
Stock market anomalies have been analyzed in detail since Eugene Fama published his famous article on the efficiency of markets. Temporal patterns in the stock market, such as whether certain months, days of the week, time periods or holidays provide better returns than other time periods have received a particularly large amount of study.

Yale Hirsch has analyzed these patterns and updates the evidence each year in his Stock Trader's Almanac. He has shown, for example, that the months of October through January are the best performing months of the year in the stock market, that the market performs better around the first of the month than the middle of the month, that the market tends to rally around holidays, and so forth. Some patterns change over time. Monday used to be the worst day in the stock market, but recently it has become the best performing day.

But what about interest rates? If the stock market displays seasonal patterns, why shouldn't other financial instruments? To answer this question, we have analyzed the monthly changes in interest rates for three sets of securities: 3-month Treasury Bills, Long-term Government Bonds, and AAA Corporate Bonds. We want to answer two basic questions. Do interest rates tend to rise or fall in some months as opposed to other months? Have these patterns changed over time.

THE SOURCES

To answer this question, we looked at bond yields for government bonds and corporate bonds going back to 1915, providing over 80 years of evidence. Data on Treasury bills only goes back to 1931, so the evidence is more limited. We calculated the percentage change in interest rates from the end of one month to the next, then calculated the average returns for all the Januarys, Februarys and so forth. We also calculated the changes over the past 50 years, to see if patterns changed after World War II, and we calculated the changes over the past 25 years to see if the patterns changed during the volatile 1970s and 1980s when inflation dominated the interest rate landscape. Treasury bills were only analyzed for the past 50 years because the data for Treasury bills does not extend back to 1915, and the excessively low-interest rates of the early 1940s, going as low as 0.01% exaggerate the percentage changes.

Based on the evidence of these series, distinct seasonal patterns in interest rates do appear. There have been some changes in these patterns over time, but the tendency has been to strengthen these patterns rather than weaken them. This has occurred because the percentage change in interest rates from one month to the next has increased over time. Moreover, some months, which were neutral in their interest rate changes in the past, have now moved demonstratively toward changing in one direction or the other. Finally, the monthly patterns in interest rates tend to reinforce the patterns in the stock market.

THE EVIDENCE

The data are summarized in the table below

Month	Govt. Bonds 19 15-1998	Govt. Bonds 19 48-1998	Govt. Bonds 19 73-1998	Corp. Bonds 19 15-1998	Corp. Bonds 19 48-1998	Corp. Bonds 19 73-1998	T-bills 194 8-1998	T-bills 197 3-1998
January	0.18	0.30	0.49	-0.47	-0.43	0.023	-1.95	-0.48
February	0.28	0.60	1.23	0.14	0.39	0.91	-1.17	0.26
March	0.14	0.63	0.98	0.52	0.77	0.67	0.82	2.37
April	0.09	0.38	0.44	0.32	0.45	0.42	0.21	-2.25
May	0.36	0.76	0.56	0.37	0.53	-0.13	-0.06	0.86
June	-0.35	-0.35	-1.21	0.06	0.13	-0.81	0.27	0.36
July	-0.11	0.0	0.20	-0.05	0.23	0.44	2.68	0.87
August	0.50	0.53	0.34	0.01	0.05	-0.06	5.96	1.94
September	0.39	0.22	-0.24	1.10	0.53	0.26	-1.51	-2.43
October	-0.28	-0.29	-0.54	-0.23	-0.02	-0.17	-0.10	-0.82
November	-0.20	-0.39	-0.87	-0.45	-0.56	-1.28	1.61	-0.09
December	0.04	-0.10	-0.82	0.08	0.14	-0.02	1.60	-0.47