The 3rd MNB – FISF Workshop

Thursday, 27th November 2025

8:30 am – 12:05 pm (Budapest Time) / 15:30 pm – 19:05 pm (Beijing Time)

The webinar will be livestreamed at **Zoom**
(Meeting ID: 402 327 2104 / Password: 555000)

	Welcome & Opening Remarks
15:30 – 15:40	**Opening Remarks -** *Viktor Várpalotai, Director of Central Bank Research and Education Directorate at MNB*
Session 1	**Session Chair:** *Dóra Gréta Petróczy, Education and Research Expert at MNB and Assistant Professor at Budapest Metropolitan University*

15:40 – 16:00 **Estimator Averaging of Local Projection and VAR Impulse Response**
By Balázs Vonnák, Economic Advisor at the Magyar Nemzeti Bank (the central bank of Hungary)

Abstract: Local projections (LP) and vector autoregressions (VAR) are standard tools for impulse response analysis and exhibit a well-known finite-sample bias–variance trade-off: LPs have relatively low-bias but high-variance at longer horizons, whereas VARs are more stable but can be biased under misspecification. Recent work combines LP and VAR via model averaging, choosing weights to maximize in-sample fit rather than to minimize the risk of the structural impulse responses. We instead propose estimator averaging: for each horizon, we select LP–VAR weights to minimize the mean squared error of the combined impulse response. We derive oracle weights, develop feasible AR-sieve-bootstrap and bootstrap-RMSE implementations, and compare them with an R2-based model-averaging benchmark. Monte Carlo results show sizable risk re- ductions relative to LP and VAR alone, and in an application revisiting Bauer and Swanson (2023) on high-frequency IV monetary policy shocks, estimator averaging delivers stable and economically intuitive IRFs for yields, activity, prices, and credit spreads.

16:00 – 16:10 **Discussant:** *Haihan Tang (FISF)* **/ Q&A**

16:10 – 16:30 **A Nascent International Financial Channel of China' Monetary Policy Transmission**
By Chang Ma, Associate Professor of Finance, FISF

Abstract: Chinese private portfolio equity outflows, though small compared to other Chinese outflows, are growing rapidly because of capital account liberalization and capital fight. Using granular stock-holding data on Qualified Domestic Institutional Investor (QDII) mutual funds, we identify a nascent financial channel of international transmission of Chinese monetary policy to world stocks. Event study analysis around monetary policy announcement days reveals that monetary policy tightening depresses returns of country equity indexes and individual U.S. stocks with QDII fund exposure relative to non-exposed stocks. The results are robust to controlling for the real transmission channel of Chinese monetary policy and other confounders. The effect is driven by smaller and less liquid firms, but not by China-concept stocks or those highly exposed to China's macroeconomic shocks. We also find that the results are driven by household portfolio rebalancing from more to less risky assets following the announcement.

16:30 – 16:40 **Discussant:** *Balázs Vonnák (MNB)* / **Q&A**

16:40 – 17:00 **Workforce Exposure to LLMs by Human Capital, including Foreign Language Proficiency**

By Eszter Baranyai, PhD, Senior Education and Research Expert at the Magyar Nemzeti Bank

Abstract: Major technological advancements have been shown to exert heterogeneous effects on different demographic groups within the labour market, shaping broader societal and economic outcomes. This study investigates workforce exposure to large language models (LLMs)—one of the fastest-growing branches of artificial intelligence—across key human capital attributes: education, work experience, and foreign language requirements. The latter remains particularly underexplored despite the multilingual capabilities of LLMs. As our setting we choose a country where a third of job postings require foreign language knowledge, significantly higher than the 2% in the US. We utilize and complement a detailed dataset of 13,200 web-scraped job postings from Profession.hu, a leading Hungarian job portal, and map to the U.S. O*NET database. Using multivariate linear regressions with OLS estimation, we find that jobs requiring mid-level education and intermediate language skills exhibit the highest exposure. Variation across languages appears to stem from differences in occupational composition rather than within-occupation variation. Furthermore, multilingual roles – particularly those involving less commonly spoken languages – are associated with higher levels of exposure. These findings underscore the need for targeted skill development and language education strategies to support workforce resilience in the face of AI-driven transformation.

17:00 – 17:10 **Discussant:** *Xiaomeng Lu (FISF)* / **Q&A**

17:10 – 17:25 **Break**

Session 2 **Session Chair:**
Ding Luo, Assistant Professor of Finance, FISF

17:25 – 17:45 **Inflation, Default, and Corporate Bond Returns**

By Xiaomeng Lu, Associate Professor of Finance, FISF

Abstract: We document key facts about the inflation risk exposure of corporate bonds from 2004–2022. Inflation betas of standard bond excess returns (relative to T-bills) are generally negative, whereas those of credit excess returns (relative to duration-matched Treasurys) are positive across most bonds. Cross-sectional variation in inflation betas is mainly driven by credit excess returns, with higher-default-risk bonds showing stronger positive exposure. Inflation beta affects future bond returns in the cross-section through credit excess returns, and firms with higher bond inflation betas exhibit higher stock inflation betas. Analyses using pre-2004 data and alternative inflation measures further illuminate underlying economic channels.

17:45 – 17:55 **Discussant:** *Eszter Baranyai (MNB)* / **Q&A**

17:55 – 18:15 **Nonparametric Estimation and Testing of Nonlinear Temperature–Yield Relationships under Climate Change**
By Chaoyi Chen, Senior Education and Research Expert at the Magyar Nemzeti Bank

Abstract: This paper proposes a kernel-based estimator for the nonlinear crop production models introduced in Schlenker and Roberts (2009). Our approach aggregates high-frequency temperature into yields by integrating an unknown production response against the within-season temperature density, estimated nonparametrically. We establish consistency and the limiting distribution of the estimator in a panel setting, and we introduce a panel-data test of random effects versus fixed effects. Small-scale Monte Carlo simulations assess the finite-sample performance of both the estimator and the test. An application to U.S. county corn yields (1950–2020) illustrates the method: we reproduce the hallmark nonlinear temperature–yield relationship—indicating severe damages under climate change—while rejecting the equal–state production-function restriction in favour of heterogeneous state responses, with lower transition temperatures concentrated in the Crop Belt.

18:15 – 18:25 **Discussant:** *Gang Zhang (FISF)* **/ Q&A**

18:25 – 18:45 **Bank Expertise and Structural Transformation**
By Gang Zhang, Assistant Professor of Economics, FISF

Abstract: Does bank expertise in identifying productive projects affect economic structures? Using the U.S. interstate banking deregulation of the 1980s as a quasi-natural experiment, we find that deregulation facilitated the convergence of economic structures across states. This effect is particularly pronounced among state pairs with significantly different pre-deregulation economic structures or when one state depends on external finance while the other is more financially developed. We then develop a general equilibrium model with imperfect searching and matching between banks and firms. Calibrated to U.S. data, banks' merger and acquisition activities penetrating new markets account for approximately half of the observed convergence of economic structures between service- and manufacturing-dominated states following deregulation. While deregulation improves social welfare, banks may deviate from the socially optimal level of entry, either under- or over-penetrating markets, because of congestion externality and banks' market power.

18:45 – 18:55 **Discussant:** *Chaoyi Chen (MNB)* **/ Q&A**

18:55 – 19:05 **Concluding Remarks -** *Jun Qian***,** *Professor of Finance, Executive Dean, FISF*

Speakers

Balázs Vonnák

Economic Advisor at the Magyar Nemzeti Bank (the Central Bank of Hungary)

Balázs Vonnák is an economic advisor at the Magyar Nemzeti Bank (the central bank of Hungary). He started working there at the Financial Markets Department in 2000 and then moved to the Economics Department, where his main responsibility was to give monetary policy advice to the Monetary Council. Later, he became the Director of Financial System Analysis. He earned his Ph.D. degree at the Central European University in 2021. His research area is econometric identification of the dynamic causal effects of macroeconomic policies.

Chang Ma

Associate Professor of Finance, Fudan International School of Finance

Professor Ma's research focuses on International Finance, Macroeconomics and Macroprudential Policy. His paper has been published in leading academic journals including Review of Financial Studies, Journal of International Economics, Journal of the European Economic Association, etc. His research is widely featured in the Wall Street Journal, UNIDO, VoxEU, VoxChina, etc. He has won the 2019/2020/2024 FISF Research Excellence Award, 2020 Pu Shan Young Scholars Academic Paper Award, Shanghai 16th Philosophy and Social Sciences Outstanding Achievement Award, 2024 FISF Faculty Recognition Award for full-time MBA teaching and was sponsored by 2019 Shanghai Pujiang Program and 2020 National Natural Science Funds Young Talents Funds Program.

Eszter Baranyai

PhD, Senior Education and Research Expert at the Magyar Nemzeti Bank

Eszter Baranyai, PhD, is a senior education and research expert at the Magyar Nemzeti Bank, where she leads research projects on artificial intelligence and central banking topics. Her scientific publications mainly cover central banking, sustainability, financial markets, and financial system issues in international journals. She has taught and conducted research at several Hungarian universities and previously worked at the Bank of England, the former UK financial supervisor

Xiaomeng Lu

Associate Professor of Finance, Fudan International School of Finance

Professor Lu's research fields include behavioral finance and empirical asset pricing. Her recent research focuses the impact of FinTech on investor behavior and the financial market. She is also interested in topics related to the Chinese financial market.

Chaoyi Chen

Senior Education and Research Expert at the Magyar Nemzeti Bank

Chaoyi Chen is a senior education and research expert at the Magyar Nemzeti Bank. He earned his Ph.D. in Economics from the University of Guelph, Canada. His research focuses on econometrics, empirical macroeconomics, and empirical finance, and he has published in academic journals such as the Journal of Business & Economic Statistics, Econometrics Journal, Econometric Reviews, Environmental and Resource Economics, and Journal of Empirical Finance etc. Dr. Chen received the Distinguished Scholar Medal from the Gordon S. Lang School of Business and Economics in 2020. He also serves as a guest editor for the Journal of Risk and Financial Management.

Gang Zhang

Assistant Professor of Economics, Fudan International School of Finance

Prof. Zhang is a macroeconomist with research interests in macro-finance, production networks, and international macroeconomics. Prior to joining FISF, he was an assistant professor of economics at the Cheung Kong Graduate School of Business. He has also served as a summer dissertation intern at the Federal Reserve Bank of Kansas City and as a Research Fellow at the Inter-American Development Bank. In addition, he has held visiting researcher positions at the Bank of Finland Institute for Emerging Economies (2025) and the Hong Kong Institute for Monetary and Financial Research (2022).

Haihan Tang

Associate Professor of Finance, Fudan International School of Finance

Professor Tang's research interests are econometric theory, financial econometrics and applied econometrics. His research has been funded by 2018 Shanghai CHEN GUANG Project, 2019 Shanghai PU JIANG Talent Project, 2019 and 2024 National Natural Science Foundation of China. He was awarded 2023 FISF Faculty Recognition Award (EMF). His research articles have been published in *Review of Economics and Statistics*, *Journal of Econometrics*, and *Econometric Theory*.