

The value, size, and momentum spread during distressed economic periods

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Received 26 January 2006; accepted 25 May 2006

Available online 11 July 2006

Abstract

We study the behavior of market risk, value, small cap, and momentum premia under different macro economic scenarios. If these factors are risk factors, then these factors offer high returns to investors at times when the gain (marginal utility) of additional consumption is low (good economic times) and low returns at times when the gain (marginal utility) of additional consumption is high (bad economics times). Our results show that market risk and small cap premia behave more like risk factors while value premium does not. In fact, our results show that a portfolio with a long position in value and a short position in growth is a hedge in the down market and recessionary periods. Our results also show that a momentum premium exists under different economically distressed scenarios we studied.

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JEL classification: G10; G11; G12; G14

Keywords: Fama–French three factor model; Risk factors; Risk-premium; Large cap stocks; Small cap stocks

1. Introduction

One of the most often confirmed findings in investment research is that value stocks (high-book-to-market stocks) outperform growth stocks (low book-to-market stocks). Although the effect has lessened recently, the same result is obtained for small stock investing; small stocks (low-capitalized stocks) outperform large stocks (high-capitalized stocks). The debate is over

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why. Fama and French (1992, 1993, 1995, 1996, 1998) believe the high returns of value and small stock investing represent a reward for bearing the risks inherent in those strategies. Others such as Lakonishok et al. (1994), Shleifer and Vishny (1997), and Daniel and Titman (1997) attribute these returns to market inefficiencies. They argue that the incorrect asset valuation results from psychological and/or institutional factors that lead investors to systematically under price value stocks.

To investigate whether the superior return of some strategy represents a risk premium it is reasonable to examine the strategy's returns for time periods characterized by economic difficulties. Consider two assets that provide the same return over a given time horizon. Suppose the first asset performs at its best during good economic times, the second during bad economic times. Clearly, a well-diversified investor should prefer the second asset for its hedging properties. This is because investors value additional consumption (made possible by the higher return) more during bad times. To induce investors to hold the first asset, it must offer a higher expected return, i.e., a risk premium. So, for example, if premium offered by a value strategy is indeed due to risk, then would one expects better performance in good economic times than in bad times.

To place this in the context of our discussion, Fama and French find that the value premium (the return on high book to market minus low book to market stocks, denoted HML for high minus low) and the small stock premium (the return on small cap stocks minus large cap stocks, denoted SMB for small minus big) coupled with the market risk premium does a good job of explaining equity returns. This supports their view that the value and the small cap stock premia represent a reward for risk. Their strongest interpretation of their results claims that HML and SMB are "state variables of concern to investors." This means that these factors offer high returns to investors at times when the gain (marginal utility) of additional consumption is low (good times) and low returns at times when the gain (marginal utility) of additional consumption is high (bad times). (See Cochrane (2001).) In other words, if these investments fail to provide proceeds at times when they are needed the most, then they must provide a higher expected rate of return to remain competitive with assets that perform better during those periods. So the premium represents a reward for risk bearing.

While our discussion thus far may appear of interest only to academic researchers, it has important implications for the practice of investment management. Traditionally, proponents of value investing defend it on the basis of its higher risk-adjusted return relative to growth investing. However, if one finds (against the risk-based rationalization) the value premium remains strong in economically adverse times, then there is another rationale for value investing. Value investing then offers a useful hedge.

In related research on momentum strategies, Jegadeesh and Titman (1993) show that stocks that have earned high returns recently ("the winners"), have earned superior returns, especially in comparison to stocks that have recently performed poorly ("the losers"). Although Fama and French never acknowledged momentum as a risk factor, Carhart (1997) used winners minus losers portfolio (WML) as a factor along with value, small stock, and market risk premia to explain the persistence in mutual fund performance. In light of Carhart's findings, in this paper we evaluate the performance of SMB, HML, and WML portfolios for various types of adverse economic situations.

We conducted our analysis as follows. The first economically adverse condition we investigate is stock market performance. We compare the investment results of these portfolios during periods when the stock market return failed to exceed the risk-free return to the results in the remaining periods. It makes sense to look at this scenario because when the return on a broad-based stock market portfolio is below the risk-free rate then HML, SMB, and WML portfolios

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