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the amplitude of such shifts moderated, they would enlarge cyclical fluctuations in interest rates. A gradual moderation over the years is plausible. The financial system, despite various setbacks, has become less volatile; the extreme fluctuations of panic and depression are half-forgotten episodes of a past era. If the public became more confident that severe contractions will no longer occur, the demand-to-hold-money schedule would shift to the left permanently, and in addition it might well be subject to less variability even in mild cycles. It appears extremely difficult by time-series regressions to confirm this explanation of increased amplitude of interest-rate cycles, and the possibility will have to be tested by other kinds of evidence than presented here.¹⁸

IV Summary of Findings

Judged by the behavior of interest rates, financial markets have displayed increasing sensitivity to cyclical influences over the years. If the pre-World War I period, the 1920's, and the 1950's are compared, a broad group of rates has responded to moderate cycles in business activity sooner and with greater amplitude. The most dramatic change has occurred in bond yields: before World War I they typically lagged at business cycle peaks and troughs by many months, but they now display practically no lag, and over the same period the amplitude of their cycles appears to have doubled. Although trends in the cyclical behavior of short-term rates are less clear, some decline of the average lag also occurred, though mainly at peaks. These rates once turned long before bond yields, but have not done so in recent cycles.

¹⁸ For some evidence consistent with this possibility, see E. Bloch, "Short Cycles in Corporate Demand for Government Securities and Cash," *American Economic Review*, December 1963, pp. 1058-1077.

Monetary influences provide a partial explanation of these changes. A declining rate of monetary growth can tighten the money market and raise interest rates, and an increasing growth rate can reduce them. Although there has been disagreement on the nature and importance of these effects, this study finds them to be quite important in cyclical movements. They account for much of the variability in timing of interest rates at business cycle turns. To separate cyclical movements from trends and other fluctuations, the data were averaged within each stage of National Bureau reference cycles, and changes taken between successive stage averages. Measured in that way, cyclical fluctuations in interest rates are related negatively to cycles in the monetary growth rate. In recent cycles monetary growth and business activity more consistently had reinforcing effects on cycles in interest rates than was true in earlier periods. Presumably Federal Reserve policy is largely responsible for this change in behavior of monetary cycles. The change explains part but not all of the decline in timing lags and increase in amplitude of interest-rate cycles relative to reference cycles.

The results also contain broader implications about monetary influences on financial markets and suggest possible directions for further study. Cyclical variations in monetary growth appear to be an independent contributor to interest-rate movements, and, while not the only or the largest contributor, neither are they a mere reflection of those movements nor of common responses in the series to business cycles. Evidence of their contribution is a first step in tracing the path of monetary disturbances through the economy. That contribution points to effects beyond those implied by the static equilibrium conditions of traditional monetary theory and implies dynamic relationships as yet only partially understood.

APPENDIX

TABLE A. — TIMING AND AMPLITUDE OF SPECIFIC CYCLES IN INTEREST RATES 1878-1961

Dates of Turning Points		Lead (-) or Lag (+) from Matched Reference Turn (months)		Amplitude of Specific Cycle Phases (change between peak and trough stages in basis points per month)	
Trough	Peak	Trough	Peak	Expansions	Succeeding Contractions
1. CALL MONEY RATE					
Sep. 1878	Aug. 1879	-6		38.0*	-27.8*
Oct. 1880	Feb. 1881		-13	133.5*	-32.5*
May 1882	Sep. 1882			56.9*	-17.7*
Jan. 1885	June 1887	-4	+3	20.4	-38.0
Aug. 1888	Aug. 1890	+4	+1	24.4	-28.0
May 1892	June 1893	+12	+5	37.3	-34.3
Nov. 1894	Oct. 1896	+5	+10	23.0	-50.4
July 1897	Oct. 1899	+1	+4	17.7	-37.1
Sep. 1900	Sep. 1902	-3	0	24.4	-31.0
July 1904	Oct. 1907	-1	+5	24.3	-72.8
Nov. 1908	May 1910	+5	+4	13.6	-9.5
Nov. 1911	Dec. 1912	-2	-1	19.5	-8.8*
Nov. 1915	Aug. 1918	+11*	0*	13.3*	-28.3*
Dec. 1918	Nov. 1919	-3	-2	35.6	-16.0
June 1922	Aug. 1923	+11	+3	9.9	-24.2
Sep. 1924	Feb. 1926	+2	-8	16.1	-5.9
Sep. 1927	Mar. 1929	-2	-5	28.5	-28.0*
May 1931	Dec. 1931			15.6*	-5.3*
Sep. 1935	Feb. 1954	+30*	+7	1.4*	-1.6
June 1955	Dec. 1957	+10	+5	5.0	-12.5
Aug. 1958	Apr. 1960	+4	-1	10.0	
2. COMMERCIAL PAPER RATE					
Aug. 1878	May 1880	-7		7.0*	-8.0*
June 1881	June 1883		+15	6.6*	-9.7*
Sep. 1885	July 1887	+4	+4	12.6	-8.6
May 1889	Dec. 1890	+13	+5	9.0	-14.2
June 1892	July 1893	+13	+6	53.3	-52.2
Oct. 1894	Oct. 1896	+4	+10	16.1	-52.0
Apr. 1897	Apr. 1898	-2		12.5**	-19.0**
Jan. 1899	Mar. 1900		+9	11.8**	-6.3
Mar. 1901	Aug. 1903	+3	+11	5.9	-12.0
Jan. 1905	Dec. 1907	+5	+7	8.2	-16.0
July 1909	June 1910	+13	+5	17.0	-9.6
Nov. 1911	June 1913	-2	+5	12.8	-8.7*
May 1916	Oct. 1918	+17*	+2*	10.1*	-21.6*
Feb. 1919	Oct. 1920	-1	+9	14.4	-18.5
Aug. 1922	May 1923	+13	0	11.7	-12.2
Oct. 1924	Oct. 1926	+3	0	5.3	-2.5
Jan. 1928	Oct. 1929	+2	+2	10.4	-18.4*
Sep. 1931	Jan. 1932			53.0*	-5.3*
Feb. 1937	Feb. 1938	+47*	+9	2.2*	-1.8*
Aug. 1939	Jan. 1941	+14*		0.7*	-0.4*
May 1943	June 1949		+7*	1.1*	-1.9*
Apr. 1950	July 1953	+6*	0	3.6*	-7.1
Dec. 1954	Aug. 1957	+4	+1	9.3	-19.2
July 1958	Jan. 1960	+3	-4	15.7	-7.7
Nov. 1961		+9			
3. TREASURY BILL RATE					
	June 1920		+5		-11.8
Aug. 1922	Mar. 1923	+13	-2	12.5	-14.1
Aug. 1924	Nov. 1925	+1	-11	12.4	-4.1
Sep. 1927	May 1929	-2	-3	13.0	-21.0*
July 1931	Dec. 1931			43.0*	-5.2*
Feb. 1936	Apr. 1937	+35*	-1	3.9*	-1.4*
Jan. 1941	June 1953	+31*	-1	1.5*	-12.5
June 1954	June 1957	-2	-1	7.7	-20.5
June 1958	Dec. 1959	+2	-5	16.3	-15.7
Dec. 1960		-2			

BEHAVIOR OF INTEREST RATES

TABLE A (continued)

Dates of Turning Points		Lead (-) or Lag (+) from Matched Reference Turn (months)		Amplitude of Specific Cycle Phases (change between peak and trough stages in basis points per month)	
Trough	Peak	Trough	Peak	Expansions	Succeeding Contractions
4. BANKERS' ACCEPTANCE RATE					
	June 1920		+5		-12.6
Aug. 1922	Dec. 1923	+13	+7	7.1	-27.4
July 1924	Oct. 1926	0	0	6.2	-6.8
Sep. 1927	June 1929	-2	-2	11.3	-17.1*
Sep. 1931	Nov. 1931			107.5*	-9.3*
June 1936	Apr. 1937	+39*	-1	4.2*	-0.1*
Apr. 1946	June 1949	+6*	+7*	2.0*	-1.0*
July 1950	Jan. 1954	+9*	+6	2.0*	-5.7
Dec. 1954	Aug. 1957	+4	+1	7.8	-24.7
June 1958	Jan. 1960	+2	-4	16.1	-7.5
Nov. 1961		+9			
5. BANK LOAN RATE					
May 1919	Feb. 1921	+2*	+13*	5.9	-8.9
Sep. 1922	Oct. 1923	+14*	+5*	2.8	-5.9
Nov. 1924	Oct. 1926	+4*	0*	1.4	-1.6
Feb. 1928	Oct. 1929	+3*	+2*	6.3	-6.8*
Sep. 1931	Mar. 1932			(not available because of break in series)	
Sep. 1941	June 1943	+39*	-20*	4.2*	-2.1*
Sep. 1946	June 1949	+11*	+7*	2.2*	-1.2*
Mar. 1950	Dec. 1953	+5*	+5*	2.5*	-1.4
Mar. 1955	Dec. 1957	+7*	+5*	3.8	-9.9
June 1958	Dec. 1959	+2*	-5*	6.3	
6. FEDERAL RESERVE DISCOUNT RATE					
Nov. 1917	Apr. 1921	+35*	+15*	7.9*	-14.3
Jan. 1923	Apr. 1924	+18*	+11*	3.3	-16.7
Jan. 1925	July 1927	+6*	+9*	3.3	-8.3
Jan. 1928	Oct. 1929	+2*	+2*	11.9	-19.6*
Sep. 1931	Jan. 1932			50.0*	-1.3*
Dec. 1947	Jan. 1954	+26*	+6*	1.4*	-3.6
Mar. 1955	Oct. 1957	+7*	+3*	6.4	-17.5
Aug. 1958	May 1960	+4*	0*	9.9	
7. HIGH-GRADE RAILROAD BOND YIELD (Macaulay)					
June 1881	Sep. 1883	+27*	+18*	0.7*	-1.7*
July 1886	Oct. 1887	+14	+7	1.2	-1.7
June 1889	Aug. 1891	+14	+13	1.5	-1.9
July 1892	Aug. 1893	+14	+7	2.3	-2.4
Aug. 1895	Aug. 1896	+14	+8	1.7	-1.6
June 1899	Sep. 1903	+24	+12	1.0	-0.7
Feb. 1905	Nov. 1907	+6	+6	1.6	-2.4
Feb. 1909	Dec. 1913	+8	+11	0.8	-1.5*
June 1914	Sep. 1915	-6*		1.6*	-1.8*
Jan. 1917	Sep. 1918		+1*	4.2*	-18.4*
Nov. 1918	May 1920	-4*	+4*	5.4	-4.0
Sep. 1922	Oct. 1923	+14*	-5*	2.6	-1.1
Dec. 1927	Sep. 1929	+1*	+1*	2.4	-2.5*
May 1931	June 1932				
8. NEW ENGLAND MUNICIPAL BOND YIELD (Macaulay)					
Aug. 1882	Nov. 1883	+41*	+20*	0.5*	-0.9*
Aug. 1886	Nov. 1887	+15	+8	2.6	-1.5
Feb. 1890	Aug. 1891	+22	+13	1.8	-0.6
Nov. 1892	Nov. 1893	+18	+10	2.6	-2.4
May 1895	Nov. 1896	+11	+11	1.5	-2.0
Aug. 1899	Feb. 1900	+26	+8	2.2	-1.0
Feb. 1901	Aug. 1903	+2	+11	1.3	-0.4
May 1905	Feb. 1908	+9	+9	2.5	-2.8
May 1909	Aug. 1910	+11	+7	1.8	-0.4
Feb. 1912	Aug. 1913	+1	+7	3.2	

TABLE A (continued)

Dates of Turning Points		Lead (-) or Lag (+) from Matched Reference Turn (months)		Amplitude of Specific Cycle Phases (change between peak and trough stages in basis points per month)	
Trough	Peak	Trough	Peak	Expansions	Succeeding Contractions
9. HIGH-GRADE MUNICIPAL BOND YIELD (S. & P.)					
Feb. 1901	Mar. 1904	+2	+18	1.1	-1.0
Apr. 1905	Jan. 1908	+8	+8	2.2	-2.7
Mar. 1909	July 1910	+9	+6	1.8	-0.5
June 1911	Sep. 1913	-7	+8	1.3	-2.6*
June 1914	Aug. 1915			0.9*	-2.1*
Jan. 1917	Apr. 1918	+25*	-4*	4.8*	-2.3*
Dec. 1918	Feb. 1921	-3	+13	3.1	-5.8
Sep. 1922	Dec. 1923	+14	+7	1.5	-1.4
Aug. 1925	Nov. 1925	+13*	-11*	3.2	-0.9
Feb. 1928	Sep. 1929	+3	+1	2.2	-2.6*
May 1931	Feb. 1932			12.2*	-6.1*
Jan. 1933	May 1933	-2*		20.3*	-5.1*
Dec. 1936	Dec. 1937		+7*	2.8*	-2.6*
Oct. 1941	Mar. 1942	+40*	-35*	10.1*	-2.0*
Feb. 1946	Feb. 1948	+4*	-9*	4.2*	-2.1*
Feb. 1951	July 1953	+16*	0*	3.9*	-4.9*
Aug. 1954	Aug. 1957	0*	+1*	4.3*	-4.3*
June 1958	Jan. 1960	+2*	-4*	3.6*	
10. YIELDS ON HIGHEST-GRADE MUNICIPAL BONDS (Moody's Aaa)					
	May 1937		0		
Nov. 1941	Mar. 1942	+41*	-35*	7.6*	-1.7*
Mar. 1946	Apr. 1948	+5*	-7*	3.9*	-1.6*
Feb. 1951	June 1953	+16*	-1	3.8*	-3.8
Aug. 1954	Aug. 1957	0	+1	3.7	-5.2
May 1958	Jan. 1960	+1	-4	3.5	-5.0
Sep. 1960		-5			
11. HIGH-GRADE CORPORATE AND MUNICIPAL BOND YIELD (S. & P.)					
Apr. 1902	Nov. 1903	+16	+14	1.6	-1.3
Sep. 1905	Nov. 1907	+13	+6	2.8	-2.2
Aug. 1909	Aug. 1910	+14	+7	1.4	-0.8
May 1911	Dec. 1913	-8	+11	0.9	-2.0*
June 1914	Sep. 1915			0.9*	-1.3*
Jan. 1917	Sep. 1918	+25*	+1*	4.2*	-8.3*
Dec. 1918	July 1920	-3	+6	5.3	-5.0
Sep. 1922	Oct. 1923	+14	+5	1.7	-1.2
Mar. 1928	Dec. 1929	+4	+4	1.9	-2.6*
June 1931	July 1932			7.8*	-4.2*
Dec. 1936	Apr. 1937		-1	4.2*	-1.3*
Nov. 1941	Mar. 1942	+41*	-35*	4.7*	-1.1*
Apr. 1946	Nov. 1948	+6*	0*	1.6*	-1.1*
Feb. 1951	June 1953	+16*	-1	2.9*	-3.8
Aug. 1954	Sep. 1957	0	+2	3.7	-5.6
June 1958	Jan. 1960	+2	-4	4.7	-3.0
Mar. 1961		+1			
12. LONG-TERM U.S. BOND YIELD					
Jan. 1919	Aug. 1920	-2	+7	5.9	-7.4
Aug. 1922	Oct. 1923	+13	+5	2.0	-2.8
Mar. 1928	Mar. 1929	+4	-5	5.0	-2.4*
June 1931	Jan. 1932			17.1*	-3.4*
Feb. 1937	Apr. 1937		-1	20.0*	-3.0*
June 1939	Sep. 1939	+12*		19.8*	-3.5*
Nov. 1941	July 1944		-7*	0.3*	-1.8*
Apr. 1946	Sep. 1948	+6*	-2*	1.2*	-1.4*
Jan. 1950	June 1953	+3*	-1	2.0*	-4.0
Aug. 1954	July 1957	0	0	3.2	-4.2
Apr. 1958	Jan. 1960	0	-4	4.9	-2.6
May 1961		+3			

BEHAVIOR OF INTEREST RATES

TABLE A — (concluded)

Dates of Turning Points		Lead (-) or Lag (+) from Matched Reference Turn (months)		Amplitude of Specific Cycle Phases (change between peak and trough stages in basis points per month)	
Trough	Peak	Trough	Peak	Expansions	Succeeding Contractions
13. YIELD ON HIGHEST-GRADE CORPORATE BONDS (Moody's Aaa)					
Feb. 1919	June 1920	-1	+5	6.0	-5.1
Sep. 1922	Apr. 1923	+14	-1	3.3	-1.2
Apr. 1928	Sep. 1929	+5	+1	1.8	-1.9*
July 1931	June 1932			8.8*	-4.1*
Jan. 1937	Apr. 1937		-1	9.2*	-1.4*
Dec. 1940	Mar. 1942	+30*	-35*	0.7*	-0.8*
Apr. 1946	Feb. 1948	+6*	-9*	1.7*	-0.9*
June 1950	June 1953	+8*	-1	2.0*	-3.1
Sep. 1954	Aug. 1957	+1	+1	3.3	-4.1
June 1958	Jan. 1960	+2	-4	5.0	-3.8
Sep. 1960		-5			
14. YIELD ON LOW-GRADE CORPORATE BONDS (Moody's Baa)					
June 1919	June 1921	+3	+17	6.1	-11.5
Sep. 1922	Oct. 1923	+14	+5	4.8	-3.9
Mar. 1928	Sep. 1929	+4	+1	4.2	-2.6*
Sep. 1930	May 1932			27.2*	-11.9*
Jan. 1937	Apr. 1938	+46*	+11	11.7*	-3.5*
Mar. 1946	Mar. 1948	+5	-8*	2.4*	-1.0*
Dec. 1950	Sep. 1953	+14*	+2	1.8*	-3.0
Oct. 1954	Nov. 1957	+2	+4	4.1	-4.4
July 1958	May 1960	+3	0	3.1	

SOURCE: See Table B.

* Indicates items not used in Tables 1-6. The municipal bond series used in those tables is No. 9 to 1929 and No. 10 thereafter.

** Treated in this study as one expansion with amplitude of 4.1.

TABLE B. — AMPLITUDE OF MOVEMENTS IN INTEREST RATES OVER REFERENCE CYCLES
(CHANGE BETWEEN PEAK AND TROUGH STAGES IN BASIS POINTS PER MONTH)

Part 1. 1879-1919.

Reference Cycles (Trough to Trough)	Call Money	Comm. Paper	Railroad Bonds	New England Muni. Bonds	Municipal Bonds S&P	High-Grade Corp. & Muni. Bonds S&P
Mar. 1879-May 1885						
Exp.*	1.2	1.7	-1.7	-1.6		
Cont.*	-6.7	-3.5	-0.5	-0.4		
May 1885-Apr. 1888						
E	18.3	6.4	-1.3	-0.4		
C	-22.1	-0.4	0.0	3.3		
Apr. 1888-May 1891						
E	20.0	0.4	-0.3	-1.0		
C	-37.3	2.8	2.0	1.8		
May 1891-June 1894						
E	-1.0	-2.3	-0.7	0.1		
C	-16.2	-12.3	-0.6	0.9		
June 1894-June 1897						
E	11.5	11.6	-0.8	-1.6		
C	-10.0	-9.2	-0.9	-0.3		
June 1897-Dec. 1900						
E	12.6	0.7	-1.0	-1.3		
C	-8.4	0.4	0.5	0.2		
Dec. 1900-Aug. 1904						
E	24.5	5.1	0.6	0.6	0.5	-0.2
C	-29.5	-4.4	0.8	1.0	0.9	0.6
Aug. 1904-June 1908						
E	5.2	6.5	0.7	1.2	1.1	0.6
C	-9.6	-15.0	0.5	1.1	1.3	1.3
June 1908-Jan. 1912						
E	8.6	3.8	-0.2	-0.4	-0.3	-1.1
C	-5.4	-3.0	0.5	0.6	0.5	0.3

TABLE B (continued)

Reference Cycles (Trough to Trough)	Call Money	Comm. Paper	Railroad Bonds	New England Muni. Bonds	Municipal Bonds S&P	High-Grade Corp. & Muni. Bonds S&P
Jan. 1912-Dec. 1914						
E	14.8	9.9	0.7		0.8	0.7
C*	-3.6	-6.2	1.2		0.2	0.6
Dec. 1914-Mar. 1919						
E*	6.3	4.5	1.4		0.8	1.5
C*	-9.9	-10.0	-2.4		0.0	-2.0

Part 2. 1919-61
Section a. Short-term Rates

Reference Cycles (Trough to Trough)	Call Money	Comm. Paper	Treas. Bills	Bankers' Accept.	Bank Loans	Fed. Res. Discount
Mar. 1919-July 1921						
Exp.	36.0	7.8		10.6	2.9	7.3
Cont.	-17.3	1.1		-0.1	4.0	3.2
July 1921-July 1924						
E	-4.0	-5.2	-4.8	-5.4	-5.3	-6.2
C	-20.1	-10.1	-16.4	-13.7	-4.2	-7.6
July 1924-Nov. 1927						
E	9.4	2.2	5.9	6.1	0.8	2.1
C	-6.8	-2.8	-3.4	-4.8	-2.0	-3.8
Nov. 1927-Mar. 1933						
E	22.8	10.0	9.3	9.0	5.8	9.9
C*	-15.5	-8.9	-10.7	-8.9	-2.5	-6.0
Mar. 1933-June 1938						
E*	-1.8	-2.5	-1.0	-1.6	-3.5	-3.0
C*	0.0	-0.9	-4.6	-0.6	-0.6	-3.8
June 1938-Oct. 1945						
E*	0.0	-0.2	0.4	0.0		0.0
C*	0.0	0.0	0.0	0.0		0.0
Oct. 1945-Oct. 1949						
E*	1.7	2.0	2.1	2.0	1.2	1.4
C*	0.0	-1.3	-0.6	-1.2	0.1	0.0
Oct. 1949-Aug. 1954						
E*	3.6	3.0	2.4	1.8	2.4	1.1
C	-1.9	-6.7	-9.9	-4.8	-1.2	-3.8
Aug. 1954-Apr. 1958						
E	4.3	6.9	7.8	7.2	2.8	4.4
C	-8.7	-21.0	-26.4	-24.0	-1.8	-11.2
Apr. 1958-Feb. 1961						
E	6.0	8.4	8.0	8.8	3.8	7.4
C	-7.8	-13.9	-9.8	-11.6	-4.1	-9.8

Part 2. 1919-61
Section b. Long-term Rates

Reference Cycles (Trough to Trough)	U.S. Bonds	Corporate Bonds, Moody's		High-Grade Corp. & Muni. Bonds S&P	Municipal Bonds	
		Aaa	Baa		S&P	Moody's Aaa
Mar. 1919-July 1921						
Exp.	3.1	3.9	6.4	3.7	1.2	
Cont.	2.0	1.8	3.8	2.2	3.0	
July 1921-July 1924						
E	-5.0	-4.2	-6.1	-4.3	-4.3	
C	-3.8	-1.5	-3.3	-1.2	-0.4	
July 1924-Nov. 1927						
E	-1.3	-1.0	-3.5	-0.8	-0.4	
C	-4.2	-1.7	-3.4	-1.3	-1.2	

BEHAVIOR OF INTEREST RATES

TABLE B (concluded)

Reference Cycles (Trough to Trough)	U.S. Bonds	Corporate Bonds, Moody's		High-Grade Corp. & Muni. Bonds S&P	Municipal Bonds	
		Aaa	Baa		S&P	Moody's Aaa
Nov. 1927-Mar. 1933						
E	2.7	1.4	3.3	1.8	1.9	
C*	-0.9	-0.3	6.4	0.1	0.9	
Mar. 1933-June 1938						
E*	-1.5	-2.6	-7.9	-3.1	-3.1	
C*	-2.5	-0.8	8.5	-1.4	-1.9	
June 1938-Oct. 1945						
E*	-1.0	-0.7	-3.2	-0.9	-1.5	-1.5
C*	-0.7	-0.4	-2.8	0.1	0.2	1.7
Oct. 1945-Oct. 1949						
E*	0.2	0.6	0.8	0.8	1.7	1.8
C*	-1.9	-1.9	-1.4	-2.1	-1.5	-1.8
Oct. 1949-Aug. 1954						
E*	1.8	1.5	1.1	1.6	1.5	1.9
C	-4.2	-3.3	-2.9	-4.0	-4.9	-4.5
Aug. 1954-Apr. 1958						
E	3.2	3.2	3.7	3.6	4.4	3.8
C	-4.2	-3.7	-0.4	-4.5	-4.0	-4.7
Apr. 1958-Feb. 1961						
E	3.7	3.3	2.3	2.9	1.7	2.2
C	-3.7	-2.4	-2.7	-2.7	-5.0	-1.6

* Indicates phases not used in Table 5.

SOURCES FOR TABLES A AND B

- Call Money Rate: Jan. 1948-Dec. 1961, *Survey of Current Business*; Feb. 1936-Dec. 1947, *Federal Reserve Bulletin*; Jan. 1878-Jan. 1936, Macaulay, *Movements of Interest Rates*.
- Commercial Paper Rate: Feb. 1936-Dec. 1961, computed from weekly data in *Commercial and Financial Chronicle*; Jan. 1878-Jan. 1936, Macaulay, *Movements of Interest Rates*.
- Treasury Bill Rate: *Federal Reserve Bulletin*. (Treasury notes and certificates to 1929, bills thereafter.)
- Bankers' Acceptance Rate: Jan. 1942-Dec. 1961, *Federal Reserve Bulletin*; Aug. 1917-Dec. 1941, *Banking and Monetary Statistics*.
- Bank Loan Rate: IQ 1939-IVQ 1961, *Federal Reserve Bulletin*; Jan. 1928-Dec. 1938, unpublished data supplied by Board of Governors of the Federal Reserve System; Jan. 1919-Dec. 1927, *Banking and Monetary Statistics*.
- Federal Reserve Bank of New York Discount Rate: Jan. 1922-Dec. 1961, Board of Governors of the Federal Reserve System, *Annual Report*, various years, and *Federal Reserve Bulletin*; Nov. 1914-Dec. 1921, simple averages of weighted rates on commercial, agricultural, and livestock paper from FRB, *Discount Rates of the Federal Reserve Banks, 1914-21*.
- High-Grade Railroad Bond Yield: Jan. 1878-Dec. 1961, Macaulay, *Movements of Interest Rates*.
- New England Municipal Bond Yield: IQ 1878-IVQ 1914, Macaulay, *Movements of Interest Rates*.
- High-Grade Municipal Bond Yield: Jan. 1900-Dec. 1961, Standard & Poor's Corporation, *Security Price Index Record*, various years.
- Yield on Highest-Grade Municipal Bonds (Aaa): Moody's Investors Service, *Municipal and Government Manual*.
- High-Grade Corporate and Municipal Bond Yield: Jan. 1900-Dec. 1961, simple average of municipal, railroad, public utility, and industrial bond yields from Standard & Poor's Corporation, *Security Price Index Record*.
- Long-term U.S. Bond Yield: *Federal Reserve Bulletin*.
- Yield on Highest-Grade Corporate Bonds (Aaa): Moody's Investors Service, *Industrial Manual*.
- Yield on Low-Grade Corporate Bonds (Baa): Moody's Investors Service, *Industrial Manual*.
- Seasonal Adjustment of Series*
- Call Money Rate: Seasonally adjusted except 1884, 1893, and June 1931-Dec. 1961.
- Commercial Paper Rate: Seasonally adjusted except 1927-1952.
- Treasury Bill Rate: Seasonally adjusted except 1931-1947.
- Bankers' Acceptance Rate: Seasonally adjusted 1955-1961 only.
- Bank Loan Rate: Not adjusted.
- Federal Reserve Discount Rate: Not adjusted.
- High-Grade Railroad Bond Yield: Not adjusted.
- New England Municipal Bond Yield: Not adjusted.
- High-Grade Bond Yield (S&P): Seasonally adjusted except 1900-1921.
- Yield on Highest-Grade Municipal Bonds (Moody's Aaa): Seasonally adjusted.
- High-Grade Corporate and Municipal Bond Yield (S&P): Not adjusted.
- Long-term U.S. Bond Yield: Seasonally adjusted 1948-1961 only.
- Yield on Highest-Grade Corporate Bonds (Moody's Aaa): Seasonally adjusted 1948-1961 only.
- Yield on Low-Grade Corporate Bonds (Moody's Baa): Seasonally adjusted 1948-1961 only.