

Abstract

Portfolio strategies have the objective to add value for the investor. The number of design possibilities of a portfolio is nearly unlimited, so a reasonable portfolio strategy should be based on an economic idea to determine in which assets to invest. This makes the performance of the portfolio assessable and helps to attribute the added value to expertise or luck. In general, portfolio strategies can be divided into passively and actively managed strategies. Passive strategies emulate broad asset indexes with no or only minimal adjustments in, for example, the weights of the assets. Active strategies, in contrast, try to outperform broad indexes by selecting specific assets or timing the investment. Commonly applied approaches to set up such portfolio strategies are, for instance, based on exploiting market anomalies. As essential elements of active portfolio management, designing and implementing investment strategies represent an already large and still constantly growing business sector. Nevertheless, there is still the need for further research to improve the understanding of the performance generation of portfolio strategies and influences on it. Moreover, further contributions can be made by advancing the design and implementation of strategies with innovative and newly developed methods.

To invest reasonably and to evaluate a portfolio strategy properly, a reference measure, or a benchmark, is needed. A benchmark can be understood as a reference portfolio that depicts all investment opportunities as well as the risk perception of the investor. The precise composition of such a benchmark is usually based on financial models, which imply a distinctive risk conception. A portfolio strategy is implemented within the investment opportunities comprised in the benchmark. Consequently, the role of the benchmark in finance is twofold. On the one hand, the benchmark is needed to determine a portfolio strategy, since the benchmark combines all investible assets. On the other hand, the benchmark is needed to evaluate the performance of the portfolio strategies afterwards in order to distinguish between compensation for taken risk and actual outperformance. For both, the benchmark has to reflect the investible universe and risk conception properly and,

in addition, should match the chosen portfolio strategy to be able to serve as a reasonable reference measure and to evaluate the portfolio performance accurately. Benchmarks are needed in research and portfolio management alike; without benchmarks no reasonable development or evaluation of portfolio strategies is possible. Designing portfolio strategies and analyzing their performance is explicitly studied in literature, but the specification of benchmarks is usually not at the center of attention. Although the importance of a benchmark is undisputed, a systematic classification and impact analysis is still missing. It is in question whether different specifications of a benchmark have an influence on the exact structure of the chosen portfolio strategy and its performance. Moreover, an analysis of the implications regarding the inherent risk conception in benchmarks is often neglected. All in all, there is undeniably the need for research to shed light on the composition and use of benchmarks and stress the importance of a reasonable specification.

This dissertation addresses different key elements in portfolio management. It intends to improve and analyze influences on portfolio strategies and their performance. Likewise, it aims at the systematization and extension of benchmark specifications as well as their effect on portfolio strategies. Each chapter focuses on a different aspect of developing and implementing portfolio strategies. The dissertation seeks to contribute to the advancement of portfolio strategies by making the performance generating process and influences on it more comprehensible and transparent. In doing so, it attempts to strengthen the awareness of the impact of the exact design of portfolio strategies and benchmarks on the resulting portfolio and its performance.

The key findings of this dissertation can be summarized as follows: The benchmark specification, especially in terms of the investible universe and the inherent risk conception, has substantial influence on the explicit design and performance of portfolio strategies. In general, the specification of the benchmark and design of portfolio strategies should be carefully considered and the implementation should be well thought out. Alternative risk conceptions, such as regret risk, can be applied to portfolio selection and lead to clearly different portfolio compositions. Moreover, timing strategies can be improved by choosing a careful investment approach on the basis of distributional regressions. All empirical work

of this thesis has in common that it pursues different ideas to set up portfolio strategies while explicitly addressing the benchmark specification used for the implementation and evaluation of said strategies.