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WELCOME FROM THE CHAIR

A warm welcome to all the participants of the 2020 Annual Financial Market Liquidity (AFML) Conference. This is the 11th conference in a row since 2010 that we organize on liquidity and other current financial topics. This year we are holding the conference online due to the prevalent extraordinary circumstances. On a positive note, this format improves our carbon footprint but also challenges us to leverage the online meeting space to build new connections. None the less, I am confident our community is tightly knit, and with your participation we will have a vibrant and interactive conference similarly to the past years when we met physically in Budapest. Our focus this year is on financial sustainability, a special session is dedicated to social innovation, and also many other classic liquidity related and other financial topics are also covered.

This is a unique opportunity to refresh and further build your network with more than 250 participants registered, many of whom are regular lecturers and participants of this conference and sustain their strong connection to our community.

Many people have contributed to this event. I would like to thank the speakers, poster session participants and the chairs for their participation, and our sponsors for their contribution.

I wish to thank the members of the scientific committee: Péter Csóka, Jonathan A. Batten, Edina Berlinger, Dániel Havran, Zsuzsa R. Huszár, Hubert János Kiss, László Á. Kóczy, Igor Lončarski, Mihály Ormos, Péter Szilágyi, Alexander Szimayer, Niklas Wagner, Adam Zawadowski; and the local organising committee: the colleagues of the Department of Finance at Corvinus University of Budapest, especially Milán Badics, Edina Berlinger, Fanni Dudás, Judit Lilla Keresztúri, Péter Kerényi, Gábor Kondor, Anita Lovas, Emília Németh-Durkó, Helena Naffa, Dávid Szabó, Balázs Árpád Szűcs, Fanni Tóth, Kata Váradi, Attila Víg. Our assistants Zsuzsa Fried, and Margit Hajnal also did an excellent job in taking care of ongoing tasks and challenges.

I trust everybody will contribute to the friendly and interactive atmosphere.

Enjoy the 11th AFML Conference and its new online format.

Warm regards,
Barbara Dömötör
Chair of the Organizing Committee

Ps. We are committed to organize the 12th AFML Conference in 2021, details are to be announced as soon as we have more visibility on the pandemic situation.

SOCIAL INNOVATION AND GREEN FINANCE

The aim of the Social Innovation and Green Finance sessions is to open new research lines beyond financial market liquidity. We set a special focus on social effects, externalities, new market tendencies, innovative technologies, and sustainability from the perspective of households, enterprises, and/or financial intermediaries. Research papers are invited in the topics of household finance, social banking, financial innovations, financial engineering, regulation, etc. As members of the Finance Department at CUB are heavily involved in a 3-year research project on the financial inclusion of disadvantaged regions, these new sessions give an opportunity to present and discuss our preliminary findings, to exchange ideas, and to initiate new research collaborations.

Acknowledgment: This research was supported by the Higher Education Institutional Excellence Program 2020 of the Ministry of Innovation and Technology in the framework of the 'Financial and Public Services' research project (TKP2020-IKA-02) at Corvinus University of Budapest.

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KEYNOTE SPEAKERS

GIANNETTI, Mariassunta

Mariassunta Giannetti, Nickolay Gantchev, Rachel Li: Does Money Talk? Market Discipline through Selloffs and Boycotts

Can market discipline affect corporate environmental and social (E&S) policies? Using novel international data on negative news coverage of corporate E&S risks, we show that E&S-conscious investors divest firms with heightened E&S risk. We also find that these firms' sales in E&S-conscious countries decrease. As a consequence of investors' and customers' reactions, firms with more E&S motivated investors and customers experience temporary declines in valuations and subsequently improve their E&S policies. Our results indicate that investors' divestitures and customers' reduced demand can trigger changes in corporate policies and decrease future negative E&S incidents.

Mariassunta Giannetti

is a professor of Finance at the Stockholm School of Economics, a CEPR research fellow, and a research associate of the ECGI. She holds a PhD in Economics from the University of California, Los Angeles and completed her BA and MSc at Bocconi University (Italy). Professor Giannetti has broad research interests in corporate finance and financial intermediation and has published extensively on these topics in top finance, economics and management journals. She has been honored with a number of prestigious international awards including the NYU Stern/ Imperial/ Fordham Rising Star in Finance award, the Sun Yefang Financial Innovation Award, the ECGI Standard Life Investments Finance Prize, and the Assar Lindbeck Medal. She is also the recipient of the Journal of Financial Intermediation best paper award, the ECB Lamfalussy Research Fellowship, the ECB Duisenberg Fellowship, and the Stockholm School of Economics Annual Research award. Professor Giannetti has served as associate editor of numerous journals, including the Review of Financial Studies, the Review of Finance, the Journal of Corporate Finance, Financial Management, the Journal of Banking and Finance, the Journal of Financial Stability, and European Financial Management and as a director of the European Finance Association, the Financial Intermediation Research Society, and the Financial Management Association.



SHRIVASTAVA, Paul***Paul Shrivastava: Wellbeing Economy and Finance in the Anthropocene***

Driven by population growth and increasing consumption the Anthropocene era has emerged with wicked and complex global challenges to a sustainable future. These are manifested in climate change, biodiversity loss, extreme weather events, economic inequality, and most recently the Covid-19 pandemic, among many others. Underlying all these crises is the economic system that fuels.

My provocation is that in order to simultaneously address these "omni-crises" we need to fundamentally rethink our global and national economies. One response to addressing these challenges is the idea of Wellbeing Economy. I will trace the emergence of wellbeing economies and their institutionalization in countries including New Zealand, Iceland, Scotland, Finland, Bhutan. Within this context I will speculate a role for "wellbeing finance".

Paul Shrivastava

is Chief Sustainability Officer at The Pennsylvania State University, Director of the Sustainability Institute, and Professor of Management. He is a member of the Club of Rome. Previously, he was the Executive Director of Future Earth, where he established the secretariat for global environmental change programs. He researches integrating arts and sciences for implementing Sustainable Development Goals, and leads the UNESCO Chair on this topic at the ICN Business School, Nancy, France. He is an advisor to the Research Institute for Humanity and Nature, Kyoto, and the Network for Education and Research on Peace and Sustainability at Hiroshima University. He has published 19 books and over 130 articles in refereed and scholarly journals.



INVITED SPEAKERS

BATTEN, Jonathan A.

Jonathan A. Batten: Moving forward on climate change in a Post COVID world: Financial market impacts

The presentation explores key areas of empirical research associated with climate change. The first aim is to provide some insights into the dynamics of carbon prices necessary for the successful trading of carbon emissions. The second deals with the pricing and portfolio management of green and alternative investments, notably in the context of socially responsible investment portfolios. The third considers the broader social implications of the transition from carbon intensive industries. Attention will focus on key stakeholders including consumers, stock and bondholders. The presentation begins by providing background on why the links between climate change and financial assets and markets are important and concludes by considering individual, corporate and broader social perspectives necessary to address climate change impacts on financial markets.

Jonathan A. Batten

is Professor of Finance at RMIT University, Melbourne, Australia, an Honorary Professor in the Discipline of Finance at the University of Sydney Business School, Australia and an Honorary Chair Professor at the East China University of Science & Technology, Shanghai, China. Prior to these positions he worked as a Professor in Finance at the Hong Kong University of Science & Technology, Monash University, Australia, Seoul National University, Korea, and University Utara Malaysia. He is the managing editor of Elsevier's highly ranked *Emerging Markets Review* and *Journal of International Financial Markets Institutions and Money*, and co-editor of *Finance Research Letters*. Prior to working in academia, he held senior treasury and risk management consulting positions with several institutions including Bank of Tokyo, Credit Lyonnais, IBM Consulting and Reuters Ltd.



Jonathan's published research crosses several disciplines: firstly, in the business area on insider trading and market manipulation, bond pricing and corporate foreign exchange risk management in journals used by the Financial Times for ranking business schools; secondly, in energy and applied mathematics on complexity in financial time series and on stock, gold and energy market integration; and thirdly, in economic policy on financial market development and the societal impacts of foreign direct investment. His current research involves assessing the

impact on banking and financial markets of the expected worldwide shift to renewable energy; portfolio adjustment to the effects of climate change; and the roles of multinational corporations in international capital markets.

He has received several external research grants from the Asian Development Bank and the World Bank on the development of fixed income markets in the Asia-Pacific region, the international payments organisation SWIFT on the internationalisation of the RMB, and the international regulator, the Bank for International Settlements. He was the previous President of the Eurasian Business and Economics Society (EBES) and has served on many national external research committees in economics and finance. He is currently an external appointee on the Academic Council and Special Advisor to the Dean of Business, the University of Economics, Ho Chi Minh City, Vietnam.

HUSZÁR, Zsuzsa R.***Truong X. Duong, Zsuzsa R. Huszár, Ruth S. K. Tan:
The Role of Market Infrastructure in Price Discovery:
Short Sellers's Perspective***

This study shows that short sale trades in the new BATS exchanges have significant return predictability beyond the well-established short-sale demand and short-sale constraints measures. Specifically, we report 17 (28) bps monthly lower future returns on stocks with high relative shorting on all BATS exchanges (on the major BATS exchange, BZX). More importantly we show that the negative return predictability of short sellers emanates from the two traditional maker-taker exchanges, which dominates in term of liquidity during our sample period. We also show that there is strong evidence of speculative trend chasing short selling, not just information short selling given the low trading costs and high speed in these markets. While the inverted markets are less developed, we also find some evidence of short sellers' return predictability in those markets, and some new evidence of a new "liquidity premium" instead of illiquidity premium, shedding light on the changing role of liquidity with the disappearance of traditional market makers. Addressing the SEC's Transaction Fee Pilot project objectives, our results shed light on how market makers compensations play a role in the information discovery of relatively informed traders, short sellers.

Zsuzsa R. Huszár

is an Entrepreneur, Researcher, and Educator with 15 years of experience in teaching at top Universities in Europe, Asia and in the U.S.A. She is the co-founder of Squaresave a new FinTech firm facilitating real estate-based investment solutions for down payment assistance and co-founder of MomEdu.online an education platform for mothers dealing with family challenges and getting back to workforce. She is still extremely active in academia and regularly publishes in top finance journals and visiting professor at the Central European University (CEU), adjunct professor in Finance at the National University of Singapore (NUS), and visiting faculty at the Singapore Management University. Previously, she was an Assistant Professor at NUS and in the California State System at Cal-Poly Pomona. Her research on short selling, securities lending and mortgage financing is internationally recognized and referenced in various US and European policy debates. She is a winner of a the 2010 Fama-DFA Prize for the Best Paper in the Journal of Financial Economics in the Areas of Capital Markets and Asset Pricing.



SCHIOZER, Rafael F.***Sérgio Leão, Rafael F. Schiozer, Gustavo Silva Araújo, Raquel de Freitas Oliveira: Bank relationship and firms' cost of hedging***

This paper investigates if and how the cost of currency hedging for non-financial firms is related to their bank relationships. We explore a novel dataset of over-the-counter (OTC) currency derivatives in Brazil and match it with loan-level information available at the Central Bank of Brazil. The matched credit and derivatives data allow us to assess whether the breadth and depth of bank relationship is related to the cost of hedging foreign exchange (FX) exposure. We find that there having an active or recent lending relationship with a given bank does not significantly translate into better or worse pricing of OTC derivatives with said bank. On the other hand, the intensity of the relationship reduces the cost of hedging. In other words, a currency derivative contract is less expensive when the bank selling it is also the firm's main lender. To further our analyses, we take advantage of the introduction of a tax on banks' short positions in foreign currency that increased the costs of banks to provide currency hedging for firms. This exogenous shock allows us to investigate if the increase is unevenly distributed among firms, depending on their relationship status. While there was an overall increase in the costs of hedging currency risks for importers, as could be expected by the new regulation, we find that the banks have not increased the costs of hedging for firms with which they have an active or recent intense relationship as much as they did for the other firms. Finally, we also find that both the existence as well as the intensity of a bank lending relationship facilitates the firms' access to hedging instruments during and after the shock. This suggests that having intense bank credit relationships can be beneficial in the OTC derivatives market.

Rafael F. Schiozer

is a Full Professor of Finance at FGV-EAESP and a CNPq research fellow. He teaches in graduate and undergraduate programs and supervises MSc and PhD students. His research focuses on financial stability, banking, risks and financial crises and has been published in journals such as the Review of Finance, Journal of Corporate Finance, Journal of Financial Stability and Journal of Banking and Finance. He holds a BA in Business from the University of São Paulo (1999), a MSc in Petroleum Engineering from the State University of Campinas (2002) and a PhD in Business (Finance) from Fundação Getulio Vargas (2006). Rafael was a visiting professor at Copenhagen Business School in 2016/17, and a visiting scholar at the Wharton School of Business – University of Pennsylvania (2013/2014) and the University of Illinois at Urbana-Champaign (2009). He is a member of the editorial board of Estudos Econômicos and has refereed for journals such as the Journal of Financial Intermediation, Review of Finance, Journal of Corporate Finance, Journal of Financial Stability, Emerging Markets Finance and Trade and the International Journal of Business and Economics, among others.



STEELEY, James M.***Charles Schnitzlein, James M. Steeley: Order choice in a limit order book with dispersed information: Evidence from an experimental asset market with partially informed traders.***

We test the predictions of market microstructure theory relating to the determinants of order choice in a limit order book where information is dispersed among traders. Using an experimental asset market, with many possible information signals and states, we find that order choice is driven by the putative relative profits from the order, the bid ask spread and the time remaining. More profitable trade types tend to be those that permit traders to disguise their information and so we see clear evidence of strategic behaviour with a preference to trade on the opposite side to a trader's signal. We also corroborate the diagonal effect in order flow found in field markets, and assess the validity of alternative theories of this phenomenon.

James M. Steeley

is Professor of Finance and Head of Department designate in the Department of Economics and Finance at Brunel University London. Previously, he has held Professorial positions at Keele University, Aston University and Stirling University and a Senior Research Fellowship at Cardiff University. During the mid-1990s he worked for the Bank of England managing a research team developing techniques to interpret financial market prices for use in monetary policy advice, and techniques to improve the pricing of UK government debt issues. He has been a visiting academic at the Financial Markets Group at the LSE, the Isaac Newton Institute of Mathematical Sciences at Cambridge University, the Technical University of Ostrava, Washington University in St. Louis, Kent State University and the University of Central Florida. He has a BA in Economics and Econometrics from Reading University (1985) and a PhD in Economics from Warwick University (1990). His research is in the field of financial markets and investments, with a focus on the UK government bond yield curve and empirical market microstructure. His work has been published in, inter alia, the *Journal of Finance*, the *Journal of Financial and Quantitative Analysis*, the *Journal of Money, Credit and Banking* and the *Journal of Banking and Finance*. He has presented at many international conferences including the American Finance Association and the Royal Economic Society. He is an Advisory Editor of *Studies in Economics and Finance* and on the editorial board of the *International Journal of Behavioural Accounting and Finance*.



WALKER, Thomas***Mohammad Bitar, Dieter Gramlich, Thomas Walker, Yunfei Zhao: After the storm: Natural disasters and bank solvency***

This paper examines how natural disasters affect the solvency of banks. Specifically, by analyzing a comprehensive dataset on natural catastrophes and detailed financial statements for 9,928 banks that operate in 149 countries, it explores (1) whether and how natural disasters affect bank solvency, (2) how accounting and regulatory measures of bank solvency reflect a bank's true affectedness, and (3) whether the effects differ across different types of banks. This study adds to the discussion of what type of capital and capital ratio best reflects a bank's sensitivity to risk. The main finding is that damages from disasters matter: they negatively affect capital ratios, and the severity of their impact depends on a bank's location, capitalization, and business model. In addition, the results show that accounting measures of solvency are more sensitive to disasters than are regulatory measures.

Thomas Walker

is a full professor of Finance at Concordia University. Prior to his academic career, Dr. Walker worked in the German consulting and industrial sector at such firms as Mercedes Benz, Utility Consultants International, and KPMG. His research interests are in sustainability & climate change, aviation, corporate governance, and risk management and he has published over sixty articles in these areas. In addition, Dr. Walker has published five books on sustainable financial systems, emerging risks, sustainable aviation, environmental policies, and sustainable real estate in the past two years. He previously served as Director/Co-Director of the David O'Brien Centre for Sustainable Enterprise, as Laurentian Bank Professor in Integrated Risk Management, as Chair of the Finance Department, and as Associate Dean, Research, at Concordia University.



SPEAKERS

BARANYAI, Eszter

Eszter Baranyai, Adam Banai: Do climate change projections appear in mortgage characteristics?

Using rich, loan-level data pertaining to close to 2 million US mortgages and a synthesised and downscaled version of global climate models, we find that the projected increase in the number of hot days in the coming decades has an effect on local mortgage characteristics. Results indicate a modest but statistically highly significant impact, suggesting higher interest rates and shorter loan terms in areas more exposed to the changing climate, after controlling for macroeconomic, borrower and loan characteristics, local housing market risks, lender competition and lender effects. Beyond this, rate spreads are higher in areas where the number of hot days (level) is projected to be extreme. It is lenders with a wide geographical focus and non-banks' loans not sold to government sponsored enterprises that react most to projected increases in hot days. To our knowledge, we are the first to use temperature projections from the downscaled version of global climate models – the collaborative effort of a number of climate scientist teams worldwide and which are used in the UN's reports – in a study in the area of finance.

Eszter Baranyai

is a lecturer at Corvinus University of Budapest (CUB), senior expert at the Hungarian National Bank and one of the authors of the Economania blog since 2018. Prior to that, she worked in a number of areas – financial stability, financial markets and liquidity risk management – across the Bank of England, the Financial Services Authority and Barclays Bank. She holds first class honours Master's degrees from CUB and ESSCA, France, qualified as an ACCA accountant and is currently pursuing doctoral studies. Her research interests include climate finance, the financial system and asset management.



BĘDOWSKA-SÓJKA, Barbara***Barbara Będowska-Sójka, Krzysztof Echaust: The asymmetry of Amihud illiquidity measure - an international perspective***

The Amihud illiquidity tends to be asymmetrical measure in a relation to negative (downside) or positive (upside) returns. It captures the tendency for orders to cluster on sell side on days when prices decline. We extend this area of research and explore the asymmetry in liquidity in face of extreme returns. In the empirical study the Extreme Value Theory tools are applied. More specifically we use the block maxima method separately for positive return days and negative return days. We examine stocks listed on twenty capital markets, both developed and emerging, over the world. We find the evidence that Amihud illiquidity forms clusters more often in the case of negative returns than for positive ones. This phenomena is observed across all markets, developed and emerging, but to a different extent.

Barbara Będowska-Sójka

is an associate professor at the Department of Econometrics at Poznań University of Economics, Poland. Her main research interests are in financial market microstructure, financial econometrics, volatility modeling and forecasting. Recently she focuses on the measures of volatility and liquidity based on the high frequency data, coherence of the proxies and the volatility-liquidity dependencies. She has already published in: Journal of Financial Stability, Research in International Business and Finance, Finance Research Letters, Risk Management, Emerging Markets Finance and Trade, Finance a uver Czech Journal of Economics and Finance, Entropy, and Eastern European Economics.



BERLINGER, Edina***Edina Berlinger, Katalin Dobránszky-Bartus, György Molnár: Modern pillories: Overdue debts of the poor***

We elaborate a theoretical model to derive a feasibility condition for market-based debt relief programs. We found that lenders have no interest to offer payment reductions if non-performing borrowers are few, have small debts, and are difficult to reach. In this situation, poor debtors serve better as deterrents, similarly if we put them into a pillory. Calibrating model parameters to poor households struggling with overdue debts in small villages of a disadvantaged rural region in Hungary, we show that this might be the case on our sample, too. As, in normal economic circumstances, private debt relief programs are typically not feasible, a state subsidy would be needed to consolidate the debts of the poor. State intervention can be justified both by positive externalities and moral considerations.

Edina Berlinger

is a full professor of finance and the chair of the Finance Department at Corvinus University of Budapest. She obtained her PhD degree from the Corvinus University of Budapest in 2004 related to the design and implementation of income-contingent student loan systems. She participated in several research and consultancy projects in the fields of banking, risk management, asset pricing, and complex systems. At the moment, she leads a research project on social innovation for financial inclusion (supported by the Higher Education Institutional Excellence Program of the Ministry of Human Capacities).

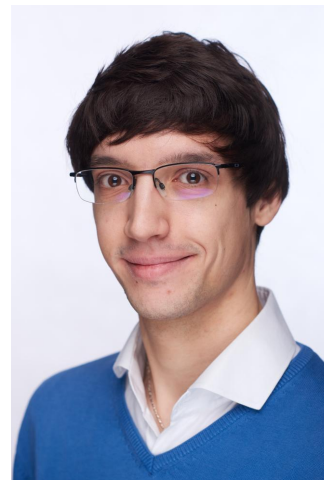


BORSOS, András***András Borsos, Bence Mérő: Shock Propagation in the Banking System with Real Economy Feedback***

In this paper we develop a model of shock propagation in the banking system with feedback channels towards the real economy. Our framework incorporates the interactions between the network of banks (exhibiting contagion mechanisms among them) and the network of firms (transmitting shocks to each other along the supply chain) which systems are linked together via loan-contracts. Our hypothesis was, that the feedback mechanisms in these coupled networks could amplify the losses in the economy beyond the shortfalls expected when we consider the subsystems in isolation. As a test for this, we embedded the model into a liquidity stress testing framework of the Central Bank of Hungary, and our results proved the importance of the real economy feedback channel, which almost doubled the system-wide losses. To illustrate the versatility of our modeling framework, we presented two further applications for different policy purposes: (i) We elaborated a way to use the model for SIFI identification, (ii) and we showed an example of assessing the impact of shocks originated in the real economy.

András Borsos

is a PhD candidate at CEU (Department of Network and Data Science) with a particular interest in economic networks. He is also affiliated with the Central Bank of Hungary, where he works as an applied researcher focusing on financial stability. In his PhD thesis he is conducting research on modeling contagious mechanisms of complex economic systems and designing regulations to prevent instabilities in the economy.



CsÓKA, Péter

Péter Csóka, P. J.J. Herings: Uniqueness of Clearing Payment Matrices and Continuity of Bankruptcy Rules in Financial Networks

We consider bankruptcy rules in financial networks, where agents are linked to each other with financial contracts. The way the proportional division rule for claims problems is extended to financial networks can be used to extend any division rule. The resulting bankruptcy rules consist of computing each agent's asset value and then making payments in accordance with the given division rule. Since payments made depend on payments received, we are looking for equilibria (fixed points) with coherent accounting, called clearing payment matrices. Although clearing payment matrices in financial networks are unique under mild conditions when proportional division rules are used, this is not the case in general. We show that for general division rules, there always exists a least clearing payment matrix and a greatest clearing payment matrix. Having multiple equilibria leads to additional systemic risk since self-fulfilling feedback effects could lead to the worst equilibrium. We provide sufficient monotonicity conditions for the uniqueness of clearing payment matrices. We show that if a bankruptcy rule leads to a unique clearing payment matrix, then it is continuous. Continuity implies that small changes in the financial network lead to small changes in the resulting clearing payment matrix. As an illustration, we prove that the constrained equal awards rule for financial networks does not satisfy continuity, whereas the constrained equal losses rule does.

Péter Csóka

is a Professor at the Corvinus University of Budapest, Department of Finance and a senior research fellow at the game theory research group of the Institute of Economics, CERS. He received his PhD in economics from Maastricht University in 2008. His research topics include theoretical aspects of risk measures, risk capital allocation, various aspects of liquidity, and financial networks. He has papers published in journals like *Management Science*, *European Journal of Operational Research*, *Games and Economic Behaviour*, and *Journal of Banking and Finance*.



DUDÁS, Fanni

Helena Naffa, Fanni Dudás: Measuring Financial Well-Being of Countries

Financial well-being is an important development indicator that combines both the economic and social aspects of countries. The present paper aims to identify the determinants of financial well-being and to develop a reliable and valid measurement for financial well-being at the country level. Compared to the relevant literature we applied a different approach to establishing financial well-being index: we created a complex index of financial well-being using multiple methodologies of multivariate statistics on the database of Global Financial Inclusion indicators provided by the World Bank. We also leveraged Machine Learning methodologies applying neural networks to form an alternate financial well-being index using the database. The created financial well-being indices may help us to predict whether the countries that have performed better during an economic and social crisis (e.g. the latest coronavirus pandemic) by this complex indicator. Then we also examined if the usual financial indicators, such as country risk premium, CDS premium, or credit risk ranking and national ESG rating, could better predict a country's performance or the created financial well-being index. Our research aims to highlight the importance of measuring financial well-being and contributes to the empirical literature by providing a robust measure of a complex financial well-being index.

Fanni Dudás

is a PhD student at the Department of Finance at Corvinus University of Budapest, where she teaches corporate finance and corporate valuation. She started her PhD studies in 2019. Her main research interests are in ESG investing, sustainability and Climate Finance.



Helena Naffa

is a part-time senior lecturer at Corvinus Business School, teaching applied valuation and the Student-Managed Investment Fund course. Her research areas include ESG investments, emerging equity markets and portfolio management. She is the head of the ESG research group at Corvinus. She earned her PhD in 2015 at Corvinus, the reviewer was Prof. Aswath Damodaran. She has more than 10 years of experience in working in CEE capital markets as a sell-side equity analyst. Currently, she is a senior buy-side analyst with Aegon Asset Management Hungary.



GUBAREVA, Mariya***Mariya Gubareva: Impact of the Covid-19 on liquidity of emerging market bonds***

We analyze liquidity of the emerging market (EM) bonds during the Covid-19 fueled uncertainty. Using bid/offer spreads we demonstrate that the apogee of both, liquidity and credit stresses is reached in late-March, and that although liquidity has improved since then, it has not yet returned to the pre-Covid levels. In particular, we find that the EM financials are more resilient to liquidity shocks than the EM corporates and sovereigns. Moreover, we observe a decoupling in the dynamics of the liquidity and credit risk metrics, as credit spreads have been tightening very slowly due to the Covid-19-triggered repricing of default risk.

Mariya Gubareva

holds a PhD in Economics (2013) from ISEG – Lisbon School of Economics and Management of the University of Lisbon. Currently, she is Vice-Dean for Research and Professor of Economics and Finance at ISCAL – Lisbon Accounting and Business School of the Lisbon Polytechnic Institute, and Researcher at SOCIUS/CSG – Research Center in Social Sciences and Management. She coordinates several research projects, serves at the Scientific Committees of diverse international conferences in the fields of Economics and Finance and at the Editorial Board of Investment Management and Financial Innovations journal. Mariya authored several publications in international peer reviewed journals. Her research interests comprise financial economics including risk management and focus on financial stability and international capital flows among many others.



HARTVIG, Áron

Milán Csaba Badics, Áron Hartvig: Volatility and illiquidity connectedness during the Financial crisis of 2007-08

In this paper we focus on the days of turmoil during the Financial Crisis of 2007-08 with the analytical purpose to compare how Diebold-Yilmaz volatility and illiquidity spillovers signal financial distress. We closely examine volatility and illiquidity networks around the acquisition of Bear Stearns and the bankruptcy of Lehman Brothers. The macro level analysis shows that total illiquidity spillover index experienced large jumps during financial turmoil, like after Bear Stearns' acquisition or when Lehman Brothers collapsed. Then, we calculate net pairwise spillover indices to show how troubled nodes affect the networks on micro level. In illiquidity network Bear Stearns became the largest shock transmitter after its failure. Furthermore, in September substantial illiquidity connections appeared from Freddie Mac to Lehman Brothers, Merrill Lynch and AIG and then Lehman Brothers became the largest shock transmitter. To the contrary, volatility network did not signal Bear Stearns' acquisition at all and the Lehman Brothers shock was also much less noticeable. We can conclude that troubled financial institutes play crucial role in illiquidity network while they are less visible in volatility network. Illiquidity connectedness indices are signalling turmoil not only on macro, but on micro level too.

Áron Hartvig

is a Quantitative Risk Analyst and currently working for Morgan Stanley. He holds a Bachelor degree in Economics from Corvinus University of Budapest (2019) and he graduated with a Master's degree in Finance from Central European University (2020). He joined the Empirical Finance Research Program in September 2018 where his research topic was financial networks and systematic risk. Highly interested in statistics, empirical analysis and network science, his first article was published in Hungarian Statistical Review.



HAVAS, Attila***Attila Havas: Various approaches to social innovation: Diversity in its definitions and models***

Social innovation (SI) has become a widely used buzzword, portrayed as a solution to many different types of societal and environmental problems. This is a strong impetus to clarify its meaning, the actors involved in SI processes, their objectives, activities and interactions, as well as SI processes, their outcomes and impacts, and derive apt policy implications. A large number of SI definitions were proposed in the last few decades. The paper first provides a critical overview of the existing SI definitions and identifies two types of major methodological shortcomings: i) some of these definitions are confined only to a certain type of SI, and thus cannot be applied generally; ii) a large number of these definitions stress that an SI must have a positive impact. The paper suggests a new, generally applicable definition: Social innovations are novel solutions or novel combinations of known solutions, aimed at tackling a societal problem or creating new societal opportunities. Further, the paper considers SI models, both linear ones and those stressing the importance of feedback loops, highlighting the pros and cons of these models. Finally, a new model of SI is proposed, inspired by the multi-channel interactive learning model of business innovations.

Attila Havas, PhD

is a Senior Research Fellow at the Institute of Economics, CERS, regional editor of International Journal of Foresight and Innovation Policy, and member of the editorial board of Foresight and STI Governance. His academic interests are in economics of innovation, national and sectoral innovation systems, theory and practice of innovation policy, (technology) foresight, and social innovation. He holds a PhD in economics (The Diffusion of New Technologies) from the Hungarian Academy of Sciences, 1997. He has participated in numerous international research projects on STI policies, innovation and transition, social innovation, as well as on foresight and prospective analyses, advised foresight programmes in several countries, been a member of EU expert groups, and invited speaker at international conferences. In 1997–2000 he was Programme Director of TEP, the Hungarian Technology Foresight Programme, providing methodological support, and focusing on STI policy implications. Previously had worked for IKU, Innovation Research Centre, Budapest University of Economics (1990–1997) and for other research institutes in the field of industrial economics and industrial policy (1983–1989). Studied and conducted research abroad at INTECH, UN University, Maastricht; SPRU, University of Sussex; PREST, University of Manchester; MERIT, University of Maastricht; London School of Economics.



HAVRAN, Daniel***Márton Gosztanyi, Dániel Havran: Highways to Hell? Paths Towards the Formal Financial Exclusion: Empirical Lessons of the Households from Northeastern Hungary***

Whenever a household faces a lack of banking payment services and access for funding, it often constraints the everyday activities, moreover the chance for getting available the financial services again. Our study explores the possible explanations of why a household becomes financially excluded in an underdeveloped area of Northeastern Hungary. We test four economic channels of formal financial exclusion: the income conditions of the households, the lack of available banking services, the negative consequences of the defaults in the social environment, the former credit history (short-term and long-term loans). By using a questionnaire (n=502) carried out in 2019 spring, we conduct a covariance-based SEM-analysis for detecting the key reasons. Our results verify the responsibility of the social policy and the banking regulation, and we find that personal loans that aimed to cover the daily expenditures are the entrance of the formal financial exclusion, especially among the poor.

Daniel Havran

is an Associate Professor of Finance at the Corvinus University of Budapest, where he has been a faculty member since 2008. His research interests are corporate finance, financial markets, market liquidity, social finance. He is a member of the editorial board of *Budapest Management Review*. Currently, he leads a research project titled *Financial and Public Services at Corvinus* sponsored by the Higher Education Institutional Excellence Program of Hungary. He teaches courses as *Corporate Finance*, *Credit Risk Management and Market*, *Econometrics for Finance*.



HOROVITZ, Andre Peter

Sophie Doepp, Andre Horovitz, Alexander Szimayer: Modeling non-maturing Demand Deposits: on the Determination of the Threshold of Separation between Volatile and Stable Deposit Volumes

This paper aims to develop a methodology for the determination of the threshold of separation between volatile and stable deposit volumes in accordance with the deposit taking institutions idiosyncratic credit and liquidity risk tolerances and liquidity management preferences. The effort is motivated by Principle 9 of the BIS Basel III recommendations for managing liquidity risk. We develop the methodology by including the new liquidity constraints from the Basel III regulatory recommendations introduced in 2013 (LCR and NSFR). We determine the two main variables that affect the threshold of separation: the confidence level and the length of the data time series of daily deposit variations, both bank-specific, in accordance with the institution's specific risk profile and internal liquidity management policies. For the determination of the specific confidence level we use established methodological results stemming from the evaluation of default probabilities of portfolios exhibiting very low default observations by Pluto and Tasche (2011) while for the determination of the institution specific minimal data time series we use the properties of the power statistics associated with the Kolmogorov-Smirnov test applied to the distributions of deposit volumes time series. We further illustrate the application of the methodology via data time series for a fictional European savings bank.

Andre Peter Horovitz,

the founder of financial risk fitness (<http://financial-risk-fitness.com>) has over 25 years experience in the financial services industry. Mr. Horovitz started his banking career at Lehman Brothers as an Investment Banking Associate in 1988. He was responsible for pricing, developing hedging strategies and marketing exotic interest rate derivatives.

Mr. Horovitz has subsequently held senior executive positions at Oliver, Wyman & Co., Commerzbank, HVB Group (currently part of Unicredit), Erste Bank, Credit Suisse and Nagler & Company. At Erste Bank and Credit Suisse, Mr. Horovitz held the positions of Chief Risk Officer and was a member of the top management committees of the respective institutions. He is a frequent speaker at various risk management conferences and a contributor to various industry journals. He has held teaching assignments in financial risk management at the Technical Universities of Munich and Vienna. His areas of expertise cover all classes of financial risk management including the important link to overall institutional strategy.

Mr. Horovitz holds an Engineering Diploma in Hydraulics from The Technical University Bucharest and an MBA in Finance from New York University's Stern Business School. He is a Registered Securities Representative in New York, a Licensed Professional Engineer (PE) in New Jersey & Michigan and a GARP (Global Association of Risk Professionals) certified Financial Risk Manager FRM®.



HOTCHKISS, Edith

Michael Goldstein, Edith Hotchkiss, Stanislava Nikolova: Dealer Behavior and the Trading of Newly Issued Corporate Bonds

This paper provides the first evidence on secondary market trading for a comprehensive sample of 12,047 new issues of corporate bonds offered from 2002 to 2018. We focus on the role of underwriters in order to understand the implications of dealer behavior for issuers. Initial underpricing of corporate bonds is small, but prices continue to rise in the following days as bonds are reallocated to investors paying higher and more disperse prices. We establish that underwriters provide customers with better prices in the secondary market, yet are more likely to take bonds into inventory overnight. To the extent underwriters have an information advantage or other source of market power that enables them to capture rents from selling bonds to higher valuation investors, they are able to do so only on the first days of trading for issues with strong investor demand. We further show that underwriters provide price support and liquidity when offerings trade below the offering price, despite the lower profitability of their trades for such offerings. Overall, our results are consistent with theory that dealers' rents from secondary market trading are unlikely to be fully shared with issuers via competition for underwriting business.

Edith Hotchkiss

is a Professor of Finance in the Carroll School of Management – Boston College. Dr Edith Hotchkiss' research focuses mainly on corporate finance, more specifically, the efficiency of Chapter 11 bankruptcy procedures; restructuring mechanisms for financially distressed firms; transparency and efficiency of the corporate bond market. Her teaching interests focus on corporate finance: valuation and corporate restructuring.



KOTRO, Balazs

Milan Csaba Badics, Balazs Kotro: Interconnectedness of Sovereign Yield Curves

In this work of ours we examined the pairwise causality effects of the different factors of the sovereign yield curves. Such curves can be decomposed for level, slope and curvature factors, therefore a dimension reduction is achieved. We chose two mayor economies for each continent. These are Germany, United Kingdom (Europe), USA, Canada (North America), Brazil, Mexico (South America), Republic of South Africa, Kenya (Africa), Japan, China (Asia), Australia and New Zealand (Oceania). The Toda-Yamamoto approach was utilized which can capture the cointegration effects. We found that financially turbulent times result denser net structure while in calm periods the USA dominates the market.

Balazs Kotro

is a PhD student of the Finance Department of CUB. His main research fields include ESG, Yield Curves, Financial Networks and factor analysis. Additionally, he works as a fixed income data analyst at MSCI.



KÖKÉNY, László

Olivér Hortay, László Kökény: Effect of COVID-19 on the ten largest ESG funds

Socially responsible investing (SRI) is steadily increasing year by year for mutual funds. These investments may have even higher costs compared to traditional portfolios (ethical surplus). Our research aims to examine the stock market performance of ESG funds during the COVID-19 pandemic period, i.e., whether a significantly positive result was achieved in terms of abnormal returns. To assess performance, we looked at the abnormal returns of the ten largest ESG funds in terms of assets and prosperity. The methodology of the research was event analysis, which we use to see if stock returns follow a normal distribution with zero expected value.). The COVID-19 pandemic event period was divided into three further stages: incubation, outbreak, fever. We took the indices of the given stock exchange as the market return. The results supported the assumption that companies with higher asset portfolios responded significantly better than their expected returns. Overall, the practical implementation of the research is that it may be worthwhile to decide on investments by asset in the future or to rely on SRI funds before such global events.

László Kökény

started his PhD studies in September 2017 at the Corvinus University of Budapest (BCE), in English. His research specialization is tourism marketing, hotel guest satisfaction and behavioral economics. During his publishing activities, he published 12 research studies and gave a total of 26 Hungarian and international conference presentations.



LIU, Bin

Atiqur Rahman Rasel, Bin Liu, Sandy Suardi: The impact of investor sentiment and attention on Bitcoin

We investigate how investor sentiment and attention affect key characteristics of bitcoin. Using an innovative approach, VADER (Valence Aware Dictionary for Sentiment Reasoning), we construct an uncertainty measurement of sentiment, sentiment dispersion factor and an investor attention (IA) factor using the effective information extracted from bitcoin-related tweets. We then employ a GARCH model with constant jump intensity to estimate the time-varying risk premium of bitcoin and examine the relation between sentiment dispersion and the risk premium. We find that as investor sentiment deteriorates or uncertainty increases, investors are compensated with higher returns through the risk premium.

Bin Liu

is a finance lecturer in the School of Accounting, Economics and Finance at the University of Wollongong. Bin's research spans several areas in finance including asset pricing, corporate governance, FinTech and environmental finance.



NESZVEDA, Gabor***Gábor Neszveda, Gábor Till, Barnabás Timár, Marcell Varga: Is short-term reversal driven by liquidity provision or behavioral bias in emerging markets? Evidence from China***

Studies argue that, in U.S. markets, the short-term reversal is strongly related to liquidity provision. In the Chinese markets, we find highly robust and puzzling patterns that are inconsistent with findings in U.S. markets and liquidity provision. First of all, there is a puzzling weekly seasonality in the reversal strategy profit which also contradicts to the theories of return seasonality. Second, reversal strategy returns depend on market sentiment instead of liquidity constraints driven by the long leg of the strategy. Our results suggest that the daily short-term reversal in China is driven by behavioral biases instead of liquidity provision.

Gabor Neszveda

moved to the Department of MNB at Corvinus University of Budapest in 2017. He studied quantitative economics at Corvinus University of Budapest and proceeded to do his PhD at the Department of Finance at Tilburg University. His main research interests include behavioral economics, behavioral empirical asset pricing, and experimental economics.



NOVÁK, Zsuzsanna***Zsuzsanna Novák, Nikolett Sereg: Hungarian forint FX swap spreads during and beyond crisis times***

The paper aims at revealing and analysing the factors driving 3-month FX swap spreads in the EURHUF and USDHUF market between the period January 2008 and December 2018 based on daily and monthly Bloomberg forward point quotes. Among indicators of market and funding liquidity risk used in the paper, the USD TED spread, the OIS LIBOR spread, auction overbidding in the Hungarian 3- and 5-year bond market, change in the spot exchange rate of the forint were included in the OLS and VAR estimates. Counterparty risk for the Hungarian financial institutions involved in the swap transaction were approximated with Hungarian government bond CDS spreads and the EMBI index, while the FX swap and CIRS tenders of the Central Bank of Hungary (MNB) were representing policy variables. The latter were reasonable to include as the MNB has been actively dealing in the FX swap market since 2008. Our initial results suggest that indicators of market and liquidity tension mostly positively contributed to the widening of FX swap spreads, while counterparty risk variables had alternating effects depending on the currency pairs used, while policy intervention had a spread dampening impact throughout most of the period examined.

Zsuzsanna Novák

graduated from the Budapest University of Economic Sciences and Public Administration in 2000 with a major in Finance and minor in European studies. She worked as civil servant at the Ministry of Economic Affairs in Hungary between 2001-2003, participating in the preparation of the National Development Plan. Between 2003 and 2006 she was a tutor of the Szent István University, Gödöllő and between 2007 and 2014 she was working for the Corvinus University of Budapest (CUB) teaching Finance, International and Public Finance, Microeconomics and Macroeconomics in both Hungarian and English and organising the Students' Scientific Association at the Faculty of Economics. She obtained her doctoral degree in Business and Administration at the Szent István University, Gödöllő in the subject of monetary policy and economic convergence. Between 2014 and 2018 she worked as analyst at the Central Bank of Hungary (MNB). Since 2008 she has been a lecturer at the Budapest University of Technology and Economics, Department of Finance. Her main field of research is monetary policy, equilibrium exchange rates, public debt, and international competitiveness, including including innovation, employment creation and productivity.



O’SULLIVAN, Conall***Conall O’Sullivan, Vassilios G. Papavassiliou: Time-varying predictability in the European sovereign bond market***

We document time-varying out-of-sample predictability in European sovereign bond market returns when the LASSO regression method is applied to return prediction using a high dimensional set of regressors that include bond liquidity, credit risk and realized volatility measures from the largest sovereign bond markets in the eurozone. We document economic significance in conjunction with statistical significance in all countries. We examine individual country macroeconomic announcement data and find the LASSO is more likely to choose announcement country regressors for large surprise announcements over the announcement window in the prediction of bond returns across all sovereigns considered. Thus, the LASSO selects economically meaningful regressors that are associated with the arrival of new information to the market. Returns and liquidity measures are selected more often in the run-up to European announcements dates whereas, realized volatility measures are more likely to be selected in the post-announcement window.

Conall O’Sullivan

is an assistant professor in finance at the UCD Michael Smurfit Graduate Business School. His primary research interests are in numerical methods for derivatives pricing, derivatives markets, and fixed income markets. Recent research has been published in the *Journal of Banking and Finance*, *Quantitative Finance*, the *International Journal of Theoretical & Applied Finance* and the *Journal of Computational Finance*. He has presented papers at leading international conferences including the



European Finance Association, the Bachelier World Congress and Computational Financial Econometrics. He is a former director of the M.Sc. in Quantitative Finance at the UCD Michael Smurfit Graduate Business School and is the current director of the B.Sc. in Economics and Finance at the UCD Lochlann Quinn School of Business. Conall was a visiting professor at New York University’s Finance and Risk Engineering department from January 2019 to May 2019. Conall is currently an adjunct professor on NYU’s M.Sc. in Financial Engineering (ranked top 10 in its field) where he teaches courses such as "Brain Teasers to Black-Scholes" and "Econometrics and Machine Learning through Python". Conall was a recipient of a UCD College of Business Teaching & Learning Award for Teaching Excellence in 2017.

Vassilios Papavassiliou

UCD Michael Smurfit Graduate Business School, University College Dublin
See pp. 29.

OLEKSY, Paweł

Marcin Czupryna, Paweł Oleksy: Liquidity of illiquid assets: Evidence from fine wine exchange

This study investigates the liquidity patterns in a fine wine exchange with an order book mechanism. The unique dataset allowed us to test the quality and coherence of different liquidity measures and investigate various factors that may have an effect on their performance. The findings clearly indicate different wine attributes to be significant determinants of liquidity measures and drivers of correlations. Importantly, wines are not homogeneous in terms of liquidity, so their segmentation into different liquidity classes provides a more realistic picture of market liquidity and seems an essential consideration when aiming at a proper liquidity assessment.

Paweł Oleksy

is an Assistant Professor at the Cracow University of Economics, Department of Financial Markets. He received his PhD in economics from SGH Warsaw School of Economics. His research interests focus on financial markets, market microstructure, alternative investments and financialisation of non-financial corporates and real assets. He is a member of the European Finance Association and the American Association of Wine Economists. He also serves as a reviewer for *World of Real Estate Journal*. He has papers published in journals like *JASSS-The Journal of Artificial Societies and Social Simulation* and *Journal of Wine Economics*. He has an extensive professional experience gained in real estate and energy markets. His teaching activity includes courses and workshops in Alternative investments, Fixed income analysis and Portfolio management.



ÖLVEDI, Tímea

Barbara Dömötör, Tímea Ölvedi: Information Processing of Peer-to-Peer Lending Platforms

Peer-to-peer platforms are a form of alternative finance, allowing direct lending between private individuals through an online platform. These online marketplaces offer the possibility of lending at reduced transactional costs, due to the lack of financial intermediary institutions, but investors have to take the risk of their funding decision. To help investors' risk assessment, the platforms use their own scoring models to rate loan applications based on the information provided by the borrowers. This paper investigates the performance of these credit ratings by comparing the platform's initial rating with the credit history of the borrowers afterwards, based on a sample of ca. 150,000 transactions of the Estonian platform called Bondora.

Tímea Ölvedi

is a PhD student at the department of Finance at Corvinus University of Budapest. Her research area is peer-to-peer lending from a risk management perspective. She is working as a senior consultant at Ernst & Young Advisory division in the Financial Services and Risk Management team since 2017.



Barbara Dömötör

is an Associate Professor of the Department of Finance at Corvinus University of Budapest. She received her PhD in 2014 for her thesis modelling corporate hedging behavior. Prior to her recent position she worked for several multinational banks' treasury. Her research interest focuses on financial markets, financial risk management and financial regulation. She is the co-director of the Hungarian Chapter of Professional Risk Managers' International Association.



PAPAVASSILIOU, Vassilios

Vassilios Papavassiliou: Information shares and market quality before and during the European sovereign debt crisis

I investigate information shares in the price discovery process in the euro-area sovereign bond market across the yield curve, during both calm and crisis periods. I employ a rich high-frequency dataset from the MTS platform. I find that price discovery is enhanced, on average, especially for periphery countries during the European sovereign debt crisis however, increases in information shares are not uniform across the yield curve. I further show that no particular market leads the price formation process across all maturity segments. I find a clear improvement in market quality for core countries (Germany and the Netherlands) but mixed results for periphery countries (Italy and Spain) in the crisis period.

Vassilios Papavassiliou

is Assistant Professor of Finance at the University College Dublin School of Business. He earned his PhD in Finance from the Queen's University of Belfast, United Kingdom. His research interests span the areas of market microstructure, high-frequency finance, liquidity, bond markets, financial contagion, FinTech, and banking and risk management. His work has been published in international refereed journals. He is the Subject Area Head of Teaching and Learning (Banking and Finance) at UCD School of Business. He brings multi-year experience in investment banking and has held senior management positions in multinational banking institutions.



PINTER, Miklos***Miklos Pinter: How to generate objective ambiguity***

Taking advantage in strategic situations by using ambiguity is well documented in the literature. However, so far there are only few results on that how to generate objective ambiguity. In this talk we introduce a procedure, which generates objective ambiguity meaning it draws an element from the set of priors defined by a belief measure in a way that the procedure does not lead to any probability distribution on the priors. Moreover, we define the notion of ambiguous action in a precise way, in order to apply it in strategic models.

Miklos Pinter

is an associate professor at the Corvinus Center for Operations Research, CUB. His research interest covers decision and game theory, mathematical economics, and operations research. He has published papers in journals like European Journal of Operational Research, Annals of Operations Research, Journal of Mathematical Economics, Economic Theory among others.



RAMESH, Vishnu***Vishnu Ramesh, Aravind Sampath: Allocation of internal cash flows – Evidence from an emerging market***

We investigate how Indian firms allocate their internal cash flows. We document that more than 50% of a firm's contemporaneous internal cash flow is channeled through the debt market. This higher debt-cash flow sensitivity facilitates the firms to maintain investments in future by borrowing. In short-run, firm reduce the dependence on costly external finance, increase investments and save cash for the future. In the long run, firms' step-up their investments by borrowing more and drawing on their cash hoards. Unlike results based on developed markets, we find that firms respond symmetrically to positive and negative cash flow shocks by making changes in their capital structure. We also document how group-affiliated firms allocate cash flows differently from stand-alone firms. Our results also underscore the importance of borrowed funds as an important financing source in emerging markets where (a) bank based private debt is cheaper and (b) provides tax-shield.

Vishnu Ramesh

is a PhD Student at the Department of Finance and accounting at Indian Institute of Management Kozhikode. He is presently working on Corporate liquidity. His co-author is Dr. Aravind Sampath. He is an assistant professor at the Department of Finance and accounting at Indian Institute of Management Kozhikode.



REIZINGER, Kristóf***Milán Csaba Badics, Kristóf Reizinger: Granger-causality analysis of risk spillovers in insurance and banking networks***

The authors have elaborated on the econometric approach of Song and Taamouti (2019) to measure the systemic risk of individual institutions and the relations among different sectors and industries. The authors also presented the rankings of systemically important financial institutions (SIFIs) and described the dynamics of the network.

The pairwise Granger-causality framework is based on principal component analysis to filter out indirect and spurious linkages from the network, causing distortions in connections, making it possible to reconstruct the original relationships among firms and quantify interconnectedness between institutions, sectors, and industries. Monte Carlo simulations confirmed the efficiency of the methodology.

The European and North American insurance and banking branches have been in focus between 2001-2019; the authors have revealed the existing relationship between them, indicating the system dynamics in different periods of the business cycle (pre-crisis, crisis, and post-crisis). The proposed framework has shown an increasing trend in the interconnectedness of the insurance and banking sectors. In contrast, the proportion of the indirect and spurious effects has fallen after the financial crisis in 2008. Moreover, the proposed econometric approach also was found to be a robust early warning indicator for loss rankings measured by log returns.

Kristóf Reizinger

has received a BSc degree in economic and financial-mathematical analysis in 2018 at the Corvinus University of Budapest and finished the actuarial and financial mathematics MSc in 2020, specialized in insurance mathematics. His research interests include banking sector liquidity concerning lending and endogenous money theory, financial econometrics, and systemic risk of financial networks.



SAFFI, Pedro***Stefan Greppmair, Stephan Jank, Pedro A. C. Saffi, Jason Sturgess: Securities Lending and Information Acquisition***

We show that mutual funds use information acquired by participating in the equity lending market to make portfolio allocation decisions. Using data from German mutual funds on their stock-level lending decisions, we find that funds lending shares are more likely to exit positions relative both to stocks that they do not lend and to funds that do not lend. Lenders also avoid losses by better timing the closure of long positions than for stocks they do not lend. Finally, we show information acquisition in the lending market allows lenders to front-run public disclosure of large short positions. The results suggest that the securities lending market provides a mechanism for mutual funds to acquire information.

Pedro Saffi

is a Professor in Financial Economics at the Cambridge Judge Business School and the Director of its Masters in Finance program. He obtained his PhD in Finance from London Business School in 2007 and was an Assistant Professor of Finance at IESE in Spain between 2007 and 2011. Prior to that, a MSc. in Economics from Fundação Getulio Vargas (2002) and a BA in Economics from IBMEC Business School (1999), both in Rio de Janeiro, Brazil. His research focus on topics such as security lending markets; short selling; and limits to arbitrage. He has published his work in the top Finance journals in the world, like the *Journal of Finance*, the *Review of Financial Studies*, *Management Science*, and the *JFQA*.



SIERADZKI, Rafał; THLON, Michał***Grzegorz Kosiorowski, Rafał Sieradzki, Michał Thlon:
Game-theoretic approach to IPO underpricing: issuer vs
investors***

Issuer and investors that are involved in an IPO play a game in which they have to agree on the issue price. Although the process is arranged and managed by a broker, in this setting, he has only an advisory role. In a situation when both parties are risk neutral the issuer will tend to set the price as high as possible because this maximizes his proceeds from the IPO given the number of sold shares is fixed. On the other hand, investors try to lower the issue price because this maximizes the probability of selling all offered shares with profit when trading starts at the stock exchange. We prove that behavior of the issuer and investors completely change if we assume that both parties are risk averse. Moreover, behavior of the issuer changes if he plans to carry out an SPO in a (relatively) short-time after the IPO. In this situation he will be inclined to lower the issue price, to increase the probability of selling all shares not only in the IPO but also in the SPO. In other words, the behavior of the issuer is different in a one-stage game and in a repetitive game.

Rafał Sieradzki

is an Assistant Professor of Finance at the Department of Economics, Cracow University of Economics (Poland). Before he worked as an economic expert in the Financial System Department at the National Bank of Poland. His research areas cover equity, bond and derivatives markets and the real economy. He is an author and co-author of many monographs, articles and reports and court expert in financial markets and risk management.



Michał Thlon, PhD

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SIFAT, Imtiaz***Abdollah Ah Mand, Imtiaz Sifat: Volatility Dynamics in Financial Futures: The Roles of Speculation and Liquidity***

This paper investigates the concomitant roles of speculation and illiquidity as potential drivers of volatility in financial futures. Despite being an integral part of the financial industry's risk management arsenal, financial futures endure a public stigma as market destabilizers. As often is with futures, speculation is billed the main culprit. The same is also said to depress liquidity in futures markets. Do these concerns mirror reality? For eleven index and interest rate futures listed in ICE Futures Europe, we answer: no. Our conclusion stems from dynamic coherence and partial coherence analyses in the time-frequency domain, which indicate mixed dependence between volatility and speculation. Surprisingly, volatility and liquidity strongly and positively depend on each other. Most results survive causal robustness checks conditional on five possible exogenous macro-determinants representing market fear, uncertainty, and currency shocks. After detailed analysis and comparison with equity market precedents, we deduce that these marquee financial futures attract a quantum of speculation healthy enough to replenish illiquid trading but not toxic enough to exacerbate volatility.

Imtiaz Sifat

is a lecturer of Finance at Monash University's School of Business at Malaysia. Imtiaz obtained his PhD in finance with a focus on market microstructure. His present research interest encompasses risk management, volatility, derivatives, and liquidity in various asset classes and markets.



VADASZ, Tamas***Hans Degryse, Roman Goncharenko, Carola Theunisz,
Tamas Vadasz: When Green Meets Green***

What is the impact of environmental consciousness (i.e., being green) as borrower and as lender on loan rates? We investigate this question employing an international sample of syndicated loans over the period 2011-2019. We find that green firms borrow at a significantly lower spread, especially when the lender consortium can also be classified as green, i.e., when "green-meets-green". Further tests reveal that the impact of "green-meets-green" became significant and large negative only after the acceptance of the Paris Agreement in December 2015. We argue that this is evidence for lenders responding to policy events which affect environmental attitudes.

Tamas Vadasz

is Assistant Professor at the Faculty of Economics and Business, KU Leuven, Belgium. He received his PhD in Finance from the University of Warwick in 2018. He is working on policy-oriented theoretical and empirical research in banking theory, financial stability and regulations.



VARGA, Gyorgy***Gyorgy Varga: On the fitting of the term structure short-end***

This paper evaluates the performance of two traditional term structure fitting models versus a modified version of the exponential flat forward. This modified version puts vertices at the dates of Central Bank Meeting, where they possibly change the target and consequently the short-term interest rate may jump. The resulting goodness-of-fit in pricing market contracts are significantly better than traditional Nelson-Siegel or Cubic Spline. The pricing errors are a fraction of the errors produced in the two other model. This new framework overcome and explain the very low accuracy of the traditional term structure fitting models at the short end of the yield curve. This new model provides a more realistic tool for bond's mark to market and the impact of monetary policy on interest rates.

Gyorgy Varga

B.S. in Economics (UFRJ), M.S. in Economy from EPGE/Fundação Getúlio Vargas and PhD in Economics from EPGE/Fundação Getúlio Vargas. Mr. Varga is currently a Partner at FCE Consultoria, where he conducts research and provides consulting and training in Applied Finances. His experience includes Brazilian and multinational banks and teaching at many Brazilian institutions. He has several articles published in scientific magazines. His interests include topics related to fixed income, derivatives, monetary policy, and mutual funds.



VERYZHENKO LEBOEUF, Iryna***Stéphanie Ligot, Iryna Veryzhenko: The High Frequency Trading and Circuit Breakers in an Electronic Market***

In this paper we study the ability of short-term circuit breaker to limit large price swings and to reduce panic trading. We compare liquidity provision and consumption by market participants (pur-HFT, mix-HFT, and non-HFT) over relatively calm periods and see how their behavior is altered during particular turbulent periods which lead to trading halts. Our sample covers high-frequency data on trades and orders (all messages) on the most liquid stocks that are included in the SBF120 french index from January 4, 2016 to December 28, 2016. Our results show that non-HFTs and mix-HFTs start playing the role of liquidity suppliers and efficiently use trading pauses to dampen price movements. These protected categories of traders initiate a trend reversal. While, HFTs do not act as market makers and trade aggressively in the direction of the trend. This makes market recovery more difficult. Overall, our findings suggest that a circuit breaker can be an insufficient tool to deter all traders from following a trend and to prevent the amplification of a crash. Regulator need to develop tools to manage the order flow toxicity in real-time. We show that developing contracts on VPIN to ensure the market stabilization in periods of high volatility could be a solution.

Iryna Veryzhenko Leboeuf

is an assistant professor in Quantitative Finance at Conservatoire National des Arts et Metiers in Paris (France). She received her Master in Applied Mathematics and Computer Science at the Taras Shevchenko National University of Kyiv (Ukraine). She holds a PhD in Finance from IAE Paris - Sorbonne Business School in Paris. Her research is mainly focused on market microstructure, high-frequency and algorithmic trading, market regulation, and artificial market modeling.



WALTER, György***Jens Valdemar Krenchel, György Walter: Leniency of personal bankruptcy systems***

Handling personal bankruptcies has a long history and broad legislative background. One central element of modern personal bankruptcy legislations is the opportunity of a “fresh start”. The literature thoroughly analyzes the possible abuses, its direct connection to social insurance, its relation to the incentives on entrepreneurship, labor market. The conditions of the fresh start is closely related to the level of the leniency of the personal bankruptcy systems. Leniency is an aggregative term showing how easy or difficult for the individual borrower to reach a fresh start. To understand the importance of different leniency levels of countries and to analyze the changes in legislation, first, we must measure the level of the leniency of the specific model. We create a composite indicator, a leniency index that incorporates the important dimensions of the legislations. Our research aims to analyze all bankruptcy models in the EU countries and indicate their leniency. We measure and map all EU countries’ personal bankruptcy systems with the created composite indicator and compare the results.

György Walter

received his MSc in finance and later his PhD in corporate finance at the Corvinus University of Budapest. Following his doctoral studies he spent 10 years in the banking sector in management positions of commercial banks in Hungary. He was also the director of Corvinus MBA Center for four years. He accomplished his habilitation in 2017. He is currently a Professor at the Corvinus University of Budapest, at the Department of Finance. His main research fields are income contingency, commercial banking, corporate finance, and personal bankruptcy.



WHELAN, Paul***Nina Boyarchenko, Lars Christian Larsen, Paul Whelan: The Overnight Drift***

We show that nearly 100% of the U.S. equity premium is earned over a window around the opening hours of European markets when U.S. cash markets are closed. We explore two potential complementary explanations. First, consistent with predictions from dealer inventory risk models, we find (i) a strong negative link to end-of-day order imbalance; (ii) reversals are amplified in periods of high volatility; (iii) in recent years dealers have increasingly offloaded inventory during Asian trading hours. Second, shocks to end-of-day quantities of risk lead to increases in overnight expected returns.

Paul Whelan

Paul Whelan's research interests are in the areas of theoretical and empirical asset pricing with a specific focus in fixed income markets. Paul has presented at American Finance Association, Western Finance Association, and European Finance Association meetings, and has received several awards for his research.



WILKE, Hannes***Daniel Fricke, Hannes Wilke: Connected Funds***

Investment funds are highly connected with each other, but also with the broader financial system. In this paper, we quantify potential vulnerabilities arising from funds' connectedness. While previous work exclusively focused on indirect connections (overlapping asset portfolios) between investment funds, we develop a macroprudential stress test that also includes direct connections (cross-holdings of fund shares). In our application for German investment funds, we find that these direct connections are very important from a financial stability perspective. Our main result is that the German fund sector's aggregate vulnerability can be substantial and tends to increase over time, suggesting that the fund sector can amplify adverse developments in global security markets. We also highlight spillover risks to the broader financial system, since fund sector losses would be largely borne by fund investors from the financial sector. Overall, we make an important step towards a more financial-system-wide view on fund sector vulnerabilities.

Hannes Wilke

holds a PhD in Finance. He joined the Bundesbank in October 2016. Since then he has been working as an economist in the central bank's financial stability department. His focus is on systemic risks emerging from the non-banking system, specifically from the investment fund sector. Since November 2019, he is deputy head of section Investment funds and other non-bank financial intermediaries.



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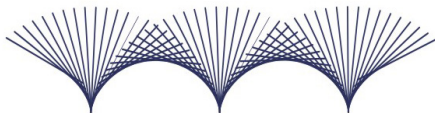
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