Branka Matyska

Contact

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Education

Undergraduate Studies :

B.Sc. Mathematics, University of Novi Sad, Faculty of Sciences, with *Honours*, 2010

Graduate Studies :

M.A. Economics, CERGE-EI, 2013.

M.Sc. Applied Mathematics - Financial Mathematics, University of Novi Sad, Faculty of Sciences, 2014.

CERGE-EI, 2013 to present

Ph.D. Candidate in Economics

Job Market Paper: *"Salience, Systemic Risk and Spectral Risk Measures as Capital Requirements"*, accepted for revision in *the Journal of Economic Dynamics and Control*

Expected Completion Date: November 2020

Research and Teaching Fields

macroprudential policy, financial regulation, risk management, financial markets, fiscal policy, monetary policy

Research Experience

Visiting fellow, KU Leuven, fall 2017

Researcher at Faculty of Economics and Business, KU Leuven, September 2016 - October 2017

Trainee programme for young researchers, National Bank of Belgium, fall 2016

Junior Researcher, CERGE-EI, September 2015 - August 2016

Research assistant for Professor Filip Matejka, CERGE-EI, summer 2015

Visiting fellow, Princeton University, fall 2015

Research assistant for Professor Fabio Michelucci, CERGE-EI, summer 2014

Research assistant for Professor Evzen Kocenda, CERGE-EI, summer 2013

Teaching Experience

Monetary Economics, Teaching Fellow for Professor Vivien Lewis, KU Leuven, summer 2017

Financial Markets, Teaching Fellow for Professor Fabio Michelucci, CERGE-EI, fall 2014

References

Filip Matejka (supervisor)
CERGE-EI
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Vivien Lewis (co-author)
Deutsche Bundesbank
vivien.lewis@bundesbank.de

Andrea Colciago (co-author)
De Nederlandsche Bank & University of Milan - Bicocca
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Job Market Paper

"Salience, Systemic Risk and Spectral Risk Measures as Capital Requirements"

Abstract: In this paper, we evaluate the effectiveness of macroprudential capital requirements in the form of market risk measures in alleviating systemic risk, fire sales, and welfare losses in crisis resolution. We develop a general equilibrium, heterogeneous agent model with financial institutions subject to risk-based capital requirement constraint and compare the benchmark Value at Risk to three spectral risk measures. The key idea of alternative regulation is probability weighting so that regulators overweight or underweight outcomes relative to their objective probabilities. Within the context of our model, prudential instruments based on solely overweighting of tail market losses are preferable for policymakers aimed to reduce the likelihood of the systemic crises. In the steady-state, the financial sector exhibit risk-seeking when the risky asset upside is salient and risk-averse behavior when the downside is salient. Focusing both on upside and downside risks achieves higher households' welfare, but results in risk-seeking preferences of the financial sector and exacerbates the systemic risk. The results suggest that overweighting upside and downside tail risks can prevent fire sales, while underweighting leads to welfare improvements in the financial system after uncertainty shock.

Other Papers

"How do Big Banks Evaluate Risk? Evidence from Capital Purchase Program"

Abstract: This paper empirically tests theories of the psychology of tail events, in particular prospect theory. We first present a model where banks are subject to the subjective expected loss constraint. Then, we estimate the probability weighting function from the asset pricing equation of the largest banks that were recapitalized under the Capital Purchase Program. When facing such rare events, banks demonstrate the coexistence of over- and underweighting of tail losses. Banks tend to overweight small probability losses during the financial distress and underweight the same when not exposed to insolvency risk. Before and during government interventions, big banks overweight losses of low probabilities and underweight losses of high probabilities, consistent with an inverse S-shaped probability weighting function of prospect theory. In contrast, after the recapitalization, we find banks' proneness to underweight tail events. The results suggest that this behavioral bias is linked to funding liquidity, prior gains and losses, market risk, market sentiment, and policy uncertainty.

"The Employment Effects of Corporate Tax Shocks: New Evidence and Some Theory" (with Vivien Lewis and Andrea Colciago)

Abstract: A substantial amount of job creation and destruction is associated with firm entry and exit. This paper asks whether corporate tax changes affect employment through firm turnover. We first identify the effect of a corporate income tax cut on the net business and job creation in US data, using a narrative approach. We find a significant positive, though delayed, impact on job creation through the firm entry and an immediate reduction in job losses through lower firm exit rates. Wages of new hires rise significantly, while aggregate wage exhibits a persistent rise in the wake of the policy change. Second, we show that the standard general equilibrium business cycle model with entry, exit, and heterogeneous firms is inconsistent with several patterns observed in the data.

"Macroeconomics with Financial Sector Risk Constraints"

Abstract: This paper presents a two-period simple macro model with the financial sector optimizing under the risk-based capital requirements. The goal of the optimal prudential policy is to maximize welfare by encouraging or discouraging risk-taking but to accomplish this objective through market risk measures and deposit insurance design. If fixed deposit insurance is unavailable, the optimal Value at Risk policy includes countercyclical loss probabilities. With deposit insurance, optimal capital requirements are higher in comparison to VaR capital regulation. Moreover, the optimal policy is procyclical or countercyclical, depending on the creditors' risk aversion. We also find that the Expected Shortfall embedded in the Basel III is optimal if creditors are risk-neutral and insurance regime with a fixed fee, and variable compensation is provided. Our main message is that deposit insurance is suboptimal in terms of welfare levels in the absence of high social costs of bank failure. Comparing different insurance regimes, we find that it is optimal for regulators not to neglect tail market outcomes when creditors are protected by deposit insurance.

Fellowships and Awards

Trainee Fellowship, National Bank of Belgium, fall 2016

Charles University Mobility Grant, fall 2015

Citigroup Endowment Fellowship, fall 2012 and summer 2013

Award from Serbian Ministry of Education in academic year 2008-2009 and 2009-2010

University Award for successful studying for academic year 2007-2008, 2008-2009, and 2009-2010

Conference Presentations

5th Belgian Macroeconomics Workshop, University of Namur, Belgium, fall 2017

Final MACFINROBODS Conference, Goethe University in Frankfurt, Germany, summer 2017

Summer schools and additional courses

Partial Differential Equations in Economics, Center for Operations Research and Econometrics, UCLouvain, Belgium, March-April 2017

Monte Carlo Methods with Applications to Finance, Center for Operations Research and Econometrics, UCLouvain, Belgium, March 2017

Partial Differential Equations in Finance, Bendheim Center for Finance, Princeton University, United States, Fall 2015

Asset Pricing, Bendheim Center for Finance, Princeton University, United States, Fall 2015

Financial Risk Management, Operational Research & Financial Engineering, Princeton University, United States, Fall 2015

Monetary Policy: Theory and Practice, Kiel Institute, Kiel, Germany, September 2014

Programming Skills

Matlab, R, Mathematica, Stata, Python