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Markus Vollmer

A Beta-return Efficient Portfolio Optimisation Following the CAPM

An Analysis of International
Markets and Sectors

 Springer Gabler

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Stuttgart, Germany

ISBN 978-3-658-06633-8
DOI 10.1007/978-3-658-06634-5

ISBN 978-3-658-06634-5 (eBook)

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: 2014945108

Springer Gabler

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Acknowledgements

Though only my name appears on the cover of this dissertation, a great many people have contributed to its production. I owe my gratitude to all those people who have made this dissertation possible and because of whom my graduate experience has been one that I will cherish forever.

My deepest gratitude is to my supervisor, Prof. Dr. Simon Gao. I have been amazingly fortunate to have an advisor who taught me how to verge on this voluminous research project. Furthermore, I appreciated his valuable support which I received within our meetings and his guidance even when I was back in Germany.

My co-supervisor, Prof. Dr. Tobias Popović, has been always there to listen and give content-related and personal advice. I am deeply grateful to him for the long discussions that helped me to sort out the structural details and also for his support by equipping me with recent academic literature.

Many friends have helped me stay sane through the demanding years of my graduate studies, foremost my long standing friends Benjamin Krotz, Malte Henn and Sebastian Honold (all graduates from HFT Stuttgart), my fellow students from Edinburgh Napier University, Hannes Gottschlich and Nico Zimmermann, and my best friend Miriam Gref. I greatly value their friendship and I deeply appreciate their belief in me. Most importantly, none of this would have been possible without the support and patience of my family. For this reason I dedicate this dissertation to my parents, my brother Frank and my beloved girlfriend Barbara who have been an instant source of love and strength all the times and in particular in the last six months.

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Abstract

Purpose

The most widely used but also extensively debated method for pricing security return is the capital asset pricing model (CAPM). In combination with Markowitz's (1959) statement on the reduction of unsystematic risk through diversification, this dissertation focuses on the development of a risk-return efficient equity allocation.

Design/methodology/approach

A quantitative research design is used which deductively employs the market index model and other grand theories as the foundation within the research process. A repeated cross-sectional analysis of the Global Stock Market is used to increase the validity and reliability of the findings to answer the research questions. The philosophies behind this approach are those of a functionalist, positivist and objectivist. The secondary data prohibits from biases connected with its sampling.

Findings

First of all, the study found proof that noticeable differences exist between countries and supersectors in regards to the beta-return relationship. Secondly, the analysis of the data allows for a risk-return efficient equity allocation. Thirdly, the predictability of future single stock performance was weak and stock picking or market timing cannot be supported by the implemented beta-return ratio.

Research Limitations

Even though the proxy is comprehensive it cannot be regarded as perfect because emerging economies are missing. Also, the statistical significance is limited due to the nature of the cross-sectional approach.

Finally, the validation of the findings is critical as the research about international and cross-sector stock market behaviour is scarce.

Practical Implications

The results of this work enable institutional and large private investors to optimise their stock portfolios through a beta-risk efficient diversification across sectors and countries.

Originality/value

This dissertation analyses one of the most comprehensive data sets available. Furthermore, it investigates more countries and industry sectors than all of the literature found on this topic.