SMART BETA: GOING BEYOND TRADITIONAL PASSIVE AND ACTIVE INVESTMENT STRATEGIES

Bachelor Thesis

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Executive summary

Problem and objective

Due to the fact that many performance studies criticize traditional passive investing, and claim that investing in actively managed funds tends to bring only little value above the benchmark; this bachelor thesis tries to analyze whether alternative investing strategies (Smart betas) could be the more profitable equivalent for an investor. In order to do so, alternatively weighted portfolios, using constituent stocks of the SMI Expanded index (SMIEXC), were created and observed in a 10-year time period and their performance was compared to the performance of the market capitalization portfolio and the underlying index.

Approach and structure

In this bachelor thesis, the criterion for alternative weights was neither the price, nor the market capitalization, but rather factors, which try to exploit market price inefficiencies. In total, six new buy and hold portfolios were created: five of them representing Smart beta strategies and one representing the traditional market capitalization portfolio. The equally weighted, high volatility, low volatility, Momentum and Contrarian portfolios, served as alternatively weighted portfolios.

The equally weighted portfolio applied equal weights to all stocks included, making it equally exposed to both big and small cap companies. For creating the Momentum and Contrarian portfolios, annual volatilities of all stocks were calculated; and correspondingly, ten stocks that depreciated the most in each previous year, were made part of the Contrarian portfolio of each consecutive year, while ten stocks that appreciated the most in the previous year, were used for creating next year's Momentum portfolio.

For creating the high- and low volatility portfolios, data of stocks' annual volatility was used. Accordingly, ten stocks with the highest level of last year's volatility were used to build next years' high volatility portfolio, and in the same manner, ten stocks with the lowest level of volatility were taken into account when creating next year's low volatility portfolio. For the market capitalization portfolio, year-end market capitalizations of each previous year were used to calculate the stocks' weights for the next years' portfolio.

Results and conclusion

As expected, the results of this thesis show that, on average, all Smart beta strategies outperformed the market capitalization portfolio and the underlying index, both in terms of returns and risk-adjusted returns. Results of outperformance were explained using the Carhart's four factor model. Namely, the size factor could explain the outperformance of the equally weighted portfolio over the market capitalization portfolio (whose underperformance is based on its non-optimal exposure to undervalued stocks and overexposure to overvalued stocks). The momentum factor explains the outperformance of the Momentum portfolio over it's opposite- the Contrarian, and the Beta factor (when being taken as a benchmark for volatility), explains the outperformance of the high volatility portfolio.

In summary, results show that all alternative portfolios created had an average annual compounded growth rate of 7.76%, compared to an average of 3.70% of both the market capitalization portfolio and the index. Out of the whole sample, the high volatility portfolio showed the best results, only slightly outperforming the Momentum portfolio, which on the other side, showed the best risk-adjusted return out of all portfolios observed.

Abstract

Early performance studies point to the conclusion that before expenses, active management tends to add little value above the benchmark, with this probability decreasing substantially after expenses. All of these performance studies support the idea of passive cap-weighted indexing approach. More recently, critics aimed towards traditional passive investing, shifted the focus towards alternative investing strategies. Smart beta, an investment tool bridging the gap between active and passive investing, has been proven to enhance diversification and risk-adjusted return, by being based on factors, which try to capture a premium associated with mispricing. This thesis tests the efficiency of Smart beta strategies on the Swiss stock market. By using stocks, which are part of the SMI Expanded index, alternative portfolios were created and their performance was observed and compared to the performance of the market capitalization portfolio and the underlying index. The main finding of this research reveals supporting evidence for the hypothesis that, on average, Smart beta strategies outperform the traditional market capitalization portfolio. Namely, over the analyzed period from 2006 to 2015, all alternative portfolios considered, produced a better risk-adjusted performance, than would have been achieved by passive exposure to a market capitalization portfolio.