

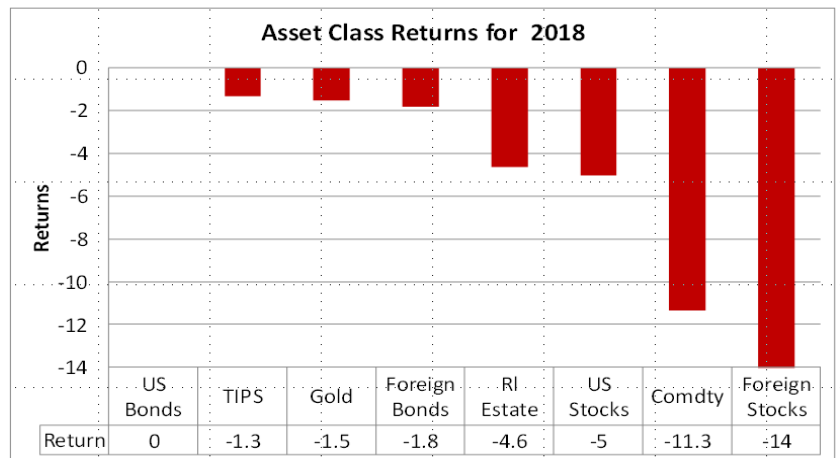
Some Great graphs Summarize 2018 and the 93 Years Ending 2018

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- All major asset classes lost money in 2018. There is red everywhere.
- The US stock market lost 6% in 2018. Small value stocks lost 14%. Large growth stocks were the only profitable style, with a 1% return.
- The decade ending 2018 was the 3rd best in terms of return per unit of risk – pretty good despite the loss in 2018.

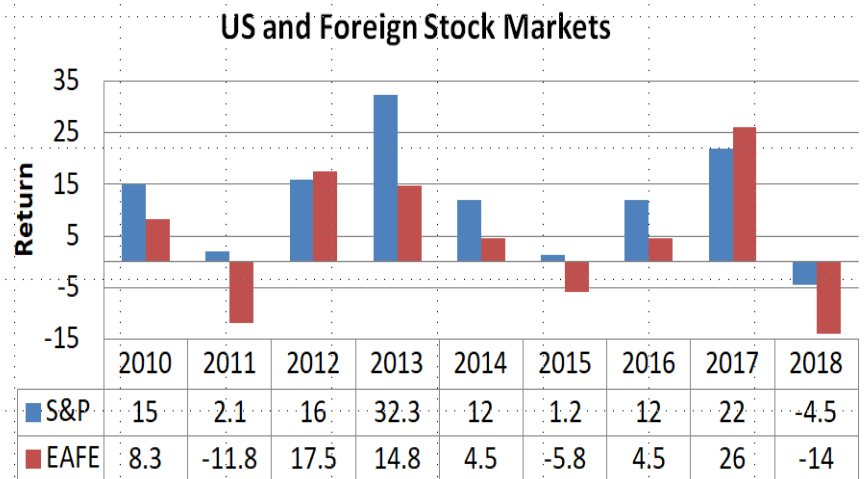
Asset Class Returns

Every asset class except U.S. bonds lost money in 2018. Most of the damage was done in the 4th quarter when U.S. stocks lost 14%



Source: The Capital Spectator

U.S. stocks have outperformed foreign stocks every year from 2010-2018 except 2012. In 2018 the U.S. stock market as measured by the S&P500 lost 4.5% while EAFE lost 14%.

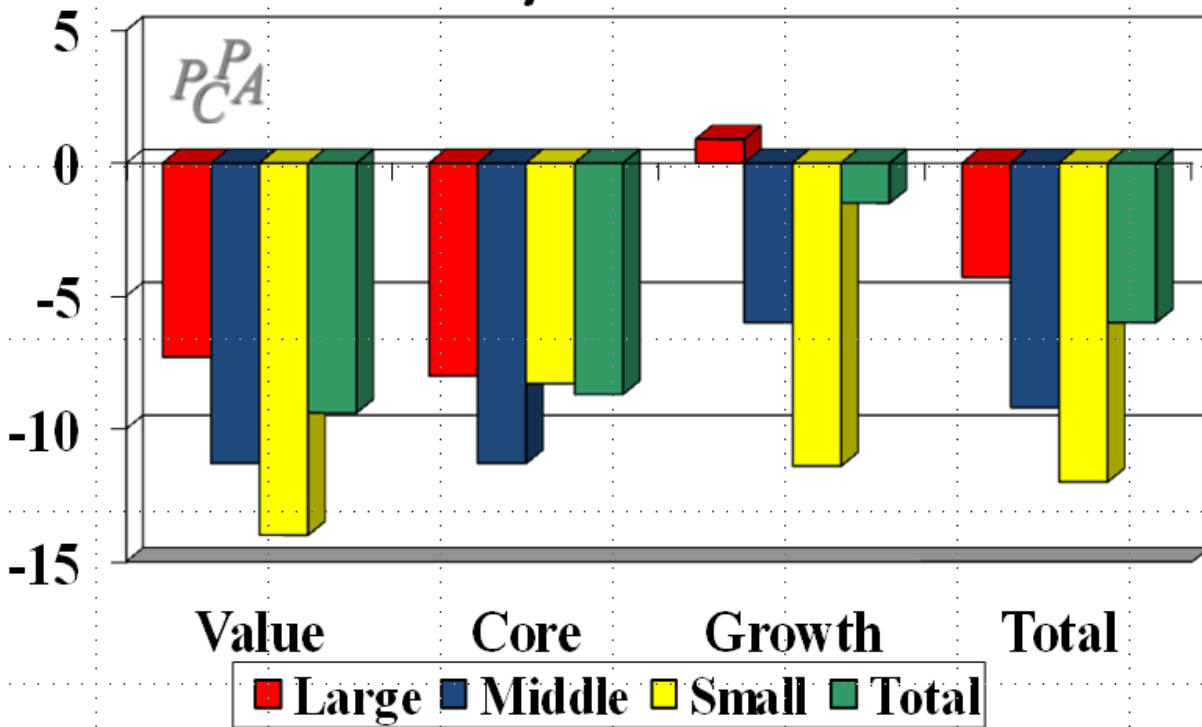


U.S. Style Index Returns

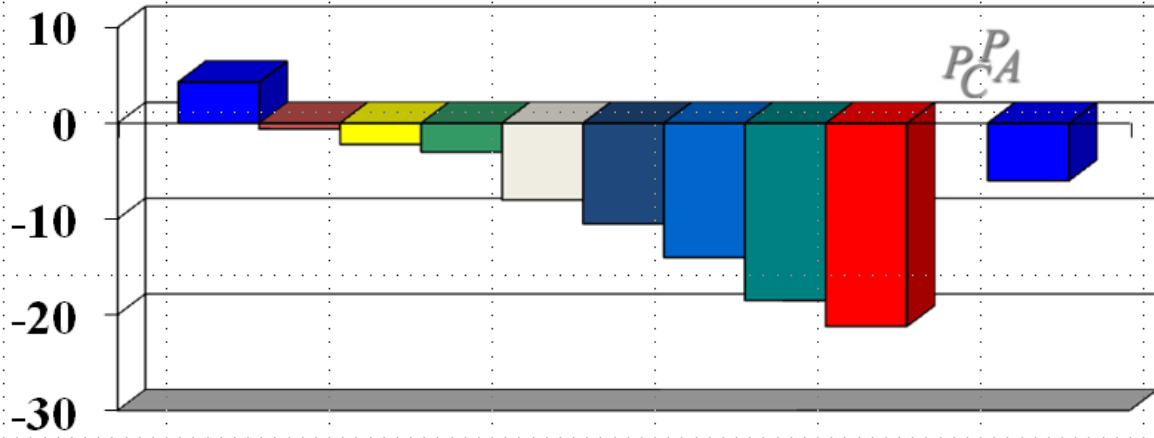
All [Surz Style Pure Indexes](#) lost money in 2018 except large cap growth, which earned 1% and Health Care companies which earned 4%. The Surz indexes use the entire US stock market, which was down 6%, in contrast to the S&P500's 4,5% loss. This is the last year that Surz Style Pure Indexes will be provided.

All style indexes – Surz, S&P and Russell – agree that small value companies were the biggest losers in 2018 and large cap growth stocks were the biggest relative winners.

U.S. Surz Style Pure in 2018

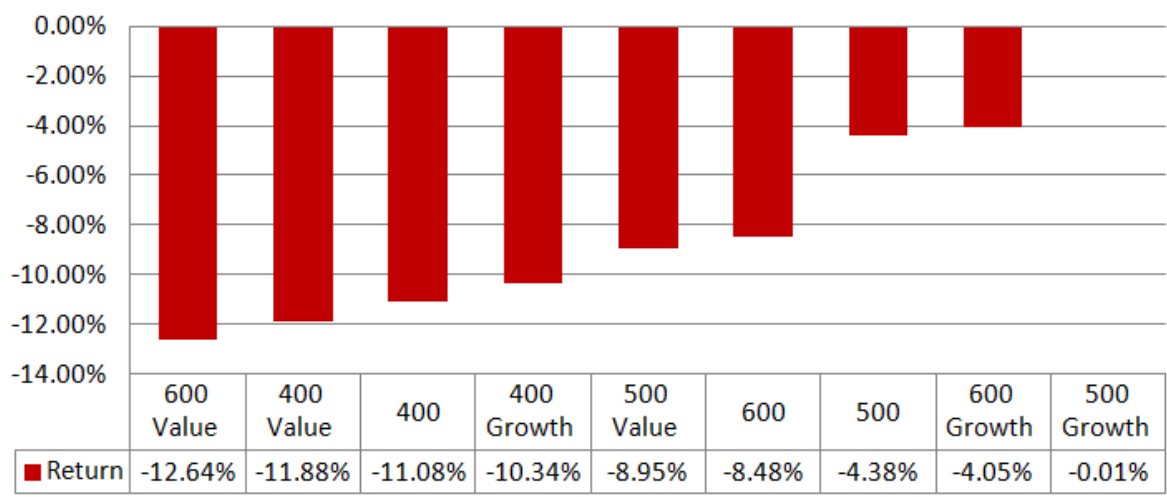


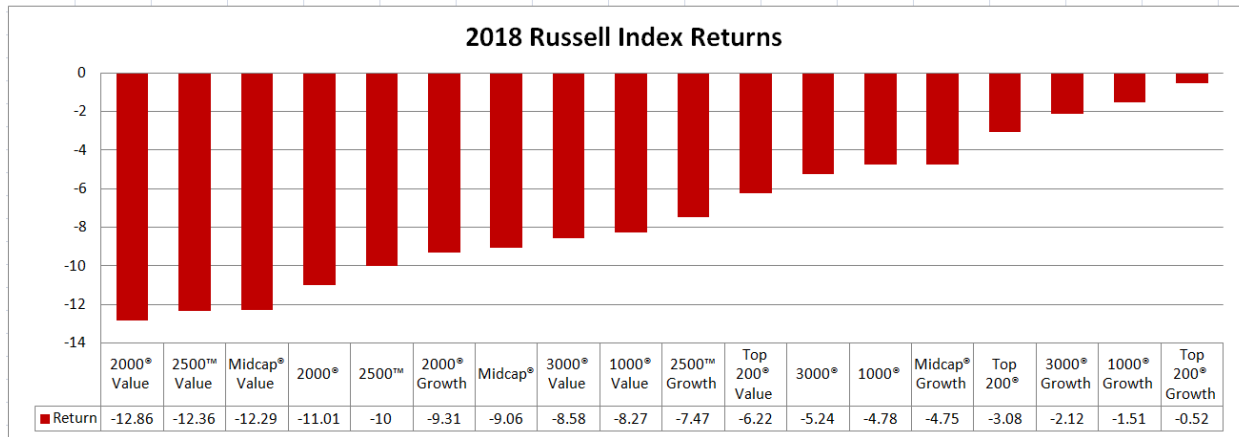
U.S. Surz Sectors in 2018



- Health ■ InfoTech ■ Dscrtnty ■ Te;&Util ■ Inustrl ■ Staples
- Finance ■ Matrls ■ Energy ■ Total

2018 S&P Index Returns

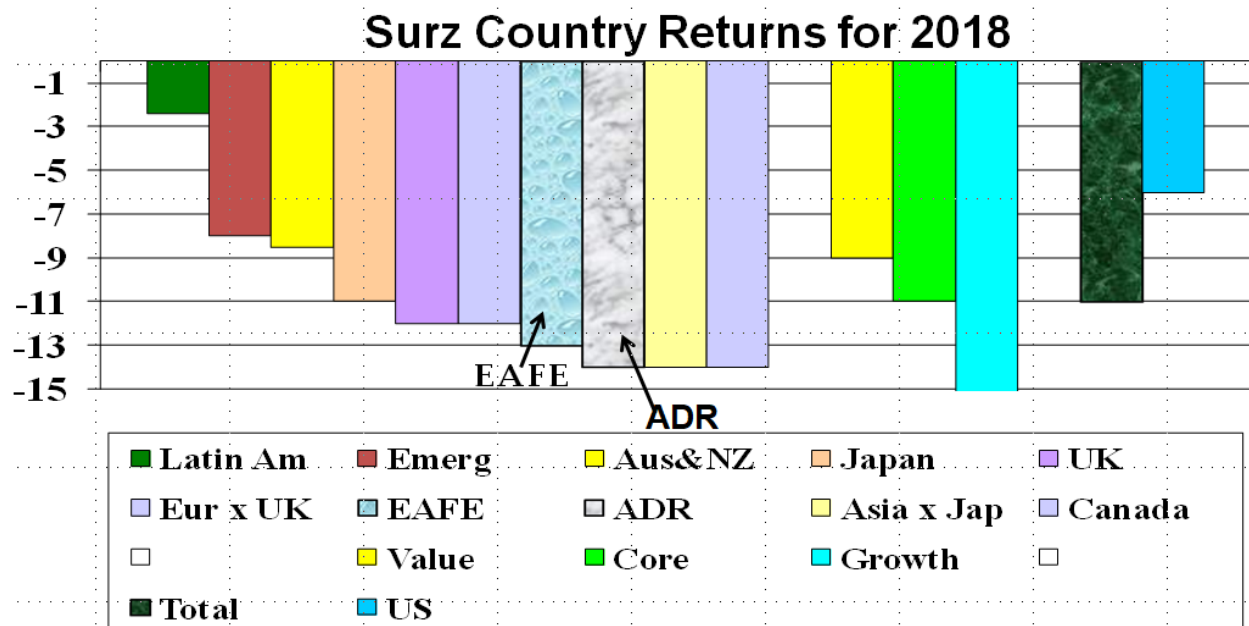




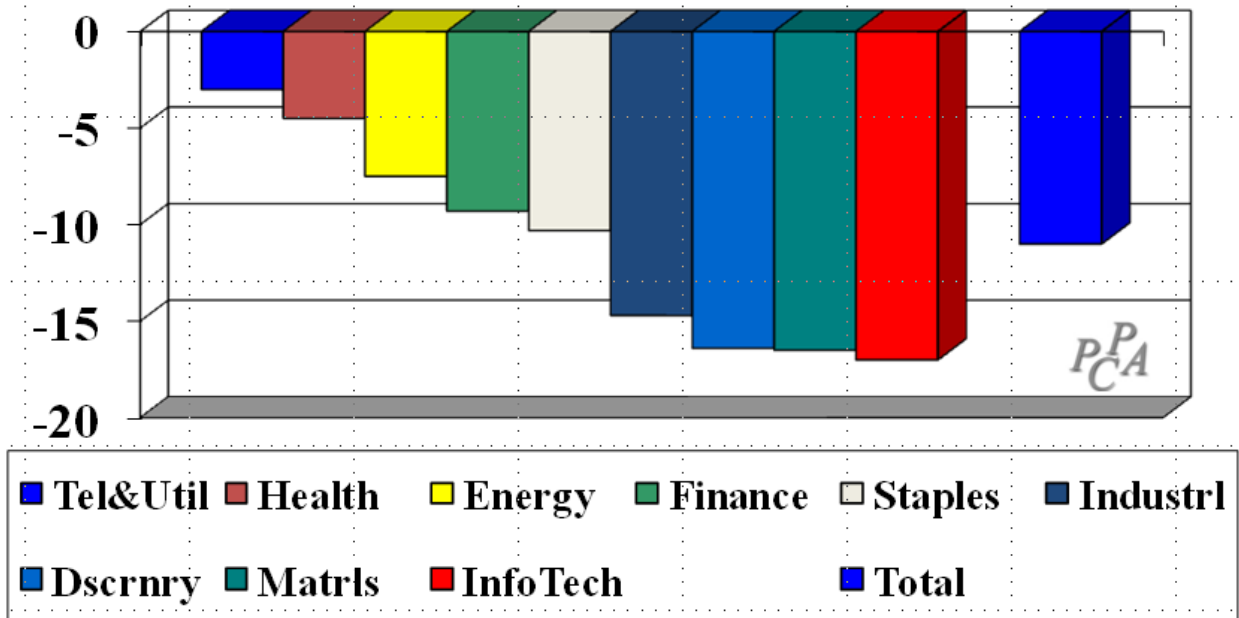
Foreign Country, Style and Sector Returns

All foreign countries, styles and sectors lost money in 2018. There are few notable differences between these results and those of the US:

- Value stocks performed best in foreign countries, while growth was in favor in the U.S.
- Foreign energy stocks lost only 7.5% versus 21% losses in U.S. energy companies.
- The total foreign market lost 11%, somewhat better than EAFE's 13.8% loss.



Foreign Surz Sectors in 2018



The past 93 years

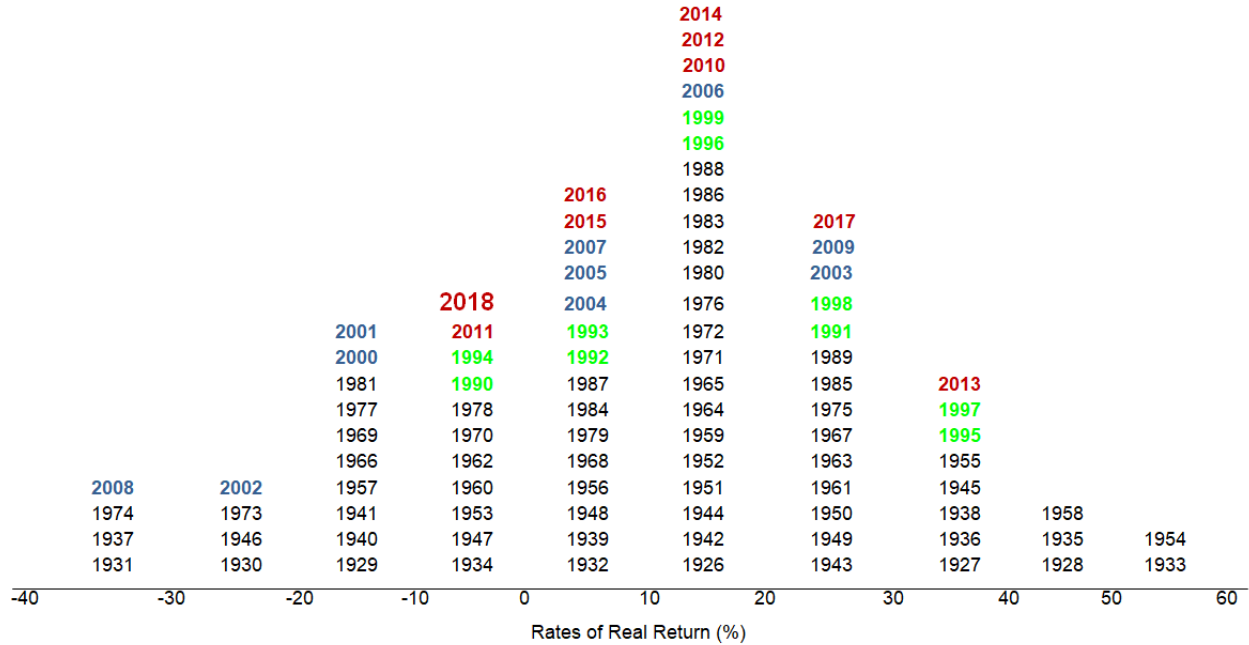
- Stocks (as measured by the S&P500) lost 4.39% in 2018 and bonds (as measured by the Barclays Aggregate) lost 1.72%. Both returns fall into a group just left of middle in their real return histograms.
- The past 10 years have provided the 3rd best stock returns for the risk. It has a Sharpe ratio of 0.94% return per unit of risk, which is 3 times the average Sharpe ratio of .34%. It's been a very good decade, despite the 4.39% loss in 2018.
- T-bill returns have lagged inflation by 1.5% per year over the past decade. Real T-bill returns (net of inflation) have been negative.
- Bonds were more "efficient," delivering more returns per unit of risk than stocks in the first 46 years, but they have been about as efficient in the most recent 47 years.

- Despite recently low levels of inflation, average inflation in the past 47 years has been more than twice that of the previous 46 years: 1.86% in 1926-1971 versus 3.97% in 1972-2018.

93-Year Return History for Common Stocks (Adjusted for Inflation)

1926-2018

Average Annually Compounded Real Return = 7%

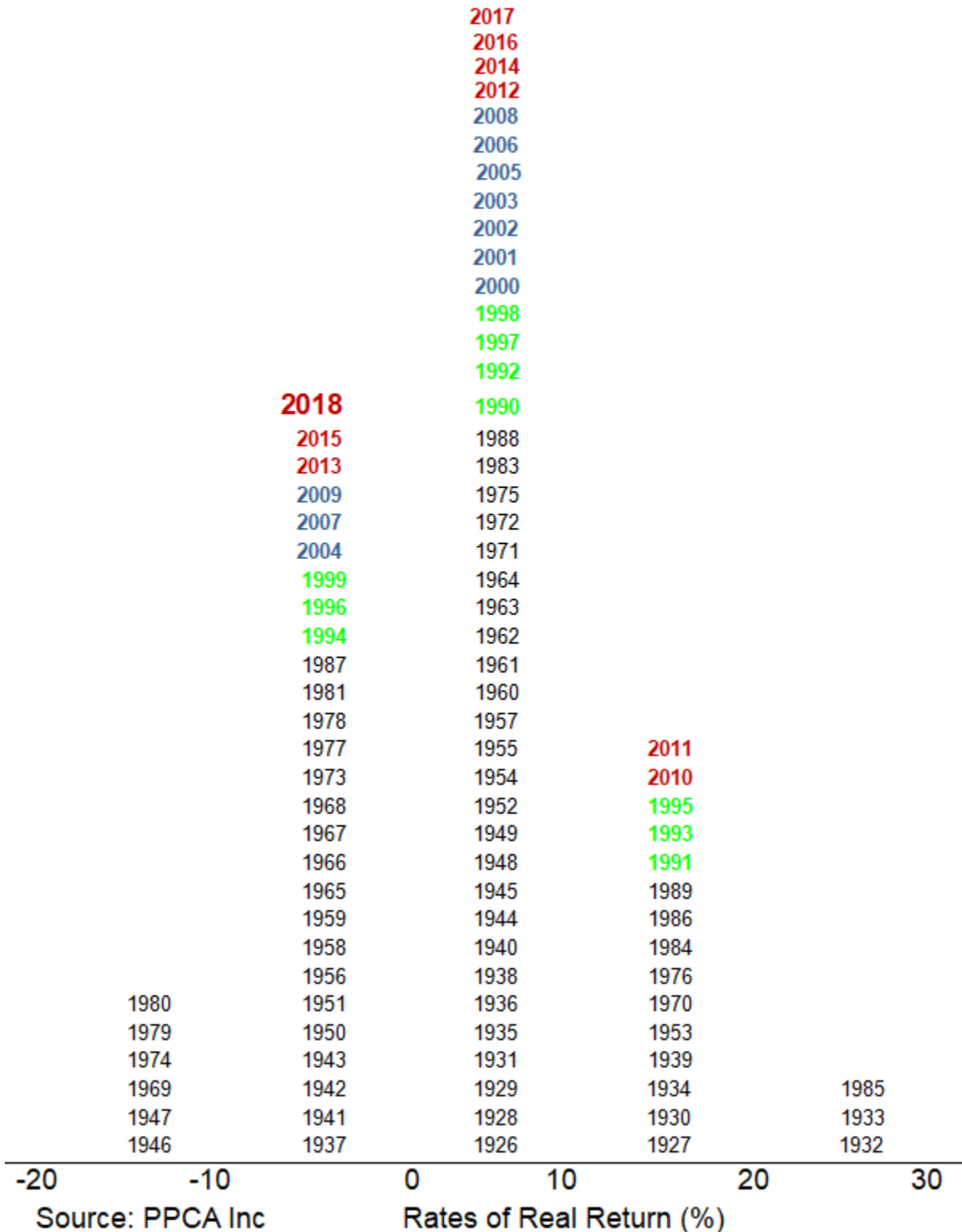


Source: PPCA Inc.

93-Year Return History of Long-Term Corporate Bonds

1926-2018

Average Annually Compounded Real Return = 3 %



	stocks			bonds			t-bills		cpi	
	RETURN	STNDEV	SHARPE	RETURN	STNDEV	SHARPE	RETURN	STNDEV	RETURN	STNDEV
2018-2018(1 YRS)	-4.39	15.35	-0.38	-1.72	3.16	-1.04	1.53	0.18	2.44	0.41
1926-2018(93 YRS)	9.99	18.65	0.34	5.96	7.19	0.35	3.37	0.89	2.92	1.79
1926-1971(46 YRS)	9.72	21.76	0.35	4.31	4.70	0.48	1.99	0.53	1.86	2.16
1972-2018(47 YRS)	10.26	15.02	0.35	7.60	8.96	0.31	4.73	0.99	3.97	1.26
1929-1938(10 YRS)	-0.89	37.95	-0.05	7.93	4.65	1.45	1.02	0.43	-1.95	2.55
1939-1948(10 YRS)	7.26	17.98	0.39	3.58	2.16	1.50	0.30	0.08	5.56	2.94
1949-1958(10 YRS)	20.06	11.98	1.50	2.38	5.40	0.13	1.68	0.21	1.86	1.33
1959-1968(10 YRS)	10.00	11.64	0.54	2.35	4.30	-0.26	3.52	0.29	2.07	0.65
1969-1978(10 YRS)	3.17	15.91	-0.17	5.79	7.90	-0.02	5.94	0.42	6.67	0.99
1979-1988(10 YRS)	16.31	16.46	0.40	10.85	13.14	0.12	9.15	0.82	5.92	1.37
1989-1998(10 YRS)	19.19	13.40	0.98	9.89	5.68	0.74	5.49	0.52	3.22	0.62
1999-2008(10 YRS)	-1.39	15.17	-0.30	6.85	9.64	0.35	3.36	0.51	2.65	1.41
2009-2018(10 YRS)	13.16	13.62	0.94	4.44	6.54	0.64	0.26	0.13	1.79	0.99
1929-1933(5 YRS)	-11.24	47.12	-0.27	8.17	6.19	0.97	1.89	0.50	-5.14	2.78
1934-1938(5 YRS)	10.68	25.98	0.40	7.70	2.29	3.31	0.15	0.05	1.33	1.88
1939-1943(5 YRS)	3.78	20.88	0.17	4.73	2.33	1.97	0.13	0.05	4.45	2.16
1944-1948(5 YRS)	10.86	14.66	0.71	2.43	1.94	1.00	0.46	0.07	6.67	3.55
1949-1953(5 YRS)	17.86	10.82	1.49	3.83	5.85	0.40	1.45	0.10	2.23	1.67
1954-1958(5 YRS)	22.30	13.10	1.52	0.96	4.93	-0.19	1.91	0.27	1.49	0.88
1959-1963(5 YRS)	9.85	12.87	0.54	4.36	3.15	0.51	2.72	0.18	1.31	0.60
1964-1968(5 YRS)	10.15	10.37	0.54	0.37	5.18	-0.74	4.32	0.19	2.84	0.62
1969-1973(5 YRS)	2.02	14.16	-0.24	5.55	8.05	-0.01	5.64	0.42	5.41	0.93
1974-1978(5 YRS)	4.33	17.59	-0.10	6.03	7.80	-0.03	6.24	0.40	7.94	0.94
1979-1983(5 YRS)	17.27	14.98	0.36	6.83	15.94	-0.25	11.13	0.75	8.39	1.53
1984-1988(5 YRS)	15.36	17.95	0.43	15.03	9.62	0.77	7.21	0.48	3.51	0.71
1989-1993(5 YRS)	14.49	12.92	0.63	12.62	5.64	1.12	5.93	0.68	3.88	0.74
1994-1998(5 YRS)	24.09	13.86	1.32	7.22	5.68	0.37	5.05	0.20	2.56	0.42
1999-2003(5 YRS)	-0.52	17.29	-0.23	7.91	7.25	0.58	3.53	0.55	2.55	0.76
2004-2008(5 YRS)	-2.25	12.84	-0.41	5.81	11.61	0.22	3.19	0.46	2.76	1.86
2009-2013(5 YRS)	18.06	15.83	1.13	6.10	8.69	0.69	0.11	0.02	1.94	1.05
2014-2018(5 YRS)	8.47	10.94	0.73	2.81	3.19	0.74	0.42	0.18	1.65	0.95

Source: PPCA Inc