5	100.4	102.1
7	July 90-May 91-Jan. 93	104.5	99.6	90.1	92.9	93.8	97.8	106.0	104.0	102.7
8	Jan. 93-June 94-Dec. 95	120.6	112.5	96.5	97.8	94.7	95.6	93.9	103.8	96.7
9	Dec. 95-June 97-June 99	92.7	91.7	85.9	87.2	89.3	99.8	103.1	122.4	127.7
10	June 99-Dec. 00-Sep. 02	79.1	81.3	82.0	80.6	92.1	107.4	115.4	125.1	132.2
11	Sep. 02-Aug. 04-May 07	103.3	96.5	80.2	79.4	85.2	102.3	115.1	114.9	98.6
12	May 07-June 08-Jan. 10	94.2	91.4	80.7	85.3	92.6	99.6	110.7	118.6	115.8
13	Jan. 10-Jan. 12-Jan. 13	107.6	100.5	99.2	99.1	97.9	99.7	101.2	101.3	97.5
14	Jan. 13-Dec. 14-Aug. 18	119.8	111.9	106.6	101.7 ^b	94.1 ^b	100.2	104.6	85.1	84.3
15	Aug. 18-Apr. 19-Jan. 20	97.9	101.1	102.1	99.5	102.1	105.8	97.9	94.6	89.8
16	Jan. 20-Sep. 21-May 23	95.8	93.8	98.4	89.9	92.0	95.0	111.6	110.5	107.6
17	May 23-July 24-Oct. 26	87.2	82.9	83.0	85.5	91.3	99.5	107.9	117.3	124.5
18	Oct. 26-Dec. 27-June 29	83.1	85.3	93.9	99.4	100.0	101.5	103.1	111.1	118.2

Shares traded

1	Mar. 82-May 85-Mar. 87	126.5	107.9	101.9	90.0	59.6	104.6	95.4	101.5	97.1
2	Mar. 87-Apr. 88-July 90	131.2	122.7	118.6	67.7	108.6	92.9	100.1	101.1	79.2
3	July 90-May 91-Jan. 93	76.3	81.2	101.1	75.3	90.2	94.7	126.5	95.7	161.6
4	Jan. 93-June 94-Dec. 95	190.6	142.8	100.4	77.2	71.2	75.3	90.0	110.1	99.7
5	Dec. 95-June 97-June 99	64.9	52.9	62.0	43.4	75.9	107.9	114.2	178.3	165.5
6	June 99-Dec. 00-Sep. 02	87.2	76.6	73.0	60.6	139.0	179.9	87.6	97.7	115.5
7	Sep. 02-Aug. 04-May 07	98.3	72.7	75.6	50.1	85.0	127.3	123.9	120.5	81.4
8	May 07-June 08-Jan. 10	93.7	83.6	79.6	90.0	100.7	112.9	105.6	115.3	117.2
9	Jan. 10-Jan. 12-Jan. 13	162.7	122.8	80.2	100.9	77.7	109.0	74.2	95.0	81.8
10	Jan. 13-Dec. 14-Aug. 18	73.7	57.7	51.8	49.5 ^b	28.6 ^b	114.3	144.4	106.3	73.6
11	Aug. 18-Apr. 19-Jan. 20	41.6	54.8	54.0	78.2	109.9	168.9	119.9	116.6	106.7
12	Jan. 20-Sep. 21-May 23	128.2	107.7	87.8	78.7	65.9	87.0	125.4	114.1	104.2
13	May 23-July 24-Oct. 26	64.1	57.4	68.0	49.8	83.8	101.9	134.8	126.3	114.8
14	Oct. 26-Dec. 27-June 29	54.1	59.6	71.1	81.8	90.1	102.4	134.4	136.7	145.0

Call money rates

1	Oct. 60-June 61-Apr. 65	108.8	106.4	90.8	100.9	103.8	91.2	99.8	109.9	102.5
2	Apr. 65-Dec. 67-June 69	92.0	90.0	79.2	93.3	86.7	100.9	113.3	134.3	216.2
3	June 69-Dec. 70-Oct. 73	166.6	107.8	62.1	59.8	78.2	59.8	87.1	175.4	342.9
4	Oct. 73-Mar. 79-Mar. 82	683.9	84.4	75.3	92.0	82.2	139.5	128.7	113.6	92.3
5	Mar. 82-May 85-Mar. 87	117.8	151.8	79.5	81.8	42.9	50.8	87.9	143.9	161.0
6	Mar. 87-Apr. 88-July 90	128.4	165.5	96.2	82.3	61.0	53.6	87.3	138.0	187.5
7	July 90-May 91-Jan. 93	214.2	189.9	119.4	91.5	114.3	89.0	57.8	97.7	108.8
8	Jan. 93-June 94-Dec. 95	164.7	231.3	150.1	48.4	53.1	39.8	78.1	61.2	136.8
9	Dec. 95-June 97-June 99	116.6	129.7	180.3	59.8	54.4	67.7	86.8	104.5	159.3
10	June 99-Dec. 00-Sep. 02	108.3	142.9	75.7	58.6	72.6	107.6	87.7	111.9	193.3

TABLE B 4—Continued
 Patterns of Successive Reference Cycles Treated on Inverted Plan
 Seven American Series

Cycle no. (1)	Dates of reference cycles Peak—Trough—Peak (2)	Average in reference-cycle relatives at stage*								
		I	II	III	IV	V	VI	VII	VIII	IX
		Initial peak (3)	Contraction			Trough (7)	Expansion			Ter- minal peak (11)
			First third (4)	Middle third (5)	Last third (6)		First third (8)	Middle third (9)	Last third (10)	
Call money rates—Continued										
11	Sep. 02—Aug. 04—May 07	198.9	115.7	77.1	42.8	35.1	61.7	145.2	139.3	76.6
12	May 07—June 08—Jan. 10	88.1	133.3	284.7	55.8	53.5	41.4	61.2	88.7	99.2
13	Jan. 10—Jan. 12—Jan. 13	115.5	104.3	80.8	88.0	73.6	92.5	97.5	160.8	131.0
14	Jan. 13—Dec. 14—Aug. 18	127.7	99.2	85.0	131.8	101.7	61.3	85.3	144.5	189.4
15	Aug. 18—Apr. 19—Jan. 20	96.7	88.4	78.4	83.5	86.9	98.9	94.5	141.6	143.7
16	Jan. 20—Sep. 21—May 23	152.0	136.9	123.8	107.9	93.5	80.5	69.9	80.7	84.0
17	May 23—July 24—Oct. 26	121.6	126.6	110.7	86.2	52.1	75.0	107.2	110.5	114.9
18	Oct. 26—Dec. 27—June 29	83.1	80.3	76.6	65.8	71.7	92.6	119.2	150.5	153.6
Railroad bond yields										
1	Oct. 60—June 61—Apr. 65	109.9	116.3	113.6	116.8	118.3	110.2	88.7	92.0	109.2
2	Apr. 65—Dec. 67—June 69	93.8	99.1	100.4	100.2	101.0	98.8	99.2	102.4	102.1
3	June 69—Dec. 70—Oct. 73	102.0	104.3	102.0	100.8	101.9	100.4	97.9	97.6	101.0
4	Oct. 73—Mar. 79—Mar. 82	126.7	115.6	103.7	101.2	96.1	93.3	86.9	82.3	83.7
5	Mar. 82—May 85—Mar. 87	104.6	104.2	103.9	103.1	99.4	96.9	91.7	91.8	92.4
6	Mar. 87—Apr. 88—July 90	101.9	102.0	104.6	102.7	102.0	100.2	96.5	98.5	100.0
7	July 90—May 91—Jan. 93	96.9	98.4	100.5	100.6	102.3	102.9	99.0	98.6	98.8
8	Jan. 93—June 94—Dec. 95	102.4	103.3	107.1	100.5	99.4	98.0	97.5	94.0	95.4
9	Dec. 95—June 97—June 99	103.9	104.2	107.4	101.4	99.2	98.1	99.0	94.3	92.3
10	June 99—Dec. 00—Sep. 02	96.7	99.0	99.6	100.3	99.4	99.2	100.7	101.2	103.5
11	Sep. 02—Aug. 04—May 07	94.0	96.4	100.7	100.8	99.5	98.8	99.7	102.7	105.8
12	May 07—June 08—Jan. 10	99.2	101.1	105.3	101.9	100.8	98.8	97.0	98.7	99.8
13	Jan. 10—Jan. 12—Jan. 13	97.0	99.1	99.4	100.1	99.9	100.1	101.0	101.9	102.0
14	Jan. 13—Dec. 14—Aug. 18	93.6	96.6	96.8	95.7 ^b	100.0 ^b	99.0	96.4	109.0	114.2
15	Aug. 18—Apr. 19—Jan. 20	102.1	101.5	95.1	98.0	98.8	98.8	103.5	103.3	105.9
16	Jan. 20—Sep. 21—May 23	103.3	110.0	104.9	106.1	103.3	96.1	89.9	93.5	95.3
17	May 23—July 24—Oct. 26	102.6	102.7	103.2	101.9	99.7	99.8	99.5	97.0	96.6
18	Oct. 26—Dec. 27—June 29	101.6	100.5	98.7	97.0	95.3	97.0	101.9	104.3	106.3

* Entries in parentheses are interpolated.

^a Based on the first segment of the series (see Ch. 9, note 2), which we use through cycle 14.

^b Omits Aug.—Nov. 1914. No data (N. Y. Stock Exchange closed).

The entries for cycles refer to

Series and of long cycles in build

DEFLATED CLE
 Upswings.
 Downswings

PIG IRON PROD
 Upswings.
 Downswings

FREIGHT CAR C
 Upswings.
 Downswings

RAILROAD STOCK
 Upswings.
 Downswings

SHARES TRADE
 Upswings.
 Downswings

CALL MONEY R
 Upswings.
 Downswings

RAILROAD BON
 Upswings.
 Downswings

BUSINESS CYCL
 Upswings.
 Downswings

TABLE B5
List of Cycles Included in Table 164 and Chart 60

The entries for the seven series refer to the cycle numbers in Table B1. The entries for business cycles refer to the line numbers in Table 16 for the United States; that is, to cycles whose peaks are shown on these lines.

IX Ter- minal peak (11)	Series and phase of long cycles in building	Expansion (Col. 2 & 6 of Table 164)	Contraction (Col. 3 & 7 of Table 164)	Full cycle (Col. 4-5 & 8-9 of Table 164, and Chart 60)
	DEFLATED CLEARINGS			
	Upswings	1-4,8-10,13-14	1-3,8-9,13-14	1-3,8-9,13-14
	Downswings	5-7,11-12	4-7,10-12,15	5-7,11-12
	PIG IRON PRODUCTION			
	Upswings	1-3,7-9,12-14	1-2,7-8,12-13	1-2,7-8,12-13
	Downswings	4-6,10-11,15	3-6,9-11,14-15	4-6,10-11,15
	FREIGHT CAR ORDERS			
	Upswings	1,3-5,9-11,15-18	3-4,9-10,15-17	3-4,9-10,15-17
	Downswings	2,6-8,12-14,19	1-2,5-8,11-14,18-19	2, 6-8, 12-14, 19
	RAILROAD STOCK PRICES			
	Upswings	3-7,11-13,16-17	3,5-6,11-12,16-17	3,5-6,11-12,16-17
	Downswings	1-2,8-10,14-15	1-2,4,7-10,13-15,18	1-2,8-10,14-15
	SHARES TRADED			
	Upswings	1-3,7-9,12-14	1-2,7-8,12-13	1-2,7-8,12-13
	Downswings	4-6,10-11,15	3-6,9-11,14-15	4-6,10-11,15
	CALL MONEY RATES			
	Upswings	2-4,7-11,15-17,20-22	2-3,7-10,15-16,20-21	2-3,7-10,15-16,20-21
	Downswings	1,5-6,12-14,18-19,23	1,4-6,11-14,17-19,22-23	1,5-6,12-14,18-19,23
	RAILROAD BOND YIELDS			
	Upswings	2-6,8-10,13-14,18-19	2-5,8-9,13-14,18	2-5,8-9,13-14,18
	Downswings	1,7,11-12,15-17,20	1,6,10-12,15-17,20	1,11-12,15-17,20
	BUSINESS CYCLES			
	Upswings	9-14,18-20,23-25	9-10,12-13,18-19,23-24	9-10,12-13,18-19,23-24
	Downswings	7-8,15-17,21-22,26	7-8,11,14-17,20-22,25-26	7-8,15-17,21-22,26

76.6
- 99.2
131.0
189.4
143.7
84.0
114.9
153.6

109.2
102.1
101.0
83.7
92.4
100.0
98.8
95.4
92.3
103.5

105.8
99.8
102.0
114.2
105.9
95.3
96.6
106.3

TABLE B6
List of Cycles Included in Table 166 and Chart 63

The entries in the last column refer to the cycle numbers in Table B2; the entries in the preceding columns refer to the cycle numbers in Table B1.

Series and phase of long waves in prices	Expansion (Col. 2 & 7 of Table 166)	Contraction (Col. 3 & 8 of Table 166)	Full cycle, positive (Col. 4-5 & 9-10 of Table 166, and Chart 63)	Full cycle, inverted (Col. 6 & 11 of Table 166)
DEFLATED CLEARINGS				
Upswings.....	7-13	7-12	7-12	7-12
Downswings.....	1-6, 14-15	1-6, 13-15	1-6, 14-15	1-5, 13-14
PIG IRON PRODUCTION				
Upswings.....	6-12	6-11	6-11	6-11
Downswings.....	1-5, 13-15	1-5, 12-15	1-5, 13-15	1-4, 12-14
FREIGHT CAR ORDERS				
Upswings.....	8-15	8-14	8-14	8-14
Downswings.....	1-7, 16-19	1-7, 15-19	1-7, 16-19	1-6, 15-18
RAILROAD STOCK PRICES				
Upswings.....	1-3, 10-16	1-2, 10-15	1-2, 10-15	1-2, 10-15
Downswings.....	4-9, 17-18	3-9, 16-18	4-9, 17-18	3-8, 16-17
SHARES TRADED				
Upswings.....	6-12	6-11	6-11	6-11
Downswings.....	1-5, 13-15	1-5, 12-15	1-5, 13-15	1-4, 12-14
CALL MONEY RATES				
Upswings.....	1-2, 14-20	1, 14-19	1, 14-19	1, 14-19
Downswings.....	3-13, 21-23	2-13, 20-23	3-13, 21-23	2-12, 20-22
RAILROAD BOND YIELDS				
Upswings.....	1-2, 13-18	1-2, 12-17	1-2, 13-17	1, 12-17
Downswings.....	3-12, 19-20	3-11, 18-20	3-11, 19-20	3-11, 18-19

TABLE B7

List of Cycles Included in Table 167

The entries refer to the line numbers in Table 16 in the sense explained at the head of Table B5; except that in the last column, number *x* is the cycle running from the peak on line *x* to the peak on line *x*+1.

Country and phase of long waves in prices	Expansion (Col. 2 & 7 of Table 167)	Contraction (Col. 3 & 8 of Table 167)	Full cycle, positive (Col. 4-5 & 9-10 of Table 167)	Full cycle, inverted (Col. 6 & 11 of Table 167)
UNITED STATES				
Upswings...	4*-6*, 7-9, 17-23	4*-6*, 7-8, 17-22	4*-6*, 7-8, 17-22	4*-6*, 7-8, 17-22
Downswings...	2*-3*, 10-16, 24-26	2*-3*, 9-16, 23-26	2*-3*, 10-16, 24-26	2*, 9-15, 23-25
GREAT BRITAIN				
Upswings...	2*-6*, 14*, 15-18, 21-26	2*-5*, 14*, 15-17, 21-25	2*-5*, 14*, 15-17, 21-25	2*-5*, 14*, 15-17, 21-25
Downswings...	7*-13*, 19-20, 27-29	6*-13*, 18-20, 26-29	7*-13*, 19-20, 27-29	6*-12*, 18-19, 26-28
GERMANY				
Upswings...	2*-3*, 6-11	2*, 6-11	2*, 6-11	2*, 6-10
Downswings...	4-5, 12-13	3*, 4-5, 12-13	4-5, 12-13	3*, 4, 12
FRANCE				
Upswings...	3*-5*, 6-8, 12-19	3*-5*, 6-7, 12-18	3*-5*, 6-7, 12-18	3*-5*, 6-7, 12-18
Downswings...	2*, 9-11, 20	2*, 8-11, 19-20	2*, 9-11, 20	8-10, 19

* Included in the analysis based on annual reference dates, but not in the analysis based on monthly reference dates.

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DEFLATED
First...
Middle...
Last...

PIG IRON P
First...
Middle...
Last...

FREIGHT CA
First...
Middle...
Last...

RAILROAD S
First...
Middle...
Last...

SHARES TRA
First...
Middle...
Last...

CALL MONE
First...
Middle...
Last...

RAILROAD B
First...
Middle...
Last...

BUSINESS CY
First...
Middle...
Last...

BUSINESS CY
First...
Middle...
Last...

*Omitted i

Deflated c

Pig iron p

Freight ca

Railroad s

Shares tra

Call mone

Railroad l

TABLE B8
List of Cycles Included in Tables 170, 172, 173 and 175,
and Charts 67, 69 and 71

The entries for the seven series in columns (a) and (c) refer to the cycle numbers in Table B1; the entries in columns (b) and (d) to the cycle numbers in Table B2. The entries for business cycles in the United States and Great Britain refer to the line numbers in Table 16 in the sense explained at the head of Table B5; except that in columns (b) and (d), number *x* is the cycle running from the peak on line *x* to the peak on line *x*+1.

Series and place of cycles	Table 170 and Chart 67 (a)	Table 172 and Chart 69 (b)	Col. 2-5 of Tables 173 and 175, and Chart 71 (c)	Col. 6 of Tables 173 and 175 (d)
DEFLATED CLEARINGS				
First	1,3,6,9,12,14	2,5,7,9,11	1,6,10,14	5,9,13
Middle			2-4,7-8,11-12	1-3,6-7,10-11
Last	2,5,8,11,13,15	4,6,8,10,12	5,9,13,15	4,8,12,14
PIG IRON PRODUCTION				
First	2,5,8,11,13	1,4,6,8,10	1,5,9,13	4,8,12
Middle			2-3,6-7,10-11,14	1-2,5-6,9-10,13
Last	4,7,10,12,15	3,5,7,9,11	4,8,12,15	3,7,11,14
FREIGHT CAR ORDERS				
First	4,7,10,13,16	3,6,9,10,12	3,7,11,16	2,6,10,15
Middle			4-5,8-9,12-14,17-18	3-4,7-8,11-13,16-17
Last	2,6,9,12,15,19	5,7,9,11,14*	6,10,15,19	5,9,14,18
RAILROAD STOCK PRICES				
First	1,6,9,12,15,17	5,8,10,12,14	5,9,13,17	4,8,12,16
Middle			6-7,10-11,14-15	5-6,9-10,13-14
Last	3,8,11,14,16,18	7,9,11,13,15	8,12,16,18	7,11,15,17
SHARES TRADED				
First	2,5,8,11,13	1,4,6,8,10	1,5,9,13	4,8,12
Middle			2-3,6-7,10-11,14	1-2,5-6,9-10,13
Last	4,7,10,12,15	3,5,7,9,11	4,8,12,15	3,7,11,14
CALL MONEY RATES				
First	1,3,6,10,13,16,19,21	9,12,14,16,18	7,13,17,21	4,12,16,20
Middle			8-11,14-15,18-19,22	5-10,13-14,17-18,21
Last	2,5,9,12,15,18,20,23	11,13,15,17,19	12,16,20,23	11,15,19,22
RAILROAD BOND YIELDS				
First	4,7,9,12,14,16,19		7,12,15,19	6,11,14,18
Middle			8-10,13,16-17	7-9,12,15-16
Last	3,6,8,11,13,15,18,20		11,14,18,20	10,13,17,19
BUSINESS CYCLES, U.S.				
First	8,10,13,16,19,22,24	12,15,17,19,21	12,16,20,24	11,15,19,23
Middle			13-14,17-18,21-22,25	12-13,16-17,20-21,24
Last	7,9,11,15,18,21,23,26	14,16,18,20,22	15,19,23,26	14,18,22,25
BUSINESS CYCLES, G.B.				
First			19,21,24,27	18,20,23,26
Middle			22,25,28	21,24,27
Last			20,23,26,29	19,22,25,28

*Omitted in Chart 69.

TABLE B9
List of Specific Cycles Included in Table 180
(The entries refer to the cycle numbers in Table B1)

Series	1879-1897	1897-1914	1914-1933
Deflated clearings	1-6	7-11	12-15
Pig iron production	1-5	6-10	11-15
Freight car orders	3-7	8-12	13-19
Railroad stock prices	5-9	10-14	15-18
Shares traded	1-5	6-10	11-15
Call money rates	7-13	14-18	19-23
Railroad bond yields	8-12	13-15	16-20