Curriculum Vitae

Prof. Dr. Eva-Maria Lütkebohmert-Holtz
Department of Quantitative Finance
Institute of Economics
University of Freiburg
Rempartstr. 16
D–79098 Freiburg

+49 761 20395410
eva.luetkebohmert@finance.uni-freiburg.de
www.finance.uni-freiburg.de

Professional Career

Professor (W3) of Quantitative Finance, University of Freiburg 09/2013 – today
Faculty of Economics and Behavioral Sciences
Acting equal opportunity commissioner 12/2019 – today
Dean of Study Affairs, Institute of Economics 01/2016 – 09/2018
Coopted member of the Faculty of Mathematics and Physics 02/2015 – today

Juniorprofessor (W1, tenure track), University of Freiburg 10/2009 – 08/2013
Faculty of Economics and Behavioral Sciences
Head of the junior research group „Pricing of Risks in Incomplete Markets"

Juniorprofessor (W1), University of Bonn 10/2006 – 09/2009
Institute for Social Sciences and Economics
Member of the Bonn Graduate School of Economics and of the
cluster of excellence „Mathematics: Foundations, Models, Applications"

Research Analyst, Deutsche Bundesbank 08/2005 – 09/2006
Department of Banking Supervision
Member of the subgroup on „Concentration risks" of the
Research Task Force of the Basel Committee on Banking Supervision

Research Assistant, University of Bonn 09/2004 – 07/2005
Institute for Applied Mathematics

Maternity and parental leave 05/2010 – 03/2011
05/2008 – 03/2009

Education

PhD (Dr. rer. nat.) in Mathematics 12/2004
University of Bonn

Diplom in Mathematics 10/2002
University of Bonn

Abitur 06/1998
Gymnasium St. Mauritz, Münster

Third Party Funding, Scholarships, and Awards

DFG-Project 11/2019 – 10/2021
on the topic *Post-Crisis Interest Rate Markets: Analysing, Modelling and Stress Testing of Multiple Yield Curves*

FRIAS Internal Senior Fellowship 2018/19
on the topic *Fragility of Interbank Markets*

FRIAS Project Group 2017/18
on the topic *Model Risk*, together with P. Dondl, P. Harms, T. Schmidt

Workshop on Robust Methods in Probablity & Finance
funding for a workshop at ICERM, Brown University,
joint with T. Bielecki, P. Dondl, P. Harms, M. Nutz, and T. Schmidt

Instructional Development Award 2016
Award for innovative teaching concept on *Finance in Practice*, joint project with T. Schmidt

Postbank Finance Award 2015 (3. Rank)
Award for a joint research project with a team of students from University of Freiburg

WELT Finance Essay Award 2015
Award for an essay additionally submitted within the Postbank Finance Award

DFG-Project 09/2012 – 03/2015
on the topic *Modelling of Market, Credit, and Liquidity Risks in Fixed-Income-Markets*
together with Prof. Dr. Ernst Eberlein

PhD Award 2005
Award form the „Gesellschaft von Freunden und Förderern der Universität Bonn"

German National Academic Foundation
PhD scholarship for the funding period: 04/2003 – 08/2004

Bonn International Graduate School
PhD scholarship for the funding period: 10/2002 – 03/2003

Scholarship for student exchange
from the University of Bonn with the University of Toronto, 08/2001 – 05/2002

Organisation of Conferences

Conference on Systemic Risk and Financial Stability, FRIAS, University of Freiburg, 19/20.09.2019
joint with G. Liang and Y. Xiao, https://www.systemicrisk2019.uni-freiburg.de

Robust Finance, FRIAS, University of Freiburg, 14.-18.05.2018
joint with P. Dondl, P. Harms, T. Schmidt,
https://www.frias.uni-freiburg.de/de/foerderprogramme/frias-projektgruppen/model-risk/robust-finance

German Probability and Statistics Days, University of Freiburg, 27.02.–02.03.2018
joint with P. Harms, P. Pfaffelhuber, A. Rohde, T. Schmidt, www.gpsd-2018.de

Robust Methods in Probability and Finance, ICERM, Brown University, 19.-23.06.2017
joint with T. Bielecki, P. Dondl, P. Harms, M. Nutz, T. Schmidt,
https://icerm.brown.edu/topicalworkshops/tw17-6-rmpf/

Risk and Regulation, University of Freiburg, 17./18.10.2014
joint with E. Eberlein and L. Rüschendorf, www.stochastik.uni-freiburg.de/risk-and-regulation

Liquidity and Credit Risk, University of Freiburg, 15./16.03.2012
joint with E. Eberlein, www.liquidity-risk.uni-freiburg.de

Publications

Monographs

[1] *Concentration Risk in Credit Portfolios.*
Springer Verlag, European Actuarial Academy (EAA) Lecture Notes, 2009.

Articles

[2] *Efficient Quasi-Bayesian estimation of affine option pricing models using risk-neutral cumulants.*
Journal of Banking and Finance, forthcoming (with R. Brignone and L. Gonzato).

[3] *Robust Deep Hedging.* Quantitative Finance 22(8): 1465-1480. 2022 (with T. Schmidt and J. Sester).

[4] *Wealth management products, banking competition, and stability: Evidence from China.* Journal of Economic Dynamics and Control 137: 104346, 2022 (with X. Feng and Y. Xiao).

[5] *Optimal cross-currency mortgage decisions.* International Journal of Theoretical and Applied Finance 25(3): 2250010, 2022 (with T. Schmidt and T. Zhu).

[6] *Arbitrage-free Nelson-Siegel model for multiple yield curves.* Mathematics and Financial Economics 16: 239-266, 2022 (with C. Gerhart and R. Brignone).

[7] *Euro area banks' interest rate risk exposure to level, slope and curvature swings in the yield curve.* European Financial Management 28: 883-925, 2022 (with D. Foos, K. Pliszka and M. Markovych).

[8] *Robust Statistical Arbitrage Strategies.* Quantitative Finance, 21(3): 379–402, 2021 (with J. Sester).

[9] *A multiple curve Lévy swap market model.* Applied Mathematical Finance, 27(5): 396-–421, 2020 (with E. Eberlein and C. Gerhart).

[10] *Empirical analysis and forecasting of multiple yield curves.* Insurance: Mathematics and Economics 95: 59-78, 2020 (with C. Gerhart).

[11] *Robust forecasting of multiple yield curves.* In Valenzuela, O., Rojas, F., Pomares, H., Rojas, I. (Eds.): Theory and Applications of Time Series Analysis, Springer Contributions to Statistics, pp. 187-202, 2019 (with C. Gerhart and M. Weber).

[12] *Tightening Robust Price Bounds for Exotic Derivatives.* Quantitative Finance, forthcoming (with J. Sester)

[13] *Calculating capital charges for sector concentration risk.*
Journal of Credit Risk, IRMC 10th Anniversary Special Issue, pp. 35–67, 2018 (with C. Kurtz and J. Sester).

[14] *Forecasting of multiple yield curves based on machine learning.*
Proceedings of the International Conference on Time Series and Forecasting 2018, Vol. 3, pp. 1483-1494, 2018 (with C. Gerhart and M. Weber).

[15] *Endogenous credit spreads and optimal debt financing structure in the presence of liquidity risk.*
European Financial Management 23(1), pp. 55-86, 2017 (with D. Oeltz and Y. Xiao).

[16] *Rollover risk and credit risk under time-varying margin.*
Quantitative Finance 17(3), pp. 455-469, 2017 (with X.-Z. He and Y. Xiao)

[17] *Collateralized Borrowing and Default Risk.*
In: Kallsen, J., Papapantoleon, A. (Eds.): Advanced Modelling in Mathematical Finance - In honour of Ernst Eberlein, Springer Proceedings in Mathematics & Statistics, Springer, 2016 (with Y. Xiao).

[18] *Funding liquidity, debt tenor structure, and creditor's belief: An exogenous dynamic debt run model.*
Mathematics and Financial Economics 9, pp. 271–302, 2015 (with G. Liang and W. Wei).

[19] *A multi-period bank run model for liquidity risk.*
Review of Finance 18, pp. 803–842, 2014 (with G. Liang and Y. Xiao).

[20] *Optimality of payoffs in Lévy models.*
International Journal of Theoretical and Applied Finance 17 (6), 1450041, 2014. DOI: 10.1142/S0219024914500411 (with E.A. von Hammerstein, L. Rüschendorf, V. Wolf)

[21] *Value-at-risk computations in stochastic volatility models using second order weak approximation schemes.* International Journal of Theoretical and Applied Finance 17(1), 1450004, 2014 (with L. Matchie).

[22] *Construction of cost-efficient self-quanto calls and puts in exponential Lévy models.*
In: Vanmaele, M., Deelstra, G., De Schepper, A., Dhaene, J., Schoutens, W., Vanduffel, S., Vyncke, D. (Eds.): Handelingen Contactforum Actuarial and Financial Mathematics Conference, Interplay between Finance and Insurance, February 6–7, 2014, Koninklijke Vlaamse Academie van Belgïe voor Wetenschappen en Kunsten, Brussel, pp. 49–61, 2014 (with E.A. v. Hammerstein, L. Rüschendorf, V. Wolf)

[23] *Granularity adjustment for regulatory capital assessment.* International Journal of Central Banking 9(3), pp. 33-71, 2013 (with M.B. Gordy).

[24] *Failure of the saddle-point method in the presence of double defaults.*
Journal of Risk 15(1), pp. 71–89, 2012.

[25] *An asset drop model as an alternative to the treatment of double defaults within the Basel framework.* Journal of Credit Risk 3(1), pp. 41–63, 2012 (with S. Ebert).

[26] *Treatment of double default effects within the granularity adjustment for Basel II.*
Journal of Credit Risk 7 (1), pp. 1–31, 2011 (with S. Ebert).

[27] *Quantification of liquidity risk in a two-period model.* in: Vanmaele, M., Deelstra, G., De Schepper, A., Dhaene, J., Schoutens, W., Vanduf- fel, S., Vyncke, D. (Eds.): Handelingen Contactforum Actuarial and Financial Mathematics Conference, Interplay between Finance and Insurance, February 10–11, 2011, Koninklijke Vlaamse Academie van Belgïe voor Wetenschappen en Kunsten, Brussel, pp. 51–60, 2011 (with G. Liang and Y. Xiao).

[28] *Absolutely continuous laws of jump-diffusions in finite and infinite dimensions with applications to mathematical finance.*
SIAM Journal of Mathematical Analysis 40 (5), pp. 2132-2153, 2009 (with B. Forster and J. Teichmann).

[29] *Granularity adjustment for Basel II.*
Discussion paper, Series „Banking and Financial Studies" 01/2007, Deutsche Bundesbank 2007
(with M.B. Gordy).

[30] *Quantification of idiosyncratic risk in the ASRF model.*
Proceedings of the Third Brazilian Conference on Statistical Modelling in Insurance and Finance,
pp. 160–165, Maresias (Brazil) 2007 (with M.B. Gordy).

[31] *Studies on credit risk concentration: an overview of the issues and a synopsis of the results from
the Research Task Force project.*
BCBS Publications No. 15 (available at http://www.bis.org/publ/bcbs_wp15.htm) November 2006
(with P. Asberg Sommar, M. Birn, J. Demuynck, K. Düllmann, A. Foglia, M. B. Gordy, T. Isogai,
C. Lotz, C. Martin, N. Masschelein, C. Pearce, J. Saurina, M. Scheicher. C. Schmieder, Y. Shiina,
K. Tsatsaronis, H. Walker).

[32] *An asymptotic expansion for the Black-Scholes model with generalized volatility.*
Bulletin des Sciences Mathématiques 128 (8), pp. 661–685, 2004.

Dissertation

[19] *Finite dimensional realizations of interest rate models with jumps and an asymptotic expansion for
the Black-Scholes model with generalized volatility.*
Dissertation, Universität Bonn, 2004.