



# Annual Report 2017 ♦ 18



# Contents



## 3 Editorial

---

### 4 The ICIR Year at a Glance

---

### 5 The ICIR at Goethe University

- 6 ICIR Its Three Pillars
  - 7 Funding and Partners
- 

## 8 People at the ICIR

- 9 Team
- 11 Executive Board
- 12 Advisory Board

## 14 Research Insurance. Risk. Regulation.

- 15 ICIR Research Portfolio
  - 17 International Research Collaborations:  
Reports by Christian Kubitzka, Irina Gemmo  
and Jan-Hendrik Weinert
  - 30 Publications
  - 33 Academic Conferences
  - 35 Frankfurt Insurance Research Workshop (FIRW)
- 

## 36 Education Studies. Lectures. Seminars.

- 37 Curriculum Overview
- 39 Bachelor and Master Degree Programs:  
Lectures and Seminars
- 42 Certificate  
"Insurance. Investment. Pensions. Regulation."
- 43 Facts and Figures

## 44 Policy Platform People. Positions. Presentations.

- 45 The Recalibration of the European System of  
Financial Supervision in Regard of the Insurance  
Sector: From Dreary to Dreamy or Vice Versa?  
(Helmut Gründl, Jens Gal)
  - 51 Life Insurance: Rising Interest Rates Can Lead to  
Challenges (Helmut Gründl)
  - 52 13<sup>th</sup> Talk on Insurance and Regulation:  
Life Insurers: Low Interest Rates are Bad.  
Are Rising Interest Rates Better?
  - 54 ICIR/SAFE Lunchtime Series: Systemic Risk in the  
Insurance Sector: Micro- and Macroprudential  
Policies are not yet Aligned
  - 56 14<sup>th</sup> Talk on Insurance and Regulation:  
Climate Risk and Sustainable Finance in Europe:  
The Role of Insurance
  - 59 Policy Presentations
- 

## 61 ICIR Events 2018

---

## 64 Imprint

# Editorial

## Looking Back at a Successful Year at the ICIR

It is with great pleasure that we present the Annual Report of the International Center of Insurance Regulation (ICIR) 2017/18. We have worked hard and with great success to achieve the three main objectives of the ICIR: contributing to internationally visible research in the field of insurance regulation, training students in the fields of insurance and insurance regulation, and providing a platform for academics, regulators, supervisors, and insurance practitioners to discuss and develop topics relating to insurance regulation.

I cordially invite you to read about our activities. We have developed research projects which aim to improve Solvency II, which contribute to the ongoing discussion on the systemic risk of the insurance sector, which look at the implications of a digitalized world on insurance markets, or which investigate possibilities to make life insurance products fit for an aging society in a low interest rate environment. We managed to present our research at different renowned international conferences and have received very good feedback that will enable us to publish the respective articles in top scientific journals.

During the year I have served as a guest editor for a special issue of the "Geneva Papers on Risk and Insurance" on "Insurance Regulation". Presently, I am preparing, together with my co-editor Mirko Kraft, the third edition of a leading text book on Solvency II.

We have also enlarged our teaching activities in the area of insurance and insurance regulation, e.g. by setting up a new master lecture on "The Micro- and Macroeconomic Role of Insurance".

The "second generation" of the ICIR's research assistants – Irina Gemmo, Franca Glenzer, Christian Kubitzka, and Jan Weinert – are presently successfully completing their doctoral studies. Jan Weinert and Christian Kubitzka are leaving team in the fall 2018. I thank them very much for their excellent work regarding research and teaching at the ICIR.

As to the "policy platform activities" of the ICIR, the Annual Report sheds light on our "Talks on Insurance and Regulation" and a recent joint event in Brussels, where our team has discussed its research results on the systemic risk of insurers with Nathalie Berger from the EU Commission and Allianz' CRO Tom Wilson, whom, by the way, we also thank for offering seminars for our students at Goethe University. Jointly with EIOPA, The World Bank, and SAFE, we have also already started to organize another Conference on "Global Insurance Supervision" in 2019.

I would also like to thank our funding partners, the boards of the ICIR, and our team: many thanks to the GDV and the State of Hesse for sponsoring and



supporting the ICIR. As part of the Goethe University, the ICIR is also very grateful for the support of the Goethe University, and for the excellent cooperation with SAFE in the House of Finance.

My thanks also go to the colleagues on the Executive Board and the members of the Advisory Board of the ICIR for their continuous support and great commitment. I also wish to thank the ICIR team members for their great work throughout the year. Without their commitment, none of the outcomes reported here would have been possible.

We hope you will enjoy reading our Annual Report, and we look forward to another exciting year at the ICIR!

A handwritten signature in black ink, appearing to read "H. Gründl". The signature is fluid and cursive.

**Prof. Dr. Helmut Gründl,**  
Managing Director of the ICIR

# The Year at a Glance



December 7–8, 2017  
Goethe University,  
Frankfurt  
Frankfurt Insurance  
Research Workshop  
for doctoral students and  
post-doctoral researchers  
in the areas of insurance,  
risk management and  
insurance regulation

January 22, 2018  
Frankfurt, Germany  
Research Presentations  
'Rising Interest Rates,  
Lapse Risk and the  
Stability of Life Insurers'  
at the Deutsche  
Bundesbank  
Prof. Dr. H. Gründl,  
Christian Kubitza,  
Fabian Regele

February 05, 2018  
London, UK  
Research Presentations  
'Financial Contagion and  
Diversification of  
Insurance Activities' at  
the Bank of England  
Christian Kubitza

February 15, 2018  
EIOPA, Frankfurt  
Research Presentations  
EIOPA Advanced Seminar  
'Quantitative Techniques  
in Financial Stability'  
Prof. Dr. H. Gründl,  
Christian Kubitza

February 19, 2018  
University of Oxford, UK  
Research Presentations  
Oxford Talks  
Postdoc & DPhil  
Workshop at the  
Department of  
Economics  
Irina Gemmo

March–May, 2018  
New York, USA  
International Research  
Exchange  
The School of  
Risk Management,  
Insurance and  
Actuarial Science,  
St. John's University  
Christian Kubitza,  
Jan-Hendrik Weinert

March 21–22, 2018  
Munich, Germany  
Research Presentations  
Annual Congress of the  
German Insurance  
Science Association 2018

April 23, 2018  
Goethe University,  
Frankfurt  
Moderation of the Panel  
'Insurance Company  
Resolution' at the ILF  
Conference  
'Resolution in Europe:  
The Unresolved Questions'  
Prof. Dr. H. Gründl

May 24, 2018  
House of Finance,  
Frankfurt  
13<sup>th</sup> Talk on Insurance  
and Regulation  
Life Insurers: Low Interest  
Rates are Bad. Are Rising  
Interest Rates Better?  
Dr. Frank Grund (BaFin),  
Dr. Klaus Wiener (GDV),  
Prof. Dr. H. Gründl

June 14, 2018  
Glashütten/Ts., Germany  
FIRM Research Prize 2018  
for Dr. Elia Berdin's  
dissertation 'Essays in  
Microprudential and  
Macroprudential Super-  
vision in Insurance'

August 5–8, 2018  
Chicago, USA  
Research Presentations  
2018 Annual Meeting of  
the American Risk and  
Insurance Association  
(ARIA)

Sep–Dec, 2018  
Philadelphia, USA  
International  
Research Exchange  
The Wharton School,  
University of Pennsylvania,  
Business Economics and  
Public Policy Department  
Irina Gemmo

October 10, 2018  
Representation of the  
State of Hessen, Brussels  
ICIR/SAFE Lunchtime  
Series  
Insights on Systemic Risk  
in the Insurance Sector  
Nathalie Berger, Ph.D.  
(European Commission),  
Tom C. Wilson, Ph.D.  
(Allianz SE),  
Prof. Dr. H. Gründl

October 17, 2018  
House of Finance,  
Frankfurt  
14<sup>th</sup> Talk on Insurance  
and Regulation  
Climate Risk and  
Sustainable Finance in  
Europe: The Role of  
Insurance  
Dr. Manuela Zweimüller  
(EIOPA),  
Dr. Christian Thimann  
(Athora)

# The ICIR at Goethe University



# ICIR

## Its Three Pillars



### Research

The International Center for Insurance Regulation (ICIR) is recognized as a leading scientific institution fostering independent research on insurance regulation and market solutions to regulatory questions. As an integral part of Goethe University in Frankfurt, the ICIR is committed to Goethe University's values and mission statement.

### Education

The ICIR offers several lectures and seminars within the Bachelor and Master degree programs at the Faculty of Economics and Business Administration of Goethe University in order to increase professional knowledge in the field of insurance economics and insurance regulation.

### Policy Platform

The ICIR provides an international and interdisciplinary platform for scholars, executives of the insurance industry, regulatory authorities, and policy makers to exchange ideas and shape strategic thinking about the future development of insurance and insurance regulation.

# Funding and Partners

We would like to express our gratitude towards our funding partners, the university, cooperation partners, and all the people within our network, for their continuous trust and tremendous support shaping the ICIR's development.



The ICIR receives generous funding by the State of Hesse (Land Hessen) and the German Insurance Association (Gesamtverband der Deutschen Versicherungswirtschaft (GDV)) for a period of ten years.

Goethe University, a research-oriented university at the heart of Europe's financial center Frankfurt am Main, provides an outstanding and modern infrastructure located on the Campus Westend in the House of Finance.

Goethe University gives the ICIR a unique scientific environment for interdisciplinary research, especially through its research center "Sustainable Architecture for Finance in Europe" (SAFE).

In addition, the ICIR receives further research funding from the German Association for Insurance Studies (Deutscher Verein für Versicherungswissenschaft e.V.) in Berlin, the Frankfurt Association for the Promotion of Insurance Studies at Goethe University (Förderkreis für die Versicherungslehre an der Johann Wolfgang Goethe-Universität) and Goethe Finance Association e.V. (GFA).



**Förderkreis für die Versicherungslehre e. V.**

# People at the ICIR



# The ICIR Team



**Prof. Dr. Helmut Gründl**  
Chair of Insurance and Regulation  
Managing Director, ICIR



**Prof. Dr. Jens Gal**  
Jun. Prof. for European Insurance Law



**Jozefina Kontic**  
ICIR Management



**Dea Lapi**  
Chair Management



**Nana Adwoa Dekyem Amo-Mensah**  
Research Assistant and Doctoral Student



**Irina Gemmo**  
Research Assistant and Doctoral Student



**Christian Kubitza**  
Research Assistant and Doctoral Student



**Fabian Regele**  
Research Assistant and Doctoral Student



**Jan-Hendrik Weinert**  
Research Assistant and Doctoral Student

# The ICIR Team



**Arina Brutyan**  
Student Assistant



**Victor Krug Kovacs Borges**  
Student Assistant



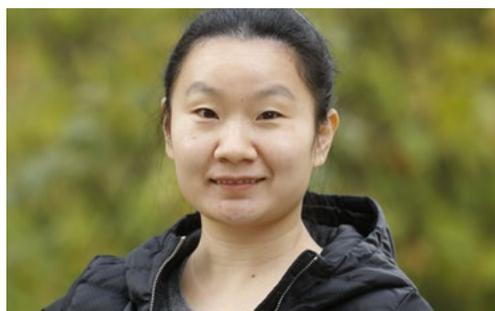
**Nicolaus Jan Karol Grochola**  
Student Assistant



**Laurin Sander Sponheuer**  
Student Assistant



**Nils Simon**  
Student Assistant



**Mingjie Shi**  
Student Assistant



# The Executive Board



**Prof. Dr. Helmut Gründl**  
Professor  
Chair of Insurance and Regulation  
Goethe University

.....  
Managing Director  
International Center for  
Insurance Regulation (ICIR)

**Prof. Karel Van Hulle**  
Honorary Professor  
Goethe University  
Associate Professor  
KU Leuven

.....  
Member  
Board Bermuda Monetary Authority (BMA)  
.....  
Member  
Public Interest Oversight Board (PIOB)

**Prof. Dr. Manfred Wandt**  
Professor  
Chair of Civil Law,  
Commercial and Insurance Law,  
Private International Law,  
and Comparative Law  
Goethe University

.....  
Managing Director  
Institute for Insurance Law  
.....  
Founding Director  
International Center for  
Insurance Regulation (ICIR)

**Prof. Dr. Wolfram Wrabetz**  
Honorary Professor  
Goethe University

.....  
Representative of the Federal State of  
Hesse for the Insurance Sector  
.....  
Founding Director  
International Center for  
Insurance Regulation (ICIR)

# The Advisory Board



**Gabriel Bernardino**  
Chairman, European Insurance and Occupational Pensions Authority (EIOPA), Frankfurt



**Dr. Frank Grund**  
Chief Executive Director of Insurance and Pension Funds Supervision, Federal Financial Supervisory Authority BaFin, Bonn



**David Hare, PhD**  
Partner, Actuarial & Advanced Analytics, Deloitte UK, Edinburgh



**Dr. Monica Mächler**  
Member of the Supervisory Board of Directors, Zurich Insurance Group Ltd. (Chair of the ICIR Advisory Board)



**Alberto Corinti**  
Member of the Board of Directors of IVASS - Istituto per la Vigilanza sulle Assicurazioni, Rome



**Prof. Dr. Brigitte Haar**  
Chair of Private Law, German, European and International Business Law, Law and Finance, and Comparative Law, Goethe University



**Dr. Denis Kessler**  
Chairman of the Board of Directors and Chief Executive Officer of SCOR SE, Paris



**Prof. Dr. Hartmut Nickel-Waninger**  
Honorary Professor, Goethe University



**Dr. Norbert Rollinger**  
CEO, R+V Group, Wiesbaden  
(Vice-Chair of the ICIR Advisory Board)



**Prof. Dr. Heinrich Schradin**  
Director of the Seminar for Business  
Administration, Financial Economics,  
Risk Management and Insurance,  
University of Cologne, Cologne



**Dr. Klaus Wiener**  
Member of the Management Board of  
the German Insurance Association,  
(Gesamtverband der Deutschen  
Versicherungswirtschaft e. V. (GDV)), Berlin



**Dr. h.c. Petra Roth**  
Former Lord Mayor of Frankfurt am Main



**Raj Singh**  
Member Executive Committee and  
Chief Risk Officer, EFG International

# Research Insurance. Risk. Regulation.



# ICIR Research Portfolio

## Insurance Industry and Financial Stability

### Diversification of Business Activities and Financial Stability\*

Fabian Regele, Christian Kubitzka

### Systemic Risk and Late Resolution of Economic Shocks

Christian Kubitzka, Helmut Gründl

### Asset Concentration Risk and Insurance Solvency Regulation

Fabian Regele, Helmut Gründl

### The Pitfalls of Central Clearing in the Presence of Systemic Risk

Mila Getmansky (UMass Amherst), Christian Kubitzka, Loriana Pelizzon (SAFE, Goethe University)

## Financial Literacy and Precautionary Insurance

Annette Hofmann (St. John's University), Christian Kubitzka, Petra Steinorth (Universität Hamburg)

## The Existence of the Miyazaki-Wilson-Spence Equilibrium with Continuous Type Distributions

Irina Gemmo, Christian Kubitzka, Casey Rothschild (Wellesley College)

## Comparative Study of African and European Insurance Regulations

Nana Adwoa Dekyem Amo-Mensah

## (Life) Insurance and Risk Management

### Interest Rate Risk, Longevity Risk and the Solvency of Life Insurers

Elia Berdin (Generali, ICIR Alumnus), Helmut Gründl

### Rising Interest Rates, Lapse Risk, and the Stability of Life Insurers

Elia Berdin (Generali, ICIR Alumnus), Helmut Gründl, Christian Kubitzka

## The Influence of Market Risks on the Stock Return of Life Insurance Companies

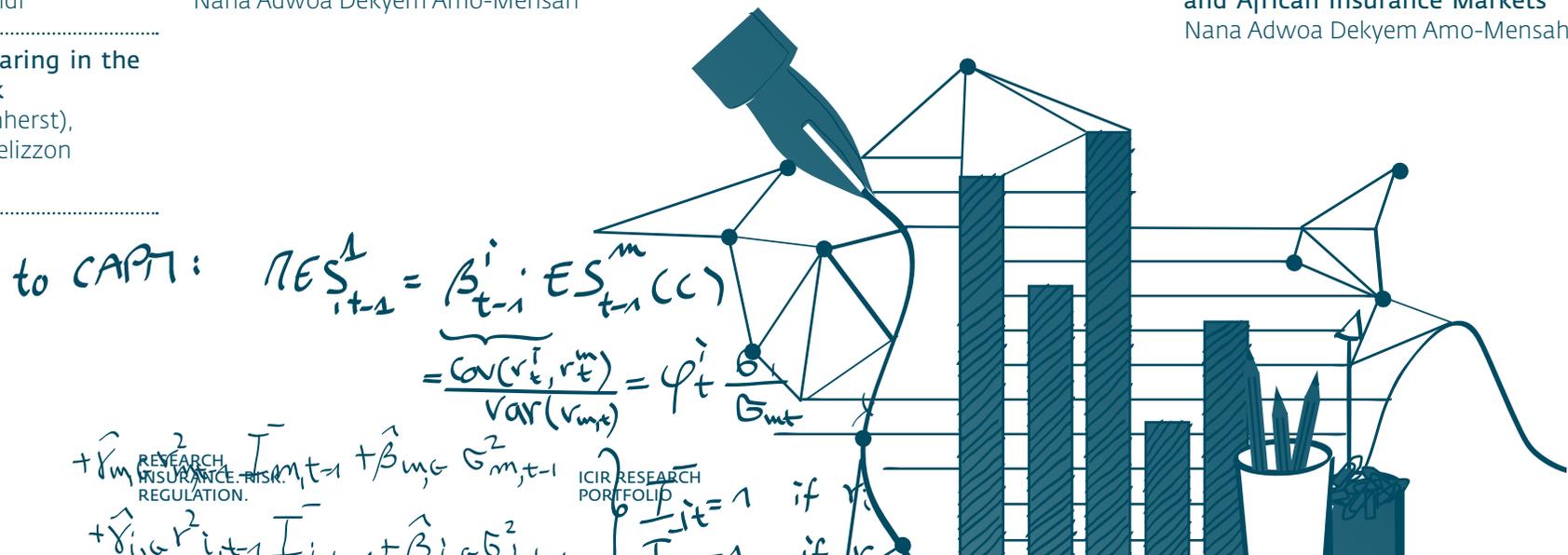
Sebastian Schlütter (Hochschule Mainz, ICIR Alumnus), Mark J. Browne (St. John's University, New York), Helmut Gründl

## Life Insurance in the Low-Interest-Rate Environment

Elia Berdin (Generali, ICIR Alumnus), Helmut Gründl

## Determinants of Life Insurance Demand Among Selected European and African Insurance Markets

Nana Adwoa Dekyem Amo-Mensah



part of SAFE research and partly funded by SAFE

both articles contribute to the subproject "Household Liquidity Risk Management and Insurance Companies' Investment Behavior" as part of the SAFE Project "Liquidity and Longevity Risk Management of Households and Life Insurance Companies in an Ageing Society"

DVfVW supported research projects

## Digitalization in the Insurance Industry

### Privacy Concerns in Insurance Markets: Implications on Market Equilibria and Social Welfare

Irina Gemmo, Mark J. Browne (St. John's University), Helmut Gründl

### Who Benefits from More Information?

Christian Kubitzka

### A Dollar Less for a Pound More: (Price) Discrimination and the Value of Privacy

Irina Gemmo, Wanda Mimra (ETH Zurich)  
Anastasia Sycheva (ETH Zurich)

### Market Insurance, Self-Insurance and Self-Protection if Consumers Value their Privacy

Irina Gemmo

## Life Insurance in an Ageing Society

### Life Insurance and Demographic Change: An Empirical Analysis of Surrender Decisions Based on Panel Data\*\*

Irina Gemmo, Martin Götz (SAFE, Goethe University)

### Life Insurance Surrender Risk and Insurance Companies Asset Allocation\*\*\*

Irina Gemmo, Martin Götz (SAFE, Goethe University), Helmut Gründl

### The Modern Tontine: An Innovative Instrument for Longevity Risk Management in an Aging Society\*\*\*\*

Jan-Hendrik Weinert, Helmut Gründl

### The Fair Surrender Value of a Tontine\*\*\*\*\*

Jan-Hendrik Weinert

### Comparing the Cost of a Tontine with a Tontine Replicating Annuity

Jan-Hendrik Weinert

### The Impact of Systematic Longevity Risk on Optimal Lifecycle Portfolio Choice with Tontines

Jan-Hendrik Weinert, Ralph Rogalla (St. John's University), Irina Gemmo



# International Research Collaborations

## Christian Kubitza as Berkley Fellow at the School of Risk Management, Insurance and Actuarial Science at St. John's University



In early 2017, I already had the opportunity to stay in the United States for two months. During this time, I engaged in stimulating research projects with international researchers. Two new research projects resulted from this stay. In 2018, I was invited again to the United States to continue the work on these projects. In particular, I had the privilege of being a Berkley Fellow at the School of Risk Management, Insurance and Actuarial Science at St. John's University New York.

### **Financial Literacy and Precautionary Insurance**

During my stay in New York City, I closely worked together with Prof. Annette Hofmann on a project we started to-gether with Prof. Petra Steinorth from University of Hamburg in 2017. Our motivation for this project is the substantial complexity of financial products, particularly insurance contracts. For example, a typical UK homeowners' policy has about 20,000 words. Therefore, it seems natural to suspect that consumers rarely understand the full ▶

extent of insurance products. Various studies even find that consumers often do not read their insurance policies at all. And if consumers read an insurance policy, then they frequently do not understand it. This phenomenon is amplified on one hand by the high complexity of the products, and on the other hand by the low financial literacy of consumers.

Motivated by these observations, we propose a novel model to understand the impact of financial literacy and contract complexity in insurance markets. Our main idea is to incorporate contract complexity in classical insurance models as an indemnity-specific background risk. We show that insurance demand is then driven by a trade-off between two second and third-order risk preferences: risk aversion and prudence. Since a consumer's experienced uncertainty increases with a contract's complexity, risk aversion provides an incentive for consumers to purchase less insurance when contracts are more complex. However, prudence provides an incentive for consumers to purchase more insurance when it becomes more complex. This latter phenomenon is known as precautionary insurance, and describes that consumers might react to additional risk by raising wealth in the worst possible state of the world. In other words, the more uncertain very prudent consumers are about the payout of an insurance policy, the more insurance they purchase in order to prepare for the worst that may happen.

Our findings thus show that insurance companies might be able to raise insurance demand by increasing the complexity of their products if consumers are sufficiently prudent. This insight gives a strong rationale for consumer protection, for example in the form of transparency requirements as recently established by the European Union as well as the NAIC.

To further understand the welfare effect of contract complexity, we set up an insurance market equilibrium

## Insurance demand is driven by a trade-off between risk aversion and prudence

model where firms may engage in costly effort to reduce contract complexity. We find that a positive level of contract complexity exists in realistic situations since consumers may prefer a high level of complexity over a high price for insurance. In a perfectly competitive market, the equilibrium level of contract complexity is optimal for consumers, implying that any transparency regulation would reduce consumer welfare since it would inefficiently increase prices. Instead, the primary measure for increasing consumer welfare is financial education.

Therefore, our research has important implications for consumer protection, the regulation of insurance markets, and the impact of financial illiteracy and contract complexity. In fully competitive markets, regulation should rather focus on financial education instead of transparency regulation for firms in order to raise consumer welfare. However, if an insurance market is not fully competitive, then oligopolistic structures can provide a strong rationale also for transparency regulation. Indeed, insurance markets in practice may not be fully competitive. For example, the largest 4 insurers in the U.S. and Canadian private passenger auto insurance market had a joint market share of more than 50% in 2017. Thus, while our research provides a strong rationale to increase financial education, there might also exist scope for transparency regulation.

### The Pitfalls of Central Clearing in the Presence of Systematic Risk

During my stay in the United States, I was also able to spend one week at Isenberg School of Management, University of Massachusetts (UMASS), in Amherst. In 2017, I began a research project together with Prof. Mila Getmansky Sherman from UMASS and Prof. Loriana Pelizzon from Goethe-University Frankfurt about the impact of central clearing on counterparty credit risk in derivative markets. ▶

The main purpose of derivatives is to hedge and transfer risk by altering cash flow patterns. For example, life insurers use foreign exchange (FX) swaps to hedge currency and counterparty risk in their investment and contract portfolio. International derivative markets, however, also played a main role in the 2007–08 financial crisis by amplifying loss spillovers. Motivated by this dubious role of derivatives, the G20 leaders initiated a fundamental change in the architecture of derivative markets, as part of the Dodd-Frank Act in the U.S. and

## The main purpose of derivatives is to hedge and transfer risk by altering cash flow patterns

the European Market Infrastructure Regulation in the EU. A key element is the introduction of mandatory central clearing of standardized OTC derivatives through central clearing counterparties (CCPs). Mandatory central clearing is intended to increase transparency, tighten risk management and, in particular, collateral standards in derivative markets, ultimately reducing counterparty risk. Indeed, the cleared share of Lehman's derivative trades was hedged and closed out by CCPs within three weeks after Lehman's default, indicating

that central clearing might be able to stabilize derivative markets.

However, market participants are reluctant to clear derivatives if not forced to. For example, insurance companies are not clearing members at central clearinghouses. In our paper, we develop an intuition for low clearing rates by examining the impact of central clearing on counterparty risk. We highlight several realistic situations in which central clearing does not reduce but increase a market participant's counterparty risk.

We extend previous studies on central clearing in three important dimensions: First, we consider systematic risk, i.e., aggregate shocks that depress or appreciate all derivative prices. Including systematic risk is a vital prerequisite to examine the performance of central clearing during economic crises. We show that during sufficiently severe economic crises, central clearing is not able to reduce counterparty risk.

Second, we account for the impact of collateral. Collateral (or, equivalently, margin) is a primary measure to reduce credit risk in derivatives transactions. We show that even small discrepancies in margin requirements have a detrimental on counterparty risk: If the clearing margin is slightly smaller than that for non-cleared transactions, then a market participant's counterparty

risk does not decrease with central clearing compared to a bilateral market. Indeed, to incentivize central clearing, cleared derivative transactions in practice are subject to smaller margin requirements than non-cleared ones.

Finally, CCP recovery tools prescribe liquidity injections from non-defaulted clearing members if a CCP's losses exceed its pre-funded resources. Our analysis of this loss sharing mechanism reveals an important bifurcation of clearing members along the lines of their exposure's

## Central clearing might be able to stabilize derivative markets

correlation with systematic risk. Clearing members with an exposure that is negatively correlated with systematic risk (e.g., by a short position in the S&P 500) have positive gains during economic crises. In these times, they are exposed to a high counterparty risk, since naturally their counterparties show a heightened default risk during crises. In contrast, clearing members with positive exposure to systematic risk (e.g., by a long position in the S&P 500) are then exposed to low counterparty risk. As a consequence, loss sharing mainly allocates losses from ►

clearing members with a negative exposure to those with a positive exposure. It thus creates an incentive for the latter not to clear derivatives.

Overall, these results provide important insights into the role of central clearing for counterparty risk. They provide strong theoretical evidence that central clearing might not reduce but increase a market participant's counterparty risk exposure in comparison to a bilateral market. This explains why many financial institutions, for example hedge funds and insurance companies, are typically not members at clearinghouses. These insights support policymakers in a recent effort to revise central clearing reforms.

Eventually, I am very grateful to Prof. Annette Hofmann and Prof. Mila Getmansky Sherman for inviting me to St. John's University New York and to University of Massachusetts, as well as to the W. R. Berkley Corporation German and Insurance Science Association (DVfVW) that generously provided me with a travel grant. Special thanks go to Prof. Helmut Gründl for enabling my travels and making my stays in New York and Amherst very valuable and enriching – both academically and personally. ♦



# International Research Collaborations

## Irina Gemmo Visits The Wharton Business Economics and Public Policy Department of the University of Pennsylvania



I had the pleasure of spending four months as a visiting scholar at the Business Economics and Public Policy Department of the Wharton School. During my stay in Philadelphia, I started to work on a research project together with Prof. Dr Olivia Mitchell, Ph.D. in the area of financial literacy and individuals' financial decision-making.

Founded in 1881, the Wharton School is the world's oldest collegiate school of business. As part of the University of Pennsylvania, the school is located in Philadelphia.

I had the great pleasure of spending the fall term (September – December) 2018 as a visiting scholar at the Business Economics and Public Policy Department of the Wharton School. The main purpose of my stay was the development of a research project in the area of financial literacy and individuals' financial decision-making.

Financial products, such as insurance contracts, confront consumers with complex information and the details of ▶

such products are often described in a language that is rarely fully understood by consumers (Policygenius (2016), Fairer Finance (2018)). At the same time, large parts of the population worldwide exhibit low levels of financial literacy (Lusardi and Mitchell (2011), Lusardi and Mitchell (2014)). In practice, financially illiterate consumers, who have difficulties processing economic information and hence struggle to make informed decisions, are confronted with highly complex financial products. Therefore, empirical research on the role of

## Financial literacy in individuals' financial decision-making is of great importance for policymakers

financial literacy in individuals' financial decision-making is of great importance for policymakers who aim to provide individuals with the opportunity to make economically reasonable savings and investment decisions.

The idea for the project was born at a research meeting with Christian Kubitzka (International Center for Insurance Regulation) in Frankfurt and has been further developed in collaboration with Prof. Dr Olivia Mitchell, Ph.D., who is a leading researcher in the area of financial literacy

(among others). Her expertise on the subject is invaluable and I am grateful for the opportunity to learn from her. At the Wharton school, I managed to benefit from the numerous interesting presentations at seminars and workshops that provided great insights into current academic research in various areas related to economics and finance. Further, I highly appreciate the many talks with faculty members and other visitors and the constructive feedback and valuable input on several projects that I received during these talks and during my academic presentation at one of the faculty's research seminars.

While located in Philadelphia, I had the chance to present my research at other institutions, such as the Wellesley College in Massachusetts, to which I was invited by Prof. Casey Rothschild, Ph.D., and at the University of Guelph in Ontario, Canada, where I stayed for a week to work with Prof. Mike Hoy, Ph.D.

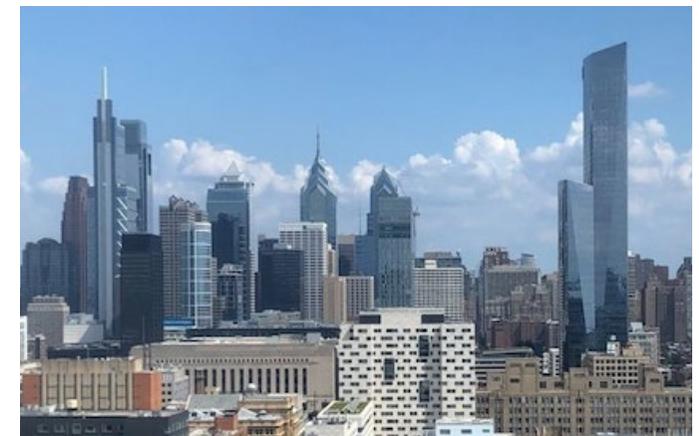
Overall, I experienced a very open-minded and constructive working environment at the Wharton School. I am very grateful to Olivia Mitchell, Mike Hoy, and Casey Rothschild for inviting me to present my research and to benefit from their expertise and knowledge. I would like to specifically thank the International Center of Insurance Regulation and my advisor, Prof. Dr Helmut Gründl, for enabling this enriching experience. ♦

Fairer Finance (2018). Misbuying insurance, available at <https://www.fairerfinance.com> (last checked: October 10, 2018). Technical report.

Lusardi, A. and Mitchell, O. S. (2011). Financial literacy around the world: an overview. *Journal of Pension Economics and Finance*, 10(4):497 – 508.

Lusardi, A. and Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52:5 – 44.

Policygenius (2016). 4 basic health insurance terms 96% of Americans don't understand. Available at <https://www.policygenius.com> (last checked: October 10, 2018).



# A Dollar Less for a Pound More: (Price) Discrimination and the Value of Privacy

Together with Wanda Mimra and Anastasia Sycheva from the Management, Technology and Economics Department of ETH Zurich, I have conducted a laboratory experiment to examine consumers' privacy concerns. Our experimental design aims at analyzing the correlation between consumer characteristics and participants' willingness to sell private information under different circumstances with respect to categorization based on this data and pay-off consequences.

Price discrimination based on consumers' personal data has become common practice in many markets. For instance, in various lines of insurance business, such as health insurance, life insurance and automotive insurance, policies are priced based on personal data of the policyholder.

The willingness to share personal information that influences the demand for such products differs across individuals. In a data set for pay-as-you-drive contracts, Kremslehner and Muermann (2016) show that such a car insurance policy that involves information sharing is more likely to be chosen by younger, female consumers who live in urban and/or wealthier areas. Besides the potential direct economic consequences, privacy concerns play an important role for consumers' decision to purchase such products. The value of privacy has been subject to a public

debate that has become increasingly relevant with public scandals, such as the Facebook Cambridge Analytica data scandal.

Together with Wanda Mimra and Anastasia Sycheva from ETH Zurich, I have been working on a laboratory experiment to elicit and distinguish the different forms of privacy concerns for personal data and individuals' preferences with respect to their knowledge about usage of this information for discriminative purposes. Specifically, we achieve this goal by combining the following subordinate goals:

1. We examine whether subjects' willingness to sell their private information is affected by inherent privacy concerns, i.e. individuals' preference to not share their private information for non-economic reasons, such as

shame or the feeling of losing control about private data. We thus elicit the pure privacy value attached to the personal data.

2. We elicit the effect of non-payoff relevant categorization based on private information on participants' willingness to sell this information.

3. We analyze whether payoff relevant categorization by private information increases or decreases the willingness to sell this information by more than the respective payoff consequences.

In our experiment, we apply a between-subject design. Participants can sell a bundle of private information to the experimenters. Prior to selling their data, subjects receive information about what happens with the data sold to the experimenters, i.e. whether it is used to categorize them and if so, whether and how categorization is relevant for their payoff in a subsequent part of the experiment. The data bundle consists of the following information: The participant's height, weight, gender, bank account balance, and a picture of the participant's face. After making the decision to sell their private information, all participants are subsequently brought into a separate part of the laboratory, the measurement room, that other participants can neither enter, nor can they hear or see anything that is happening inside ▶

---

## References:

Kremslehner, D. and Muermann, A. (2016). Asymmetric information in automobile insurance: evidence from driving behavior. CFS Working Paper Series, 543.

Gemmo, I., Mimra, W., and Sycheva, A. (2019). A Dollar Less for a Pound More: (Price) Discrimination and the Value of Privacy. ICIR Working Paper Series. Forthcoming

SOLD DATA	BMI	BANK ACCOUNT BALANCE (CHF)	CATEGORY & PAYOFF (CHF) IN TREATMENT									
			(I)	(II)	(III)	(IV)	(V)					
NO	-	-			A		A	20	A	20	A	20
YES	< 22 (FEMALE) < 23,5 (MALE)	≥ 1000			B		B	30	B	20	B	20
	< 22 (FEMALE) < 23,5 (MALE)	< 1000	NONE	20		20						
	≥ 22 (FEMALE) ≥ 23,5 (MALE)	≥ 1000			C		C	20	C	10	C	0
	≥ 22 (FEMALE) ≥ 23,5 (MALE)	< 1000										

this room. If participants have decided to sell their data, their private information is verified by experimenters in this separate room.

In treatments (II)-(V), participants are classified into one of three groups according to their data provided. Subjects that do not sell their private information are classified as category A. Subjects with a bank account balance above or equal to 1000 CHF and a Body-Mass-Index (BMI) below 22 for female participants and 23,5 for male participants are classified as category B. The remaining subjects, i.e. participants who did sell their data and have a bank account balance below 1000 CHF or a BMI above 22 for female participants and 23,5 for male participants, are classified as category C. In all treatments, participants receive a payoff in a second experimental market. Depending on the treatment, participants' payoffs may depend on their personal information sold. In the baseline treatment (I), participants are not categorized, and all subjects receive the same payoff, i.e. 20 CHF, from this part of the experiment independently of their personal information (and of whether personal data is sold to experimenter). In this treatment, with the BDM mechanism, we thus elicit the pure privacy value attached to the personal data. In treatment (II), subjects are categorized as described above.

Participants' payoff is independent of their category and of whether they sell their personal information to the

experimenter. All subjects receive a payoff of 20 CHF from this part of the experiment as in treatment (I). We employ this treatment (II) additionally to the baseline treatment (I), in order to elicit the effect of non-payoff relevant categorization based on private information on participants' willingness to sell this information. In the other three experimental treatments, payoffs from Part II correspond to the payoff in the baseline treatment, if no private information is sold and hence participants are categorized as A. In these treatments, we want to analyze whether

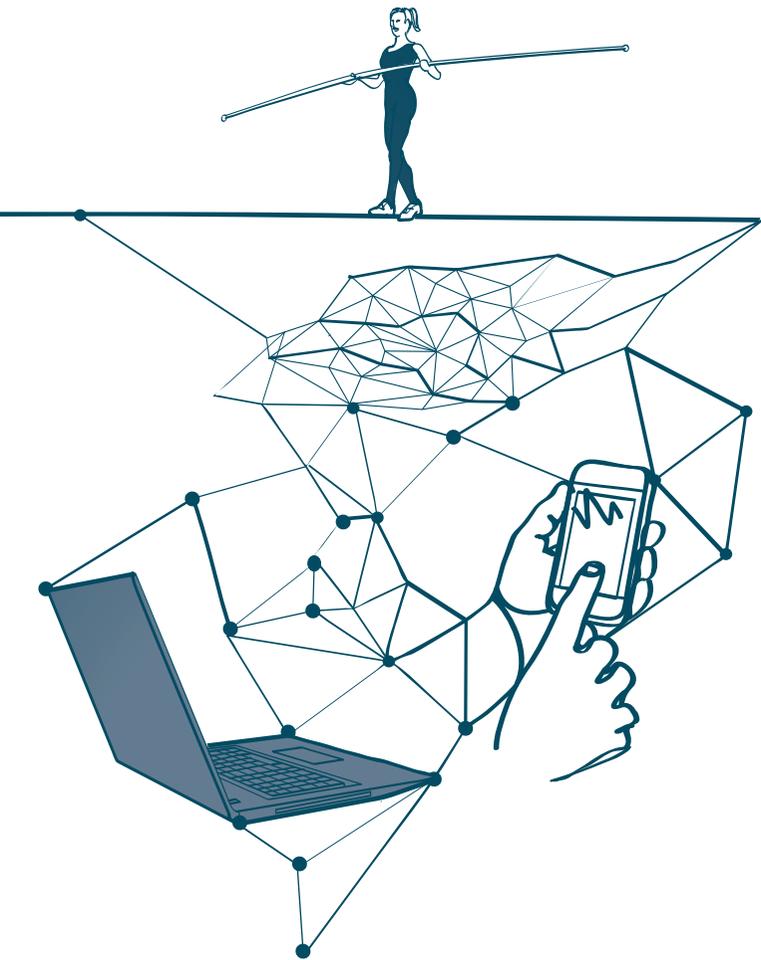
## The value of privacy has been subject to a public debate that has become increasingly relevant

payoff relevant categorization by private information increases or decreases the willingness to sell this information by more than the respective payoff consequences, indicating that payoff relevant categorization affects individuals' valuation of private information. If participants sell their private information, the payoff depends on their categorization into B or C. This is done in the following way: In treatment (III), both categories, A and C, receive the baseline payoff of 20 CHF from this part of the experiment. Participants with a high bank account balance and

a low BMI, that were classified as category B, receive 30 instead. In both treatments, (IV) and (V), participants with a high bank account balance and a low BMI receive the same payoff as participants who did not sell their data, i.e. the baseline payoff 20 CHF. Subjects that are classified as category C receive a lower payoff from this part of the experiment. In treatment (IV), we employ the same payoff difference between category A and C as we have used in treatment (III) between category A and B. Therefore, participants that are categorized as C receive 10 as a payoff from this part of the experiment in treatment (IV). In order to see whether the negative price discrimination has a disproportional effect on participants' willingness to sell their private information if they do not get any payoff from this part of the experiment in case they are categorized as C, we include treatment (V), in which the payoff for subjects in category C is 0. Table 1 summarizes the categorization of participants by their private information and the respective payoff consequences by treatment. ♦

# Consumers' Privacy Concerns and Their Impact on Insurance Markets and Regulation

## Research Presentation at the Swiss Risk and Insurance Forum 2018



The Swiss Risk and Insurance Forum brings together experts from various disciplines, such as academia, the insurance industry, and consulting companies to discuss and think about topics that are relevant to the insurance industry.

The Swiss Risk and Insurance Forum in Rüslikon, Switzerland, is organized jointly by Swiss Re, the University of Lausanne, EPFL, the University of Zurich, ETH Zurich, and the University of St. Gallen. This year's topic of the one-and-a-half-day event was "Insurance: Models, Digitalization, and Data Science". 29 invited participants came together to discuss along the key themes "Methods and Models", "Business Cases", and "Data Availability, Protection, and Regulation" in three plenary sessions. For each topic, the event features break-out sessions that provide room for intensive discussions on specific questions and challenges, such as how to bring together actuarial modelling and data science, or how a digitalization shapes the insurance industry. In the context of the module on "Data Availability, Protection, and Regulation", I gave a presentation on "Consumers' privacy concerns and their impact on insurance markets and regulation" that was mainly based on the research paper "Privacy Concerns in

Insurance Markets: Implications for Market Equilibria and Social Welfare" which is joint work with Mark J. Browne (St. John's University New York) and Helmut Gründl (ICIR). In this article, we consider consumers with privacy concerns, i.e. an inherent disutility from sharing private information that does not depend on insurance buyers' risk type. We show that given the existence of such privacy concerns, offering an insurance contract with an option to screen consumers characteristics, can decrease or eliminate cross-subsidies between risk types. Such a screening policy however leads to a Pareto improvement of social welfare, if the market equilibrium the absence of such a screening policy does not entail any cross-subsidies.

One of my key take-aways from our discussions at the Swiss Risk and Insurance Forum 2018 is that customer satisfaction and consumer protection are important factors for the development of the insurance industry in a digital environment. Both, a lively dialogue between insurance experts and experts in data sciences, as well as an active exchange between industry, academia and regulatory authorities can contribute to a successful digital transformation of the insurance industry. ♦

# International Research Collaborations Tontines

## Jan Weinert Visits the School of Risk Management, Insurance and Actuarial Science at St. John's University



Due to demographic change and the resulting shift in the age structure of the population, it is becoming increasingly difficult to finance pay-as-you-go pension systems in many Western societies. In Germany, falling birth rates combined with rising life expectancy are leading to an increase in the number of beneficiaries of the statutory pension insurance and a simultaneous decrease in the number of contributors.

The associated increase in the so-called pension ratio thus makes it more difficult to maintain pay-as-you-go pension systems, such as the state pension system in Germany. In contrast, funded old-age provision products and private old-age provision are gaining in importance.

This challenge of an ageing society is reinforced by an increasing need for financial resources in old age. Medical progress in recent decades has made it possible to treat a large number of diseases and ailments that led to death ▶

50 years ago. These medical measures and treatment methods, however, are often associated with enormous costs and increase especially in old age, when infirmities accumulate<sup>1</sup>. Thus, for example, an expensive, senior-friendly conversion or extension of one's own home may become necessary, which enables independent living in the accustomed environment for as long as possible. In old age, there are also very high average nursing costs for outpatient and inpatient care. However, specific long-term care insurance policies often depend on the level of

## A tontine offers an age-increasing payout structure without warranties

long-term care and contain exceptions so that soft factors and uninsured aspects are not covered. These include, for example, costly items to maintain the standard of living (e.g. more taxi rides with impaired eyesight, the use of high-quality food-on-bikes services or shopping delivery services) or the purchase of high-quality care services above and beyond the statutory level (e.g. massages or domestic help).

In addition to the demographic challenges, the insurance industry is also exposed to the influences of the current

low interest rate environment. Since the introduction of Solvency II as the European Insurance Regulatory Framework, stricter capital requirements for insurers have been required. On the one hand, insurers are obliged to invest a large part of their premium income in low-risk fixed-interest securities which, however, only generate low interest rates, but on the other hand have to make high guarantee promises to policyholders with existing contracts. In theory, escaping this dilemma is only possible through riskier investments and higher returns. In particular, the newly introduced risk-based solvency regulations constitute an obstacle. Accordingly, insurers will have to hold more capital the higher their risks are.

The challenges just described raise the question of an old-age provision product that provides well-founded solutions to these problems. It would need to be innovative enough to free the insurer from guarantee commitments and longevity risk assumption, while at the same time paying out sufficient capital to meet increasing capital needs at retirement age.

In the course of these developments, the historical concept of the Tontine is becoming increasingly important<sup>2</sup> but has not yet been examined with regard to its suitability as a supplement to traditional pension products under the current challenges described above.

<sup>1</sup> A study by Standard Life (2013) shows that an 85-year-old person has on average six times more total expenditure than a comparable 65-year-old person.

<sup>2</sup> McKeever (2009), Milevsky (2015) and Li & Rothschild (2017) are working on the historical development of Tontine, Sabin (2010), Milevsky & Salisbury (2015) and Milevsky & Salisbury (2016) are focusing on the actuarially fair and optimal payout structure of a Tontine and Chen et al. (2017) combine Tontine and Annuity to create a common product.

I started in October 2014 as a PhD student and research assistant at the International Center for Insurance Regulation (ICIR) and the Chair of Insurance and Regulation. At that time, the ICIR had been in existence for almost 5 years and had established an excellent reputation in the insurance world. This unique project gave my colleagues and me a great responsibility and countless opportunities to get in touch and exchange ideas with political decision-makers, industry experts and top-class international researchers. The combination of state-of-

## The historical concept of the tontine is becoming increasingly important

the-art research and participation in the political debate was the key to success. In addition, the close cooperation with EIOPA, including the organisation of the "Global Insurance Supervision" conference, made ICIR an absolute reference institution in the debate on insurance supervision. My small contribution to the success of ICIR came mainly from my research in the field of life insurance: At the beginning of my doctoral studies I worked with Prof. Gründl on the Tontine as an innovative product in life insurance and a cost-effective instrument for old-age ▶

provision under the aforementioned conditions. The analytical framework developed by us met with lively interest in the academic insurance world and further exciting research questions on the Tontine followed from this project, which I wrote in the following years in several scientific essays, strategy papers and book chapters and led to a doctorate. This experience made it clear to me how much precise research can help in dealing with real problems. My time at the ICIR, which ended in November, was intense but at the same time very pleasant. I learned a great deal as a student and grew enormously as a human being. I especially appreciated the great variety and the independent work in connection with a high degree of self-organisation. The ICIR offered me a unique platform to develop my ideas and participate in the political debate in the insurance industry. In my new career as a risk manager with a German life insurer, I will continue to act as an ambassador of ICIR and the Goethe University of Frankfurt in the world.

The Tontine is a financial product developed by its inventor Lorenzo de Tonti in the 1650s to provide long-term public financing for the French State. In its original form, each Tontine holder received a lifelong annual pension payment in exchange for a one-off payment to the French State. The shares of deceased Tontine members were distributed among the survivors, which increased their pension payments.

Over the years, however, the Tontine disappeared from literature and practice. This has to do mainly with various problems of early Tontines. On the one hand, in the early Tontines it did happen that Tontine members murdered each other to increase individual payments, or it happened that the Tontine provider used the collected money of the Tontine members in settlement of debts. It also happened that deceased people were replaced by living ones. In addition, early Tontines were often not actuarially fair, as older participants had lower payment

## The payments are volatile but the structure has the advantage that there is no default risk

expectations than younger participants due to their lower chances of survival.

In summary, a Tontine offers an age-increasing payout structure without warranties, which is generated by the diversification of mortality between policyholders. This special feature makes Tontines appear extremely interesting against the backdrop of an increasing need for capital in old age, since very high payouts can be generated in old age by a small expenditure of funds. How-

ever, the amount of the payments realised is uncertain due to a lack of guarantees. However, since the longevity risk is borne jointly by all Tontine holders and does not remain with the provider, the payments are volatile, but this structure has the great advantage that no equity capital has to be held to hedge the longevity risk and there is no default risk. As no risk transformation takes place on the part of the provider, no regulatory risk surcharges or equity capital in the sense of collateral security are required. This is particularly advantageous against the backdrop of the ongoing low-interest phase, which makes it more difficult for insurers to meet guarantee promises of traditional products under the regulatory provisions of Solvency II. Thus, a Tontine can be offered very economically. Although the Tontine's payment structure provides a relatively accurate coverage of the funds required in old age at very low contributions, the payments of the Tontine holder are uncertain in terms of amount and temporal structure, which means that the advantages and disadvantages of tontine have to be weighed up. I analyse this in the essay contained in the dissertation "Comparing the Cost of a Tontine with a Tontine-Replicating Annuity".

An important feature of financial products is their liquidity and the ability to trade them on financial markets at short notice. However, the historical concept of the Tontine does not allow this and is therefore very illiquid. This can ►

significantly reduce the attractiveness of such a product today and could even contradict consumer protection directives. Among other things, this is the question I get to the bottom of in the essay "The Fair Surrender Value of a Tontine", which is also part of my dissertation, and analyse how a cancellation option can best be integrated into a Tontine.

During the annual conference of the German Association for Insurance Science in March 2017, I was offered the opportunity of a joint research project with Prof. Ralph Rogalla from St. John's University in New York City and an associated research stay. Prof. Rogalla invited me to Manhattan for a 2-month research stay in March and April 2018. The School of Risk Management, Insurance and Actuarial Science is part of the Tobin College of Business at St. John's University. Based in Manhattan, New York City, the university is a world leader in risk and insurance education, attracting candidates from around the world. As a Berkley Fellow at SRM, I worked together with Prof. Rogalla to find out how the optimal investment behaviour behaves over the lifetime of a Tontine and which individual and Tontine-specific parameters influence this optimal investment decision. The collaboration resulted in the essay "The Impact of Systematic Longevity Risk on Optimal Lifecycle Portfolio Choice with Tontines". At St John's University I always felt welcome and involved and the SRM faculty was friendly and helpful in every

situation. I personally appreciated the numerous discussions with the faculty members as well as the constructive feedback and valuable input on our project. I was also able to present the project at several scientific presentations during the faculty's research seminars, which led to exciting discussions. Overall, I had a very great time in New York, where I not only enjoyed the nice and encouraging atmosphere at SRM, but also had the opportunity to experience the vibrant city and its many cultural activities. I am very grateful to the School of Risk Management at St John's University, especially Prof. Ralph Rogalla for the invitation and the fruitful cooperation, and Prof. Mark J. Browne for granting the Berkley Fellowship. I would also like to thank the DVfVW, who generously granted me a travel scholarship. Special thanks go to my supervisor, Prof. Dr Helmut Gründl, for making my trip possible and making my stay in New York an amazing and enriching experience – both academically and personally. ♦

#### **Publications and Presentations**

##### **Book Chapter**

Weinert, J. (2018) – Tontines in Europe Today, in Chapter 19, The Past, Present, and Future of Tontines, Duncker & Humblot; Berlin

##### **ICIR Working Papers**

Weinert, J., Rogalla, R., Gemmo, I. (2018): The Impact of Systematic Longevity Risk on Optimal Lifecycle Portfolio Choice with Tontines  
ICIR Working Paper

##### **Academic Presentations**

###### **04/2018**

Annual Meeting of the American Risk and Insurance Association (ARIA) 2018, Chicago, USA  
The Impact of Systematic Longevity Risk on Optimal Lifecycle Portfolio Choice with Tontines

###### **08/2018**

Annual Meeting of the American Risk and Insurance Association (ARIA) 2018, Chicago, USA  
The Fair Surrender Value of Tontines

###### **09/2018**

45<sup>th</sup> Seminar of European Group of Risk and Insurance Economists (EGRIE), Nuremberg, Germany  
The Impact of Systematic Longevity Risk on Optimal Lifecycle Portfolio Choice with Tontines

###### **09/2018**

14<sup>th</sup> International Longevity Risk and Capital Markets Solutions Conference, Amsterdam, The Netherlands  
The Impact of Systematic Longevity Risk on Optimal Lifecycle Portfolio Choice with Tontines

##### **Research Stays Abroad**

###### **03 – 05/2018**

Berkley Research Fellow, The Peter J. Tobin College of Business, School of Risk Management, Insurance and Actuarial Science St John's University, New York City, USA

# Publications and Working Papers Insurance Economics

**Working Paper No. 32/2018**  
**The Existence of the Miyazaki-Wilson-Spence Equilibrium with Continuous Type Distributions**  
Irina Gemmo, Christian Kubitza, Casey Rothschild

**Working Paper No. 31/2018**  
**The Pitfalls of Central Clearing in the Presence of Systematic Risk**  
Christian Kubitza, Loriana Pelizzon, Mila Getmansky Sherman

**Working Paper No. 30/2017**  
**Diversification of Business Activities and Systemic Risk**  
Christian Kubitza, Fabian Regele

**Working Paper No. 29/2017**  
**Rising Interest Rates, Lapse Risk, and the Stability of Life Insurers**  
Elia Berdin, Helmut Gründl, Christian Kubitza

**Working Paper No. 28/2017**  
**Scenario-Based Capital Requirements for the Interest Rate Risk of Insurance Companies**  
Sebastian Schlütter

**Working Paper No. 27/2017**  
**Corporate Governance of Insurance Firms after Solvency II**  
Michele Siri

**Working Paper No. 26/2017**  
**The Fair Surrender Value of a Tontine**  
Jan-Hendrik Weinert

**Working Paper No. 25/2017**  
**Transparency Aversion and Insurance Market Equilibria (new title: Privacy Concerns in Insurance Markets: Implications on Market Equilibria and Social Welfare)**  
Irina Gemmo, Mark Browne, Helmut Gründl

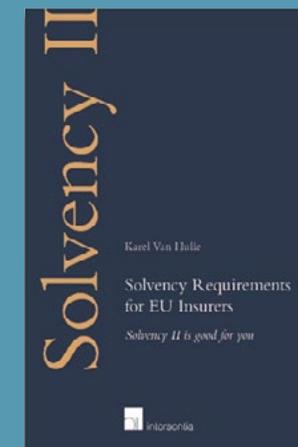
**Book Chapter**  
Weinert, J. (2018)–Tontines in Europe Today, in Chapter 19, *The Past, Present, and Future of Tontines*, Duncker & Humblot; Berlin

## Guest Editor



Prof. Dr. Helmut Gründl  
**The Geneva Papers on Risk and Insurance—Issues and Practice**  
October 2018, Volume 43, Issue 4,  
pp 591–593

## Forthcoming



Karel Van Hulle  
**Solvency Requirements for EU Insurers**  
*Solvency II is good for you*

# Publications

## Insurance Law

### Prof. Dr. Manfred Wandt

Contributions in Collected Editions  
Wandt, Transparency in German Insurance Contract Law, in Pierpaolo Marano/Kyriaki Noussia (eds.), Transparency in Insurance Law and Regulation, Vol I: The Insurance Contract 2018 (in print).

Wandt/Bork, Transparency in German Insurance Supervisory Law, in: Pierpaolo Marano/Kyriaki Noussia (eds.), Transparency in Insurance Law and Regulation, Vol. II: The Insurance Undertakings/Intermediaries and the Supervisory Authorities 2018 (in print).

Wandt/Bork, Pre-contractual Duties under the German Insurance Law, Chapter 10, pp. 261 – 292, in: Yong Qiang Han/Gregory Pynt (eds.), Carter v Boehm and Pre-Contractual Duties in Insurance Law – A Global Perspective after 250 Years  
Hart Publishing, Oxford 2018.

Transparency of Insurance Contract Terms, pp. 419-432, in Lambros Kotsiris/Kyriaki Noussia (eds), Liber Amicorum in Honour of Ioannis K. Rokas Nomiki Bibliothiki, Athens 2017.

#### Articles

Auskunfts- und Aufklärungsobliegenheiten nach Eintritt des Versicherungsfalles  
VersR 2018, S. 321-328.

Wandt/Bork, German National Report on Disclosure Duties in Insurance, in preparation of the AIDA World Congress

published by “Deutscher Verein für Versicherungswissenschaft” (available at: [www.dvfvw.de/index.php?option=com\\_content&view=article&id=188&Itemid=172](http://www.dvfvw.de/index.php?option=com_content&view=article&id=188&Itemid=172)), 21 pp.

#### Editorship

VersR (Zeitschrift für Versicherungsrecht, Haftungs- und Schadensrecht)

ZVersWiss (Zeitschrift für die gesamte Versicherungswissenschaft)–Bereichs-schriftleiter

Langheid/Wandt, Münchener Kommentar zum VVG

Bd. 1, 2. Auflage 2016

Bd. 2, 2. Auflage 2017

Bd. 3, 2. Auflage 2017



#### Editorship

Frankfurter Reihe, Verlag Versicherungswirtschaft

Christian Waller, AVB und Quote, Die vertragliche Ausgestaltung der Quotierungsregelung in § 28 Abs. 2 S. 2 VVG  
2018

Marcel Straub, Grenzen der Leistungspflicht des privaten Krankenversicherers, Versicherungsfall, Übermaßbehandlung und Übermaßvergütung  
2018

Köksal Sahin, Risiko als Vertragsgegenstand, Die Reform der vorvertraglichen Anzeigepflicht im Japanischen Versicherungsvertragsrecht  
2018

Solvency II in der Rechtsanwendung 2017, Kapitalanlage und Versicherungsaufsichtsrecht  
2018

# Publications

## Insurance Law

### Prof. Dr. Jens Gal

**The Recalibration of the European System of Financial Supervision in Regard of the Insurance Sector: From Dreary to Dreamy or Vice Versa?**  
In: SAFE Policy Letter No. 60 (together with Helmut Gründl).

**Rechtsrahmen des Versicherungsmarketing**  
In: Zerres, Michael P./Reich, Michael (eds.), Handbuch Versicherungsmarketing, 2<sup>nd</sup> ed., Berlin und Heidelberg 2018.

**§§ 1 – 7 VVG-InfoV [Regulation on Insurance Information Duties]**  
In: Römer, Wolfgang/Langheid, Theo (eds.), VVG-Kommentar, 6<sup>th</sup> ed. (in printing process).

**Artt. 1 – 7 EGVVG [International Insurance Law Act]**  
In: Römer, Wolfgang/Langheid, Theo (eds.), VVG-Kommentar, 6<sup>th</sup> ed. (in printing process).

**Artt. 1 – 82 EIOPA-VO [Comprehensive Annotated Commentary to the EIOPA Reg.]**  
In: Prölss, Erich/Dreher, Meinrad (eds.), VAG, 13<sup>th</sup> ed., at pp. 2149 – 2518.

**Artt. 315 – 317, 345 – 358 DVO Solvency II [Solvency II Implementation Regulation]**  
In: Bürkle, Jürgen (ed.), DVO Solvency II, approx. 50 pages (pending printing).

# Research Award

## FIRM Research Prize 2018



Dr. Elia Berdin's dissertation "Essays in Microprudential and Macroprudential Supervision in Insurance" was awarded one of the three best dissertations submitted in the Research Prize 2018 of the Frankfurt Institute for Risk Management and Regulation (FIRM).

Dr. Berdin, an alumnus of the Chair of Insurance and Regulation and ICIR, presented his research at the FIRM Research Conference in Glashütten/Ts on June 14, 2018.

[➤ Link to FIRM](#)

# Academic Conferences Research Presentations

October 6–7, 2017 |  
University of Ulm, Germany  
24<sup>th</sup> Annual Meeting of the German  
Finance Association (DGF)

**The Fair Surrender Value of a Tontine**  
Jan-Hendrik Weinert

**Transparency Aversion and Insurance  
Market Equilibria**  
Irina Gemmo, Mark J. Browne, Helmut  
Gründl

October 23–24, 2017 | Barcelona, Spain  
IAALS Life Colloquium 2017

**Rising Interest Rates, Lapse Risk,  
and the Solvency of Life Insurers**  
Christian Kubitzka, Elia Berdin,  
Helmut Gründl

November 16, 2017 | Leeds, UK  
Seminar Presentation at Leeds  
University Business School

**Persistence of Insurance Activities and  
Financial Stability**  
Fabian Regele, Christian Kubitzka

November 23, 2017 |  
Zurich, Switzerland  
Research Seminar at the Department  
of Management, Technology, and  
Economics, ETH Zurich

**Privacy Concerns in Insurance  
Markets: Implications on Market  
Equilibria and Social Welfare**  
Irina Gemmo

January 5–7, 2018 | Philadelphia, USA  
2018 ASSA Annual Meeting  
Poster Session

**Business Activities of Insurance  
Companies and Financial Stability**  
Fabian Regele, Christian Kubitzka

February 19, 2018 | Oxford, UK  
Oxford Talks–Postdoc & DPhil  
Workshop at the Department of  
Economics, University of Oxford

**Privacy Concerns in Insurance  
Markets: Implications on Market  
Equilibria and Social Welfare**  
Irina Gemmo

March 21–22, 2018 | Munich, Germany  
Annual Congress of the German  
Insurance Science Association 2018  
DVfVW Internationale Jahrestagung  
2018

**Diversification of Business Activities  
and Systemic Risk**  
Christian Kubitzka, Fabian Regele

**Life Insurance Surrender Risk and  
Insurance Companies' Asset Allocation**  
Irina Gemmo, Martin Götz, Helmut Gründl

**Self-Insurance and Self-Protection  
if Consumers Value their Privacy**  
Irina Gemmo

**Insurance Demand and Self Insurance  
in the Presence of Contract Opacity**  
Steinorth, Petra; Hofmann, Annette;  
Kubitzka, Christian

**The Influence of Market Risks on the  
Stock Return of Life Insurance  
Companies**  
Sebastian Schlütter, Mark J. Browne,  
Helmut Gründl

April 2018 | New York City, USA  
Travelers Research Symposium and  
Berkley Scholar Presentation, St. John's  
University

**The Impact of Systematic Longevity  
Risk on Optimal Lifecycle Portfolio  
Choice with Tontines**  
Jan-Hendrik Weinert, Ralph Rogalla,  
Irina Gemmo



July 20, 2018 |  
Universität Bonn, Germany  
7<sup>th</sup> Research Workshop in Financial  
Economics

**Systemic Risk and Late Resolution of  
Economic Shocks**  
Christian Kubitzka

August 5 – 8, 2018 | Chicago, USA  
2018 Annual Meeting of the American  
Risk and Insurance Association (ARIA)

**The Role of Asset Concentration Risk for  
Individual Stability and Systemic Risk**  
Fabian Regele, Helmut Gründl

**Do Policyholders Benefit from More  
Informed Insurers?**  
Christian Kubitzka

**The Fair Surrender Value of a Tontine**  
Jan-Hendrik Weinert

September 17–19, 2018 |  
Nuremberg, Germany  
45<sup>th</sup> Seminar of European Group of Risk  
and Insurance Economists (EGRIE)

**Financial Literacy and Precautionary  
Insurance**  
Annette Hofmann (St. John's University),  
Christian Kubitzka (Goethe University/ICIR),  
Petra Steinorth (Universität Hamburg)

**Who Benefits From More Information?**  
Christian Kubitzka

**Lifecycle Portfolio Choice with Natural  
Tontines**  
Jan-Hendrik Weinert, Ralph Rogalla,  
Irina Gemmo

September 20–21, 2018 |  
Amsterdam, The Netherlands  
14<sup>th</sup> International Longevity Risk and  
Capital Markets Solutions Conference

**The Impact of Systematic Longevity Risk  
on Optimal Lifecycle Portfolio Choice  
with Tontines**  
Jan-Hendrik Weinert, Ralph Rogalla,  
Irina Gemmo

September 28, 2018 | Guelph, Canada  
Visiting Speaker Seminar Winter 2018,  
Economics and Finance, University of  
Guelph

**Market Insurance, Self-Insurance  
and Self-Protection if Consumers Value  
their Privacy**  
Irina Gemmo

October 17, 2018 |  
Wellesley, Massachusetts, USA  
Brown Bag Seminar, Wellesley College  
**Market Insurance, Self-Insurance and  
Self-Protection if Consumers Value  
their Privacy**  
Irina Gemmo



# Frankfurt Insurance Research Workshop (FIRW)

## December 7, 2017

### Welcome Address

Helmut Gründl  
(Chair of Insurance and Regulation, ICIR)

### Session 1 (Life Insurance 1)

**Funding Life Insurance Contracts with Guarantees: How can we optimally respond to the policyholder's needs?**  
Peter Hieber (with An Chen, Thai Nguyen)

### Minimum Return Rate Guarantees under Default Risk (Optimal Design of Quantile Guarantees)

Sascha Offermann (with Antje Mahayni, Oliver Lubos)

### Session 2 (Hedging and Risk Management)

**Optimal Reinsurance Program under Default Risk**  
Lukas Reichel

### Natural hedging with fix and floating strike guarantees

Oliver Lubos (with Antje Mahayni, Katharina Stein)

### Session 3

**(Systemic Risk and Financial Stability)**  
**An elusive panacea? The impact of the regulatory valuation regime on insurers' investment behaviour** Caterina Lepore  
(with Misa Tanaka, David Humphry, Kallol Sen)

**Systemic Risk in a Macroeconomic Model with a Banking and a Life Insurance Sector**  
Nina Wunde (with Gregor Weiß)

**Session 4 (Life Insurance 2)**  
**Optimal Saving and Insurance under Generalized Mean-Variance Preferences**  
Cathleen Sende (with Nicole Branger, Antje Mahayni, Nikolaus Schweizer)

**Multi-Year Analysis of Solvency Capital in Life Insurance**  
Karen Rödel

**Lapse risk in life insurance: Correlation and contagion effects among policyholders' behaviors**  
Flavia Barsotti (with Xavier Milhaud, Yahia Salhi)

## December 8, 2017

**Session 5 (Behavioral Insurance 1)**  
**Fee for advice: a remedy for biased product recommendation in financial and insurance markets?**  
Markus Weinert (with Jörg Schiller)

**Weighting Privacy Against Insurance Coverage under Ambiguity**  
Martin Lehmann (with Christian Biener, Martin Eling)

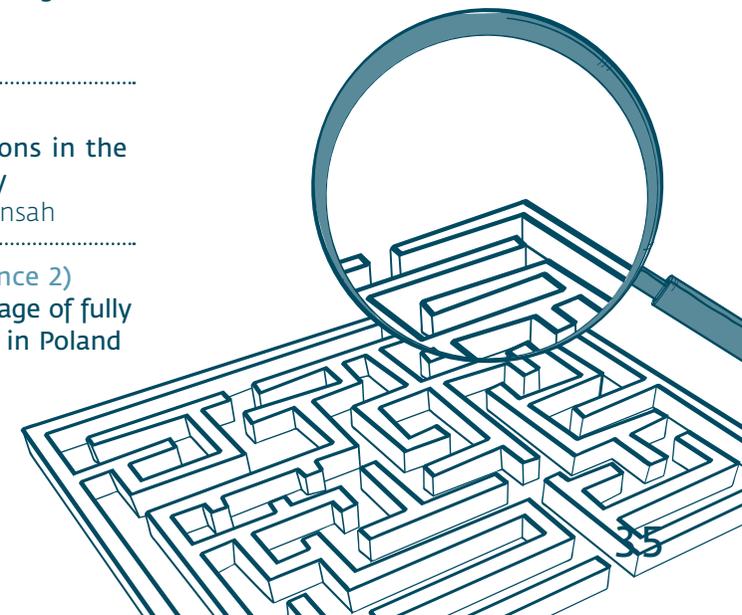
**Panel on Writing and Publishing in Academia**  
(with Prof. Dr. Roman Inderst)

**Session 6 (Regulation 1)**  
**Cost Efficiency and Regulations in the Ghanaian Insurance Industry**  
Nana Adwoa Dekyem Amo-Mensah

**Session 7 (Behavioral Insurance 2)**  
**Adequacy and reality of coverage of fully comprehensive car insurance in Poland**  
Marcin Kawinski

**Comparative Risk Aversion in Two Periods: An Application to Self-Insurance and Self-Protection**  
Tobias Huber

**Session 8 (Regulation 2)**  
**Insurance regulation within the statutory health insurance system – Empirical analysis of status quo, proportionality and necessity of compliance management systems**  
Anja Bauchowitz



# Education Studies. Lectures. Seminars.



# Curriculum

## Insurance Economics and Regulation

International Center for Insurance  
Regulation (ICIR)  
Chair of Insurance and Regulation,  
Prof. Dr. Helmut Gründl

### Winter Term

#### Bachelor Program

Fundamentals: Basic Concepts,  
Methods and Models in the Field of  
Finance and Insurance

#### Lecture

##### Corporate Finance

Finanzen III

Prof. Dr. Helmut Gründl

#### Lecture

##### Insurance Economics

Versicherungsökonomie

Prof. Dr. Helmut Gründl, Christian  
Kubitza

#### Seminar

##### Risk Management in Insurance Companies

Risikomanagement in

Versicherungsunternehmen

Thomas C. Wilson, Ph.D.

#### Master Program

Specialization in the Field of  
Insurance and Regulation

#### Seminar

##### Insurance Technology and Its Limits

Versicherungstechnologie und ihre  
Grenzen

Prof. Dr. Hartmut Nickel-Waninger

#### Seminar

##### Selected Topics in Insurance Regulation

Prof. Karel Van Hulle

### Summer Term

#### Bachelor Program

Fundamentals: Basic Concepts,  
Methods and Models in the Field of  
Finance and Insurance

#### Lecture

##### Insurance Products and Their Distribution

Versicherungsprodukte und deren  
Absatz

Prof. Dr. Hartmut Nickel-Waninger

#### Seminar

##### European Insurance Regulation

Europäische Versicherungsregulierung

Prof. Karel Van Hulle

#### Master Program

Specialization in the Field of  
Insurance and Regulation

#### Lecture

##### Asset and Liability Management in Insurance Companies

Prof. Dr. Helmut Gründl

#### Lecture

##### The Micro- and Macroeconomic Role of Insurance Companies

Prof. Dr. Helmut Gründl,  
Christian Kubitza

#### Lecture (start summer term 2019)

##### Insurance and Finance

Dr. Christian Thimann

## Winter Term

### Seminar

#### Insurance Law Seminar on „Liability Insurance“

Versicherungsrechtliches Seminar:  
„Haftpflichtversicherung“  
Prof. Dr. Manfred Wandt

### Colloquium

#### European Insurance Contract Law Europäisches Versicherungsvertragsrecht

Prof. Dr. Jens Gal

### Colloquium

#### European Insurance Law: Substantive Foundations, Conflict of Laws and Legal Harmonization

Europäisches Versicherungsrecht:  
Materielle Grundlagen, Kollisionsrecht  
und Rechtvereinheitlichung  
PD Dr. iur Leander D. Loacker,  
Universität Zürich

### Colloquium

#### Liability and General Liability Insurance: European and German Law

Haftpflicht und Haftpflichtversicherung:  
Europäisches und deutsches Recht  
PD Dr. iur Leander D. Loacker,  
Universität Zürich

### Colloquium

#### German and European Insurance Contract Law: Introduction to Private Insurance Law

Deutsches und Europäisches Ver-  
sicherungsvertragsrecht: Einführung  
in das Privatversicherungsrecht  
Hon. Prof. Dr. Peter Reusch

### Lecture

#### Introduction to Conflict of Law

Prof. Dr. Jens Gal

### Lecture

#### Commercial Law

Prof. Dr. Jens Gal

### Lecture

#### Law of Obligations

Prof. Dr. Jens Gal

## Summer Term

### Lecture

#### German Tort Law (with a focus on the Interdependence with Insurance Law)

Deliktsrecht (mit Bezügen zum  
Versicherungsrecht)  
Prof. Dr. Manfred Wandt

### Colloquium

#### German and European Insurance Contract Law

Deutsches und Europäisches  
Versicherungsvertragsrecht  
Prof. Dr. Manfred Wandt

### Seminar

#### „Cyber Risks: New Challenges for Liability and Insurance Law?“

„Cyber-Risiken: Neue Heraus-  
forderungen für das Haftungs- und  
Versicherungsrecht?“  
Prof. Dr. Manfred Wandt

### Seminar

#### Development of Supervision and Regulation of Insurance Markets in the late 2010s: Stagnancy, Innovation or Consolidation

Entwicklung der Beaufsichtigung und  
Regulierung der Versicherungsmärkte in  
den ausstehenden 2010er Jahren: Stag-  
nation, Innovation oder Konsolidierung  
Prof. Dr. Jens Gal

## Lecture

### Corporate Finance Finanzen III Prof. Dr. Helmut Gründl

The bachelor degree lecture "Finance III" covers corporate finance, insurance and risk management topics. The main goal is to equip students with the fundamental concepts of valuation, capital structure and risk management of financial institutions. They learn about the reasons why risk financing matters and how to use derivatives for hedging risks and what the difference is. ♦

## Lecture

### Insurance Economics Versicherungsökonomie Prof. Dr. Helmut Gründl Christian Kubitzka

The objective of the lecture on "Risk Management and Insurance" is to understand the relevance and principles of risk management in the context of insurance. To this end, the life and non-life insurance segments are analyzed, including current developments unfolding from time to time. This approach is based inter alia on the expected utility theory [Bernoulli principle], the (cumulative) prospect theory as well as theoretical risk approaches. In the course of the exercises, an introduction is given to statistical programming, and the content of the lecture is applied to various problem cases to be solved. The students are enabled to understand, reflect on and apply modern theory. ♦

## Lecture

### Insurance Products and Their Distribution Versicherungsprodukte und deren Absatz Prof. Dr. Hartmut Nickel-Waninger

The objective of the lecture is to understand the fundamental concept of insurance as well as the delineation between individual and social insurance. Moreover, selected insurance products are to be introduced from the non-life (motor vehicle insurance, building insurance), life insurance and health insurance segments. The calculations used for the various insurance products are dealt with in detail. The sales policy of an insurance company represents a further focal point of the module. In the process, the sales strategies and sales policy instruments of insurance companies are presented, followed by a discussion of their respective benefits and drawbacks. Students are enabled to understand the fundamental concept of insurance along with the clear

delineation between individual and social insurance systems. They acquire an overview of the large variety of insurance products available and receive an in-depth insight into selected insurance products from the non-life, life and health insurance segments. They develop a firm command of quantitative methods of insurance calculation and receive an insight into distribution policy of the insurance industry and are to understand the benefits and drawbacks of various distribution channels. ♦

### Seminar

#### **Risk Management in Insurance Companies** Risikomanagement in Versicherungsunternehmen Thomas C. Wilson, Ph.D.

The seminar aims at introducing students to the basic concepts of risk management in insurance companies. During the seminar, the students will gain insight on how companies develop and assess their risks, and the role of regulation. The range of topics covers all areas of traditional and non-traditional insurance activities and related regulation. Learn how to interpret, classify and critically discuss results of scientific research and more. Generally improve presentation and communication skills. ♦

### Seminar

#### **European Insurance Regulation** Europäische Versicherungsregulierung Prof. Karel Van Hulle

The seminar aims at providing students with basic knowledge about insurance regulation and supervision in the EU. During the seminar, students will first receive a general introduction about insurance regulation and supervision in the EU. They will then have to research a topic relating to insurance regulation and/or supervision, to present their research and to discuss the outcome with fellow students. Students will be able to select the relevant topic from a list provided in advance. The topics will relate to areas such as Solvency II, market conduct, insurance distribution, supervisory co-operation. ♦

### Lecture

#### **Asset and Liability Management in Insurance Companies** Prof. Dr. Helmut Gründl

The goals of the ALMI lecture are to understand asset and liability management strategies used in insurance companies, and to understand the new Solvency II insurance regulatory rules. The contents of the ALMI lecture are separated into three categories: Liability Management, Asset Management, and Asset Liability Management and Solvency II. The first part – Liability Management – focuses on topics such as risk pooling, insurance pricing, estimation of reserves, risk sharing, reinsurance, alternative risk transfer, and capital management. Students are supposed to understand the sources of risks in insurance companies, and to learn techniques to measure and limit these risks. For the Asset Management part, the lecture applies classic pricing methods as

well as performance measurements to the insurance context. Specifically, in this part students are expected to practice knowledge such as Markowitz Diversification, CAPM, Performance Measurements, and Dynamic Financial Analysis. In addition, the second part offers insights into the regulatory framework for insurers' investment policies. The last part – Asset Liability Management – integrates both asset management and liability management strategies to arrive at an integrated risk management of insurance companies. It aims to help students understand the motivation and importance of conducting ALM, and to further equip students with methodologies such as simultaneous and classic modeling based on the Markowitz approach. Furthermore, policyholders' reactions on the default risks of insurers are also incorporated as one of the topics. We also discuss the envisaged Solvency II regulatory regime and its implications for ALM. ♦

## Lecture

### The Micro- and Macroeconomic Role of Insurance Companies

Prof. Dr. Helmut Gründl  
Christian Kubitzka

Insurance companies play a vital role: for individuals that seek to decrease uncertainty of wealth, for businesses that want to manage business risk, for the real economy by providing funds and pooling risks, and for the financial market by being important counterparties in numerous financial transactions. In this course we will shed light on these different roles of insurance companies. We will compare the implications for different stakeholders and (insurance) markets in general. In the first part of the course, we will provide the basics for understanding the different roles of insurance companies, that include the microeconomics of insurance demand and information asymmetries in insurance markets, the specifics of life insurance and its regulation, the relation between eco-

conomic growth and insurance penetration, the behavior of insurers as asset investors, and the relation between financial crises and insurance companies. In the second part of the course, participants will present research papers that examine specific details about these different roles of insurance companies. Based on their presentation, participants are required to hand in a written homework about the policy implications of the presented research. ◆

## Seminar

### Insurance Technology and Its Limits Versicherungstechnologie und ihre Grenzen Prof. Dr. Hartmut Nickel-Waninger

During this seminar, students establish how enterprises can identify and evaluate their risks so that they can develop concepts for bearing such risks on that basis. The central topic of the seminar varies each year and includes current developments unfolding e.g. in the fields of liability insurance and aviation risks or current topics in the fields of life insurance and health insurance. Apart from the discussion of current theoretical and practical problems posed, a central element of the seminar is the processing of complex insurance theory models by students. In addition, an external expert attends the courses each year and delivers a topic-related presentation on current practical developments of the subject selected. ◆

## Seminar

### Selected Topics in Insurance Regulation Prof. Karel Van Hulle

The objective of the seminar is to build on the knowledge acquired in the bachelor seminar on European Insurance Regulation. Students are required to research a specific topic, to report about their research and to discuss the results of the research with their fellow students. As opposed to the bachelor seminar, the topics in the master seminar will have to be researched on a comparative basis. The topics will be provided in advance and will relate to issues such as the ORSA, key governance functions, assessment of fit and proper requirement for key function holders, internal model approval, market conduct issues, insurance distribution, etc. ◆

# The ICIR Introduces the Certificate “Insurance. Investment. Pensions. Regulation.” for Master Students



The certificate “**Insurance. Investment. Pensions. Regulation.**” of the Chair of Insurance and Regulation, the Chair of Investment, Portfolio Management and Personal Finance and the International Center for Insurance Regulation (ICIR) serves as a qualified letter of recommendation for graduates of the Master programs at the Faculty of Economics and Business Administration of the Goethe University who have acquired competencies in the areas of insurance, investment, pensions and insurance regulation.

Graduates are entitled to a certificate if they have successfully completed a specified scope of courses and/or their master thesis in these areas.

The certificate certifies all courses (and theses) completed by the applicant in the Bachelor and Master programs, including the ECTS points earned, that are thematically related to the topics of insurance, investment, pensions and insurance regulation.

The certificate can be used for applications for work or internship positions related to insurance, pensions, or insurance regulation, or also for positions in the scientific field.

# Facts and Figures

## Exams and Theses 2010–2018

Number of exams and theses supervised by the Chair of Insurance and Regulation and the ICIR in the Bachelor and Master programs in the period 2010–2018.

### Bachelor

Number of exams:

2564

Number of theses:

91

### Master

Number of exams:

817

Number of theses:

58

### Topic Assignments for Bachelor and Master Theses 2017/18:

The Economic Impact of Solvency II on Insurers • Solvency II und Insurance Capital Standard: Überschneidungen und Abgrenzung mikro- und makro-prudenzieller Versicherungsaufsicht • Sind Kryptowährungen systemisch relevant? • Blockchain Technology in the Insurance Industry • The Influence of Market Risks on the Stock Return of European Insurance Companies • Insurance Business Diversification and Cost of Capital • Recovery and Resolution for Insurance Companies in the EU and in Germany • The Valuation of Life Insurance Contracts according to IFRS17 and Solvency II • Run-off als strategische Handlungsoption eines Lebensversicherers • The Role of the Surrender Option in Life Insurers' Risk Management • Organisation des Risikomanagements in Finanzdienstleistungsunternehmen • Hedging Life Insurers' Market Risks und Accounting Frictions • Die betriebliche Altersvorsorge in Bedrängnis der Niedrigzinsphase – Der Pensionfonds als Ausweg? • Infrastructure Investments by Insurance Companies: On the Adequateness of Solvency Capital Requirements • IFRS 17 – Implications of the New Accounting Standard for the German Insurance Industry • Telematik Smartphone Apps – Akzeptanzmodell und Einfluss auf das Fahrverhalten • Die Zinszusatzreserve in der Lebensversicherung im Lichte der Niedrigzinsphase • The Impact of Demographic Changes on Insurance Companies' Risk Management • Kapitalallokation als Basis der Steuerung von Versicherungskonzernen • Telematik in der Tarifierung von Kraftfahrzeugversicherungen • Asset and Liability Management in Pension Funds • Catastrophe Bonds as Risk Management Instruments • ...

# Policy Platform

## People. Positions. Presentations.



# The Recalibration of the European System of Financial Supervision in Regard of the Insurance Sector: From Dreary to Dreamy or Vice Versa? \* 1



Coming (great) events cast their (long) shadow before. As the financial crisis gave birth to the creation of the European System of Financial Supervision (ESFS), the imminent Brexit now serves as an impulse to rather extensively reorganize it.

Pursuant to the preferences of the Commission – as revealed in its draft for a regulation amending the regulations founding the European Supervisory Authorities (ESA) – the supervision (and regulation) of the financial sectors should be further centralized and integrated and additional powers should be given to the ESAs. To a large degree these alterations are intended to adjust the competences of the European Securities and Markets Authority (ESMA) to better meet its new objectives under the Capital Markets Union (“CMU”). In view that an equivalent to the CMU or the Banking Union – in the sense of a European Insurance Union – is not yet on the horizon for the insurance sector (or the occupational pensions sector), one could prima vista take the view that insurance supervision and regulation is ▶

° SAFE policy papers represent the authors' personal opinions and do not necessarily reflect the views of the Research Center SAFE or its staff.

**1** Some Comments on the EU Commission's Proposal for a Regulation of 20 September 2017 in: COM (2017) 536 final, and the Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions, Brussels, of 20 September 2017 in: COM(2017) 542 final.

**2** See for the Solvency II Preparatory Guidelines and further guidelines: <https://eiopa.europa.eu/regulation-supervision/guidelines>.

once again taken captive by the necessity of regulatory reforms stemming from other financial sectors. However, even if that is partially the case, the outcome of the intended reforms might still be advantageous for the insurance sector and an important step in the right direction. Therefore, it needs to be intensively discussed.

At this stage, some of the most prominent envisioned changes to the structure, tasks and powers of the European Insurance and Occupational Pensions Authority (EIOPA) and their necessity, usefulness or counter-productivity still have to be examined.

### Centralization of Supervision

When the ESAs were created—with the exception of ESMA vis-à-vis rating agencies—they were primarily assigned to promote convergence of supervisory practices of the national supervisory authorities, i.e. the European Banking Authority (EBA) in the banking sector, EIOPA in the insurance sector, and ESMA in securities markets. The creation of the Banking Union and the resulting centralization of supervision of many financial institutions under the auspices of a European authority—albeit not under that of the EBA or another ESA but the Single Supervisory Mechanism (SSM) at the ECB—has brought a very significant change. We are currently witnessing a similar development with regard to capital markets. The CMU is intended to unify capital markets in Europe supported by

a more integrated European financial supervision. The Commission's proposals can thus be seen as a stepping stone to by and by abolish national supervision of financial markets and creating a fully centralized supervisory system (at least in relation to some financial institutions). Whilst such a centralization appears to be called for in regard of large banking undertakings and groups, financial conglomerates and capital markets, which are defined by a substantive amount of cross-border business, one might question its appropriateness in the

## The current group supervisory system still ails from a certain lack of centralization

insurance sector where business (i.e. the tendering of insurance cover) remains to be local for the most part. On the contrary, one cannot ignore that to a large extent insurance cover is no longer provided by stand-alone insurance undertakings but rather by companies belonging to insurance groups or financial conglomerates which may as such not be efficiently supervised on a purely national level. The current group supervisory system still ails from a certain lack of centralization and thus lends itself to a significant degree to supervisory arbitrage. In

view, for example, of pending reform of the regulation of Global Systemically Important Insurers (G-SIIs), e.g. the creating by IAIS of the Insurance Capital Standard (ICS) or the requirements to provide for Higher Loss Absorbency (HLA), one could argue that at least those insurers (and insurance groups) that are of particular importance to the European Union as a whole would be more efficiently supervised by EIOPA directly. Such discussion about the creation of an Insurance Union remains, however, for a later day. For the moment, EIOPA, other than ESMA in respect of certain sectors of capital markets, is pursuant to the Commission's concept not to be granted full and unabated supervision over any European insurance undertakings. Furthered centralization of supervision in the insurance sector is rather limited to certain aspects. For example, EIOPA will be more involved in the authorization and supervision process pertaining to non-EU insurers and, as will be discussed later, in the authorization for the application of internal models. Whilst such tasks will diminish the powers of the national supervisors (and the group supervisor) they will also help to create a more level playing field.

### Europeanization by Structural Reform of EIOPA

Whereas EIOPA has been a European agency since its creation, with all organs, members of its organs and employees only acting in the interest of the European Union as a whole, reality proved it—and the other ▶

ESAs—to be a horse of a different colour. All significant decisions of EIOPA are taken either by the Board of Supervisors or the Management Board with voting rights only granted to the representatives of the national supervisory authorities (NSAs). Even though the directors of the NSAs or their replacements are in the discharge of their duties within EIOPA subject to a duty (and a right) of independence, thus are barred from accepting instructions from their governments and from acting in the national interest, it may be feared that any decision (at least in face

## The majority of decisions is still under the purview of the national supervisors

of a crisis) could be overly oriented towards the safeguarding of national interests. The Commission aspires to further Europeanize the regulation and supervision of the insurance sector by altering the organizational structure of EIOPA. The Commission aims to retain the Board of Supervisors as the main organ of EIOPA, which respectively means that the majority of decisions is still under the purview of the national supervisors. Yet, it plans to rechristen the Management Board and to shift several powers from the Board of Supervisors to the

thence-called Executive Board. Under the current structure of EIOPA such would not result in a significant loss of importance of the national supervisors since the Management Board comprises the Chairperson, several members elected by and from within the members of the Board of Supervisors, the Executive Director and a Representative of the Commission, with only the two former categories of members having a voting right (except concerning budget questions where the representative of the Commission has a voting right). Under the provisioned amendments of the EIOPA Regulation, the Executive Board would, however, consist of the Chairperson and a number of full-time members, i.e. employees of EIOPA. The task of this Executive Board would for the most part, as is the case today for the Management Board, remain the preparation of decisions of the Board of Supervisors. Under the current regime the Management Board displayed, however and although a distinct organ on paper, some traits more similar to a preparatory sub-committee, especially in view that voting members were, except for the Chairman, exclusively elected by and from within the voting members of the Board of Supervisors. Under the proposed regime it would rather be a genuinely distinct organ exclusively composed of European staff katexochen. This would dramatically alter the equilibrium between EIOPA and the NSAs, since projects will often be predefined by the preparatory work done by EIOPA sensu stricto. Further, the Executive Board would take

over several tasks and powers from the Board of Supervisors. For instance, the Executive Board is intended to take the final decision on the settlement of disputes between NSAs, on the breach of Union law and on the execution of stress tests. These structural changes will in toto result in a significant disempowerment of the NSAs and result in a massive Europeanization of insurance supervision. This means that EIOPA would be granted several areas within which it could take insurance supervisory decisions unchecked by the NSAs but with

## Structural changes will result in massive Europeanization of insurance supervision

immediate effect for them. Whether these are happy news, is a question of perspective. One can, however, expect that the NSAs will not greet this proposal with open arms, but rather with teeth and claws.

### **New Tasks and Powers (Especially Pertaining to Internal Models)**

EIOPA would also be assigned several new tasks and powers. It will e.g. be entrusted with monitoring and addressing issues pertaining to technological innovations ▶

and environmental, social and governance factors. One could question if these tasks and powers are truly new or were already entrusted to EIOPA under some of the catch-all competences. However, in view of the upcoming challenges in these fields it is certainly useful that the EIOPA Regulation would explicitly state that these factors should also be taken under consideration by EIOPA. An important clarification is provided by the draft in obligating EIOPA to not only help the European Commission to prepare equivalence decisions on the insurance supervisory systems of third countries, as has already been the case. EIOPA should also continuously monitor the regulatory and supervisory developments in those countries which have been afforded equivalence status in order to re-evaluate the decision in the event of any changes. EIOPA would also be explicitly tasked with developing and maintaining an up-to-date supervisory handbook; an obligation hitherto only assumed to exist implicitly.

A true innovation, or in some respects rather reinforcement of existing tasks and powers, is planned with regard to the approval process for internal models. The Commission's draft makes it incumbent on supervisory authorities including group supervisors to inform EIOPA about completed applications for the usage of internal models or internal group models and to provide the underlying documentation where requested before deciding on the application. For internal group models this appears to

only be a clarification since EIOPA is already a member of the supervisory colleges and thus takes part in the joint decision on relevant applications. For decisions on single entity basis this, however, is a true innovation which enables EIOPA to efficiently supervise the national practices of authorizing the implementation of internal models. This empowerment seems very appropriate since a divergence in supervisory practices concerning the allowance of internal models, especially within a principle based system, increases the risk of supervisory arbitrage.

## A true innovation is planned with regard to the approval process for internal models

By putting EIOPA in a position of being an information juncture it is not only able to better assess deficiencies and best practices. It should also be explicitly assigned to use such information, though this power already existed implicitly in the past, to issue guidelines on the assessment of internal models.

### Altered Review over Guidelines and Recommendations

Following the issuance of the Solvency II Preparatory Guidelines<sup>2</sup>, the legal instruments of guidelines and

recommendations and the imperfect judicial protection against this rather hard category of soft law has received much attention. The Commission is to be lauded in trying to close the protective gap by providing for a new appeal mechanism. The draft allows the EIOPA Stakeholder Group (in the case of EIOPA this can only be the particular Stakeholder Group whose sector is addressed by the guidelines) to submit a petition to the Commission, if it believes that EIOPA has exceeded its competences. The Commission would be entitled to order EIOPA to alter or withdraw the relevant guidelines. The advantage of only granting petition rights to (the majority of the members of) the Stakeholder Group would be that guidelines became appealable whilst avoiding the creation of a burdensome *actio popularis*. In view of its continuous tendency to usurp additional powers also by excessive use of soft law instruments, one could, however, question if the Commission is really the best forum to decide such questions. To many, such a mechanism might seem like allowing the hens to appeal to the wolf for protection against the fox.

### Reformed Funding System

The amendment which is most likely to spark an extreme amount of controversy relates to an envisioned change to the funding of EIOPA. Currently EIOPA is funded by a proportional contribution of the NSAs (amounting to 60% of the total budget) and a balancing contribution ▶

out of the EU-budget (of 40%). In addition, the EIOPA Regulation allows that fees can be collected from insurance undertakings. However, this only applies to undertakings directly supervised by EIOPA, which currently do not exist. The Commission's draft is intent on creating a tabula rasa and making all European insurers directly liable for funding EIOPA. Pursuant to the proposed concept, all entities supervised indirectly by EIOPA, that is all entities supervised by the NSAs belonging to the insurance and occupational pensions

## The Commission's draft is intent on making all EU insurers directly liable for funding EIOPA

sector of the ESFS, would be obligated to contribute in a proportional manner to the annual budget of EIOPA. The remainder of the budget would be paid through a balancing contribution by the EU (with direct fees by directly supervised entities remaining possible, but for the time being irrelevant). This proposition apparently stems from the fact that in the past some NSAs were reluctant or even unable to forward their contributions to the ESAs, because they were themselves underfunded. The reason for this is most likely that some European NSAs are still

exclusively funded from the general state budget (maybe with additional fees for supervisory actions), without an annual contribution of the supervised entities.

In a way, the Commission's proposition now circumvents national legislators' decisions of who has to pay for the soundness of the insurance sector (i.e. the tax payer or the insurance undertakings and, thus, indirectly the policyholders). This appears questionable in itself. Further, it remains unclear and needs to be substantiated in subsequent EU legislation, how the contributions should be levied. It can be expected that it will be the NSAs who collect the contributions for the account of EIOPA. Hence, it is difficult to see the true advantage of this procedure compared to the current system. Most likely the changes and making the insurers directly liable to EIOPA are intended to pave the way for future changes. Thusly understood, the Commission wants to create a system which can be switched at a moment's notice to make the ESAs, including but not limited to EIOPA, the direct supervisor of the supervised entities – with contribution channels already established – and to eradicate national supervision. Irrespective of one's thoughts about the prospect of a fully centralized supervision of the insurance sector, one cannot but fear that the proposed amendment will increase the contributory burden on the undertakings at least in those countries, such as Germany, that have in place a funding system that reliably provides for an annual

contribution to the NSA. In conjunction with the establishment of EIOPA most of such NSAs increased the fee in order to allow for the payment of their obligatory contributions to EIOPA. Once a direct contribution to EIOPA is established, such system would be expected to again lower the national contributions in order to avoid a sort of "double-taxation". However, given past experience, it seems more likely for a camel to go through the eye of the needle than for the state to lower taxes or contributions once raised. In conjecture, it would be safe to assume

## Making the insurers directly liable to EIOPA paves the way for future changes

that the proposed amendment would mean a cost increase for supervised entities. This is even more true in light of EIOPA being expected to increase its staff by one-third in reaction to the planned amendments.

### Information Request with a Bite

EIOPA's power to request information from the NSAs, other national authorities and insurers is intended to put it into a position to discharge of its duties in an orderly fashion. Whilst the EIOPA Regulation already creates an ►

obligation for NSAs, other national authorities and insurers to appropriately respond to an appropriate request of information, it does not provide for any legal consequences where such obligation is breached. Though this has not been a problem thus far, the Commission sees fit to provide legal consequences and hence provide EIOPA with a means to force parties to comply. EIOPA should be given the power to impose fines on insurers, nota bene not on NSAs, if they neglect their duty. Currently, EIOPA may only request the provision of information directly from insurers as an ultima ratio-measure, meaning when the necessary information cannot be provided by the NSA or other state authorities. Insofar the imposition of fines in the insurance sector—other than in the sectors supervised by ESMA—will remain, for the time being, hypothetical.

### Power of Strategic Planning for NSAs

One of the planned amendments that appears rather benign at first sight but might have a very pronounced impact relates to the new power of EIOPA to address so-called strategic supervisory plans to NSAs. This instrument enables EIOPA to identify for the NSAs with a three-year-horizon (in conjunction with the work programmes of EIOPA) the specific priorities for supervisory activities. The NSAs are, furthermore, obligated to assess EIOPA's annual work programme and adopt their own work programme and report towards EIOPA. This ties the concrete supervisory practices of the NSAs much closer to the control and

the steering of EIOPA. The Commission's propositions are quite vague as to the level of abstractness that the strategic supervisory plans are supposed to have. Hence, it is not inconceivable that EIOPA could use this power to directly supervise certain (big) insurance undertakings.

### Résumé

Other than the changes to the governance structure, i.e. the creation of the Executive Board in lieu of the Management Board, and the funding scheme, the proposed

## Concerning pan-European insurance groups one should entertain the idea of a centralized supervision

amendments of the EIOPA Regulation seem in praxi rather minor and often only of declaratory nature. In many instances, however, the alterations seem to be intended to prepare for future recalibrations of the ESFS. One might understand the proposed amendments, thus, as an effort to softly steer the EIOPA Regulation towards a future implementation of an Insurance Union with a single supervisory authority, i.e. EIOPA. Viewing reactions from many stakeholders, on the one hand, it appears that such a fruit is not yet ripe for plucking. On the other

hand, it seems contradictory that most Europeans regard the American system of state based supervision and regulation of the insurance sector as anachronistic, yet cling onto a system of national supervision. At least concerning large undertakings and pan-European insurance groups one should entertain the idea of a centralized supervision. This would support the creation of a truly Internal Market of insurance and, if only by reducing supervisory expenditures, further increase the competitiveness of European insurers on a global level. For those who for one reason or another are opposed to centralized supervision, the proposed amendments should come as a warning. The EU is out to centralize, it is out to integrate and it is not taking prisoners. With Great Britain, one of the biggest opponents to centralized financial supervision, out of the Union, the creation of a fully integrated financial market seems more feasible. Since the British financial market now enters into competition with the European Union market, centralized financial supervision and a resulting robust fully integrated market might be just what the doctor ordered. ♦

# Life Insurance: Rising Interest Rates Can Lead to Challenges



In the short term, a strong and rapid increase of interest rates can be problematic for insurance companies.

The persistently low interest period and the large number of long-standing contracts with a guaranteed interest rate of up to 4 percent pose major challenges for European life insurers. Many of these companies are therefore looking forward to a higher level of interest rates. And indeed, interest rates have already risen slightly over the past two years. At first glance, it seems that higher interest rates have a stabilizing effect on the balance sheets of life insurers. Everything all right then?

Not quite: The reason lies in different interesting effects of rising interest rates on the trade balance and the solvency balance sheet according to Solvency II. Under the principle of lowest-value (“Niederstwertprinzip”), insurance companies would have to swiftly write-off bonds in the trade balance sheet, while the value of the obligations on the liability side would even rise in the short term due to the additional interest rate reserve regulations, and would only drop thereafter. This would lead to short-term trade losses for the company. In the sense of a “true and fair view”, it would therefore be advisable, in the case of rising interest rates, to amend

the regulations on additional interest rate reserves so that insurance companies can dissolve them quickly.

In the solvency balance sheet, however, rising interest rates for life insurance companies have a clearly positive effect due to the appropriate market-consistent valuation. Solvency, i.e. the endowment of the insurance company with own funds, improves.

However, a sudden, sharp increase in interest rates may pose risks for the insurance industry and thus for clients as well, if policyholders discontinue their contracts due to rising interest rates and invest in higher yielding assets. Although, cancellations usually result in trade balance profits due to cancellation fees, they can contribute to a reduction in own funds in the solvency balance sheet.

In conclusion, it can be said that on the one hand a moderate, slow increase in interest rates would clearly have positive effects for life insurance companies. On the other hand, a very strong and rapid increase in interest rates could lead to problems. ♦

# Life Insurers: Low Interest Rates are Bad. Are Rising Interest Rates Better? Experts Call for a Recalibration of the Additional Interest Reserve



Prof. Dr. Helmut Gründl, Dr. Frank Grund and Dr. Klaus Wiener discussed the effects of rising interest rates.

The prolonged period of small returns on assets and the large amounts of legacy contracts which grant a minimum rate of return to policy holders of up to 4% poses a major challenge to European life insurers.

Therefore, many of them hope for a near-term reversal in interest rates. However, a sudden rise in interest rates could also entail risks for the insurance industry and thus also for insurance customers. What are the effects of rising interest rates on life insurers' solvency and liquidity? This question was addressed at the 13<sup>th</sup> Talk on Insurance and Regulation on May 24, at the Goethe University Frankfurt, organized by the International Center for Insurance and Regulation (ICIR).

**Prof. Dr. Helmut Gründl**, outlined the results of a recent joint research work with Elia Berdin and Christian Kubitzka which simulates the effects of a sudden interest rate shock. According to the researchers, a significant and above all rapid rise in interest rates would worsen the liquidity and solvency of life insurers over several years. "Even a gradual increase in interest rates would ▶



substantially worsen the liquidity situation and slightly reduce the solvency of the life insurer”, Gründl said.

At first sight, rising interest rates might stabilize the balance sheet of life insurers. However, policy holders may find it more attractive to lapse their contracts and to invest in new saving opportunities with higher returns. In this case life insurer could face a significant outflow of liquidity.

Also, diverging accounting requirements of Solvency II and GAAP caused frictions, Gründl stated. Under the principle of lowest-value (Niederstwertprinzip), insurance companies would have to swiftly write-off bonds in the trade balance sheet in the case of rising interest rates. At the same time, the value of the obligations on the liability side would even rise in the short term due to additional interest rate reserve regulations, and would only drop thereafter. This would lead to short-term trade losses for the company. In the solvency balance sheet, however, rising interest rates for life insurance companies have a clearly positive effect due to the appropriate market-consistent valuation. The solvency improves. However, cancellations of insurance contracts may have an adverse effect. Due to cancellation fees, cancellations usually result in trade balance profits, while they can contribute to a reduction in own funds in the solvency balance sheet. “In this situation any surrender leads to loss”, Gründl said.

**Dr. Frank Grund**, Chief Executive Director Insurance and Pension Funds Supervision of the Federal Financial Supervisory Authority (BaFin), agreed to Gründl’s assessment that rising interest rates could bear some risks, however, “there is no need to panic”, he said. Grund pointed out that buffers would mitigate the lapse risk in case of a substantial hike. Not all insurance policies could be surrendered so easily. The surrender charge or the loss of tax incentives and government subsidies for policy holders of Riester contracts provided strong lapse barriers. Contracts with occupational pension funds even could not be mitigated at all.

Grund doubts that an interest rate rise of 5 percentage points in two years, as suggested by Gründl et al., was realistic. Even current stress tests of the European Insurance and Occupational Pensions Authority (EIOPA) were based on a less severe scenario, Grund said.

With reference to the additional interest reserve (Zinszusatzreserve) Grund conceded that life insurers may face diverging effects from financial reporting and prudential regulation. “The problem of the additional interest reserve can only be solved by changing the law”, Grund said. Therefore, he advocated a modification of the actual reserve ordinance (Deckungsrückstellungsverordnung).

In his speech **Dr. Klaus Wiener**, Member of the Executive Board and Chief Economist at the German Insurance

Association (GDV), also called for some regulatory adjustments and pleaded for a recalibration of the additional interest reserve. “The instrument is in principle sensible however, the pace of additional reserve accumulation is way too fast”, he said. Interest rate provisioning already amounted up to 60 billion euros. Even with surging interest rates buffers would further increase.

Wiener pointed out that since the onset of the financial crisis lapse rates have decreased continuously. He considered it unlikely that higher yields would lead to higher lapse rates because a surrender would imply a loss of biometric risk protection for policy holders and surrender charges would apply. Wiener does not expect a rise in capital market yields of more than 3 percent. However, even 3% would not be high enough to trigger a mass termination of life insurance contracts, he stated. “To avoid frictions, surrender values of life insurance policies should be adjusted to changing market conditions”, Wiener suggested. ♦

# Systemic Risk in the Insurance Sector: Micro- and Macroprudential Policies are not yet Aligned



SAFE/ICIR Lunchtime Series in Brussels: Nathalie Berger, Helmut Gründl and Tom Wilson discussed systemic risk in the insurance sector and its regulatory implications.

A functioning insurance sector is important for society, said Helmut Gründl (SAFE, International Center for Insurance Regulation, ICIR, and Goethe University Frankfurt) in his introductory presentation at the second SAFE Lunchtime Series event on 10 October 2018. The event was jointly organized by SAFE and ICIR at the Representation of the State of Hessen in Brussels, bringing together perspectives on systemic risk in the insurance sector from academia, regulators and practitioners.

In his introductory presentation, **Helmut Gründl** stressed the importance of a well-functioning insurance sector for the society and discussed potential channels how insurers could contribute to systemic risk. He further emphasized that micro- and macroprudential policies are not yet aligned and discussed differences between the entity- and the activity-based approach for identifying systemically important insurers. Gründl presented two current research projects of the ICIR on systemic risk in the insurance sector that help to ▶



better understand and counteract systemic risk in the insurance sector.

The first research project introduces a measure of systemic risk that accounts for the slow resolution of economic shocks and illustrates the long-term impact an insurer's distress can have on the financial system. The second research project, an empirical work, shows how insurance companies can exploit a diversification potential between life and non-life insurance business that can minimize their contribution to systemic risk. He pointed out that both projects can have important implications for the adequate regulatory treatment of systemic risk.

**Tom Wilson**, CRO of Allianz SE, opened the subsequent panel discussion from an industry perspective, highlighting the risks originating from large exposures of insurance companies to bank and sovereign debt. According to him, a lack of broad and deep debt capital markets, current insurance and banking regulations, as well as the strong interdependencies between sovereign and bank bonds further impair the situation. He noted that bank debt and sovereign bonds, which can be highly correlated during times of crisis, represent a large proportion of fixed income investments for insurance companies in Europe. To mitigate these systemic concentrations for the insurance sector, he called for a completion of the Capital Markets Union in Europe and

for a deeper and vibrant corporate debt market, helping to further diversify the insurers' portfolios and reduce insurer's exposure to systemic risk.

**A Stronger Cooperation Among Policymakers**  
Moreover, a well-functioning debt capital market would allow for a more direct way for insurers to finance real economic activity. In addition to dissolving the bank-sovereign systemic risk nexus, taking the pro-cyclicality out of the current Solvency II capital requirements by

## Stressing the importance of a level-playing field for global insurance companies

implementing a broader "matching adjustment" is a second important step to improve the status quo in his opinion. According to Wilson, it is critical that these policies be put in place while assuring a level-playing field for insurers on the global level.

**Nathalie Berger**, Head of Unit Insurance and Pensions at the European Commission, insisted on the importance of a level-playing field for global insurance companies, which is only achievable through a stronger cooperation

among policymakers. Berger underlined the strong financial stability of insurers in the EU since the introduction of Solvency II, but also highlighted the need for continuously taking future developments of the insurance sector into account. She continued with an overview of measures that are currently applicable on the European level to assure stability in the insurance sector and to mitigate systemic risk, including stress tests, the Own Risk and Solvency Assessment (ORSA) or capital add-ons. With regard to the development of Solvency II, she focused on the long-term guarantee package and several countercyclical tools. To make the reassessment successful it is necessary that all stakeholders contribute, particularly by providing detailed data. Berger concluded by stating support for further work on activity-based regulation and for the development of global standard. She emphasized the Commission priority to ensure a level-playing field for European insurers on a global basis. ♦

Photos: Vivian Hertz

# Climate Risk and Sustainable Finance in Europe: The Role of Insurance



Dr. Manuela Zweimüller and Dr. Christian Thimann discussed the impact of climate change on insurance and its role in the transition towards a more sustainable economy.

The insurance sector as the largest institutional investor with a long-term investment prospect plays a key role in financing sustainable growth. At the same time, insurance companies are particularly affected by climate change. They have to pay out more to policyholders as extreme weather events become more severe and more frequent. Also, they face losses as climate change hits the companies they invest in. Thus, climate change poses risks for insurance companies that have to be evaluated and priced. What is the impact of climate-related risks on the insurance sector and how can investment portfolios of the insurance sector be mobilized to finance the transition towards a sustainable economy? Those questions were addressed at the 14<sup>th</sup> Talks on Insurance and Regulation hosted by the International Center of Insurance Regulation (ICIR) at the House of Finance.

In his speech **Dr. Christian Thimann**, Chief Executive Officer of Athora Deutschland Holding, emphasized the importance of the financial sector and its regulators in ▶



financing a sustainable European economy. He reminded that the Paris Agreement in 2015 for the first time had mentioned the financial sector's key role in re-directing private capital-flows towards sustainable investments. As chairman of the EU-Commission's High-Level Expert Group (HLEG) Thimann had been substantially involved in developing a comprehensive program of reforms on sustainable finance. Based on the HLEG's recommendations the EU-Commission had come forward with an Action Plan in March this year, which set the re-orientation of private capital-flows towards sustainable investments as number one priority.



Thimann pointed-out that a lot of progress had already been made in understanding how environmental risks affect the financial system. "Also, we have a good notion of how to assess, and report those risks. However, on the action level we do not move fast enough," he criticized. "There is still a risk that we fail on the issue, not because we are not aware of the risks, but because there are still not enough capital flows in renewable energy, in CO2-reduced transportation and in resource-protecting food production." According to the EU-Commission to achieve to EU's climate targets agreed in Paris, additional 180 billion Euros a year are needed.

Thimann considers the focus in financial markets on short-time investment horizons one of the major obstacles in re-directing private capital streams towards sustainable projects in infrastructure. Especially the accounting principles of IFRS which are based on mark-to-market values were damaging. "The regulator concentrates on the short-term, although we would need long-term investments," Thimann said. The focus on short-term value extraction from equities created a lot of volatility and instability in the market which made it very difficult to finance sustainable projects.

He reminded the audience that a few regulators have the power to steer the financial sector in a different direction, through common guidelines and by determining capital weights on long-term investments such as infrastructure. "By turning a few switches they can have an enormous impact on the economy," he stated.

**Dr. Manuela Zweimüller**, Head of the Policy Department of the European Insurance and Occupational Pensions Authority (EIOPA), answered that long-term investments were desirable, in order to account for long-term liabilities. "However, we will not serve political interests but keep a risk- and evidence-based approach in regulation," Zweimüller stated and pointed-out that the relaxation of capital requirements for certain "green" investments could come at a price for consumers." First of all, the risk of such investments had to be analyzed and ▶



insurers on both sides of the balance sheet, on their assets as well as their liabilities. Moreover, it had to be examined to what extent “green” investments are suitable for private investors and how to avoid “greenwashing”. The entire product development cycle should take ESG factors into account from product design to distribution. “EIOPA does not intend to prescribe how insurers should invest or whom/what to insure but rather has a challenging role how the forward looking aspects of climate-related risks are addressed. Our responsibility as a supervisor is to foster a so-called stewardship approach of the insurance sector to use its influence for a gradual transition towards a more sustainable economy,” Zweimüller concluded. ◆

evaluated properly as EIOPA had already done for investments in infrastructure projects and infrastructure corporate bonds. Besides, the result of such risk analysis could also mean that capital charges for “green” investments may go up.

Zweimüller argued against a specific mandate for EIOPA to foster sustainable investments. Considering EIOPA’s role to protect consumers and strengthen financial stability, sustainability considerations are already embedded in its activities. Also, she questioned the need for a major adaptation of the prudential regulatory framework, as ESG (environmental, social and governance) factors are in-

herently included in Solvency II and particularly in its risk management requirements, and also referred to in the IORP II Directive (Institutions for Occupational Retirement Provisions).

Zweimüller outlined several activities of EIOPA in line with the EU-Commission’s Action plan. EIOPA for example participates in developing a sustainable taxonomy, which helps to create an EU classification system as well as standards and labels for “green” financial products.

Zweimüller stated that more robust stress testing were needed to evaluate the effects of climate change for

# Policy Platform

## Presentations and Moderation

October 12–13, 2017

Vienna, Austria

Austrian Financial Market Authority  
(FMA)

Moderation of the Conference on  
“Current Challenges for Insurance  
Markets and Supervision in the  
Central, Eastern and South Eastern  
European Region”

Prof. Karel Van Hulle

November 13, 2017

Frankfurt, Germany

Deutsche Bundesbank

Persistence of Insurance Activities and  
Financial Stability

Helmut Gründl, Christian Kubitzka,  
Fabian Regele

November 29, 2017

Arandjelovac, Serbia

Association of Serbian Insurers  
Serbian Insurance Days

From Solvency I to Solvency II

Prof. Karel Van Hulle

December 13, 2017

Allianz, Munich, Germany

China Insurance Regulatory  
Commission (CIRC)

Integrated Financial Supervision  
in Germany

Helmut Gründl

January 22, 2018

Frankfurt, Germany

Deutsche Bundesbank

Rising Interest Rates, Lapse Risk  
and the Stability of Life Insurers

Helmut Gründl, Christian Kubitzka,  
Fabian Regele

February 5, 2018

London, UK

Bank of England

Financial Contagion and Diversification  
of Insurance Activities

Christian Kubitzka

February 14, 2018

House of Finance, Frankfurt

Meeting with IMF Euro Area Financial  
Sector Assessment Program (FSAP)

Helmut Gründl

February 15–16, 2018

Frankfurt, Germany

EIOPA Advanced Seminar

“Quantitative Techniques in Financial  
Stability”

Rising Interest Rates, Lapse Risk, and  
the Stability of Life Insurers

Helmut Gründl, Christian Kubitzka

February 22, 2018

Skopje, Macedonia

XPrimm and the Insurance Supervisory  
Agency of the Republic of Macedonia

Moderation at the International  
Insurance Forum–CEE and SEE Regional  
Actuarial Insurance Conference

Prof. Karel Van Hulle

February 27, 2018

Frankfurt, Germany

Institutional Money Kongress 2018

Solvency II und internes Rating

Prof. Karel Van Hulle

March 15, 2018

Casablanca, Morocco

Association Marocaine des Actuaire  
5<sup>th</sup> Actuarial Congress

Keynote Presentation “Developing a  
Risk Based Solvency Regime–  
Lessons From Solvency II”

Prof. Karel Van Hulle

April 23, 2018

House of Finance, Frankfurt

ILF Conference “Resolution in Europe:  
The Unresolved Questions”

Moderation of the Panel “Insurance  
Company Resolution” at the ILF  
Conference

Helmut Gründl

May 16, 2018

Karlsruhe in Baden-Baden, Germany

40<sup>th</sup> Anniversary Celebration of the  
Insurance Committee of the  
Industrie- und Handelskammer

Versicherungsregulierung: Quo Vadis?

Prof. Karel Van Hulle

May 21, 2018  
 Poznan, Poland  
 70<sup>th</sup> Anniversary Celebration of the Insurance Department of the Economic University  
 Early Lessons From Solvency II: Are We on the Right Track?  
 Prof. Karel Van Hulle

May 24, 2018  
 Madrid, Spain  
 Insurance Europe  
 Moderation of the 10<sup>th</sup> International Insurance Conference  
 Prof. Karel Van Hulle

September 12, 2018  
 Vienna, Austria  
 Institutional Money and the Austrian Association of Insurers  
 Insurance Day  
 Kapitalmarktunion: Was liegt noch auf dem Tisch, insbesondere für die Versicherungswirtschaft?  
 Prof. Karel Van Hulle

October 8, 2018  
 Frankfurt, Germany  
 Deutsche Bundesbank  
 The Influence of Market Risks on the Stock Return of Life Insurance Companies  
 Sebastian Schlütter, Mark Browne, Nicolaus Grochola, Helmut Gründl

October 17, 2018  
 Münster, Germany  
 Forschungsstelle für Versicherungswesen and the Bundesverband Deutscher Versicherungskaufleute  
 6<sup>th</sup> Versicherungsvertriebsrecht-symposium  
 Participation in a Panel Discussion on "PRIIPS, IBIPS und Co.-gelebter Verbraucherschutz oder Haftungsfalle"  
 Prof. Karel Van Hulle

October 25, 2018  
 Amsterdam, Netherlands  
 EIOPA and the Nederlandsche Bank (DNB)  
 Seminar on Recovery and Resolution in Insurance  
 Recovery and Resolution and Macro-prudential Implications  
 Prof. Karel Van Hulle

November 5–6, 2018  
 Rüschlikon/Zurich, Switzerland  
 Swiss Risk and Insurance Forum | Consumers' Privacy Concerns and Their Impact on Insurance Markets and Regulation  
 Irina Gemmo

November 6, 2018  
 London, United Kingdom  
 S&P Global Ratings  
 2018 European Insurance Conference  
 Participated in a Panel Discussion on Regulation at the "Low Rate Fog Lifts, But is the Future Clear?"  
 Prof. Karel Van Hulle

November 7, 2018  
 Frankfurt, Germany  
 ECB Workshop on Money Markets, Monetary Policy Implementation and Central Bank Balance Sheets  
 The Pitfalls of Central Clearing in the Presence of Systemic Risk  
 Christian Kubitza

November 16, 2018  
 Frankfurt, Germany  
 8<sup>th</sup> Bundesbank-CFS-ECB Workshop on Macro and Finance  
 Rising Interest Rates, Lapse Risk, and the Stability of Life Insurers  
 Christian Kubitza

November 30, 2018  
 Brussels, Belgium  
 European Commission  
 High-level conference on "The future of corporate reporting in a digital and sustainable economy"  
 Moderation of the Panel "Is Corporate reporting still fit for purpose and upcoming challenges?"  
 Prof. Karel Van Hulle

# ICIR Events 2017/18



# ICIR Events 2018



May 24, 2018  
House of Finance, Frankfurt  
13<sup>th</sup> Talk on Insurance and Regulation

**Life Insurers: Low Interest Rates are Bad. Are Rising Interest Rates Better?**  
Dr. Frank Grund, Chief Executive Director of Insurance and Pension Funds Supervision, Federal Financial Supervisory Authority (BaFin)  
Dr. Klaus Wiener, Member of the Management Board of the German Insurance Association (GDV)  
Prof. Dr. Helmut Gründl, Chair of Insurance and Regulation, Goethe University, ICIR



October 10, 2018  
Representation of the State of Hessen, Brussels  
ICIR & SAFE Lunchtime Series

**Insights on Systemic Risk in the Insurance Sector**  
Nathalie Berger, Head of Unit Insurance and Pensions, DG FISMA, European Commission  
Prof. Dr. Helmut Gründl, Chair of Insurance and Regulation, Goethe University, ICIR  
Tom Wilson, PhD, CRO, Allianz SE

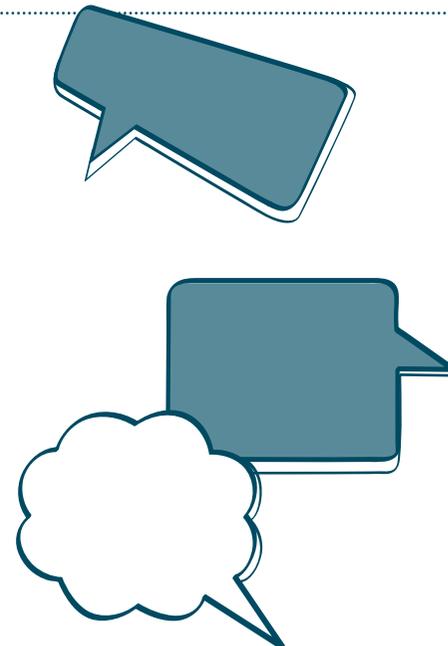
October 17, 2018  
House of Finance, Frankfurt  
14<sup>th</sup> Talk on Insurance and Regulation

**Climate Risk and Sustainable Finance in Europe: The Role of Insurance**  
Dr. Manuela Zweimüller, Head of the Policy Department, EIOPA  
Dr. Christian Thimann, Chairman of the Management Board, Athora, Athene Deutschland Holding GmbH & Co. KG



November 15, 2018  
House of Finance, Frankfurt  
15<sup>th</sup> Talk on Insurance and Regulation

**Insurance Market and Regulatory Developments in the Western Balkan Countries – Challenges and Perspectives**  
Dr. Klime Poposki, President of the Council of Experts of the Insurance Supervision Agency, Republic of Macedonia



November 22, 2018  
 House of Finance, Frankfurt  
 Frankfurter Vortrag zum Versicherungswesen (Frankfurt Association for the Promotion of Insurance Studies at Goethe University (Förderkreis für die Versicherungslehre e.V.) in cooperation with the ICIR)

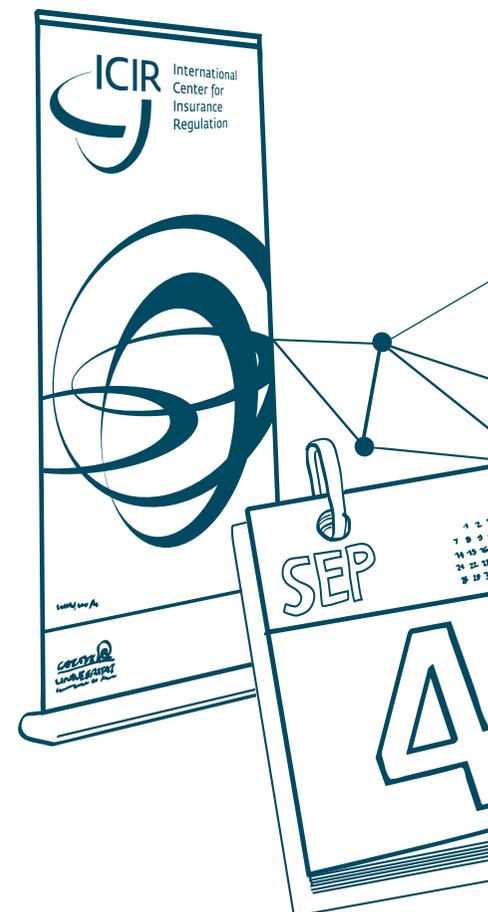


**Diversification of Insurance Activities and Systemic Risk**  
 Fabian Regele, M. Sc., Wissenschaftlicher Mitarbeiter, Stiftungsprofessur für Versicherung und Regulierung, ICIR, Goethe-Universität Frankfurt

November 29 – 30, 2018  
 Goethe University, Frankfurt  
 ICIR Research Workshop  
 Frankfurt Insurance Research Workshop 2018

A research workshop for doctoral students and post-doctoral researchers in the areas of insurance, risk management, or insurance regulation

**Coinsurance in a Changing Regulatory Environment: A Workshop Report**  
 Prof. Dr. Jens Gal, Juniorprofessur für Europäisches Versicherungsrecht mit Schwerpunkt im Versicherungsaufsichtsrecht, ICIR, Goethe-Universität Frankfurt



## Events 2019

SAVE THE DATE

6<sup>th</sup> Conference on Global Insurance Supervision (GIS) September 4 – 5, 2019

ICIR, EIOPA, SAFE, THE WORLD BANK  
 Goethe University, Campus Westend  
 Frankfurt am Main, Germany



## Imprint

### **Publisher**

International Center for  
Insurance Regulation  
(ICIR)

House of Finance  
Goethe University Frankfurt  
Theodor-W.-Adorno Platz 3  
60629 Frankfurt  
Germany  
+49 (0)69 798 33 693  
[icir@finance.uni-frankfurt.de](mailto:icir@finance.uni-frankfurt.de)

### **Authors**

Helmut Gründl  
Jozefina Kontić

### **Photos**

Uwe Dettmar

### **Illustrations and Graphicdesign**

Andrea Ruhland ([www.andand.de](http://www.andand.de))

[www.icir.de](http://www.icir.de)