

Report on the 10th Annual Financial Market Liquidity Conference*

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The *10th Financial Market Liquidity Conference* was held on 14–15 November 2019 at the Corvinus University of Budapest (CUB), marking the decennial anniversary of the series. Similar to previous years, the event – which brings together experts from the academic and practical fields of finance – was organised by the Financial Research Centre of the Department of Finance at the university and the Game Theory Research Group of the Centre for Economic and Regional Studies. The conference presenting scientists' latest answers to the questions generated by current market needs was organised with substantial funds provided by the private sector and various foundations. Besides the gold sponsorship of the Foundation of the Department of Finance, major contributions were provided by the CFA Society Hungary, KELER CCP, MSCI, Morgan Stanley, OTP Bank and the Department of Finance of the Budapest University of Technology and Economics. The 150 participants were able to attend 45 specialised presentations and view 11 posters at the two-day conference showcasing 22 countries and 52 institutions.

On 14 November, the first day of the event, *Gyula Vastag*, the Vice-Rector for Research of CUB, welcomed the participants. The keynote of the plenary session following the opening was given by Andrew Karolyi, a Distinguished Professor of SC Johnson College of Business at Cornell University. It was not the first time that Karolyi was a guest and the keynote speaker at the liquidity conference, as he also opened the event in 2017. His presentation lent a solid professional tone to the gathering, even if he did not choose a topic from his own research this time, talking instead, inspired by his editorial work, about the role played, or, if you will, not yet played, by climate finance in science. As executive editor of the *Review of Financial Studies*, Karolyi launched an initiative that led to the publication of a selection of studies analysing the relationship between the world of finance and climate change, a field Karolyi and his colleagues had considered neglected. When the call for papers was made, they were aware that the studies may not necessarily produce significant results, but they hoped to at least provide a publication platform

* The papers in this issue contain the views of the authors which are not necessarily the same as the official views of the Magyar Nemzeti Bank.

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for an unjustly overlooked topic. Karolyi and his team practically reversed the traditional publication process: they requested research proposals related to climate finance to be submitted for assessment before giving the green light to the plans and researchers they picked. This ensured that the studies would be published, regardless of the results, in the journal's special issue. The collection of papers was ultimately published in March 2020, with promising articles, for example on the climate change sensitivity and risk management of large corporations, climate change indices and the relationship between house prices and sea level rise.

After the plenary session, the presentations continued in parallel sessions. The different sessions focused on macroeconomics, asset pricing and the bond market as well as theoretical issues and the field of social innovations. The asset pricing session was opened by invited speaker *Niklas Wagner*, a professor at the University of Passau. His presentation examined the role of distinct premia on equity markets in trading and non-trading periods. His research focused on the intertemporal relationship between expected returns and conditional variance and the role of trading breaks. His model merges two different asset pricing processes based on this relationship: a continuous one that represents the diffusive risk during the trading period and a discontinuous one that captures random overnight price changes. The distinct premia for trading and non-trading risks expand Merton's intertemporal asset pricing model published in 1973. The results show that both trading risk and the risk of overnight price changes play a crucial role in understanding expected market risk premium. Wagner also showed that the risk premium differs significantly in the two periods. One of the main messages of the presentation was that exchange closures are usually accompanied by an increase in investors' risk aversion, who therefore demand a higher premium for holding the portfolio overnight.

The parallel sessions during the afternoon concentrated on the bond market and theoretical and social innovation. The latter session's first presentation was delivered by *Alexander Szimayer*, professor of finance at the University of Hamburg. He presented the results of his research conducted with three members of the Department of Finance of the CUB, Péter Csóka, Zsolt Bihary and Péter Kerényi, examining managerial power and demanded pay in a principal-agent framework. The audience learnt about a continuous model with two non-standard features: 1) the agent can restrict the principal's strategies, 2) agents determine their demanded future pay based on realised past pay, also addressing pay for luck. They also take it into account that shareholders (the principals) restrict demanded pay at the expense of agents, in line with the so-called say-on-pay, i.e. shareholders' vote on the remuneration of the firm's executives. The framework can be used to examine the impact of managerial power on executive compensation and the say-on-pay regulations of the 2000s. The results show that say-on-pay increases principals' power (value), decreases outrage, in other words it acts as a natural

barrier to the excessive increase in compensation, thereby lowering agents' pay when high pay is demanded. By contrast, in the case of low or medium demanded pay, say-on-pay slightly increases overall pay, while the structure changes and shifts towards incentive-dependent salary components.

The evening plenary session began with the presentation of *Balázs Szentes*, professor at the London School of Economics and editor of several top economic journals. Szentes, an expert in game theory and contract theory, gave a talk about the learning process before trading and the reduced efficiency arising from disregarding "free" information. In his bilateral trading model, the seller makes a take-it-or-leave-it offer, however, the buyer is uncertain about the value of the product but may access additional information for a premium, and this cost increases in line with informativeness. Assuming a free learning opportunity, the model's equilibria can be Pareto-ranked. The presenter pointed out that if learning is costly, but the cost of information converges to zero, then the system converges to the worst free-learning equilibrium.

The first day of the conference concluded with the presentation of *Rafael Schiozer*, the head of the Accounting and Finance Department of the Brazilian National Research Council. In his talk, the financial stability and banking system expert concentrated on the practical experience about forbearance of bank loans. The main question was why and when, under what financial difficulties is existing credit debt renegotiated. The conclusions were drawn based on a database containing 13 million loans disbursed to non-financial corporations in Brazil, 1.1 million of which were forborne. Evidence suggests that larger loan amounts and the difficulty in seizing collateral increase the probability of forbearance. Borrowers' previous renegotiations also raise this probability and they may also indicate loan evergreening. In the case of the overwhelming majority (80 per cent) of loans, forbearance typically occurs in the four months following a 60-day delinquency. If prevailing regulations state that banks may increase the provisions of non-delinquent loans of borrowers who also have delinquent loans, this incentivises forbearance on non-performing loans. Because of the macroeconomic resource allocation problems arising from this and the concealment of loan losses, these findings point out important lessons for regulation and supervision.

On 15 November, the conference continued with a plenary session. The first presenter was *Jonathan Batten*, a finance professor at the University Utara Malaysia and the managing editor of *Emerging Markets Review* and *Journal of International Financial Markets Institutions and Money*. Batten is a returning speaker at the conference: in earlier years he talked about the feasibility of hedging international stock market indices with Brent oil futures contracts, pointing out that the efficiency of hedging changes over time and depends on the given equity market, but brings economic returns. Now, his presentation was about hedging risks arising from the

price movements of Indonesian and Malaysian stock markets with Brent and palm oil and FX futures contracts. In the Indonesian and Malaysian economy, palm oil producers are micro and small enterprises. Since international palm oil prices are denominated in USD, they are exposed to changes in stock exchange prices as well as the fluctuations in the USD exchange rate, which has a major economic and social impact. Indices measuring the illiquidity of stock markets have shown that the liquidity effect that changes over time correlates with the efficiency of hedging. In financially more advanced and open economies, highly liquid equity markets enable more efficient hedging, so in economically more developed Malaysia hedging with palm oil is more efficient than in Indonesia. In an economy with a “healthy” equilibrium in terms of exports and imports, the foreign exchange risk can be minimised, and the presenter believes that we should focus on hedging the risks arising from the variability of commodities’ trading prices.

The second presenter at the plenary session was *Fabrizio Lillo*, professor at the University of Bologna. He spoke about asset commonality, systemic risk and investment strategies. He analysed the relationship between investment funds and the financial instruments in their portfolios with dynamic, bipartite network representation. Investment funds build their portfolio from various financial instruments, and there are highly popular assets (e.g. stocks of large enterprises) and very unpopular ones. Lillo measured commonality with the so-called Average Commonality Coefficient (ACC) reflecting the investment behaviour of asset managers as a function of the popularity of the assets they hold. The indicator distinguishes between investment funds based on which of them invest in less popular assets on the one hand and provides information about fund performance on the other hand. The main conclusion of the analysis covering the 2003–2011 period was that the investment funds that invested in less popular assets outperformed the others. This is because investments in niche markets are less affected by fire sales in times of financial market turmoil.

After this, the daily programme continued with the presentations in parallel sessions. Experts talked about theoretical and practical aspects of liquidity, investment funds, central counterparties and the banking system as well as social innovations.

The application for the next conference to be held on 26–27 November 2020 is now open (https://www.uni-corvinus.hu/fooldal/egyetemunkrol/tanszekek/befektetesek-es-vallalati-penzugy-tanszek/tanszeki-kutatasok/#null_33).