

Dominik Rösch

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Education

- 2015 **Assistant Professor in Finance**, State University of New York at Buffalo
- 2015 **PhD in Finance**, RSM, Erasmus University, The Netherlands
Fall 2013, Research visit, Cornell University, Ithaca, USA
Dec. 2011, Research visit, Sirca, Sydney, Australia
Nov. 2011, Research visit, University of California, Los Angeles, USA
- 2009 **MSc in Finance**, SOAS University of London, UK.
Major: Quantitative Finance
- 2006 **Diplom Mathematician (eq. MSc)**, University of Bonn, Germany
Thesis: Financial Market Models and Market Maker Spreads, written at Deutsche Boerse (Eurex), presented at Archelon, Deutsche Bank, and Deutsche Boerse
Majors: Stochastic Analysis, Probability Theory, Logic and Set Theory
Minor: Computer Science

Interests

Market microstructure and market quality (arbitrage, liquidity, and efficiency); financial institutions; financial crises. I am also interested in teaching and service. For me, to teach is to research the past and to research is to teach the future. I developed a framework to efficiently analyze terabytes of financial data, which contributes to research, teaching, and service.

Publications

The Dynamics of Market Efficiency

(with Avanidhar Subrahmanyam and Mathijs van Dijk)

Review of Financial Studies, 2017; 30 (4): 1151-1187

Tick Size, Liquidity for Small and Large Orders, and Price Informativeness: Evidence from the Tick Size Pilot Program

(with Kee Chung and Albert Lee)

Journal of Financial Economics, forthcoming

Asset Pricing: A Tale of Night and Day

(with Terrence Hendershott and Dmitry Livdan)

Journal of Financial Economics, forthcoming

Job Market Paper

The Impact of Arbitrage on Market Liquidity

(solo-authored)

R&R (2nd round) Journal of Financial Economics

I study deviations from the law of one price in American Depositary Receipts (ADR) using tick-by-tick data from the United States and 22 different home markets from 2001 to 2016. Deviations persist, on average, 12 minutes, and mainly arise because of demand pressure. Exploiting institutional details that create exogenous variation in the impediments to arbitrage within and across days, I show that absolute price deviations predict illiquidity. Price deviations mainly predict the inventory costs component of the bid-ask spread. Thus, consistent with recent theory, these findings suggest that arbitrageurs in the ADR market tend to trade against demand pressure and enhance market integration and liquidity.

o received “Outstanding Paper in Institutions and Markets” award at the 50th Eastern Finance Association

Working Papers

How Do Shocks Arise and Spread Across Stock Markets? A Microstructure Perspective

(with Dion Bongaerts, Richard Roll, Mathijs van Dijk, and Darya Yuferova)

R&R Management Science

We study intraday, market-wide shocks to stock prices, market liquidity, and trading activity on international stock markets and assess the relevance of recent theories on “liquidity dry-ups” in explaining how such shocks arise and spread across markets. Market-wide price shocks are prevalent and large, with rapid spillovers across markets. However, price shocks are predominantly driven by information; they do not revert and are often associated with macroeconomic news. Furthermore, liquidity shocks are typically isolated and transitory. We find little evidence that liquidity effects foment price shocks or non-fundamental contagion. Overall, market-wide liquidity dry-ups are of little concern to international investors.

A Portfolio Optimization Approach to Identifying Private Information

(with Dion Bongaerts and Mathijs van Dijk)

We propose a portfolio optimization approach to identifying private information. In our model, investors are exposed to liquidity and private information shocks and optimize their trading across stocks taking into account price impact (Kyle's Λ). We obtain a very simple expression for a stock's private information shock: $\Lambda \times OIB$ (order imbalance). Intuitively, observed order imbalance is more likely to be information-driven when trading is expensive. Consistent with our measure capturing private information, we show empirically that it is greater for smaller firms with higher analyst dispersion, helps to explain return reversals, predicts return volatility, and increases before M&A announcements.

Learning from the stock price and financial market frictions

(with Avandhar Subrahmanyam and Mathijs van Dijk)

Multimarket Trading and Accounting Standards

(with Pooyan Ghazizadeh and Erik Peek)

A new measure of the efficiency of international equity markets based on price deviations in cross-listings

(with Mathijs van Dijk)

Presentations (*) presented by co-author (including planned presentations)

- o 2019: American Finance Association meeting (AFA) (Atlanta, USA); Jackson Hole Finance Conference; NSF Grant Review; Summer Symposia in Financial Markets in Gerzensee; Baruch College (*); European Accounting Association meeting (Paphos, Greece) (*);
- o 2018: Northern Finance Association (Charlevoix, Canada); Research in Behavioral Finance Conference (Amsterdam, Netherlands); 2nd CEPR-Imperial-Plato Market Innovator Conference (London, U.K.); McGill University
- o 2017: Summer Symposia in Financial Markets in Gerzensee; 5th Conference on Securities markets: Trends, risks and policies (Milan) (*); Economic Research in High Performance Computing Environments (Federal Reserve Bank of Kansas City); Seminar, University of California, Berkeley - Haas School of Business (*); First International Program on Analytics for Banks and Financial Institutions (Niagara Falls, USA); CDSE DAYS (Buffalo, USA); Cheungkong GSB(*), HEC Lausanne(*)
- o 2016: Research in Behavioral Finance Conference (Amsterdam, Netherlands); Eastern Finance Conference (Baltimore), Asian Finance Conference (Bangkok), FMA Annual Meeting (Vegas), Conference on Financial Econometrics and Empirical Asset Pricing (Lancaster, U.K.) (*), Maastricht Workshop on Advances in Quantitative Economics (*), Annual Conference in International Finance, Hong Kong; the 7th Behavioral Finance Conference (Miami) (*); FTSE/Russell World Investment Forum (Georgia) (*); Erasmus University(*)
- o 2015: 8th Financial Risks International Forum on Scenarios, Stress, and Forecasts in Finance (Paris) (*); Cass Business School, University at Buffalo, Cornell University, City University of Hong Kong, Frankfurt School of Finance & Management
- o 2014: 12th International Paris Finance Meeting (Paris, France); Financial Management Association and Doctoral Consortium (Nashville, USA); 26th Northern Finance Association (Ottawa, Canada); Asian Finance Association (Bali, Indonesia); 50th Eastern Finance Association (Pittsburgh, USA); INFER Workshop on Financial Globalization, International Trade and Development (Bordeaux, France) (*); Extreme Events in Finance (Rayaumont, France); 21st Annual Meeting of the German Finance Association (Karlsruhe, Germany); Conference on Emerging Markets Finance (Bombay, India) (*); INFER Workshop on Financial Globalization, International Trade and Development (Bordeaux, France) (*); Seminar, Erasmus University; Seminar, Babson College
- o 2013: 40th European Finance Association meetings (EFA) (Cambridge, U.K.); 30th International Symposium on Money, Banking and Finance (Poitiers, France); Campus for Finance (Vallendar, Germany); 21st Conference on the Theories and Practices of Securities and Financial Markets (Kaohsiung, Taiwan); The World Finance & Banking Symposium (Beijing, China); 6th Erasmus Liquidity Conference (Rotterdam, Netherlands); Cornell University; Indiana University (*), University of Cambridge (*), University of Manchester (*), University of South Carolina (*)
- o 2012: Brazilian Finance Conference (Sao Paulo) (*); EFMA meetings (Barcelona) (*); Frontiers of Finance Conference (Warwick Business School) (*); Goethe University Frankfurt (*); Deakin University Australia (*); UCLA (*) ; Rotterdam School of Management, Erasmus University (*); PhD Seminar, Rotterdam School of Management, Erasmus University
- o 2011 HPC Cloud Day (Amsterdam, Netherlands)

Teaching Experience

	State University of New York at Buffalo
2016 – 2019	Investment Management (MGF 402)
2016 – 2019	Complex Financial Instruments (MGF 636)
	Singapore Institute of Management
2018	International Financial Management (MGF 403)
2016	Investment Management (MGF 402)
	Erasmus University (assistant)
2014/15	Investments (Master course); Alternative Investments (Bachelor course); MSc thesis supervision
2013/14	Trading & Exchanges (Master course); MSc thesis supervision
2012/13	Trading & Exchanges (Master course); Bachelor and MSc thesis supervision
2011/12	Investments (Master course); MSc thesis supervision
2010/11	Investments (Master course); MSc thesis supervision
	University of Bonn (assistant)
2001 – 2003	Linear Algebra I, II, III and Analysis II

Service

Referee: Asia-Pacific Journal of Financial Studies; De Economist; Economic Change and Restructuring; Economics, Management, and Financial Markets; Emerging Markets Finance and Trade; Financial Analysts Journal; Financial Innovation; Journal of Banking & Finance (JBF); Journal of Economic Behavior & Organization; Journal of Financial and Quantitative Analysis (JFQA); Journal of Futures Markets; Management Science (MS); Pacific-Basin Finance Journal; Review of Finance (RoF); Review of Financial Studies (RFS);

Grant reviewer: National Science Centre (Poland)

Conference Co-Organizer: CDSE Days 2016 - 2019

Professional Experience

2003 – 2013	Regentmarkets Group Regentmarkets operates www.binary.com , a website offering binary derivatives on financial markets. Regentmarkets has an annual turnover of several hundred million USD and manages a complex book of thousands of different derivative contracts.
2012 – 2013	Consultant and Quality Assurance (part-time)
2006 – 2010	Head of Quants Department, Malaysia Built up an international team - including decisions to hire and fire - of six quantitative analysts. Project leader to develop and launch a new financial product which contributes a substantial part to annual turnover and profit.
2003 – 2004	Quantitative Analyst, Malta and Malaysia
2006 – 2006	Deutsche Boerse Group (Eurex) Product Design Equities And Indices, Germany 7-months internship
2005 – 2007	De-Media GmbH Software Engineer, Germany (part-time)

Skills

Database management

MS Excel, OneTick, MySQL, Sqlite, MS Access, PostgreSQL

Programming

Perl, Shell, PHP, VBA, C/C++, Java, HTML, CSS, Javascript, R/S-Plus, Rats, Microfit, Maple, QuantLib, Latex

Financial

Superderivatives, Bloomberg Terminal, Bloomberg Data License, Telekurs, Tenfore, Netdania, Gtis, Interactive Brokers

Databases

TRTH, TAQ, Datastream, Optionmetrics, CRSP, Bloomberg

Awards and Scholarships

- o 2017: Senior Personal in NSF MRI HPC proposal (\$ 1 million)
- o 2016: received OneTick software (worth several hundred thousand dollars) for SUNY at Buffalo
- o 2016: Use case in National Science Foundation Data Infrastructure Building Blocks (1541215) (\$ 5 million)
- o 2014: FMA Doctoral Student Consortium Participant
- o 2014: "Outstanding Paper in Institutions and Markets" award 2014 Eastern Finance Association (Pittsburgh) (\$1,000)
- o 2013: AFA Annual Conference Doctoral Student Travel Grant, San Diego
- o 2011, 2013: Vereniging Trustfonds Erasmus Universiteit Rotterdam Travel Grant
- o 2011: developed framework to retrieve, store, and analyze terabytes of tick-by-tick data (TAQ+TRTH)
- o 2011: received OneTick software (worth \$270,000). Press Release at onetick.com
- o 2008: RMG Scholarship (GBP 7,915)