

The Low-Volatility Anomaly Revisited

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Abstract

The present study conducts two different strategies in order to exploit the low-volatility anomaly in the U.S., the European and the German equity market. The first strategy uses quadratic optimization to calculate optimal portfolio weights. The second strategy sorts stocks into portfolio quintiles based on past realized volatility. Our main findings show that both low-volatility strategies outperform the respective benchmark market portfolio. While the effect is strongest during bull-market periods, it gets weaker during periods of market downturns. Additional results show that in the U.S. market, the low-volatility anomaly can be explained by trading volume and operating profitability. In the German market, operating profitability and the dividend yield can explain the low-volatility effect while in the European market none of these characteristics play a role in explaining the effect. Overall, our findings provide evidence that the low-volatility anomaly still is a robust phenomenon that is inherent in mature capital markets.

Keywords: Low-Volatility Anomaly, Portfolio Optimization, Risk-Return Tradeoff

JEL Classification: G1

I. Introduction

The low-volatility effect describes the long-term average outperformance of low-volatility portfolios relative to the market portfolio along with the relative underperformance of high-volatility portfolios versus low-volatility portfolios on a risk-adjusted basis (see e.g. *Blitz/van Vliet 2007*). The observed phenomenon contradicts rational economic theory that higher risk should be compen-

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The authors would like to thank Prof. Dr. Hans-Peter Burghof (the editor) and an anonymous referee for valuable comments and suggestions. The usual disclaimer applies.