THE IMPACT OF EXTREME RETURNS ON SWISS AND U.S. STOCK AND BOND PERFORMANCE

Ronald W. Best, University of West Georgia, Carrollton, Georgia, U.S.A.
Charles W. Hodges, University of West Georgia, Carrollton, Georgia, U.S.A.
James A. Yoder, University of West Georgia, Carrollton, Georgia, U.S.A.

dx.doi.org/10.18374/JIFE-20-4.5

ABSTRACT

We compare the impact of extreme returns on Swiss and U.S. stock and bond portfolios. We find that Swiss and U.S. equity portoflio returns are greatly impacted by a relatively few large negative and positive returns. We show that the Swiss bond portfolio exhibits very few negative returns and that the magnitude of these returns is small. The impact of extreme returns on the U.S. bond portfolio is greater than for the Swiss bond portfolio, but is still less than that of the equity portfolios. Simulations indicate that trading strategies designed to take advantage of extreme returns require substantial accuracy to succeed.

Keywords: *bond returns, stock returns, extreme returns*

1. INTRODUCTION

Market timing is a well discussed strategy. A common definition of stock market timing is described in Seyhun (1994) “as an investment strategy that transfers assets from equities to cash equivalents, or from cash equivalents to equities, based on a prediction of the direction and extent of the next price movement.” Market timers attempt to be out of the market when the negative returns are expected to occur. They return to the market when they expect returns to be positive. However, several studies have shown that historical stock market performance is strongly impacted by a few extreme positive and negative returns. Thus, investors who incorrectly forecast large negative outcomes risk finding themselves out of the market when large positive ones occur.

Examining returns from 1928 to 1990, Ellis (1993) indicates that removing just three large positive return years severely reduces total period return. Further, if an investor misses the 30 largest return days from the period, average annual return falls from 18% to approximately 5%. Chandy and Reichenstein (1992, 1993) show that a few market surges drive stock returns. They show that the total return for the period 1926 to 1987 would be zero if the 50 highest monthly returns were omitted. Shilling (1992) reports that over the 1946 to 1991 period removing the 50 largest monthly returns lowers an investor’s average annual return from 11.2% to about 4%. Seyhun (1994) reports that from 1926 to 1993 missing the 48 highest monthly returns decreases average portfolio return by around 9%. Average return is also heavily influenced by extreme negative stock returns. Seyhun (1994) shows that omitting the 48 most negative monthly stock returns from 1926 to 1993 roughly doubles the period’s average stock portfolio return. In a similar vein, Stowe (2000) shows that during the 1991 to 1998 period, removing the 40 worst return days increases average annual stock portfolio return by about 100%.

Recently, Best, Hodges, and Yoder (2019) update results to cover the period from 1926 to 2016 and include an analysis of return outliers on bond portfolios. They find that for U.S. stocks missing the five most negative return years during the period increases total return by over seven-fold, while missing the five most positive return years reduces total return by a similar magnitude. Due to the truncated bottom of the distribution of bond returns, they show that missing the five most negative bond return years only increases total return by about 40%, but missing the five most positive bond return years reduces total return by around 85%.

The results reported in the extreme return literature have been interpreted as being both favorable and unfavorable regarding market timing attempts. Some authors make unequivocal declarations against