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With a foreword by Prof. Dr. Thorsten Poddig

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Friedrichsdorf, Germany

Dissertation University of Bremen, Germany, 2014

ISBN 978-3-658-07258-2 ISBN 978-3-658-07259-9 (eBook)
DOI 10.1007/978-3-658-07259-9

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at http://dnb.d-nb.de.

Library of Congress Control Number: 2014949923

Springer Gabler

Printed on acid-free paper

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Springer DE is part of Springer Science+Business Media.
www.springer-gabler.de

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Foreword

Today's active asset management is mainly based on the theory of portfolio selection, which was founded by H. Markowitz and J. Tobin in the 1950s. Since then, it was continuously developed. However, there arose quickly several points of criticism in practical applications. Practitioners complained about the results of the portfolio optimizations as unintuitive, since the resulting portfolio structures are usually characterized by high concentrations in a few assets. In addition, portfolio structures are very sensitive to minor changes in the input parameters, which are necessary for the portfolio optimization. While the use of this theory was accompanied by a degree of skepticism ever since, the course and outcome of the recent financial market crisis represented another significant drawback for the application of this theory. In the financial market crisis, both private and institutional investors suffered considerable losses in their portfolios, although they should be apparently well-diversified.

In the light of this practical experience, a 'new', highly propagandized investment approach emerged: Risk Parity or Equal Risk Contribution (ERC) portfolios. These are approaches to portfolio construction, which do not, or not primarily, take the return component into account, but are completely or mainly based on risk parameters. Albeit such approaches are not really new; the so-called minimum-variance portfolio, which is part of the classical theory of portfolio selection, accomplishes this since the beginning in a similar manner. In this respect, this leads consequently to the research question of this work: What aspects of the 'new' approaches are really 'new', what are they able to achieve? Or in other words: Are these approaches capable to accurately solve those problems, for which the classical models are discredited?

The present work deals with these issues. It analyzes the topic of risk-based asset allocations encompassing the theoretical, methodological and empirical point of view. In addition to common approaches in the investment industry, own extensions are presented and their quality is analyzed. The basic question is whether these approaches, including the developed extensions, denote a progress with respect to the classical theory and if so, what the difference exactly is. Whereas the achieved results are rich in detail and can hardly be summarized in a foreword, the basic result is anticipated. Despite some favorable results in individual cases, on the whole, a superiority of the risk-based budgeting portfolios cannot be ascertained. Overall, the risk budgeting models do not offer a real alternative to the well-known minimum-variance portfolio. Insofar, the currently in the investment practice propagandized approach seems more likely to be a 'fad' than a noticeable progress.

Prof. Dr. Thorsten Poddig

Preface

This PhD thesis contains the result of research undertaken at the Department of Finance of the University of Bremen under the supervision of Prof. Dr. Thorsten Poddig.

Many people have contributed to the success of the thesis, whom I would like to express my gratitude.

First of all, I thank my supervisor Prof. Dr. Thorsten Poddig for his excellent support during the years of research. His constructive suggestions as well as the critical comments were essential for this work. I have learned a lot during the time of my doctoral studies and have developed professionally and personally. Therefore, for enabling the PhD study and for his granted support in all aspects, I am extremely grateful. Also a heartfelt thank you to Prof. Dr. Diethelm Würtz for his continued support during my dissertation. His valuable suggestions, the research stays in Zurich and not least the introduction to the software R, which has now become a passion, have also contributed to the success of this work.

I also thank my former colleagues for the friendly cooperation and the numerous valuable discussions. A special thanks goes to Geraldine Tchegho for her willingness for spontaneous discussions and the many funny moments. I will always have fond memories of our time together in the office. I also thank Petra Sebbes for the versatile support and the nice talks, which made the doctorate more enjoyable.

Special thanks go to my husband and family for their essential support and the sometimes necessary free space. Especially in difficult situations, my husband has always given me confidence and courage. Without his encouragement, patience, trust and love and without the support of my family, this work would not have been possible.

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