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Chapter 1

Introduction

Tony Klein[*,¶], **Sven Loßagk**[†,‖], **Mario Straßberger**[‡,**], **and Thomas Walther**[§,††]

[*]*Queen's University Belfast, Queen's Management School, United Kingdom*
[†]*Berufsakademie Sachsen, University of Cooperative Education Dresden, Germany*
[‡]*Zittau/Görlitz University of Applied Sciences, Faculty of Business Administration and Economics, Germany*
[§]*Utrecht University, Utrecht School of Economics, The Netherlands*
Technische Universität Dresden, Faculty of Business and Economics, Germany
[¶]*t.klein@qub.ac.uk*
[‖]*sven.lossagk@ba-sachsen.de*
[**]*m.strassberger@hszg.de*
[††]*t.walther@uu.nl*

The field of modern finance and risk management is characterised by fundamental changes and further developments in recent years. Theoretical and empirical analysis of asset prices, implementation of behavioural finance approaches, and time series analysis with time-varying volatility are topics that were honoured by the Nobel Prize committee.

Some of these developments are picked up in the present volume which is dedicated to our academic mentor Hermann Locarek-Junge. He contributed to the field of portfolio management and risk management of his own during the last four decades as Ph.D. student and post-doc at the University of Augsburg, Professor at the University

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of Essen/Duisburg, Professor at the Technische Universität Dresden, Chairman of the German Finance Association (Deutsche Gesellschaft für Finanzwirtschaft E.V.) and host of various conferences. This volume comprises twenty chapters from scholars in finance who learned and worked with Hermann Locarek-Junge in various ways. Their contributions cover some of the latest and most relevant topics in finance research dealing with questions of modern finance, modern risk management, and modern commodity finance.

In the first section of this Festschrift, authors address current topics of *modern finance* including asset management, entrepreneurship, and behavioural finance.

Günter Bamberg and *Sebastian Heiden* take a closer look at the notion of returns. They show that confounding the return notions leads to incorrect results in portfolio optimisation and performance measurement.

Ralf Trost and *Alexander Fox* discuss the role of emotionally involved investors in finance and decision theory and use an example of a German football fan bond. They conclude that currently emotional aspects seem to be too complex to be incorporated into mathematically driven models.

Friedrich Thießen and *Jörg Müller* investigate the performance of various risk-reduced investment strategies during the COVID-19 pandemic. They document limited risks throughout the sample of funds. Further, they find heterogeneous returns within strategies but homogeneous returns across strategies which is due to the low degree of commitment to an investment strategy by fund managements.

Susanne Homölle, Nikolas Höhnke, Ulf Hübenbecker, and *Philipp Winskowski* focus on the growth of social banks, which typically have higher deposits-to-assets ratios than conventional banks due to excess liquidity. The empirical results of 23 European social banks show a tremendous growth in deposits since the financial crisis leading to excess liquidity risks with strict self-restrictions.

Ulrike Stopka compares approaches in practice for determining the eligible cost of capital for different regulated infrastructure network companies (telecommunication, electricity, and railway) in Germany. Although the regulation is applied by the Bundesnetzagentur for all three industries, the methodological framework is different in detail.

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Benjamin Hammer, Nils Härtel, Suleiman Naiem, and *Bernhard Schwetzler* examine the enterprise value growth of private equity backed buyouts. They show that the rate of growth of enterprise value for small and medium-sized enterprises (SME) is higher than that for non-SMEs. Furthermore, they investigate the effects of different portfolio firm- and deal-characteristics, e.g., financial market development, private equity fund size, or management buyouts, on the growth of enterprise value.

The second section of this Festschrift covers different contributions to *risk management* including aspects of risk measurement, risk controlling, and regulation.

From a statistical point of view, *Steffi Höse* and *Stefan Huschens* give answers on estimating probabilities of risky events if no occurrence of such events has been observed before. They present a variety of point estimates and interval estimates for the Bernoulli parameter based on different approaches to statistical inference.

Kerstin Bergk, Mario Brandtner, and *Wolfgang Kürsten* compare Conditional Value-at-Risk and Tail Nonlinearly Transformed Risk Measure as a basis of regulatory capital constraints for banks. Imposing both risk measures on the classical portfolio selection problem, the authors show that the first constraint might be less effective than the second one in inducing lower risk takings. But, the effectiveness depends on the bank's grade of risk aversion.

Lars Hengmith and *Sophia Licht* attempt to objectify subjective risk assessments using systematic opinion combining techniques. The applicability of the proposed methodology is tested by expert interviews in the electricity industry.

Stefan Huschens and *Gerhard Stahl* develop an approach for capturing model risk by a multiplicative risk factor instead of additively aggregating it to other risks. They consider and compare the standard additive (location) model, a multiplicative (scale) model, and a location-scale model.

Krzysztof Jajuga considers model risk in option pricing focussing on the uncertainty with respect to the estimates of underlying price volatility. He proposes to measure model risk by sensitivity measures. One of the sources of model risk is identified with the volatility index VIX which is not an appropriate estimator for expected volatility.

Rainer Lasch and Karl Dietrich develop a framework for success factors of resilient supply chains and analyse reactions of supply chains to disruptions by a case study in the mobile phone sector.

Katarzyna Kuziak and *Krzysztof Piontek* examine systemic risk in the German banking sector. They report differences in systemic risk assessment depending on selected financial ratios, normalisation and ordering methods, and group of banks.

In the third section of this Festschrift, authors deal with topics of *commodities and energy finance* considering oil, gold, and cryptocurrencies as well as power purchase agreements and renewable energy sources.

The impact of oil-market variables on short-term stock market returns is examined by *Harald Kinateder* and *Niklas Wagner*. They report significant positive effects of oil prices on stock returns across different markets but a negative influence of oil price volatility.

Sven Loßagk undertakes an assessment of the German Renewable Energy Sources Acts over time regarding the risk situation of lenders and shareholders by using Monte-Carlo simulation and by applying different risk metrics of project finance. He demonstrates a decrease in financial risk for equity and debt.

The use of Power Purchase Agreements (PPA) for purposes of corporate risk reduction is outlined by *Andreas Horsch* and *Steffen Hundt*. They analyse gain and risk structures of major PPA types and recommend that buyers should carefully match their risk appetite and price expectation with the PPA's price mechanism.

Thomas Burkhardt and *Dominik Möhring* review a model for predicting gold price movements proposed in popular literature. Next to a sceptical analysis, they apply appropriate out-of-sample tests for model evaluation and identify the model to be inadequate.

Siegfried Köstlmeier and *Klaus Röder* consider gold as an additional component to German stock portfolios. While hedging perspectives suggest increasing the share of gold in stock portfolios, they find that investors should rather decrease its share in Germany when maximising the Sharpe ratio.

Tony Klein and *Thomas Walther* deal with dynamic correlation of precious metal and equities. Their findings suggest that Gold and Silver serve as short-term safe-haven with decreasing correlation towards zero during equity market recessions, while Platinum and Palladium show features of a diversifier.

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Finally, *Mario Straßberger* includes Bitcoin in German equities portfolios and examines diversification benefits and hedging abilities. He reports improved performances and significant diversification effects for stock market investors but almost no hedging abilities of Bitcoin.

We are deeply grateful to all contributors for participating in the realisation of this Festschrift by submitting their original papers. Furthermore, we are highly indebted to many colleagues helping us with friendly reviews of the various chapters: *Dirk Baur, Lanouar Charfeddine, Simon Cornée, Robert Czudaj, Jeroen Derwall, Gregor Dorfleitner, Tom Dudda, Matthias Fengler, Rüdiger Kiesel, Ladislav Kristoufek, Eran Manes, Paul Schure, Daniel Tillich, Christian Walkshäusl*, and *Florian Ziel*. We are also grateful to *Duc Khuong Nguyen* and World Scientific for their kind support throughout the process.

Finally, we would like to thank Hermann Locarek-Junge for his manifold support on our way into the academic world. During our time as research assistants, we benefited greatly from his experience and guidance through the challenging process of research, in particular by allowing for an unbounded development of research topics within the realms of modern finance. Unforgotten are the annual trips to Saxon Switzerland, where we discussed recent research topics during daytime and other interesting issues afterwards. And of course, every recent staff member will remember the regular all-staff meetings which usually included either ice cream or — depending on the time of the year — Dresdner Stollen. For all this, we are deeply grateful and wish him all the best for his future.