2011
CRESTMONT RESEARCH STOCK MARKET MATRIX

TAX-EXEMPT INVESTOR 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)

2011 MATRIX: AVERAGE ANNUAL DATA

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 the methodology popularized by Robert Shiller 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

Copyright 2002-2012, Crestmont Research (www.CrestmontResearch.com)

FROM P/E	FROM 1899=1	TO Yr: 19
18.6	1	1900
22.7	1	1901
22.0	1	1902
17.6	1	1903
16.3	1	1904
19.3	1	1905
18.7	2	1906
13.4	1	1907
13.1	1	1908
14.9	2	1909
13.5	1	1910
14.2	2	1911
13.7	2	1912
11.9	1	1913
11.1	1	1914
11.5	1	1915
12.0	2	1916
8.8	1	1917
6.4	1	1918
6.5	1	1919
5.3	1	1920
5.4	1	1921
7.5	1	1922
7.9	1	1923
8.4	1	1924
10.1	2	1925
11.7	2	1926
15.9	3	1927
21.8	3	1928
27.6	5	1929
21.5	4	1930
14.7	3	1931
8.1	2	1932
11.1	2	1933
12.2	3	1934
13.1	3	1935
19.3	4	1936
18.5	4	1937
13.9	3	1938
15.6	4	1939
14.7	3	1940
12.2	3	1941
9.2	3	1942
11.0	3	1943
11.3	4	1944
13.3	4	1945
14.0	5	1946
11.2	4	1947
10.7	4	1948
9.9	4	1949
11.2	5	1950
12.0	6	1951
12.5	6	1952
12.0	7	1953
13.7	8	1954
17.5	11	1955
18.3	13	1956
15.6	12	1957
15.1	12	1958
18.4	15	1959
17.4	15	1960
20.5	18	1961
18.8	17	1962
20.3	19	1963
22.6	22	1964
23.3	23	1965
21.3	22	1966
21.6	23	1967
21.5	24	1968
19.4	23	1969
15.2	19	1970
16.9	22	1971
17.8	23	1972
16.1	22	1973
10.9	16	1974
10.2	15	1975
11.5	17	1976
10.4	16	1977
9.4	15	1978
8.9	15	1979
8.8	16	1980
8.5	16	1981
7.3	15	1982
9.6	20	1983
9.4	20	1984
10.7	22	1985
13.4	28	1986
16.0	34	1987
14.4	31	1988
16.6	36	1989
16.5	36	1990
17.9	40	1991
19.6	43	1992
20.7	46	1993
20.5	46	1994
22.7	54	1995
25.9	65	1996
31.0	82	1997
36.0	101	1998
42.1	120	1999
41.7	125	2000
32.1	102	2001
25.9	84	2002
24.1	80	2003
26.4	92	2004
26.0	96	2005
26.0	102	2006
26.8	113	2007
20.8	91	2008
16.9	72	2009
20.7	86	2010

Yr: 19	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	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
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	8	9	9	11	13	15	20	26	21	14	7	9	10	11	15	15	11	12	11	10	9	12	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 (%)	4	4	4	5	5	4	4	5	5	4	5	5	5	6	6	5	5	7	8	6	7	7	6	6	6	5	5	5	4	4	5	7	9	5	5	4	4	5	6	5	6	7	7	5	5	4	4	5	6	7	7	7	6	6	5	4	4	4	4	3	3	3	3	3	3	3
CPI (Inflation %)	7	-2	6	1	0	1	3	6	-4	8	4	-8	7	3	1	1	8	17	18	15	16	-11	-6	2	0	2	1	-2	-2	0	-2	-9	-10	-5	3	2	1	4	-2	-1	1	5	11	6	2	2	8	14	8	-1	1	8	2	1	1	0	1	3	3	1	2	1	1	1	1	2
GDP (Nominal %)	4	13	3	6	5	9	8	3	-7	12	5	3	8	5	-6	6	27	20	26	11	13	-16	0	17	3	4	7	-1	1	7	-12	-16	-23	-4	17	11	14	10	-6	7	10	25	28	23	11	2	0	10	10	-1	10	15	6	6	0	9	5	5	1	8	4	3	7	5	7	8
GDP (Annualized %)	[----------	+5.3%	----------	]	[----------	+10.0%	----------	]	[----------	+3.0%	----------	]	[----------	-1.2%	----------	]	[----------	+11.2%	----------	]	[----------	+6.6%	----------	]	[----------	+6.9%
GDP (Real %)	2	12	2	3	4	9	4	-2	-5	12	0	3	6	4	-8	4	16	0	8	-3	-2	-4	7	14	3	2	6	1	2	7	-9	-6	-13	-1	11	9	13	5	-3	8	9	17	18	16	8	-1	-11	-1	4	-1	9	8	4	5	-1	7	2	2	-1	7	2	2	6	4	6	6
GDP (Annualized %)	[----------	+3.9%	----------	]	[----------	+2.9%	----------	]	[----------	+3.4%	----------	]	[----------	+0.9%	----------	]	[----------	+5.6%	----------	]	[----------	+4.1%	----------	]	[----------	+4.4%

P/E Ratio		
1899 = 1		
←"TO" Year		
FROM		
1901	First Electric Typewriter	
1902	Navy Installs Radio	
1903	Wright Bros Fly	
1904	Crayola & Jell-O	
1905	Pen Gets Pocket Clip	
1906	S.F. Earthquake	
1907	Photocopier Marketed	
1908	Model T Introduced	
1909	Chlorine In Drinking Water	
1910	Electric Range Invented	
1911	Sherman Anti-Trust Act; Airmail Begins	
1912	Titanic Sinks; U.S. Radio Act	
1913	Income Tax & Federal Reserve	
1914	WWI Starts; First Transcon. Phone Call	
1915	Americans Avg 40 Phone Calls A Year	
1916	Keds & Electric Clock Invented	
1917	US Enters WWI; Einstein Theorizes Lasers	
1918	WWI Ends	
1919	Prohibition; Shortwave Radio; Dial Phones	
1920	Women's Right To Vote	
1921	World Series On Radio; Quartz Crystals	
1922	100,000 Radios Made In U.S.; 3 Frequencies	
1923	500,000 Radios Made; Neon Signs	
1924	2.5 Million Radios Made; Frozen Food Invented	
1925	Commercial Picture Fax By Radio In U.S.	
1926	First Publicly Shown 'Talkie'	
1927	2-Way Radio Phone: U.S. To London ($15/min)	
1928	Teletype Machine; Test TV In 3 Homes	
1929	Crash of '29; Car Radio	
1930	Photo Flash Bulbs	
1931	Radios In 40% Of Homes; Scotch Tape	
1932	Radar; 8 mm Cameras; Electric Eye Scanner	
1933	End of Prohibition; FM Radio; Wallboard	
1934	Radios In 50% Of Homes; AP Wirephoto	
1935	Social Security Act Passed	
1936	BBC First TV Service, 3 Hours A Day	
1937	Hindenburg Airship Crash	
1938	National Minimum Wage Enacted	
1939	Regular TV Broadcasts In U.S.; Helicopter	
1940	World War II Begins; Radar Invented	
1941	Pearl Harbor Attack; 2-Way Police Radio	
1942	U.S. Office Of Censorship Due To War	
1943	Phone Line Repeaters Help Service	
1944	D-Day, Normandy	
1945	World War II Ends; FCC Sets VHF Channels	
1946	ENIAC, 1st Computer; First Copy Machine Sold	
1947	Transistor Invented; Microwave Oven	
1948	Israel Established; RCA High Speed Fax	
1949	NATO Established; Network TV In U.S.	
1950	Korean War Begins; Credit Card Created	
1951	Color TV; Modern Plastic Invented	
1952	Phone Area Codes; EDVAC Computer	
1953	Korean War Ends; Magnetic Core Memory	
1954	TVs In 54% Of Homes; Transistor Radios	
1955	Tests Begin On Digital Fiber Optics	
1956	Transatlantic Phone Cable; The Pager	
1957	Sputnik, First Satellite; EEC Formed	
1958	Stereo LP Records; Data On Phone Lines	
1959	COBOL; Microchip; Plain Paper Xerox	
1960	90% Homes w/TVs; Laser; Weather Satellite	
1961	Berlin Wall Built; IBM Selectric Typewriter	
1962	Cuban Missile Crisis; Mariner II At Venus	
1963	Kennedy Killed, Income Tax 91% To 70%	
1964	Vietnam Begins; Home VCR	
1965	First Minicomputer; Car Phones; Hypertext	
1966	Dow @ 1,000; 8-Tracks In Cars; Fax Machine	
1967	Floppy Disk; Cordless Phones; Dolby	
1968	Intelsat Global Satellite Link; Intel 1KB RAM	
1969	Neil Armstrong Walks On Moon; ATMs	
1970	Barcodes; First Internet Connections	
1971	Microchip, Price Controls; Answering Machine	
1972	Dow Closes Above 1,000; Pong; HBO	
1973	U.S. Leaves Vietnam; International Internet	
1974	Nixon Resigns; Wage & Price Controls End	
1975	Microsoft; Optical Videodisk Demo	
1976	Apple I; Cray-1; Home Satellite Dish	
1977	Elvis Dies; TRS-80 PC; Fiber Optic Call	
1978	Modems; Cell Phone Tests; Intel 16-bit Chip	
1979	CompuServe Online; VisiCalc Spreadsheet	
1980	CPI 13.5%; CNN; Sony Camcorder	
1981	IBM PC Introduced; 300 bps Modems	
1982	Dow Over 1,000; Compact Disk; 5.5 Mil. PCs	
1983	AT&T Breakup; 288k Chips; Domain Names	
1984	3 1/2" Floppy; Intel 32-bit; 1 MB Chips	
1985	Cellphones; 2400k Modems; Windows OS	
1986	Laser Printers; TV On 7 Hrs/Day In U.S.	
1987	Stock Market Crash; 50% Have Cable TV	
1988	Transatlantic Fiberoptic Cable; Internet T1	
1989	Poland Solidarity; Nintendo Profits @ $1 Bil.	
1990	World Wide Web (www)	
1991	Gulf War; USSR Breakup; 75% Have VCRs	
1992	65 Mil. PCs; 200k On AOL; CDs > Cassettes	
1993	Pentium Chip; HTML; V-Chip	
1994	First WTC Attack; Satellite TV; 33% w/PC	
1995	NAFTA Enacted; Dot.com; Internet Audio	
1996	100k Web Sites; 30 Mil In U.S. On Internet	
1997	Internet Video; 43% In U.S. Have PCs	
1998	Russia Debt Default; 75 Mil U.S. On Internet	
1999	Satellite Can See 3' Objects On Earth	
2000	Dow Hits 11,723; NASDAQ Hits 5,048	
2001	WTC Attack (9/11); >50% U.S. On Internet; iPod	
2002	HDTV Grows; Wi-Fi Laptops; DVD Sales>VCR	
2003	Iraq Conflict; Home Networks; T-Bills @ <1%	
2004	Hybrid Cars; Flat Panel TVs; Blogs; VoIP	
2005	Hurricanes; $70 Oil; Podcasts; Housing Boom	
2006	YouTube; Dow High; Pluto Demoted; Fed Pause	
2007	iPhone; Sub-Prime; Going Green; Facebook	
2008	Recession; Wall Street Crisis; $144 Oil; Obama	
2009	H1N1; Jackson Dies; GM Bankruptcy; Digital TV	
2010	iPad; Greece Debt Crisis; Twitter; QE2	
2011	The Cloud; Arab Spring; OWS; E-books	
4.2%	Avg	
3.2%	Avg	
6.5%	Avg	
+10.0%	+7.9%	+5.5%
3.4%	Avg	
+3.2%	+3.0%	+3.2%