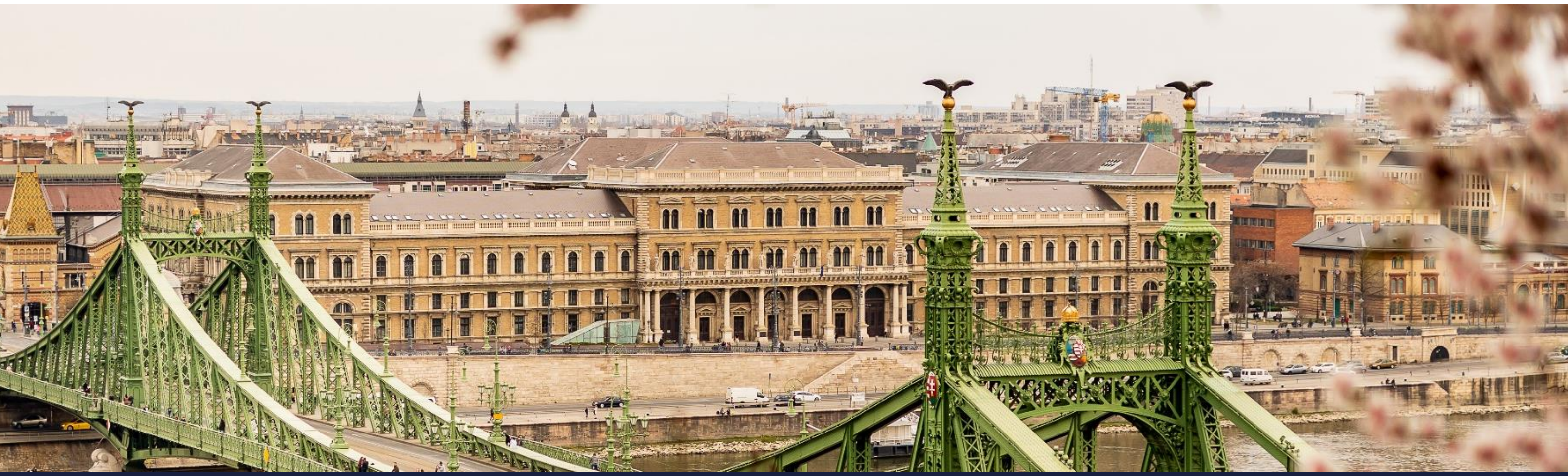
CORVINUS UNIVERSITY of BUDAPEST

12^{th} Annual Financial Market Liquidity Conference

11^{th} – 12^{th} November 2021

Budapest and online



BOOK OF ABSTRACTS

12th Annual Financial Market Liquidity Conference
Hungary Budapest and online
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2nd November 2021

Welcome from the Chair

A warm welcome to all the participants of the 2021 Annual Financial Market Liquidity (AFML) Conference. This is the 12th conference in a row since 2010 that we organize on liquidity and other current financial topics. This year we are faced by new challenges that lead us to hold the conference in a hybrid format, allowing both on-site and off-site participation. I am confident that we can cope with this renewed situation that tests our ability to adapt. I am confident that we can benefit from the personal and virtual meetings as well. The topics of the conference cover a broad spectrum, besides our main focus of liquidity. You will find new areas in finance represented, such as Fintech and financial sustainability.

This is a unique opportunity to refresh and further build your network with more than 150 participants registered, many of whom are regular lecturers and participants of this conference, who 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, Thomas Walker, Adam Zawadowski; and the local organizing committee: the colleagues of the Department of Finance at Corvinus University of Budapest, especially Péter Kerényi, Anita Lovas, Helena Naffa, Dóra Petróczy. 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 12th AFML Conference and its new hybrid format.

We are committed to organize the 13th AFML Conference in 2022, to be held on the 10-11th of November 2022.

Warm regards,

Barbara Dömötör
Chair of the Organizing Committee

Contents

Abstracts are ordered by title.

Keynote speakers

Bond Returns and the Trading of Large Mutual Funds

Mariassunta Giannetti

We show that mutual funds with a large share of a bond issue sell their holdings of that issue to a lower extent when they experience redemptions, arguably because they attempt to avoid negative effects on the bond price, which would feedback on their performance. As a consequence, bond issues with more concentrated ownership experience higher returns during periods of turmoil and have lower price volatility. We provide evidence that the stabilizing trading of bond funds with a large share of an outstanding issue can help explain how the intervention of the Fed in the bond market through the Secondary Market Corporate Credit Facility quickly stabilized both eligible and ineligible bonds.

Liquidity Spillovers: Evidence from Two-Step Spinoffs

Yakov Amihud, Sahn-Wook Huh, and Avanidhar Subrahmanyam

How does an idiosyncratic shock to the liquidity of a stock affect the liquidity and prices of related stocks? Utilizing the feature that the second stage of a two-step spinoff increases the float of an already-public firm, we document strong evidence that the enhanced liquidity of spun-off firms spills over to their industry peers after the spinoffs. These liquidity spillovers lead to value spillovers as well. The improved liquidity also induces greater pricing efficiency and larger institutional holdings in those stocks. The results provide support for the notion that the prices of spun-off firms provide additional public information about the related firms, thereby ameliorating information asymmetry in those firms.

Sustainable Finance

Luc Renneboog

This presentation will answer three fundamental questions about sustainable finance or ESG research: a. What is sustainable finance/CSR/ESG/SRI/…? What fundamental forces steer companies to behave as good citizens rather than as pure profit maximizers? b. Does a focus on CSR create corporate value? c. Does activism on CSR/SRI yield superior returns?

The effect of stock liquidity on the firm's investment and production

Yakov Amihud and Shai Levi

We show that stock market liquidity affects subsequent corporate investment and production. Stock illiquidity, which raises the firm's cost of capital, lowers investment in capital assets, R&D, and inventory. This effect holds regardless of the firms' financially constraints. Consequently, illiquidity induces firms to adopt production processes that are less capital intensive. Illiquid firms have higher marginal productivity of capital, greater labor input increase for given increases in assets, and lower operating leverage, thus being less reliant on fixed costs. These effects hold after controlling for endogeneity, employing an exogenous liquidity event – the 2001 decimalization – and the instrumental variable method.

Invited speakers

Gender Quotas and Bank Risk

Rose C. Liao, Gilberto Loureiro, Alvaro G. Taboada

We assess the effects of board gender quotas on bank stand-alone and systemic risk. Using a sample of banks from 39 countries, we find that 70% of banks comply with the quota within three years. On average, results show little change in stand-alone risk but an increase in systemic risk post-quota. The increase in risk is concentrated among banks that did not meet the quota pre-reform in countries with smaller pools of female executives and less egalitarianism. These banks experience a deterioration in risk management and in their long-run operating performance post quota, in contrast to their peers from countries with larger pools of qualified female directors and more egalitarianism. Further analyses show that among banks forced to add female directors post quota, newly appointed female directors have less experience and are more likely to be insiders. The evidence is consistent with some banks "gaming" the reform by strategically appointing insiders for "window-dressing," leading to a deterioration in the board's monitoring function.

Information Precision and Attitude toward Risk: An Experiment

Emmanuel Morales Camargo, Charles R. Schnitzlein, James M. Steeley

The assumption that economic agents maximize the expected utility of a concave utility of wealth function (EUT) is used widely as a model of behavior in the presence of risk in empirical and theoretical research in economics and finance. Despite its simplicity and logical appeal, EUT has been challenged as a poorly performing model in explaining behavior and alternatives have gained traction (e.g. loss aversion). We add to this literature by showing that information about the value of a risky asset affects behavior in a way that is inconsistent with both EUT and loss aversion. We do this by conducting an experiment in which we run a prediction market. Our experimental data set includes 172 subjects and 6,250 compensated predictions. In each prediction period, a subject predicts the value of a risky asset, with the accuracy of the prediction determining the payoff. We systematically vary the amount of information about the risky asset that a predictor holds. We find that low levels of information about the distribution of the risky asset value are associated with risk-seeking behavior (negative expected value predictions). In contrast, information that implies a substantial revision in the asset's expected value is associated with risk-averse behavior: expected profits are traded off for reduced risk. By comparing treatments with different numbers of subjects, we also find evidence that risk taking is reduced in the presence of an audience. Our results suggest less stability in risk preferences than is commonly assumed in the literature and have implications for understanding financial and other behavior in a variety of contexts.

Is it smart trading on social media and attention? Return predictability in popular Chinese industries during the pandemic

Zsuzsa R. Huszar, Ruth S. K. Tan, Wen Wen, and Xuhang Zhao

We examine the stock market implications of the Chinese Baidu search index measure for three industries building up to the pandemic and during the Covid-19 pandemic. We find that on average stocks with high search activity, capturing retail interest, underperform other stocks in the short term. We also show that internet search activity is rather consistent across the three industries, with a distinct jump in interest in healthcare stocks after the onset of the pandemic. Examining the pandemic effect, we note a regime shift and find that stocks with high search index outperform other stocks, but only in the longer term. This effect is the most pronounced in the wine industry in our sample. Overall, these results imply excessive sentiment based trading and call for caution on the part of investors who decide to start ad-hoc trading following media hype.

Insider Trading and Market Manipulation: The limitations of Market-Surveillance

Jonathan A. Batten

Existing regulatory approaches to insider trading and market manipulation are discussed. Three cases are highlighted that demonstrate the limitations of financial market surveillance and the existing top-down regulatory approach: Inside-traders attempt to minimise detection risk and will reduce the impact of offsetting news to maximise financial advantage; while, the recent LIBOR and Foreign Exchange manipulation were reliant on whistle-blowers, demonstrating the limited role of regulatory market-surveillance in OTC versus exchange-trade markets. Implications for markets, regulators and corporations are discussed.

Network Disruptions and the Security of Supply in the European Gas Network

László Á. Kóczy, Dávid Csercsik, Balázs R. Sziklai

The natural gas supply of the Eastern European countries located between Germany and Russia has always been problematic. A historical reliance on Russia has been eased by increased connectivity to the West. Recent developments may lead to a diversified source but via a single supply route, which, in the light of the 2017 Baumgarten explosion, may introduce another type of risk.

We propose a novel framework to measure the supply security of natural gas networks, combining a linear programming approach with a risk assessment technique borrowed from finance which measures supply security in European countries. The expected shortfall (ES) is currently the best practice for risk measurement recommended by one of the most important international financial regulators, the Basel Committee on Banking Supervision. ES assigns risks by looking at a fraction of the worst cases of supply disruptions. The latter is modeled as the change in the optimal network flow in the case of one of the pipelines falling out due to certain incidents.

Several network configurations are considered along with seasonal scenarios corresponding to the difference in the availability of gas from storage facilities. We find that the construction of Nord Stream 2, that is, doubling the capacity of the direct connection between Russia and Germany alleviates the gas shortage problem if the connection via Ukraine is shut down, otherwise, the construction increases the risk for Eastern Europe.

The educational gradient of patience in saving decisions

Hubert János Kiss

There is ample evidence that patience is positively associated with saving behavior. However, less is known about the heterogeneity of this relationship. In this study, we investigate if the effect of patience is modulated by educational attainment. Using a representative sample of the Hungarian population we study if and how owning stocks / having retirement saving / having life insurance associates with patience in the overall population and also when we focus on groups with low / intermediate / high education. We find consistently that the association between patience and saving behavior decreases with the educational level of the respondent.

The impact of cultural and political factors on the spread and macro-economic fallout of COVID-19

Anup Basnet, Dieter Gramlich, Thomas Walker

This study examines how cultural and political factors affect the spread and the macro-economic consequences of the novel coronavirus (SARS-CoV-2) and its associated disease (COVID-19). We argue that political, institutional, and cultural factors can help explain the spread and severity of the virus at the country-level, as well as the gravity of the pandemic's economic effects. We find that socio-political factors are significant predictors of a country's resilience to the pandemic. This study highlights the complex and interrelated nature of socio-political country-level characteristics and how they affect a country's relative success in handling the ongoing epidemic. A better understanding of these relationships should help governments and regulators create better preventative and mitigating measures if or rather when the next pandemic strikes.

Speakers

A Model of Stock Buybacks

Alvin Chen

This paper studies buybacks in a Kyle-type model with many informed parties: a manager implementing buybacks and speculators trading for themselves. Buybacks introduce two opposing forces. They compete against the speculators' trades, making informed trading less profitable. They also increase (decrease) the firm's per-share value when its shares are undervalued (overvalued), making informed trading more profitable. Less informative buybacks weaken the first force while strengthening the second. The manager's incentive to manipulate the current stock price to increase managerial compensation constrains how much information buybacks contain. The model generates novel predictions linking the structure of managerial compensation, buybacks, and trading outcomes.

An axiomatization of the pairwise netting proportional rule in financial networks

Péter Csóka, P. Jean-Jacques Herings

We consider financial networks where agents are linked to each other with liabilities. Payments depend on each other and are given by bankruptcy rules. We analyze the effects of extending the proportional bankruptcy rule by adding pairwise netting, also called bilateral netting or bilateral compression. We provide an axiomatization of the pairwise netting proportional rule. Our main axioms are net impartiality and invariance to mitosis. The additional basic axioms are claims boundedness, limited liability, priority of creditors, and continuity.

An empirical analysis of indexed bond market segmentation and clientele effect in Brazil

Gyorgy Varga

This article uses a unique database on the Brazilian Government bonds ownership to measure the investors preference for specific maturities (clientele effect) and bond indexation type. With this dataset, we measure the demand effect. We also evaluate the impact of bond issues and its liquidity on different maturities. The results shows that demand drives a premium on most liquid bonds, supply of long bond is positively related with term spread, supply predicts positively long-term bonds excess return, supply effect is stronger for longer maturities and both supply and the term spread are strong predictors of excess return.

Applications of non-linear machine learning ensemble tree methods for prepayments forecasting of fixed rate institutional loans

Rene M. Glawion, Johannes Heuel, Andre Horovitz, Alexander Szimayer

This paper aims to enhance the currently used statistical models geared to predict prepayments of fixed rate institutional loans. Upon deploying four model types (post LASSO multinomial logit, decision trees, random forests and LightGBM) for prepayment predictions on Euro-currency, fixed-rate institutional loans between 2012 and 2020, we found that ensemble tree-based Machine Learning Methods (especially gradient boosting machines and random forests) signicantly outperform the predicting abilities of linear multinomial logit models (that represent the bulk of the industry installations in Europe). We recovered the expected inverse relationships between changes in implied forward rates and subsequent prepayments but we also identified other potential driving features. We encourage lenders to explore using non-linear ML methods to build early warning systems for prepayment predictions of institutional loans.

Arbitrage-Based Recovery

Ferenc Horváth

We develop a novel recovery theorem based on no-arbitrage principles. Our Arbitrage-Based Recovery Theorem does not require assuming time homogeneity of either the physical probabilities, the Arrow-Debreu prices, or the stochastic discount factor; and it requires the observation of Arrow-Debreu prices only for one single maturity. We performseveral different density tests and mean prediction tests using 25 years of S&P 500 options data, and we find evidence that our method can correctly recover the probability distribution of the S&P 500 index level on a monthly horizon.

Are mortgage lenders offloading climate exposure to government-sponsored enterprises?

Eszter Baranyai

We investigate the thus far unexplored topic of whether US residential mortgage lenders respond to climate change projections by offloading risk to government-sponsored enterprises (GSEs). We find that both banks and independent mortgage companies have sold proportionately more loans to GSEs in areas that are most exposed to the changing climate – measured across risks of extreme heat, drought and flood. The observed relationship can be traced back to 2013 but is more marked since 2016 when granular climate change projections became public. While mortgage lenders' increased climate change risk awareness should be welcomed, a potential shift of the exposure to the public sector should be of policy interest.

Are we responsible when it hurts? How ESG scores affect stock returns in gains and losses

Balázs Kotró, Martin Márkus, Gábor Neszveda

The effects of ESG ratings on corporate operational (COP) and financial performance (CFP) is an already well researched topic however many aspects of sustainability investing has not been explored and answered. The positive relation between ESG and COP-CFP is supported by most of the studies, the relation between ESG scores and stock returns rather be negative. In this research we focused on the relation between stock returns and ESG scores differentiating cases when shareholders are realizing gains and losses. Our research question hence in this paper is how investors evaluate ESG scores in gains and losses. For measuring investment performance we used the Capital Gains Overhang (CGO) variable which was built by dynamic reference points to determine whether investors are facing gains or losses and performed a long-short strategy along the top and bottom ESG portfolios with monthly rebalancing. We found evidence that investors are likely to sacrifice return for being responsible in cases when their portfolio is in gain or breakeven but less responsible when their portfolio is underperforming.

Attractiveness to Optimists and Stocks as Lotteries in the Cross-section of Expected Stock Returns

Gábor Neszveda

Theoretical studies find that optimistic investors, who overweight the probabilities of better outcomes, can survive and influence asset prices even in a competitive market. To study the impact of optimistic investors on the cross-section of expected stock returns, I define the measure of attractiveness to optimists of a stock based on rank-dependent probability weighting. In both portfolio-level and firm-level analyses, I find an economically and statistically significant negative relation between the measure of attractiveness to optimists and the expected stock return even after controlling for a set of control variables in the cross-section of U.S. stock returns. Furthermore, this framework both conceptually and empirically subsumes the MAX effect, one of the most common characteristics for lottery-type stocks.

Bid-ask spreads, markets and money

Sjur Didrik Flåm

I consider agents who just use markets and money to mediate trades and express economic interests. The main purpose is to indicate good prospects for agent-based convergence to competitive equilibrium.

Central Bank Digital Currency versus Deposit Insurance

András Kollarik

This paper compares account based Central Bank Digital Currency (CBDC) with deposit insurance (DI) in a moral hazard setting. The relevant agents' utilities are the same in the two systems when either the deposit insurance fee is paid ex post or the deposit insurance fund (DIF) bears the risk-free interest rate. If the DIF's return is lower than the risk-free rate, then CBDC yields higher welfare than DI. As in reality the DIF mainly invests in claims on the government, CBDC and DI can be regarded equivalent in practice. However, in old times of metallic standard the DIF could have invested primarily in non-interest bearing metal, which is in line with the fact that early central banks issued demand deposits to the non-bank private sector.

Composite signal pairs trading strategy based on liquidity and cointegration

Milán Csaba Badics, Tamás Fallenbüchel

We study a popular market neutral trading strategy called pairs trading. The novel approach of the presented paper is to use a selection mechanism, which both considers cointegration and liquidity property of the various pairs. The purpose of this work is twofold. Firstly, we would like to answer whether the composite signal-based strategy, which accounts for liquidity factor as well, outperforms the simple cointegration using one. Furthermore, it is an important question, what is the cause of the difference. Do illiquid pairs produce higher monthly returns due to the higher risk and higher limits to arbitrage?

Deep Learning Market Microstructure: Dual-Stage Attention-Based Recurrent Neural Networks

Chaeshick Chung, Sukjin Park

We apply the Dual-Stage Attention-Based Recurrent Neural Network(DA-RNN) model to predict future price movements using microstructure variables. The biggest feature of the DA-RNN model is that it adaptively selects relevant variables according to market conditions. We analyze whether microstructure variables have predictive power for future price movements, and what factors influence this predictive power. We find that microstructure variables possess predictive power against the direction of future price movements. This predictive power depends on how many uninformed traders exist in the market. Moreover, the importance of microstructure variables is negatively related to market liquidity. Thus, while microstructure variables are more important in severe market conditions with high transaction costs, the effect of trading on price dynamics depends on market structure.

Dividend Policy and Stock Liquidity: Lessons from Central and Eastern Europe

Jarosław Kubiak, Szymon Stereńczak

Recent years has brought an increasing academics' attention to the effects of stock liquidity on corporate financial decisions. This paper aims to investigate the relationship between stock liquidity and firms' dividend policy. We study the effect of stock liquidity on companies' dividend policy and the effect of companies' dividend policy on stock liquidity as well. Data on all stocks listed in fourteen CEE countries in the period from 2010 up to 2020 are utilized to model the relationships. In order to reflect the multidimensionality of stock liquidity and comprehensively analyse dividend policy – stock liquidity relationship, we utilize several liquidity measures. We found strong bidirectional relationship between liquidity and dividend policy. To account for the endogeneity in the regressions, we have applied several methods, including two-stage recurrent and SUR estimation. Unlike previous studies carried out on the Warsaw Stock Exchange, we found strong, positive relationship between stock liquidity and dividend policy, thus supporting the hypothesis that stock liquidity decreases the information asymmetry between insiders and outsiders, thus producing more incentives to pay dividends. We also found that stock liquidity is affected by company's dividend policy, thus causing a reverse-causality between these two features.

Do ESG Metrics Reflect Crisis Resilience of Equities During the Covid-19 Pandemic?

Fanni Dudás, Helena Naffa

The COVID-19 epidemic caused a significant slowdown in economic activity, and these events significantly influenced corporate development and impacted companies' financial sustainability. To capture a firm's overall ESG performance, the Environmental, Social, and Governance aspects, collectively the ESG factors have recently been created. ESG strategies have become policies applied by companies to achieve objectives related to the stakeholders' needs. Our paper focuses on examining the economic resilience of companies during the crisis triggered by the coronavirus. There is no single approach to analyze economic resilience; in our study, we apply Martin's (2012) framework for analysis. Our research focuses on measuring two dimensions of resilience, namely resistance and recoverability. The resistance means depth of reaction to the crisis, and the recoverability means the speed and extent of regional economic recovery from the crisis. We discover how companies react to recessions from peak to trough and how they recover from trough to peak and examine the variables that determine their economic resistance. For empirical analysis, we apply multiple regression based on the database of Sustainalytics and Bloomberg. The outcome of the analysis is expected to apply to the investment industry.

Double "FF": Flight to quality and foreign equity bias

Bálint Z. Nagy, Mirjám E. Orban

Crisis periods are great opportunities to observe the 'flight to quality' the so called overinvestment in secured assets or the phenomenon of 'flight to home'. Thus, the flight to quality might occur not only across different financial assets, but also in between different markets perceived as having a higher "quality". In this context, one of the six major puzzles in finance, namely the foreign equity bias has been explained by the literature throughout arguments like: informational asymmetries (Portes and Rey, 2005), barriers to foreign investment (Sercu and Vanpee, 2008), corporate governance (Dalhlquist et al, 2003), or hedging home risk (Cooper and Kaplanis, 1994), and to a much less extent by cultural beliefs and financial education (Beugelsdijk et al. 2010; Giofré, 2017).Our objective is to analyze the phenomenon of foreign equity bias from the view of dynamic correlations in the times of distress, noticing a negative impact of flight to quality over the foreign investments, the impact being more pronounced in the 2008-2009 financial crisis and the COVID-19 pandemic. These primary results are also being confirmed by the Tobit regression to which we have gradually added the well-known explanatory variables from the foreign bias literature.

ESG Integration and Thematic Investing: Do the Wants Meet the Needs?

Máté Fain, Helena Naffa

We introduce a stakeholder theory framework in the investment discipline by distinguishing "organisational" and "global" sustainability. We aim to analyse the performance of two equity investment strategies, ESG integration and ESG-themed investing, in changing global market conditions, including the COVID-19 pandemic. ESG integration is consistent with the organisational sustainability concept, while thematic investing corresponds more to global sustainability. ESG integration utilises separate E/S/G ratings and classifies stocks into portfolios of leaders, followers, loungers, laggards, and unrated. Thematic portfolios discover nine UN SDG-related themes such as water scarcity, ageing population, cybersecurity concerns. Our approach follows a factor portfolio construction procedure: stock weights and returns derive from extended Fama-MacBeth cross-sectional regressions. Time-series analyses of ESG factor portfolio returns applies the Fama-French (FF) right-hand-side approach, which simultaneously tests performance and the validity of adding new ESG factors to FF factor models. Findings show that investors allocating resources to ESG leaders and thematic portfolios achieved returns commensurate with risk in the longer term. Further, in ESG integration, an inverted U-shaped relation of expected returns prevailed, emphasising the "law of diminishing returns" to ESG. Next, during the exogenous shock of the COVID-19 pandemic, the outcomes did not corroborate the literature's "flight to quality" concept.

Efficient Estimation of Bid-Ask Spreads from Transaction Prices

Emanuele Guidotti, Tim A. Kroencke

We propose a novel estimation procedure of bid-ask spreads from transaction prices. Our estimator is unbiased in the presence of low liquidity and is efficient in the sense that it comes with the lowest variance among alternative estimators. We illustrate the performance of our efficient estimator in a comprehensive simulation experiment and with empirical data. Our results show that previous research has considerably underestimated transaction costs.

Have Fintechs outperfomed Banks? The impact of COVID on the financial markets

Barbara Bedowska-Sójka, Agata Kliber, and Laivi Laidroo

The paper aims to compare the performance of stocks of FinTechs and banks during the pandemic crisis. We consider STOXX Global FinTech Index and four different bank indices: STOXX3000, EuroSTOXX, MSCI World Banks, and KBW Nasdaq Bank Index. Our sample starts in January 2019 and ends in May 2021, capturing the pre-pandemic and pandemic periods. We find that although returns of FinTechs and banks dropped at one time, the former better adapted to the crisis and recovered faster. The conditional correlations among banks' indices are constant through time while correlations between the two sectors: banks and FinTechs changed dynamically. Analysis of quantiles coherency revealed a negative correlation between the extreme quantiles in both sectors, suggesting that the sharp increases in one sector co-occurred with the unusual downfalls in the other. Such relationships were more pronounced in the short-term frequency.

High-frequency tweeting and market making after hours

Stefan Scharnowski

This paper analyzes differences between the regular and extended trading sessions in the high-frequency reaction of equity markets to potential news. Using presidential tweets as market-stirring events, I find that generally volatility increases and liquidity deteriorates within less than a second after a tweet. Compared to the regular trading session, the reduction in market quality is stronger and faster during the extended trading hours, when liquidity is lower and designated market maker participation is optional.

Improvement of core-periphery measures in complex networks

Edina Berlinger, Barbara Dömötör, Zoltán Pollák

Financial networks exhibit a special scale-free and hierarchical structure which can be the best characterized by core-periphery models. In this paper, first we present discrete continuous, symmetric and asymmetric core-periphery models. Then we show some deficiencies of the most widespread method of Boyd et al. [2010] for the continuous and symmetric case. To remedy these deficiencies, we propose an improved methodology based on a weighted formula which corresponds better to the basic idea of coreness as introduced by Borgatti and Everett [2000]. We show that our method is more robust to random errors in the networks, as well, so it is expected to capture better the real structure of financial markets.

Intraday Market Quality of Gold Futures around Macroeconomic News

Neharika Sobti

This study examines the impact of domestic and global macroeconomic news surprises on the six intraday market quality aspects of the Indian gold futures market- returns, trading volume, volatility, effective spreads, order imbalance and depth. Using high-frequency data sampled at 5-minutes interval, I assess pre-announcement, contemporaneous and post-announcement effects of news surprises. In addition, I examine the asymmetric news effect of positive and negative news surprises and assess state dependence in the relationship due to exchange rate effects. Firstly, I find that only global macroeconomic news surprises from US have significant and stronger contemporaneous and post-announcement effects on six market quality aspects. Domestic news surprise from India has no impact across six market quality measures. Secondly, US news related to Non-farm payroll, personal consumption, Imports, Retail Sales, Unemployment, Building Permits and ISM manufacturing have significant influence. Thirdly, I find strong evidence in favour of the asymmetric news impact as negative news has a stronger and positive impact than positive news surprises that supports the safe-haven properties of the Indian gold futures. Fourth, I observe state dependence in the relationship between news surprise and market quality aspects due to exchange rate.

Leniency of Personal Bankruptcy Laws and Entrepreneurship in the EU

Ferenc Illés, Fanni Tóth, György Walter

The literature describes many institutional and legal factors that affect the intensity of entrepreneurship. One important factor is the regulation of personal bankruptcy. Many papers tried to explore the overall effect of the introduction of fresh start, lenient bankruptcy measures. However, the methodology of measuring leniency has been limited to one-time legislative changes or difference in homestead exemptions. Our study aims to continue and extend a former study of Armour-Cumming (2008) who built a simple bankruptcy index and analysed the relation of personal bankruptcy and entrepreneurship in 15 developed countries from 1990 to 2005. We create an improved composite index of personal bankruptcy legislations to characterise leniency in detail. We detect the main changes of the regimes in leniency levels due to major reforms. We analyse the latest data of the relevant 25 EU countries having personal bankruptcy systems, self-employment statistics, and economic control variables. With panel regression we examine the hypothesis that all other things being equal, a more lenient bankruptcy regime in the EU will tend to stimulate entrepreneurship. We expect that regimes in the EU are very heterogenous and leniency scores and dimensions determining leniency levels are positively associated with entrepreneurship.

Liquidity constraints and buffer stock savings: Theory and experimental evidence

John Duffy, Andreas Orland

We provide a direct, experimental test of the buffer stock model of savings behavior. We use a three-period intertemporal model of consumption/savings decisions where liquidity in the second period is constrained (and, thus, borrowing is not possible). We contrast behavior in this constrained version of the model with an unconstrained version where there is no liquidity constraint. A second treatment variable is the variance of the stochastic income process, resulting in a 2x2 experimental design. We test the comparative statics predictions of the model and find that, in contrast to these predictions, the liquidity constraint does not increase savings in the first period of the constrained model relative to the first period of the unconstrained model. However, we find strong support for all the other comparative statics predictions of the model, e.g., the impact of a higher variance of income on savings behavior and differences between period 1 and period 2 savings. In further analyses, we find that we can rationalize the departures we observe from model predictions by some combination of debt aversion, heterogeneity in cognitive abilities and/or learning.

Liquidity imbalance and price dynamics

Ceyda Ustun

This paper examines the liquidity imbalance and price changes with different levels of frequencies and different types of traders in 30 stocks comprising the benchmark Turkish BIST30 index in 2019. During liquidity imbalance caused by foreign traders, I examine which types of domestic traders supply liquidity at different frequencies by leaning against the imbalance. I show preliminary evidence that small traders are important in providing liquidity in the longer term, that is beyond intraday.

Market Impact of Government Communication: The Case of Presidential Tweets

Farshid Abdi, Emily Kormanyos, Loriana Pelizzon, Mila Getmansky Sherman, and Zorka Simon

We focus on the role of social media as a high-frequency, unfiltered mass information transmission channel and how its use for government communication affects the aggregate stock markets. To measure this effect, we concentrate on one of the most prominent Twitter users, the 45th President of the United States, Donald J. Trump. We analyze around 1,400 of his tweets related to the US economy and classify them by topic and textual sentiment using machine learning algorithms. We investigate whether the tweets contain relevant information for financial markets, i.e. whether they affect market returns, volatility, and trading volumes. Using high-frequency data, we find that Trump's tweets are most often a reaction to pre-existing market trends and therefore do not provide material new information that would influence prices or trading. We show that past market information can help predict Trump's decision to tweet about the economy.

Monetary Policy Disagreement

Gyuri Venter and Paul Whelan

We present evidence that disagreement about the future path of monetary policy affects bond risk premia in an international panel of advanced countries. This result suggests an important role for dispersed policy expectations that has, so far, received little attention in the literature. Priced policy disagreement is more significant, in both economic and statistical terms, than disagreement about inflation or real growth, is robust for a host of proxies of bond risk premia, inclusion additional controls, alternative measures of disagreement, sample periods and is pervasive in the cross-section of sovereign bond yields.

Monetary Policy, User Cost and Inequality: Homeowners versus Renters

Gupta Neha

User costs of housing are a major part of a household's expenditure. I empirically investigate the heterogeneous impact of an unanticipated expansionary monetary policy on housing markets and household tenurial decision by exploiting the user cost of housing channel. Drawing on a Swiss household panel data and daily interest rate futures, I find that the less financially constrained households are 3.45 percentage points more likely to become homeowners in case of unexpected decrease of 100 basis points in 3-month CHF Libor. The households in the upper income quartile with pillar 3a savings benefit the most in case of an unanticipated negative monetary policy shock. The real user cost expenses of renting also benefits significantly by a decrease of on average 19% from an unexpected expansionary monetary policy. Single family houses do not benefit from the shocks in the monetary policy. The findings highlight the importance of apartments and multifamily housing.

Multilayer DY spillover networks: volatility, illiquidity and CDS connectedness of financial institutions

Milán Csaba Badics, Áron Dénes Hartvig

Analysis of the interconnectedness of financial institutions plays crucial role in systemic risk assessment. Furthermore, during crises the strength of connections sharply increases and risk spills over across institutes, as it happened during the Financial Crisis of 2007-2009. A widely used measure to analyse systematic risk is the volatility spillover. However, most analysis concentrating on DY spillover indices are limited to simply abstracting the financial system into a single-layer network with only a certain type of information or interconnectedness. A single-layer network, like volatility spillover network, cannot capture the diversity and heterogeneity of information transmission and its interconnectedness among financial institutions. To overcome this drawback of the DY method we propose a multilayer network, which considers CDS, illiquidity and volatility information and the multilayer structure of a complex system, to understand the interaction behaviour in the financial system.

Overdue debt as a poverty trap

Edina Berlinger, Katalin Dobránszky-Bartus, György Molnár

We examined the impact of overdue debt on the employment, bank account status, and mental and physical health of the debtor using targeted questionnaires and in-depth interviews in one of Hungary's most disadvantaged regions. In this region, a significant part of society has been living in financial exclusion even before the COVID-19 crisis, under prospering economic conditions. We found that many borrowers with escalated non-performing obligations are hiding from debt collection. To avoid deductions, they do not apply for registered jobs or open bank accounts and, consequently, live under constant stress. Overdue debt thus creates a debt-trap mechanism that results in a significant loss for both the individual and society. In this light, policy makers should pay more attention to smoothing out credit cycles and resolving non-performing debt obligations, especially in this fragile part of society.

Resilience of capital companies to the crisis caused by the COVID-19 pandemic: the case of Poland

Edward Altman, Rafal Sieradzki, Michal Thlon

We utilize the Altman Z"-Score credit risk model to estimate the impact of the COVID-19 pandemic on credit risk changes of a large sample of Polish SME firms. The Altman model, which has proven to be a powerful and robust bankruptcy prediction model across many industries and countries, is used to assess over 1,000 SMEs from seven Polish industrial sectors. Specifically, we assess the vulnerability of the sampled firms to credit downgrades, including the likelihood of becoming insolvent and filing for bankruptcy, over the expected downturn in the real economy. Based on scenario analysis on individual firm financial data. we analyze rating transitions under six potential scenarios, focusing on the deterioration of the SME firms' profits, working capital and increase in current liabilities. Our modelling provides Bond Rating Equivalents (BREs) to capture their changes in credit quality under the different scenarios. We find that the reactions of companies from the various rating equivalent groupings is quite diverse and cannot be explained only by the firms" industrial sector. Of particular importance is the proportion of firms whose credit quality deterioration could result in an insolvency. What is perhaps surprising is that the most resilient companies with respect to credit downturns are those which initially were assigned to the most risky credit rating equivalent, namely the CCC rating class. And, those that were assigned to investment grade classes were amongst the least resilient. We explain and comment upon this seemingly counter-intuitive result in our analysis.

Return spillovers between green energy indexes and financial markets: a first sectoral approach

Capucine Nobletz

This paper assesses the interconnectedness between global green energy and sectoral stock indexes. We show that green energy return spillovers need to be monitored. The green energy index has a significant degree of financial openness, and it is tightly interconnected with sectors producing similar goods as materials or industrials. Over time, the green energy return spillovers vary according to global events and economic/financial uncertainties. Spillovers rose during the pandemic crisis, illustrating the "fly to liquidity" mechanism.

Share repurchases: Riding on the wave of uncertainty

Nina Anolick, Jonathan A. Batten, Harald Kinateder, Niklas Wagner

We document that uncertainty contributes to waves of share repurchases in twelve countries of the Economic and Monetary Union of the European Union (EMU) from 2000 to 2020. An increase in the monetary policy uncertainty (MPU) index by Baker et al. (2016) leads to a significant decrease in announcement activity. During periods of high uncertainty about future financial conditions, firms have a precautionary demand for cash and therefore adopt more conservative payout policies by reducing share repurchases. We find that this is reflected in leverage and credit spread factors that negatively affect the likelihood of share repurchases. In our sample, the observed cyclicality of the repurchase likelihood is driven in particular by fluctuations in prevailing liquidity conditions and MPU. This relation is even more pronounced in the post-quantitative easing period (2010-2020), as the expansionary monetary stimulus appears to have promoted monetary policy as a significant source of uncertainty for firms in deciding whether to announce a share repurchase. Overall, policy uncertainty measures are becoming increasingly important for payout policies, underscoring the fact that monetary policy can have a large impact on firm-specific and aggregate share repurchases. These results remain robust even after excluding peripheral countries from the sample.

Synthetic Leverage and Fund Risk-Taking

Daniel Fricke

Mutual fund risk-taking via active portfolio rebalancing varies both in the cross-section and over time. In this paper, I show that the same is true for funds' off-balance sheet risk-taking, even after controlling for on-balance sheet activities. For this purpose, I propose a novel measure of synthetic leverage, which can be estimated based on publicly available information. In the empirical application, I show that German equity funds have increased their risk-taking via synthetic leverage from mid-2015 up until early 2019. In the cross-section, I find that synthetically leveraged funds tend to underperform and display higher levels of fragility.

The Economics of Decoupling

Andre Speit, Paul Voss

When shareholders disagree, costs of collective decision making arise. We study the multitude of ways in which financial markets exacerbate these costs by allowing investors to decouple cash flow claims and voting rights, effectively trading them separately. In our analysis, we categorize these "decoupling techniques" into two classes: Vote Trading and Hedging. For each class, investors face different vote prices and incentives. We find that Vote Trading techniques result in lower vote prices and higher welfare loss than Hedging. Our results provide a theoretical underpinning for the diverging empirical findings on vote prices in the equity lending and options markets.

From consumption smoothing to poverty: Side effects of informal borrowing at households in Northeastern Hungary

Dániel Havran

Credit constrained households often smooth consumption by reciprocal lending with relatives or peers. Although solidarity lending helps to mitigate consumption risk in a rural environment, it may change incentives to save. The study investigates the impact of this consumption-driven informal borrowing on the propensity to save and financial solvency. I aim to identify the circumstances in which informal borrowing reverse the positive dynamics of assets leading to poverty. To describe the decision mechanism of the households, I model the choice between risk-sharing and saving regimes and evaluate the coexistence of the two when the insurance is partial. Using the learnings, I empirically explore the financial behaviour of the households by a survey made in a marginalized region of Northeastern Hungary. I show that while consumption-driven risk-sharing slows down asset accumulation, negative asset dynamics appear only in the case of indebtedness. My study finds that the average propensity to save is 8-10% lower for informal borrowers. Furthermore, an average household has an approximately 39% higher probability to default on a personal loan if it is in the risk-sharing regime. The results relate to the explanations of why rationally acting households are stuck in poverty. It also draws attention to the side effects of risk-sharing that should integrate into developmental programme designs. A practical implication is that where a fresh start is not legally possible, the banking industry should offer group savings solutions instead of personal loans for households under an asset threshold.

The characteristics of peer-to-peer applicants

Tímea Ölvedi

In recent years, different forms of social lending have become a widely researched area. One of the most extensive business models is peer-to-peer lending (P2P), an online platform connecting lenders and borrowers. The segment's rapid growth has attracted the attention of market participants, and demand has arisen for a deeper understanding of this new form of financial intermediation. The purpose of this paper is to contribute to the existing literature by examining the borrower side of P2P lending. The analysis is based on a unique, manually collected dataset from a market leader platform. LASSO regression is used to examine the relationship between applications and a wide range of macroeconomic indicators. Then, k-means cluster analysis is applied to identify borrower groups with similar characteristics. The results indicate there is a strong positive correlation between mortgage delinquency and demand for P2P funding. Furthermore, the platform's customer base significantly overlaps with bank clients.

The measure of model risk in credit capital requirements

Roberto Baviera

Credit capital requirements in Internal Rating Based approaches require the calibration of two key parameters: the probability of default and the loss-given-default. This letter considers the uncertainty about these two parameters and models this uncertainty in an elementary way: it shows how this estimation risk can be computed and properly taken into account in regulatory capital. We analyse two standard real datasets: one composed by all corporates rated by Moody's and one limited only to the speculative grade ones. We statistically test model hypotheses on the two key parameters and we observe that parameter dependency raises substantially the tail risk in capital requirements. The results are striking with a required increase in regulatory capital in the range 38% - 66%. This study draws also a clear policy implication: we suggest to reintroduce the scaling factor in credit capital requirements – factor that has been removed in Basel III Accord – to take into account model risk.

Three notions of epsilon competitive equilibria in finitely additive exchange economies

Attila Tasnádi

In finitely additive exchange economies one cannot employ the usual definition of the competitive equilibrium, since this would result in an empty set, and therefore one has to consider notions of epsilon-competitive equilibria. In this paper we investigate the relationship between three notions of epsilon-competitive equilibria.

Time discounting predicts credit loan forbearance takeup

Edina Berlinger, Sára Khayouti, Hubert János Kiss

During the COVID-19 pandemic many countries eased the burden of borrowers through forbearance. Using a representative sample of the Hungarian adult population, we investigate if time discounting and locus of control predict who takes up loan forbearance. We find convincing evidence that time discouting associates with the resort to forbearance: individuals who value more the future are less likely to take up forbearance, even if we take into account education and financial status. There is no relationship between locus of control and forbearance takeup.

To Cut or Not to Cut: a Model of Bank Dividend Restrictions

Tamas Vadasz

This paper develops a theoretical model to investigate the trade-offs of regulating bank dividends. Banks are incentivized to smooth dividend across states because of the presence of shareholders with strong cash-flow considerations. Dividend smoothing is made possible by ex-ante measures which make the bank's value less sensitive to economic shocks, such as excess capital, or advanced risk management. This also provides a novel explanation of how dividend smoothing creates value: dividend-focused shareholders discipline the bank to exert effort, and achieve better portfolio quality. The threat of a regulatory intervention in bank's discretion over their payout strategy negatively affects these ex-ante incentives.

Using advanced machine learning methods to measure financial systemic risk and uncertainty

Milán Csaba Badics, Bálint Mazzag

In this paper, I combine four popular financial systemic risk measures with two main machine learning methods: principal components analysis (PCA) and partial least squares regression (PLS), in order to provide a stable ranking of financial institutions. This latter approach is less common in the current financial studies, therefore it adds to the existing literature. I analysed how the combined models included information from the initial four measures and also how model uncertainty grew significantly before crisis periods. Out of the two pooling methods the PLS was shown to be more robust, albeit the combined rankings did not significantly reduce variation in rankings. Finally, both methods must be included for supervisory purposes, as both can serve as an early-warning indicator for negative financial performance for an institution. The final aim of this paper is to help prevent severe financial shocks in the future.

Your skin or mine: assuring the viability of a CCP

Melinda Szodorai, Kata Váradi

Central counterparties, through their clearing and settlement activity, assure the financial system's stability, while along with member's collaterals, their capital is "in the game" as well. The existing literature lacks results on how the top management's decision regarding the structure of the guarantee system affects the size of the own capital to be risked. This article shows how large the central counterparty's own contribution to the guarantee system should be to protect non-defaulting members or prevent the institution's recovery and resolution. The results show that a partially merged guarantee system between different markets is optimal from most stakeholders' perspectives.

Poster (prerecorded) presentations

Impact of uncertainties on illiquidity premium

Shweta Kundlia and Divya Verma

The main purpose of the paper is to study the impact of uncertainties on the market illiquidity premium for Indian stock market. The effects of uncertainties on illiquidity premium are studied for economic uncertainty, market uncertainty, and geopolitical uncertainty. The effect of uncertainties is also studied during the periods of crisis. The monthly mean returns on illiquid stocks over liquid stocks is 1.07% and market illiquidity positively affects illiquidity premium only in the periods of crises. It is found that uncertainties in Indian stock market have a significant and positive influence on illiquidity premium only in the periods of crisis. Thus, investors do not price illiquidity in normal times, but demand a positive illiquidity premium in periods of crises. It is also found that a longer duration of crisis and uncertainty in the market can make investors risk-averse and demand more compensation for holding illiquid securities. To the best of our knowledge this paper contributes the first logical analysis of the impact of uncertainties on the illiquidity premium. The impact of uncertainties is individually studied to influence stock markets, but the literature fails to provide the evidence of the impact of uncertainties on illiquidity premium.

Searching for non-linear effects of fiscal policy on consumption and investment evidence from Sub-Saharan Africa countries

Gabriel Temesgen

This paper examines the consumption and investment responses to unanticipated government spending shocks and the size of the fiscal multiplier during periods of the negative output gap the and positive output gap. It uses a panel of 18 SSA countries over the period of 2000– 2018, applying a panel VAR estimation technique. I find a fiscal impact multiplier of output close to zero during expansion and 0.08 during contractions. Furthermore, in contractions, the fiscal multipliers are 0.1 percent for private consumption and 0.6 percent for private investment while in expansions, the fiscal multipliers is -.0.01 for private consumption and -0.013 percent for private investment. Analyzing the effects of government spending shocks on private consumption and private investment spending indicates that the magnitude of the effects of fiscal shocks on consumption and investment is very small. Hence, the results differ from the benchmarks of neoclassical model, and are more in line with the theories of Keynesian model.

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