CRESTMONT STOCK MARKET MATRIX

RETIREMENT ACCOUNT (TAX DEFERRED) REAL RETURNS

Real Returns (inflation adjusted), including dividends (reinvested), transaction costs, and taxes deferred

COMPONENTS	
Index	Included
Dividends	Included (Reinvested)
Transaction Costs	Included
Taxes	Not Included (Deferred)
Inflation	Real (Inflation Adjusted)

P/E	1900=1.0	TO / FROM Yr: 19	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
		(TO P/E)	19	23	22	18	16	19	19	13	13	15	14	14	14	12	11	11	12	9	6	7	5	5
		(TO 1900=1.0)	1	1	1	1	1	1	2	1	1	2	1	1	2	1	1	1	2	1	1	1	1	1
18.6	1.0	1900		22	16	3	2	7	8	3	2	5	4	3	4	3	2	2	3	2	1	1	0	-1
22.7	1.2	1901			11	-5	-3	4	5	0	0	4	2	2	3	1	1	1	2	1	0	0	-1	-2
22.0	1.3	1902				-18	-10	2	3	-2	-2	3	1	1	2	1	0	1	2	0	-1	-1	-2	-3
17.6	1.1	1903					-1	14	12	3	2	7	4	3	5	3	2	2	3	2	0	1	-1	-2
16.3	1.1	1904						31	19	4	2	8	5	4	5	3	2	3	4	2	0	1	-1	-2
19.3	1.4	1905							8	-7	-6	3	1	0	2	0	-1	0	1	0	-2	-1	-2	-4
18.7	1.5	1906								-19	-12	2	-1	-1	1	-1	-2	-1	1	-1	-2	-2	-3	-5
13.4	1.2	1907									-3	14	6	4	6	2	1	2	3	1	-1	0	-2	-3
13.1	1.2	1908										34	11	6	8	4	2	3	4	2	-1	0	-2	-3
14.9	1.6	1909											-9	-5	1	-3	-4	-2	1	-1	-4	-3	-4	-6
13.5	1.4	1910												-2	6	-1	-2	0	2	0	-3	-2	-4	-6
14.2	1.4	1911													15	0	-2	0	3	0	-3	-2	-4	-6
13.7	1.6	1912														-14	-10	-5	0	-3	-6	-5	-6	-8
11.9	1.4	1913															-6	0	5	0	-4	-3	-5	-7
11.1	1.3	1914																7	12	2	-4	-2	-5	-8
11.5	1.4	1915																	16	0	-7	-5	-7	-10
12.0	1.6	1916																		-14	-17	-11	-12	-14
8.8	1.4	1917																			-20	-9	-12	-15
6.4	1.1	1918																				5	-7	-12
6.5	1.2	1919																					-17	-20
5.3	1.0	1920																						-22
5.4	0.8	1921																						
7.5	1.1	1922																						
7.9	1.2	1923																						
8.4	1.3	1924																						
10.1	1.7	1925																						
11.7	1.9	1926																						
15.9	2.4	1927																						
21.8	3.2	1928																						
27.6	4.4	1929																						
21.5	3.6	1930																						
14.7	2.4	1931																						
8.1	1.4	1932																						
11.1	2.2	1933																						
12.2	2.6	1934																						
13.1	2.8	1935																						
19.3	4.1	1936																						
18.5	4.1	1937																						
13.9	3.0	1938																						
15.6	3.3	1939																						
14.7	3.2	1940																						
12.2	2.9	1941																						
9.2	2.6	1942																						
11.0	3.2	1943																						
11.3	3.4	1944																						
13.3	4.2	1945																						
14.0	4.7	1946																						
11.2	4.0	1947																						
10.7	3.6	1948																						
9.9	3.4	1949																						
11.2	4.4	1950																						
12.0	5.5	1951																						
12.5	5.9	1952																						
12.0	6.0	1953																						
13.7	7.4	1954																						
17.5	10.3	1955																						
18.3	12.2	1956																						
15.6	11.6	1957																						
15.1	11.9	1958																						
18.4	14.6	1959																						
17.4	14.3	1960																						
20.5	16.9	1961																						
18.8	15.9	1962																						
20.3	17.9	1963																						
22.6	20.7	1964																						
23.3	22.4	1965																						
21.3	21.5	1966																						
21.6	22.8	1967																						
21.5	24.0	1968																						
19.4	23.1	1969																						
15.2	18.8	1970																						
16.9	21.4	1971																						
17.8	23.0	1972																						
16.1	22.1	1973																						
10.9	16.1	1974																						
10.2	15.5	1975																						
11.5	17.2	1976																						
10.4	15.9	1977																						
9.4	15.0	1978																						
8.9	15.4	1979																						
8.8	16.4	1980																						
8.5	16.0	1981																						
7.3	14.0	1982																						
9.6	18.3	1983																						
9.4	18.1	1984																						
10.7	20.7	1985																						
13.4	25.8	1986																						
16.0	31.2	1987																						
14.4	28.1	1988																						
16.6	33.3	1989																						
16.5	33.3	1990																						
17.9	36.0	1991																						
19.6	38.6	1992																						
20.7	41.1	1993																						
20.5	41.0	1994																						
22.7	47.4	1995																						
25.9	57.3	1996																						
31.0	72.5	1997																						
36.0	87.8	1998																						
42.1	105.1	1999																						
41.7	109.8	2000																						
32.1	87.9	2001																						
25.9	70.9	2002																						
24.1	67.3	2003																						
26.4	77.0	2004																						
26.0	80.0	2005																						
26.0	83.7	2006																						
26.8	91.2	2007																						
20.8	73.1	2008																						

FROM Yr: 19	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
(TO P/E)	8	8	8	10	12	16	22	28	21	15	8	11	12	13	19	18	14	16	15	12	9	11
(TO 1900=1.0)	1	1	1	2	2	2	3	4	4	2	1	2	3	3	4	4	3	3	3	3	3	3
1900	0	1	1	2	3	3	4	5	4	3	1	2	3	3	4	4	3	3	3	3	2	3
1901	0	0	0	1	2	3	4	5	4	2	1	2	2	3	4	3	3	3	3	2	2	2
1902	-1	0	0	1	2	2	3	5	4	2	0	2	2	2	3	3	2	3	2	2	2	2
1903	0	1	1	2	3	3	4	6	5	3	1	2	3	3	4	4	3	3	3	3	2	3
1904	0	1	1	2	3	4	5	6	5	3	1	2	3	3	4	4	3	3	3	3	2	3
1905	-2	-1	0	1	1	2	4	5	4	2	0	2	2	2	3	3	2	3	2	2	2	2
1906	-2	-1	-1	1	1	2	4	5	4	2	0	1	2	2	3	3	2	2	2	2	1	2
1907	-1	0	0	2	2	3	5	6	5	3	1	2	3	3	4	4	3	3	3	3	2	3
1908	-1	0	1	2	3	4	5	6	5	3	1	2	3	3	5	4	3	3	3	3	2	3
1909	-3	-2	-1	0	1	2	4	5	4	2	0	1	2	2	4	3	2	3	2	2	1	2
1910	-2	-1	-1	1	2	3	5	6	5	3	0	2	2	3	4	4	3	3	3	2	2	2
1911	-2	-1	-1	1	2	3	5	6	5	3	0	2	3	3	4	4	3	3	3	2	2	3
1912	-4	-3	-2	0	1	3	4	6	4	2	-1	1	2	2	4	4	2	3	2	2	2	2
1913	-3	-1	-1	2	2	4	6	7	6	3	0	2	3	3	5	5	3	3	3	3	2	3
1914	-2	-1	0	2	3	5	7	8	6	4	0	3	3	4	5	5	3	4	3	3	2	3
1915	-4	-2	-1	2	3	4	7	8	6	3	0	2	3	3	5	5	3	4	3	3	2	3
1916	-7	-4	-3	0	2	3	6	8	6	3	-1	2	3	3	5	4	3	3	3	2	2	3
1917	-5	-2	-1	2	3	5	8	10	7	4	0	3	4	4	6	5	4	4	4	3	2	3
1918	-1	2	3	6	7	9	11	13	10	6	2	5	5	6	7	7	5	5	5	4	4	4
1919	-3	1	2	6	7	9	12	14	11	6	1	5	5	6	8	7	5	5	5	4	3	4
1920	6	8	8	12	12	14	16	18	14	9	3	6	7	7	9	9	6	7	6	5	5	5
1921	44	27	20	22	20	21	23	25	19	12	6	9	10	10	12	11	8	9	8	7	6	7
1922		13	10	16	15	17	20	22	16	9	3	7	8	8	10	9	7	7	6	5	4	5
1923			8	17	16	18	21	24	17	9	2	6	7	7	10	9	6	7	6	5	4	5
1924				28	21	22	25	27	18	9	1	6	7	7	10	9	6	6	6	5	4	5
1925					14	19	24	27	16	6	-2	3	5	5	8	8	5	5	4	4	3	4
1926						24	30	32	17	5	-5	2	4	4	8	7	4	4	4	3	2	3
1927							36	36	15	1	-10	-1	1	2	6	6	2	3	2	1	1	2
1928								35	5	-9	-19	-8	-3	-2	3	3	-1	0	0	-1	-2	0
1929									-18	-25	-31	-16	-10	-7	-1	-1	-4	-3	-3	-3	-4	-2
1930										-32	-37	-15	-8	-5	2	2	-2	-1	-1	-2	-3	-1
1931											-42	-5	2	3	11	9	3	4	3	2	1	2
1932												54	35	25	30	23	13	13	11	8	6	8
1933													19	13	23	17	7	7	6	4	2	4
1934														7	25	16	4	5	3	2	0	2
1935															46	21	3	5	3	1	-1	2
1936																0	-14	-6	-6	-6	-7	-3
1937																	-26	-9	-8	-8	-9	-4
1938																		11	3	-1	-4	2
1939																			-5	-7	-8	-1
1940																				-8	-10	1
1941																					-12	5
1942																						26

FROM Yr: 19	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
(TO P/E)	11	13	14	11	11	10	11	12	12	12	14	18	18	16	15	18	17	20	19	20	23	23
(TO 1900=1.0)	3	4	5	4	4	3	4	6	6	6	7	10	12	12	12	15	14	17	16	18	21	22
1900	3	3	3	3	3	3	3	3	4	3	4	4	5	4	4	5	5	5	5	5	5	5
1901	2	3	3	3	2	2	3	3	3	3	4	4	4	4	4	4	4	5	4	4	5	5
1902	2	3	3	2	2	2	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5
1903	3	3	3	3	3	3	3	3	4	3	4	4	5	4	4	5	5	5	5	5	5	5
1904	3	3	4	3	3	3	3	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5
1905	2	3	3	3	2	2	3	3	3	3	3	4	4	4	4	4	4	5	4	4	5	5
1906	2	3	3	2	2	2	2	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5
1907	3	3	4	3	3	2	3	3	4	4	4	5	5	5	5	5	5	5	5	5	5	5
1908	3	3	4	3	3	3	3	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5
1909	2	3	3	2	2	2	3	3	3	3	3	4	4	4	4	5	4	5	4	5	5	5
1910	3	3	3	3	2	2	3	3	3	3	4	4	5	5	5	5	5	5	5	5	5	5
1911	3	3	4	3	3	2	3	3	4	4	4	5	5	5	5	5	5	5	5	5	5	5
1912	2	3	3	3	2	2	3	3	3	3	4	4	5	4	4	5	5	5	5	5	5	5
1913	3	3	4	3	3	3	3	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5
1914	3	4	4	3	3	3	3	4	4	4	4	5	5	5	5	5	5	6	5	5	6	6
1915	3	4	4	3	3	3	3	4	4	4	4	5	5	5	5	5	5	6	5	5	6	6
1916	3	3	4	3	3	2	3	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5
1917	3	4	4	4	3	3	4	4	4	4	5	5	6	5	5	6	6	6	6	6	6	6
1918	4	5	5	4	4	4	4	5	5	5	5	6	6	6	6	6	6	7	6	6	7	7
1919	4	5	5	4	4	4	4	5	5	5	5	6	7	6	6	7	6	7	6	6	7	7
1920	5	6	6	5	5	4	5	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7
1921	7	7	8	7	6	6	6	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8
1922	5	6	6	5	5	4	5	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7
1923	5	6	6	5	4	4	5	6	6	5	6	7	7	7	7	7	7	7	7	7	7	7
1924	5	6	6	5	4	4	5	5	5	5	6	7	7	7	7	7	7	7	7	7	7	7
1925	4	5	5	4	3	3	4	5	5	5	5	6	7	6	6	7	6	7	6	6	7	7
1926	3	4	5	4	3	3	4	4	4	4	5	6	6	6	6	6	6	6	6	6	6	7
1927	2	3	4	3	2	2	3	4	4	4	4	5	6	5	5	6	6	6	6	6	6	6
1928	0	2	2	1	1	0	1	2	3	3	3	4	5	5	4	5	5	5	5	5	5	5
1929	-2	0	0	-1	-1	-1	0	1	1	1	2	3	4	4	4	4	4	4	4	4	5	5
1930	0	1	2	1	0	0	1	2	2	2	3	4	5	4	4	5	5	5	5	5	5	5
1931	3	4	5	3	2	2	3	4	4	4	5	6	7	6	6	7	6	7	6	6	7	7
1932	8	9	9	7	6	5	6	7	7	7	8	9	9	9	9	9	9	9	8	9	9	9
1933	4	6	6	4	3	3	4	5	5	5	6	7	8	7	7	8	7	8	7	7	8	8
1934	3	4	5	3	2	2	3	4	5	5	5	7	7	7	7	7	7	7	7	7	7	7
1935	2	4	5	3	2	1	3	4	4	4	5	7	7	7	7	7	7	7	7	7	7	7
1936	-2	0	2	0	-1	-1	1	2	2	2	3	5	6	5	5	6	5	6	5	6	6	6
1937	-2	0	2	0	-1	-1	1	2	2	2	4	5	6	5	5	6	6	6	6	6	6	6
1938	2	5	6	3	2	1	3	5	5	5	6	8	8	7	7	8	7	8	7	7	8	8
1939	0	4	5	2	1	0	2	4	4	4	5	7	8	7	7	8	7	8	7	7	8	8
1940	2	6	7	3	2	1	3	5	5	5	6	8	9	8	8	8	8	8	8	8	8	8
1941	5	10	10	5	3	2	5	7	7	6	7	9	10	9	9	9	9	9	8	9	9	9
1942	15	18	16	9	6	4	7	9	9	8	9	11	12	11	10	11	10	10	10	10	10	10
1943	5	14	13	5	2	1	4	7	7	6	8	10	11	10	9	10	9	10	9	9	9	9
1944		23	18	5	2	0	4	7	7	6	8	11	11	10	9	10	9	10	9	9	9	9
1945			13	-3	-5	-5	1	5	5	5	7	9	10	9	8	9	9	9	8	8	9	9
1946				-16	-12	-10	-2	3	4	3	6	9	10	8	8	9	8	9	8	8	9	9
1947					-8	-7	3	9	8	7	9	13	13	11	11	12	10	11	10	10	10	10
1948						-6	10	15	13	11	13	16	16	14	13	13	12	13	11	11	11	11
1949							28	27	20	15	17	20	20	16	15	16	14	14	13	13	13	12
1950								26	16	11	14	19	19	15	13	14	13	13	11	11	12	11
1951									6	5	11	17	17	13	12	13	11	12	10	10	11	11
1952										3	13	21	20	15	13	14	12	13	11	11	11	11
1953											23	31	26	18	15	16	13	14	11	11	12	12
1954												39	28	16	13	15	12	12	10	10	11	11
1955													18	6	5	9	7	9	6	7	8	8
1956														-5	-1	6	4	7	5	6	7	7
1957															3	12	7	10	6	7	9	9
1958																23	9	12	7	8	10	9
1959																	-2	7	3	5	7	7
1960																		18	5	8	10	9
1961																			-6	3	7	7
1962																				12	14	12
1963																					16	12
1964																						8

Yr: 19	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
S&P 500 Index Value	6	8	8	7	7	9	10	8	8	10	9	9	10	9	8	8	9	8	8	9	8	7
S&P500 Div Yield (%)	4	4	4	5	5	4	4	5	5	4	5	5	5	6	6	5	5	7	8	6	7	7
CPI (Inflation %)	7	-2	6	1	0	1	3	6	-4	8	4	-8	7	3	1	1	8	17	18	15	16	-11
GDP (Nominal %)	4	13	3	6	5	9	8	3	-7	12	5	3	8	5	-6	6	27	20	26	11	13	-16
GDP (Real %)	2	12	2	3	4	9	4	-2	-5	12	0	3	6	4	-8	4	16	0	8	-3	-2	-4

Yr: 19	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
S&P 500 Index Value	8	9	9	11	13	15	20	26	21	14	7	9	10	11	15	15	11	12	11	10	9	12
S&P500 Div Yield (%)	6	6	6	5	5	5	4	4	5	7	9	5	5	4	4	5	6	5	6	7	7	5
CPI (Inflation %)	-6	2	0	2	1	-2	-2	0	-2	-9	-10	-5	3	2	1	4	-2	-1	1	5	11	6
GDP (Nominal %)	0	17	3	4	7	-1	1	7	-12	-16	-23	-4	17	11	14	10	-6	7	10	25	28	23
GDP (Real %)	7	14	3	2	6	1	2	7	-9	-6	-13	-1	11	9	13	5	-3	8	9	17	18	16

Yr: 19	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
S&P 500 Index Value	12	15	17	15	16	15	18	22	24	25	30	40	47	44	46	57	56	66	62	70	81	88
S&P500 Div Yield (%)	5	4	4	5	6	7	7	7	6	6	5	4	4	4	4	3	3	3	3	3	3	3
CPI (Inflation %)	2	2	8	14	8	-1	1	8	2	1	1	0	1	3	3	1	2	1	1	1	1	2
GDP (Nominal %)	11	2	0	10	10	-1	10	15	6	6	0	9	5	5	1	8	4	3	7	5	7	8
GDP (Real %)	8	-1	-11	-1	4	-1	9	8	4	5	-1	7	2	2	-1	7	2	2	6	4	6	6

GDP (Annualized %), nominal: 1900–09 +5.3%; 1910–19 +10.0%; 1920–29 +3.0%; 1930–39 -1.2%; 1940–49 +11.3%; 1950–59 +6.6%; 1960–65 +6.9%

GDP (Annualized %), real: 1900–09 +3.9%; 1910–19 +2.9%; 1920–29 +3.4%; 1930–39 +0.9%; 1940–49 +5.6%; 1950–59 +4.1%; 1960–65 +4.4%

NOTES:
1) Numbers reflect the percentage annual rate of return from the starting period to the ending period
2) Returns include index returns, dividends, and transaction costs/fees (bid/ask spread, commissions, fees, etc.) & exclude taxes; real returns excluding inflation (see assumptions)
3) Red: <0%; Pink: 0% - 3%; Blue: 3% - 7%; Lt Green: 7% - 10%; Dk Green: >10%
4) Black type reflects P/E ratio increasing over the period; White type reflects P/E ratio decreasing over the period
5) The black diagonal line reflects the boundary of 20-year periods
6) S&P500 index & P/E ratio reflect Robert Shiller's methodology of average daily prices annually, including related data
7) Other data and information developed from various sources and believed to be reliable

LEGEND				
Red		<	0.0%	
Pink	0.0%	-	3.0%	
Blue	3.0%	-	7.0%	
Lt Green	7.0%	-	10.0%	
Dk Green		>	10.0%	

White Numbers: Decreasing P/E Ratio

CRESTMONT RESEARCH

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21	22	21	19	15	17	18	16	11	10	12	10	9	9	9	8	7	10	9	11	13	16	14	17	16	18	20	21	20	23	26	31	36	42	42	32	26	24	26	26	26	27	21	17	P/E Ratio
21	23	24	23	19	21	23	22	16	16	17	16	15	15	16	16	14	18	18	21	26	31	28	33	33	36	39	41	41	47	57	72	88	105	110	88	71	67	77	80	84	91	73	55	1900 = 1.0
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	101	102	103	104	105	106	107	108	109	← "TO" Year
5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	4	FROM Rodin Completes 'The Thinker'
5	5	5	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	4	4	4	4	4	4	4	4	4	1901 First Electric Typewriter
4	4	4	4	4	4	4	4	4	3	4	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	4	4	4	4	4	4	4	4	4	1902 Navy Installs Radio
5	5	5	5	4	4	5	4	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	4	1903 Wright Bros Fly
5	5	5	5	4	5	5	4	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	4	1904 Crayola & Jell-O
5	5	5	4	4	4	4	4	4	3	4	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	4	4	4	4	4	4	4	4	4	1905 Pen Gets Pocket Clip
5	5	5	4	4	4	4	4	4	3	4	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	4	4	4	4	4	4	4	4	4	1906 S.F. Earthquake
5	5	5	5	4	5	5	4	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	4	1907 Photocopier Marketed
5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	4	4	4	4	4	4	4	4	1908 Model T Introduced
5	5	5	5	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	4	4	4	4	4	4	4	4	4	1909 Chlorine In Drinking Water
5	5	5	5	4	5	5	4	4	4	4	4	4	3	4	3	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	4	1910 Electric Range Invented
5	5	5	5	4	5	5	5	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	4	1911 Sherman Anti-Trust Act; Airmail Begins
5	5	5	5	4	4	5	4	4	4	4	4	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	4	1912 Titanic Sinks; U.S. Radio Act
5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	4	5	4	4	5	4	4	1913 Income Tax & Federal Reserve
6	6	6	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	1914 WWI Starts; First Transcon. Phone Call
5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	4	5	5	5	5	4	4	1915 Americans Avg 40 Phone Calls A Year
5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	4	4	4	4	4	5	4	4	1916 Keds & Electric Clock Invented
6	6	6	6	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	5	4	4	4	4	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	1917 US Enters WWI; Einstein Theorizes Lasers
6	6	6	6	6	6	6	6	5	5	5	5	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	5	5	5	5	5	5	5	5	4	1918 WWI Ends
6	6	6	6	6	6	6	6	5	5	5	5	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	5	5	5	5	5	5	5	5	4	1919 Prohibition; Shortwave Radio; Dial Phones
7	7	7	7	6	6	6	6	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	5	5	5	5	5	5	5	5	1920 Women's Right To Vote
8	8	8	7	7	7	7	7	6	6	6	6	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	7	7	6	6	6	6	6	6	6	5	5	1921 World Series On Radio; Quartz Crystals
7	7	7	7	6	6	6	6	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	5	5	5	5	5	5	5	5	1922 100,000 Radios Made In U.S.; 3 Frequencies
7	7	7	7	6	6	6	6	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	5	5	5	5	5	5	5	5	1923 500,000 Radios Made; Neon Signs
7	7	7	7	6	6	6	6	5	5	5	5	5	5	5	4	4	5	4	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	5	5	5	5	5	5	5	4	1924 2.5 Million Radios Made; Frozen Food Invented
6	6	6	6	6	6	6	6	5	5	5	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	5	5	5	5	5	5	5	5	4	1925 Commercial Picture Fax By Radio In U.S.
6	6	6	6	5	6	6	5	5	4	4	4	4	4	4	4	4	4	4	4	4	5	4	5	5	5	5	5	5	5	5	5	5	6	6	5	5	5	5	5	5	5	5	4	1926 First Publicly Shown 'Talkie'
6	6	6	6	5	5	5	5	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	1927 2-Way Radio Phone: U.S. To London ($15/min)
5	5	5	5	4	5	5	4	4	3	4	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	4	1928 Teletype Machine; Test TV In 3 Homes
4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	5	5	4	4	4	4	4	4	4	4	3	1929 Crash of '29; Car Radio
5	5	5	5	4	4	5	4	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	4	1930 Photo Flash Bulbs
6	6	6	6	5	6	6	5	4	4	4	4	4	4	4	4	3	4	4	4	4	5	4	5	5	5	5	5	5	5	5	5	5	6	6	5	5	5	5	5	5	5	5	4	1931 Radios In 40% Of Homes; Scotch Tape
8	8	8	8	7	7	7	7	6	6	6	6	5	5	5	5	5	5	5	5	6	6	5	6	6	6	6	6	6	6	6	6	6	7	7	6	6	6	6	6	6	6	5	5	1932 Radar; 8 mm Cameras; Electric Eye Scanner
7	7	7	7	6	6	6	6	5	5	5	5	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	5	5	5	5	5	5	5	4	1933 End of Prohibition; FM Radio; Wallboard
7	7	7	6	6	6	6	6	5	4	5	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	5	5	5	5	5	5	5	5	4	1934 Radios In 50% Of Homes; AP Wirephoto
7	7	7	6	6	6	6	6	5	4	5	4	4	4	4	4	3	4	4	4	4	5	4	5	5	5	5	5	5	5	5	5	6	6	6	5	5	5	5	5	5	5	5	4	1935 Social Security Act Passed
6	6	6	5	5	5	5	5	4	3	4	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	4	4	4	4	4	4	4	4	1936 BBC First TV Service, 3 Hours A Day
6	6	6	6	5	5	5	5	4	4	4	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	4	4	4	4	5	4	4	1937 Hindenburg Airship Crash
7	7	7	7	6	6	6	6	5	5	5	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	5	5	5	5	5	5	5	4	1938 National Minimum Wage Enacted
7	7	7	7	6	6	6	6	5	4	5	4	4	4	4	4	3	4	4	4	4	5	4	5	5	5	5	5	5	5	5	5	6	6	6	5	5	5	5	5	5	5	5	4	1939 Regular TV Broadcasts In U.S.; Helicopter
8	8	7	7	6	6	6	6	5	5	5	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	5	5	5	5	5	5	5	4	1940 World War II Begins; Radar Invented
8	8	8	8	7	7	7	7	5	5	5	5	5	4	5	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	5	5	5	5	5	5	5	4	1941 Pearl Harbor Attack; 2-Way Police Radio
9	9	9	8	7	8	8	7	6	6	6	5	5	5	5	5	4	5	5	5	5	6	5	6	5	6	6	6	5	6	6	6	7	7	7	6	6	5	6	6	6	6	5	5	1942 U.S. Office Of Censorship Due To War
9	8	8	8	7	7	7	7	5	5	5	5	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	5	5	5	5	5	5	5	4	1943 Phone Line Repeaters Help Service
9	9	8	8	7	7	7	7	5	5	5	5	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	5	5	5	5	5	5	5	4	1944 D-Day, Normandy
8	8	8	7	6	6	7	6	5	4	5	4	4	4	4	4	3	4	4	4	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	5	5	5	5	5	5	5	4	1945 World War II Ends; FCC Sets VHF Channels
8	8	8	7	6	6	6	6	4	4	4	4	4	4	4	4	3	4	4	4	4	5	4	5	5	5	5	5	5	5	5	5	6	6	6	5	5	5	5	5	5	5	5	4	1946 ENIAC, 1st Computer; First Copy Machine Sold
9	9	9	8	7	7	7	7	5	5	5	5	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	6	6	6	7	6	6	5	5	5	5	5	5	5	4	1947 Transistor Invented; Microwave Oven
10	10	10	9	8	8	8	7	6	6	6	5	5	5	5	5	4	5	5	5	5	6	5	6	5	5	6	6	5	6	6	6	7	7	7	6	6	5	6	6	6	6	5	5	1948 Israel Established; RCA High Speed Fax
11	11	11	10	8	9	9	8	6	6	6	6	5	5	5	5	4	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	6	6	6	6	6	6	6	5	5	1949 NATO Established; Network TV In U.S.
10	10	10	9	8	8	8	7	6	5	5	5	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	6	6	6	7	7	6	5	5	5	5	5	5	5	4	1950 Korean War Begins; Credit Card Created
10	9	9	8	7	7	7	7	5	4	5	4	4	4	4	4	3	4	4	4	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	5	5	5	5	5	5	5	4	1951 Color TV; Modern Plastic Invented
10	9	9	8	7	7	7	7	5	4	5	4	4	4	4	4	3	4	4	4	4	5	4	5	5	5	5	5	5	5	5	6	6	6	6	6	5	5	5	5	5	5	5	4	1952 Phone Area Codes; EDVAC Computer
10	10	10	9	7	7	7	7	5	4	5	4	4	4	4	4	3	4	4	4	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	5	5	5	5	5	5	5	4	1953 Korean War Ends; Magnetic Core Memory
9	9	9	8	6	6	6	6	4	4	4	3	3	3	3	3	2	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5	6	6	6	5	5	5	5	5	5	5	4	4	1954 TVs In 54% Of Homes; Transistor Radios
7	7	7	6	4	5	5	4	2	2	2	2	2	2	2	2	1	2	2	2	3	4	3	3	3	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	3	1955 Tests Begin On Digital Fiber Optics
6	6	6	5	3	4	4	4	2	1	2	1	1	1	1	1	1	2	1	2	3	3	3	3	3	3	3	3	3	4	4	4	5	5	5	4	4	4	4	4	4	4	4	3	1956 Transatlantic Phone Cable; The Pager
7	7	7	6	4	4	5	4	2	2	2	2	1	1	2	1	1	2	2	2	3	3	3	3	3	3	3	4	3	4	4	5	5	5	5	5	4	4	4	4	4	4	4	3	1957 Sputnik, First Satellite; EEC Formed
8	7	7	6	4	5	5	4	2	2	2	2	1	1	1	1	1	2	2	2	3	3	3	3	3	3	4	4	3	4	4	5	5	5	5	5	4	4	4	4	4	4	4	3	1958 Stereo LP Records; Data On Phone Lines
6	6	6	5	2	3	4	3	1	0	1	0	0	0	1	0	0	1	1	1	2	3	2	3	3	3	3	3	3	3	4	4	5	5	5	4	4	4	4	4	4	4	3	3	1959 COBOL; Microchip; Plain Paper Xerox
7	7	7	5	3	4	4	3	1	1	1	1	0	0	1	1	0	1	1	1	2	3	2	3	3	3	3	3	3	3	4	4	5	5	5	5	4	4	4	4	4	4	3	3	1960 90% Homes w/TVs; Laser; Weather Satellite
5	5	5	4	1	2	3	2	0	-1	0	0	-1	-1	0	0	-1	0	0	1	2	2	2	2	2	3	3	3	3	3	4	4	5	5	5	4	4	3	4	4	4	4	3	2	1961 Berlin Wall Built; IBM Selectric Typewriter
8	7	7	5	2	3	4	3	0	0	1	0	0	0	0	0	-1	1	1	1	2	3	2	3	3	3	3	3	3	3	4	4	5	5	5	4	4	4	4	4	4	4	3	3	1962 Cuban Missile Crisis; Mariner II At Venus
6	6	6	4	1	2	3	2	-1	-1	0	-1	-1	-1	0	-1	-1	0	0	1	2	2	2	2	2	3	3	3	3	3	4	4	5	5	5	4	4	3	4	4	4	4	3	2	1963 Kennedy Killed, Income Tax 91% To 70%
2	3	4	2	-2	0	1	1	-2	-3	-2	-2	-2	-2	-1	-2	-2	-1	-1	0	1	2	1	2	2	2	2	2	2	3	3	4	4	5	5	4	3	3	3	3	3	4	3	2	1964 Vietnam Begins; Home VCR
-4	1	2	1	-3	-1	0	0	-4	-4	-2	-3	-3	-3	-2	-2	-3	-1	-1	0	1	2	1	2	2	2	2	2	2	3	3	4	4	5	5	4	3	3	3	3	3	3	3	2	1965 First Minicomputer; Car Phones; Hypertext
	6	6	2	-3	0	1	0	-4	-4	-2	-3	-3	-3	-2	-2	-3	-1	-1	0	1	2	1	2	2	2	2	2	2	3	3	4	4	5	5	4	3	3	3	3	3	4	3	2	1966 Dow @ 1,000; 8-Tracks In Cars; Fax Machine
		5	1	-6	-2	0	-1	-5	-5	-3	-4	-4	-3	-3	-2	-3	-1	-1	-1	1	2	1	2	2	2	2	2	2	3	3	4	4	5	5	4	3	3	3	3	3	4	3	2	1967 Floppy Disk; Cordless Phones; Dolby
			-4	-11	-4	-1	-2	-6	-6	-4	-4	-5	-4	-3	-3	-4	-2	-2	-1	0	1	1	2	1	2	2	2	2	3	3	4	4	5	5	4	3	3	3	3	3	3	3	2	1968 Intelsat Global Satellite Link; Intel 1KB RAM
				-18	-4	0	-1	-7	-6	-4	-5	-5	-4	-3	-3	-4	-2	-2	-1	1	2	1	2	2	2	2	2	2	3	3	4	5	5	5	4	3	3	4	4	4	4	3	2	1969 Neil Armstrong Walks On Moon; ATMs
					14	11	6	-4	-4	-1	-2	-3	-2	-1	-1	-2	0	0	1	2	3	2	3	3	3	3	3	3	4	4	5	6	6	6	5	4	4	4	4	4	4	4	3	1970 Barcodes; First Internet Connections
						8	2	-9	-8	-4	-5	-5	-4	-3	-3	-4	-1	-1	0	1	2	2	2	2	3	3	3	3	3	4	5	5	6	6	5	4	4	4	4	4	4	3	3	1971 Microchip, Price Controls; Answering Machine
							-4	-16	-12	-7	-7	-7	-6	-4	-4	-5	-2	-2	-1	1	2	1	2	2	2	3	3	3	3	4	5	5	6	6	5	4	4	4	4	4	4	3	2	1972 Dow Closes Above 1,000; Pong; HBO
								-27	-16	-8	-8	-8	-6	-4	-4	-5	-2	-2	-1	1	2	2	3	2	3	3	3	3	4	4	5	6	6	6	5	4	4	4	4	4	4	3	3	1973 U.S. Leaves Vietnam; International Internet
									-4	3	0	-2	-1	0	0	-2	1	1	2	4	5	4	5	5	5	5	5	5	5	6	7	7	8	8	6	5	5	5	5	5	5	5	4	1974 Nixon Resigns; Wage & Price Controls End
										11	1	-1	0	1	1	-1	2	2	3	5	6	5	6	5	5	6	6	5	6	6	7	8	8	8	7	6	5	6	6	6	6	5	4	1975 Microsoft; Optical Videodisk Demo
											-7	-7	-4	-1	-1	-3	1	1	2	4	6	4	5	5	5	5	5	5	5	6	7	8	8	8	7	6	5	6	5	5	6	5	4	1976 Apple I; Cray-1; Home Satellite Dish
												-6	-2	1	0	-3	2	2	3	6	7	5	6	6	6	6	6	6	6	7	8	8	9	9	7	6	6	6	6	6	6	5	4	1977 Elvis Dies; TRS-80 PC; Fiber Optic Call
													3	5	2	-2	4	3	5	7	9	7	8	7	7	7	7	7	7	8	9	9	10	9	8	7	6	7	6	6	6	5	4	1978 Modems; Cell Phone Tests; Intel 16-bit Chip
														7	2	-3	4	3	5	8	9	7	8	7	7	7	7	7	7	8	9	10	10	10	8	7	6	7	7	6	7	6	4	1979 CompuServe Online; VisiCalc Spreadsheet
															-2	-8	4	3	5	8	10	7	8	7	7	7	7	7	7	8	9	10	10	10	8	7	6	7	7	6	7	5	4	1980 CPI 13.5%; CNN; Sony Camcorder
																-13	7	4	7	10	12	8	10	8	8	8	8	7	8	9	10	11	11	11	9	7	7	7	7	7	7	6	4	1981 IBM PC Introduced; 300 bps Modems
																	31	14	14	17	17	12	13	11	11	11	10	9	10	11	12	12	13	12	10	8	8	8	8	8	8	7	5	1982 Dow Over 1,000; Compact Disk; 5.5 Mil. PCs
																		-1	6	12	14	9	11	9	9	9	8	8	8	9	10	11	12	11	9	7	7	7	7	7	7	6	4	1983 AT&T Breakup; 288k Chips; Domain Names
																			14	19	20	12	13	11	10	10	10	9	9	10	11	12	12	12	10	8	7	8	7	7	7	6	5	1984 3 1/2" Floppy; Intel 32-bit; 1 MB Chips
																				25	23	11	13	10	10	9	9	8	9	10	11	12	12	12	9	8	7	7	7	7	7	6	4	1985 Cellphones; 2400k Modems; Windows OS
																					21	4	9	7	7	7	7	6	7	8	10	11	11	11	9	7	6	6	6	6	6	5	3	1986 Laser Printers; TV On 7 Hrs/Day In U.S.
																						-10	3	2	4	4	5	4	5	7	9	10	11	10	8	6	5	5	5	5	6	4	3	1987 Stock Market Crash; 50% Have Cable TV
																							18	9	9	8	8	6	8	9	11	12	13	12	9	7	6	6	6	6	6	5	3	1988 Transatlantic Fiberoptic Cable; Internet T1
																								0	4	5	5	4	6	8	10	11	12	11	8	6	5	6	6	6	6	4	3	1989 Poland Solidarity; Nintendo Profits @ $1 Bil.
																									8	8	7	5	7	9	12	13	14	13	9	7	6	6	6	6	6	4	3	1990 World Wide Web (www)
																										7	7	4	7	10	12	14	14	13	9	6	5	6	6	6	6	4	2	1991 Gulf War; USSR Breakup; 75% Have VCRs
																											6	3	7	10	13	15	15	14	10	6	5	6	6	6	6	4	2	1992 65 Mil. PCs; 200k On AOL; CDs > Cassettes
																												0	7	12	15	16	17	15	10	6	5	6	6	6	6	4	2	1993 Pentium Chip; HTML; V-Chip
																													16	18	21	21	21	18	12	7	6	7	6	6	6	4	2	1994 First WTC Attack; Satellite TV; 33% w/PC
																														21	24	23	22	18	11	6	4	6	5	5	6	3	1	1995 NAFTA Enacted; Dot.com; Internet Audio
																															26	24	22	18	9	4	2	4	4	4	4	2	0	1996 100k Web Sites; 30 Mil In U.S. On Internet
																																21	20	15	5	0	-1	1	1	2	2	0	-2	1997 Internet Video; 43% In U.S. Have PCs
																																	20	12	0	-5	-5	-2	-1	-1	0	-2	-4	1998 Russia Debt Default; 75 Mil U.S. On Internet
																																		4	-9	-12	-11	-6	-4	-3	-2	-4	-6	1999 Satellite Can See 3' Objects On Earth
																																			-20	-20	-15	-8	-6	-4	-3	-5	-7	2000 Dow Hits 11,723; NASDAQ Hits 5,048
																																				-19	-13	-4	-2	-1	1	-3	-6	2001 WTC Attack (9/11); >50% U.S. On Internet; iPod
																																					-5	4	4	4	5	1	-4	2002 HDTV Grows; Wi-Fi Laptops; DVD Sales>VCR
																																						14	9	8	8	2	-3	2003 Iraq Conflict; Home Networks; T-Bills @ <1%
																																							4	4	6	-1	-7	2004 Hybrid Cars; Flat Panel TVs; Blogs; VoIP
																																								5	7	-3	-9	2005 Hurricanes; $70 Oil; Podcasts; Housing Boom
																																									9	-6	-13	2006 YouTube; Dow High; Pluto Demoted; Fed Pause
																																										-20	-22	2007 iPhone; Sub-Prime; Going Green; Facebook
																																											-25	2008 Recession; Wall Street Crisis; $144 Oil; Obama
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	101	102	103	104	105	106	107	108	109	2009 H1N1; Jackson Dies; GM Bankruptcy; Digital TV
85	92	99	98	83	98	109	107	83	86	102	98	96	103	119	128	120	160	160	187	236	287	266	323	335	376	416	451	460	542	671	873	1084	1326	1427	1192	996	964	1131	1210	1310	1477	1220	948	
3	3	3	3	4	3	3	3	4	4	4	4	5	5	5	5	6	4	5	4	3	3	3	3	3	3	3	3	3	2	2	2	1	1	1	1	2	2	2	2	2	2	2	2	4.3% Avg
3	3	4	5	6	4	3	6	11	9	6	7	8	11	13	10	6	3	4	4	2	4	4	5	5	4	3	3	3	3	3	2	2	2	3	3	2	2	3	3	3	3	4	0	3.2% Avg
10	6	9	8	6	9	10	12	8	9	12	11	13	12	9	12	4	8	11	7	6	7	8	7	6	3	6	5	6	5	6	6	6	6	6	3	3	5	7	6	6	5	3	-1	6.5% Avg
								+10.0%											+7.9%										+5.4%									+4.3%						
7	3	5	3	0	3	5	6	-1	0	6	5	6	3	0	2	-2	4	7	4	3	3	4	4	2	0	3	3	4	3	4	4	4	4	4	1	2	2	4	3	3	2	0	-2	3.4% Avg
								+3.2%											+3.0%										+3.1%									+1.9%						