Prof. Dr. Daniel Rösch

Curriculum Vitae

Short CV

Professor Dr. Daniel Rösch is a Professor of Business and holds the chair of Statistics and Risk Management at the Faculty of Business, Economics, and Management Information Systems at the University of Regensburg in Germany. Prior to joining the University of Regensburg in 2013 he was a Professor of Finance and Director of the Institute of Banking and Finance at the Leibniz University of Hannover from 2007 to 2013. He earned a PhD (Dr. rer. pol.) from the University of Regensburg in 1998 for a work on empirical Asset Pricing. From 2006 to 2011 he was visiting researcher at The University of Melbourne. Since 2011 he is visiting Professor at the University of Technology in Sydney. His research interests cover Risk Management, Data Science & Analytics, Banking, Credit Risk Analytics, Financial Regulation and Supervision, Statistical & Machine Learning and Real Estate Finance. He published numerous papers in leading international journals, earned several awards and honors, and regularly gives talks on major international conferences. As a service to the profession he was President of the German Finance Association, co-founder and member of the board of directors of the Hannover Center of Finance, and deputy managing director of the workgroup Finance and Financial Institutions of the German Operations Research Society. He also serves on the editorial board of the Journal of Risk Model Validation. Professor Rösch has cooperated with financial institutions and supervisory bodies such as Deutsche Bundesbank in joint research projects. Among others, his work has been funded by Deutsche Forschungsgemeinschaft, the Thyssen Krupp Foundation, the Frankfurt Institute for Finance and Regulation, and the Melbourne Centre for Financial Studies. He participated in a long-term research grant with academics from the University of Technology in Sydney which was supported by the Australian Centre for International Finance and Regulation. In 2014 and 2019 the Handelsblatt and Wirtschaftswoche ranked him amongst the top 5% and 10% of German speaking researchers in Business and Management.

Awards

2020	Research Award, Thesis by supervised doctoral student, Frankfurt Institute for Risk Management and Regulation (FIRM)
2018	Research Award, Thesis by supervised doctoral student, Frankfurt Institute for Risk Management and Regulation (FIRM)
2016	Best Teaching Award, Faculty of Business, Economics and Management Information Systems, University of Regensburg
2015	Best Paper Award, Global Real Estate Summit, Washington D.C.
2015	Distinguished Visiting Professorship, University of Technology, Sydney
2011	Best Paper Award, Finance and Corporate Governance Conference , La Trobe University, Melbourne
2010	Outstanding Paper Award, 5th Annual Conf. of the Korean Securities Association, Korean Development Bank, Seoul, Korea
2010	Research Award, 18th Conf. on Theories and Practices of Securities and Financial Markets, Kaohsiung, Taiwan
2009	Best Paper Award, 22th Australasian Finance and Banking Conf., Australian Securities Exchange, Sydney
2007	Best Paper Award, 14th Annual Meeting of the Global Finance Association, Sydney
2006	Förderpreis, Bayerische Landesbank, Munich
2005	Best Teaching Award, Faculty of Business, Economics and Management Information Systems, University of Regensburg
2003	Best Paper Award, 10th Annual Meeting of the Global Finance Association, Frankfurt
1999	Förderpreis, Bayerische Landesbank, Munich
1994	Best Diploma in Business, Faculty of Business, Economics and Management Information Systems, University of Regensburg

List of Publications

Refereed Journals

[1] Jennifer Betz, Maximilian Nagl, and Daniel Rösch. Credit line exposure at default modeling using bayesian mixed effect quantile regression. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 2022.

[2] Ralf Kellner, Maximilian Nagl, and Daniel Rösch. Opening the black box - quantile neural networks for loss given default prediction. *Journal of Banking and Finance*, 134:106334, 2022.

[3] Rainer Jobst and Daniel Rösch. Euro zone sovereign default risk and capital - a bayesian approach. *Journal of Fixed Income*, 31(3):41–65, 2021.

[4] Felix Kircher and Daniel Rösch. A shrinkage approach for sharpe ratio optimal portfolios with estimation risks. *Journal of Banking and Finance*, page 106281, 2021.

[5] Patrick Büchel, Michael Kratochwil, Maximilian Nagl, and Daniel Rösch. Deep calibration of financial models: turning theory into practice. *Review of Derivatives Research*, August 2021.

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[7] Jennifer Betz, Ralf Kellner, and Daniel Rösch. Time matters: How default resolution times impact final loss rates. *Journal of the Royal Statistical Society: Series C (Applied Statistics)*, 70(3):619–644, 2021.

[8] Yongwoong Lee, Harald Scheule, and Daniel Rösch. Systematic credit risk in securitised mortgage portfolios. *Journal of Banking and Finance*, 122:105996, 2021.

[9] Ralf Kellner and Daniel Rösch. A bayesian re-interpretation of "significant" empirical financial research. *Finance Research Letters*, 38, 2021.

[10] Jennifer Betz, Steffen Krüger, Ralf Kellner, and Daniel Rösch. Macroeconomic effects and frailties in the resolution of non-performing loans. *Journal of Banking & Finance*, 112:1–26, 2020.

[11] Ralf Kellner and Daniel Rösch. A country specific point of view on international diversification. *Journal of International Money and Finance*, 98:102064, November 2019.

[12] Arndt Claussen, Daniel Rösch, and Martin Schmelzle. Hedging parameter risk. *Journal of Banking and Finance*, 100:111–121, 2019.

[13] Hung Do, Harald Scheule, and Daniel Rösch. Liquidity constraints, home equity and residential mortgage losses. *Journal of Real Estate Finance and Economics*, 2019.

[14] Rainer Jobst, Ralf Kellner, and Daniel Rösch. Bayesian loss given default estimation for european sovereign bonds. *International Journal of Forecasting*, 36:1073–1091, 2020.

[15] Marius Pfeuffer, Maximilian Nagl, Matthias Fischer, and Daniel Rösch. Parameter estimation, bias correction and uncertainty quantification in the vasicek credit portfolio model. *Journal of Risk*, 22:1–29, 2019.

[16] Jennifer Betz, Ralf Kellner, and Daniel Rösch. Systematic effects among loss given defaults and their implications on downturn estimation. *European Journal of Operational Research*, 271:1113–1144, 2018.

[17] Hung Do, Daniel Rösch, and Harald Scheule. Predicting loss severities for residential mortgage loans: A three-step selection approach. *European Journal of Operational Research*, 270(1):246–259, 2018.

[18] Steffen Krüger, Toni Oehme, Daniel Rösch, and Harald Scheule. A copula sample selection model for predicting multi-year lgds and lifetime expected losses. *Journal of Empirical Finance*, 47:246–262, 2018.

[19] Steffen Krüger, Daniel Rösch, and Harald Scheule. The impact of loan loss provisioning on bank capital requirements. *Journal of Financial Stability*, 36:114–129, 2018.

[20] Steffen Krüger and Daniel Rösch. Downturn lgd modeling using quantile regression. *Journal of Banking & Finance*, 79:42–56, Juni 2017.

[21] Jennifer Betz, Ralf Kellner, and Daniel Rösch. What drives the time to resolution of defaulted bank loans? *Finance Research Letters*, 18:7–31, August 2016.

[22] Ralf Kellner and Daniel Rösch. Quantifying market risk with value-at-risk or expected shortfall? consequences for capital requirements and model risk. *Journal of Economic Dynamics and Control*, 68:45–63, Mai 2016.

[23] Arndt Claussen, Sebastian Löhr, Daniel Rösch, and Harald Scheule. Valuation of systematic risk in the cross-section of credit default swap spreads. *Quarterly Review of Economics and Finance*, 64:183–195, 2016.

[24] Yongwoong Lee, Daniel Rösch, and Harald Scheule. Accuracy of mortgage portfolio risk forecasts during financial crises. *European Journal of Operational Research*, 249:440–456, 2016.

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[34] Sebastian Löhr, Olga Mursajew, Daniel Rösch, and Harald Scheule. Dynamic correlation modeling and spread forecasting in structured finance. *Journal of Futures Markets*, 33(11):994–1023, 2013.

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Books and Editorship

[1] Harald Scheule and Daniel Rösch. *Deep Credit Risk - Machine Learning in R*. Kindle Independent Publishing Platform, 2022.

[2] Daniel Rösch. *Data Analytics - Statistics and Machine Learning in Python with Examples and Applications*. Kindle Independent Publishing Platform, 2021.

[3] Daniel Rösch and Harald Scheule. *Deep Credit Risk - Machine Learning with Python*. Kindle Independent Publishing Platform, 2020.

[4] Daniel Rösch. *Understanding Statistics and and Probability - An Introduction to Methods Techniques and Computer Applications*. Create Space Independent Publishing Platform, 2017.

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[9] Daniel Rösch and Harald Scheule, editors. *Model Risk: Identification Measurement and Management*. Risk Books, 2010.

[10] Daniel Rösch and Harald Scheule, editors. *Stress-testing for Financial Institutions - Applications, Regulations, and Techniques*. Risk Books, 2008.

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[12] Daniel Rösch. *Default Risk in Banking Portfolios - Concepts for Modeling, Estimation and Forecasting*. Habilitation Thesis, University of Regensburg, 2004.

[13] Daniel Rösch. *Empirische Identifikation von Wertpapierrisiken - Faktoren-, Arbitrage- und Gleichgewichtsmodelle im Vergleich*. Gabler, and PhD Thesis, University of Regensburg, 1998.

Other Publications

[1] Michael Breitner and Daniel Rösch. Finanzwirtschaft und Finanzinstitutionen. *OR News*, pages 68–69, 2013.

[2] Arndt Claussen, Sebastian Löhr, Kristina Lützenkirchen, Daniel Rösch, and Harald Scheule. Credit Ratings und Kapital fr Verbriefungstransaktionen. *Risikomanager*, 9:20–21, 2011.

[3] Daniel Rösch and Harald Scheule. Securitization rating performance and agency incentives. Working paper, BIS, 2011.

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[5] Daniel Rösch and Harald Scheule. Foreword. In Joe L. Breeden, editor, *Reinventing Retail Lending Analytics*. Risk Books, 2010.

[6] Michael Breitner, Hans-Jörg von Mettenheim, Daniel Rösch, and Grigoriy Tymchenko. Sicherheit und Risikomanagement an den Finanzmrkten. *Uni-Magazin, Leibniz Universitt Hannover*, 2010.

[7] Daniel Rösch and Harald Scheule. Downturn model risk - another view on the Global Financial Crisis. In *Model Risk: Identification, Measurement and Management*. Risk Books, 2010.

[8] Daniel Rösch and Harald Scheule. Credit losses in economic downturns - empirical evidence for Hong Kong mortgage loans. Working paper, Hong Kong Institute for Monetary Research, 2008.

[9] Michael Breitner, Hans-Jrg v. Mettenheim, and Daniel Rösch. Finanzwirtschaft und Finanzinstitutionen. *OR News*, pages 74–75, 2009.

[10] Daniel Rösch and Harald Scheule. *Integrating Stress-Testing Frameworks*. Stress-testing for Financial Institutions - Applications, Regulations and Techniques. Risk Books, 2008.

[11] Birker Winferfeldt and Daniel Rösch. Estimating credit contagion in a standard factor model. *Risk Asia*, pages 66–71, October 2008.

[12] Daniel Rösch and Harald Scheule. A multi-factor approach for systematic default and recovery risk. In Bernd Engelmann and Robert Rauhmeier, editors, *The Basel II Risk Parameters*. Springer, 2006.

[13] Alfred Hamerle and Daniel Rösch. Ein einfaches Modell zur Risikomessung von Kreditportfolien. In *Festschrift zum 65. Geburtstag von Eberhard Schaich*, pages 65–79. Wirtschaftsstatistik, 2005.

[14] Stefan Blochwitz, Alfred Hamerle, Stefan Hohl, Robert Rauhmeier, and Daniel Rösch. Myth and reality of discriminatory power for rating systems. *Wilmott Magazine*, pages 2–6, January 2005.

[15] Daniel Rösch and Harald Scheule. Modeling systematic consumer credit risk: Basel II and and reality. *Credit Technology*, 53:35–42, 2005.

[16] Leif Boegelein, Alfred Hamerle, Michael Knapp, and Daniel Rösch. Econometric approaches for sector analysis. In Matthias Gundlach and Frank Lehrbaß, editors, *CreditRisk+ in the Banking Industry*, pages 231–248. Springer, Berlin, 2004.

[17] Alfred Hamerle and Daniel Rösch. Validierung von Ratingsystemen - Teil II: Performancemessung. *Kredit und Rating Praxis*, 31:15–19, 2005.

[18] Alfred Hamerle and Daniel Rösch. Validierung von Ratingsystemen - Teil I: Statistische Validierung. *Kredit und Rating Praxis*, 30:20–22, 2004.

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[21] Alfred Hamerle, Thilo Liebig, and Daniel Rösch. Credit risk factor modeling and and the Basel II IRB approach. *Deutsche Bundesbank, Series 2: Banking and Financial Supervision*, (2), 2003.

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