What Happens To Stocks When Interest Rates Rise?

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I. Our Greatest Fear Of The Moment

One of our greatest fears today is the coming rise in interest rates. The concern is that when rates rise, not only will bond prices fall, but rising rates will also undermine equities, driving stock prices down. But is this a rational fear? Does it have any historical basis? The argument presented here is quite the opposite. Historically, stocks have performed favorably during such periods. Let's explore the issue.

II. Is Our Fear Based In Fact?

Eventually, the U.S. Federal Reserve will reverse its history-making efforts to hold down intermediate bond yields and associated residential mortgage rates. At that time, it is feared that interest rates will rise across the board and that this will undermine stock market returns. To analyze this fear, let's examine stock market returns during periods of economic expansion when interest rates have risen the most. Specifically, I restrict the analysis to periods when the U.S. economy was not experiencing an economic recession as defined by the official body that designates such downturns, i.e., the National Bureau of Economic Research (NBER). Since 1865, we have experienced 30 economic expansions, not including the current period of growth. The shortest of these expansionary phases lasted 10 months. For this reason, I selected the 10-month-long window within each growth period during which interest rates rose the most. For this purpose, I used the current yield on the 10-year constant-maturity U.S. Treasury bond. The following table provides the total return on the S&P 500 for these 10-month-long windows during which interest rates rose the most.

S&P 500 returns for ten-month long periods during economic expansions when interest rates rose the most

10 month period ending	S&P 500 return in % unannualized
04/30/2006	11.70
11/30/1994	-3.44
09/30/1987	32.29
07/31/1981	8.56
01/31/1980	17.38
07/31/1973	0.27
09/30/1969	-11.79
04/30/1959	30.88
12/31/1956	6.26
05/31/1953	1.25
12/31/1947	3.57
05/31/1940	-19.61
04/30/1937	14.69
03/31/1929	31.51
08/31/1925	27.65
05/31/1923	7.30
01/31/1920	13.21
12/31/1917	-19.73
01/31/1913	4.01
01/31/1910	16.97
07/31/1906	1.02
08/31/1902	14.98
04/30/1898	10.26
12/31/1895	6.54
04/30/1892	18.79
04/30/1890	2.90
01/31/1887	10.95
03/31/1882	-7.62
10/31/1873	-12.58
01/31/1869	14.67

Covers 10-month long time periods that ended from 05/31/1865 through 07/31/2013

Economic expansions (not recessions) were defined by the National Bureau of Economic Research (NBER)

All data provided by Global Financial Research, Inc., San Juan Capistrano, CA on 08/11/2013

The S&P 500 Index is a capitalization-weighted index of generally large cap growth and value stocks that is designed to fairly represent the overall performance of the US stock market

These data are summarized more succinctly in the following table.

Summary results for ten-month long periods of greatest interest rate increase

Statistics	Unannualized S&P 500 returns in % for	
	Ten-month long periods during economic expansions when interest rates rose the most	All possible ten-month long periods
Median return in % unannualized	7.93	8.91
Mean return in % unannualized	7.76	8.66
Frequency (probability) that the return was positive (>0.0%)	80	72
Total number of ten-month periods	30	1779

Covers 10-month long time periods that ended from 05/31/1865 through 07/31/2013

The median return for all 10-month windows when interest rates rose the most was 7.93%. This compares favorably to the median of all possible 10-month-long windows of 8.91%. Perhaps more interesting, however, is that 80% of 10-month windows of greatest interest rate increase delivered positive stock market returns. In contrast, only 72% of all possible 10-month windows generated positive S&P returns. Based on these 30 economic expansions, it would appear that rising interest rate environments are not detrimental to equity market returns.

III. Examining More Recent Economic History

If we constrain ourselves to more recent economic history, the above result holds even more strongly. Since 1919, we have experienced 16 economic expansions, not counting the current. The shortest of these growth phases lasted 12 months. Therefore, as before, we identify the 12-month-long window within each economic expansion during which interest rates rose the most. The data are presented in the following table.

S&P 500 returns for twelve-month long periods during economic expansions when interest rates rose the most

12 month period ending	S&P 500 return in %
05/31/2004	18.33
10/31/1994	3.87
05/31/1984	-3.12
07/31/1981	12.85
01/31/1980	20.38
07/31/1973	3.70
09/30/1969	-6.44
05/31/1959	37.62
07/31/1957	0.76
06/30/1953	2.35
08/31/1948	10.15
05/31/1940	-15.89
04/30/1937	24.39
03/31/1929	38.37
10/31/1925	39.61
04/30/1923	15.05

Covers 12-month long time periods that ended from 02/29/1920 through 07/31/2013

These data are summarized in the following table.

Summary results for twelve-month long periods of greatest interest rate increase

Statistics	S&P 500 returns in % for	
	Twelve-month long periods during economic expansions when interest rates rose the most	All possible twelve-month long periods
Median return in %	11.50	12.94
Mean return in %	12.62	12.09
Frequency (probability) that the return was positive (>0.0%)	81	73
Total number of twelve-month periods	16	1122

Covers 12-month long time periods that ended from 02/29/1920 through 07/31/2013

The median 12-month return during periods when interest rates rose the most was a favorable 11.50% for the S&P 500. This compares to a median return of 12.94% for all possible 12-month windows (whether interest rates were rising or not and whether our economy was in expansion or contraction). But of greatest interest, 81% of the 12-month windows of most rapid interest rate increase delivered positive S&P returns. This is in contrast with only 73% for all possible 12-month windows. We can perhaps gain greater perspective on what lies ahead for the U.S. stock and bond markets by reviewing the last two episodes in further detail. The following table shows the results for the two most recent periods.

During two most recent economic expansions when interest rates rose the most

Twelve-month period ending	Interest rate on 10-year treasury bond (in %)		Return on S&P 500 (in %)
	At beginning of period	At end of period	
05/31/2004	3.37	4.66	18.33
10/31/1994	5.43	7.81	3.87

Setting aside the current ongoing economic expansion, the last growth phase ended with December 2007, just prior to the Great Recession. During that growth phase, the 12-month period that experienced the greatest interest increase ended May 2004. During that interval, the yield on 10-year Treasurys rose from 3.37% to 4.66%, a remarkable 38% proportionate increase. Nevertheless, the S&P 500 was still able to deliver a positive 18.33% return during this 12-month period.

Similarly, in the prior economic expansion that ended in March 2001, interest rates experienced the greatest rise during the 12-month-long window ending October 1994. During this yearlong period, Treasury yields rose from 5.43% to 7.81%, a 44% proportionate increase. Nevertheless, the S&P 500 still returned a favorable 3.87%.

IV. Conclusions

All other things held constant, an increase in interest rates should reduce stock prices. This occurs because the present discounted value of future dividends falls in direct conjunction with rising interest rates. But of course, all other things are never held constant. As a general rule, when interest rates are rising most rapidly during an economic expansion, this also corresponds with significant economic growth and increasing corporate profits and generally occurs in the middle of economic expansion phases (as opposed to at their end). Thus, although stock prices are hurt by the higher interest rates through the adverse discounting process, the favorable economic growth and increased per share earnings have, on average, more than offset this negative effect.

Nevertheless, investors should keep in mind that not all industry segments may react in the same fashion. Certain industries carry far higher debt levels than others. As interest rates rise, the carrying costs of these higher debt levels may weigh more heavily on these relatively disadvantaged industries.

Three industry segments well-known for their high debt levels include utilities, master limited partnerships (MLPs) and REITs. In the impending rising interest rate environment, these three industry segments, in particular, may be disadvantaged. In contrast, the two industries best known for benefiting (in a relative sense) during rising interest rate environments during phases of economic growth include technology and banking.

As our Federal Reserve reverses course, correcting its now-bloated balance sheet, interest rates will likely rise. Nevertheless, unless this time things are different, domestic equity prices are still expected to continue their appreciation.