DMITRY BRIZHATYUK

January, 2022

CONTACT
INFORMATION

Personal website: dbrizhatyuk.github.io
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London, UK

RESEARCH
FIELDS

Macroeconomics; International economics; Applied time series; Credit risk

PROGRAMMING

R, Matlab, Dynare, Phyton, Stata

EMPLOYMENT

Moody's Analytics, Assistant Director - Research   2020 - ...

Quantitative researcher in the Banking operating unit working on ESG and climate risks, with a focus on credit concentrations

– Conducted empirical analysis to quantify the corporate valuation effects of exposure to extreme weather
– Developed a novel framework to access credit concentrations arising from climate change risks
– Moody's Vasicek-Hibbert-Kealhofer (VHK) innovation award (2021)

EDUCATION

University of Washington, Ph.D. in Economics   2020

Specialization in macroeconomics and international economics with experience in both structural modeling and empirical analysis

– Best second-year paper award (2017)
– Buechel fellowship (2018)

Paris School of Economics, M.Res. in Economics   2013

Novosibirsk State University, B.A & M.A. in Economics   2011, 2013

REFERENCES

Professor Fabio Ghironi (chair)
University of Washington
Department of Economics
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Professor Yu-chin Chen
University of Washington
Department of Economics
yuchin@uw.edu

Professor Mu-Jeung Yang
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Eccles School of Business
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Dr. Debra Glassman (teaching reference)
University of Washington
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DMITRY BRIZHATYUK

RESEARCH

· Housing market cycles, productivity growth, and household debt   [link]

Housing market crashes are associated with household deleveraging and a very persistent decline in economic activity in an unbalanced panel of 50 countries. The persistence of the output response is driven by a slowdown in productivity growth and capital accumulation and is increasing in the amount of preexisting household debt. To interpret these stylized facts, I construct a two-agent (borrower-saver) dynamic general equilibrium model with occasionally binding collateral constraint tied to housing equity. Productivity grows endogenously in the model through forward-looking innovation investment. When the preexisting level of debt is sufficiently high, negative housing demand shocks cause collateral constraint to bind and trigger deleveraging. Endogenous slowdown in TFP growth emerges as one of the adjustment margins during this process, prolonging the real effects of a crisis. The initial shock is amplified by a negative feedback loop between deleveraging, borrowers' housing wealth and growth. I use the calibrated model to draw implications for macroeconomic policy during episodes of deleveraging.

· Medium-term cycles, the role of occasionally binding constraints   [link]

Why are emerging small open economies are more prone to swings in trend growth than developed? This paper emphasizes the role of occasionally binding credit constraints that cause state dependence and asymmetry in the link between economic activity and endogenous growth. Negative shocks are more detrimental to TFP growth in financially vulnerable economies prone to leverage-deleverage cycles than in economies that can optimally borrow through the cycle.

· Scarring effects of trade policy uncertainty (with Fabio Ghironi)

This paper studies the macroeconomic consequences of trade policy uncertainty with an emphasis on its effects on productivity growth. We build a small open economy model with nominal rigidity, endogenous growth through the introduction of new products, and time-varying volatility of import tariffs. Import tariff uncertainty shocks act as aggregate supply shocks. They cause a temporary improvement of the current account along with the real exchange rate appreciation in the medium run. In addition, an increase in import tariff uncertainty causes a sharp decline in the introduction of new intermediate products, which is detrimental to productivity growth and prolongs the effect of the shock. We show that endogenous risk premia is the key channel transmitting the shock to the broader economy and study role monetary policy in shaping it.

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RESEARCH AT
MOODY'S
ANALYTICS

· Assessment of Financial Impacts of Climate-related Hazard Events [link]

This study documents statistically and economically significant negative impacts of extreme weather events (cyclones, storms, and droughts) on the subsequent valuation of affected firms. The effect on firm valuation, measured by asset or equity returns, can be as large as -2.9% over the first ten weeks post-event. Relative to the existing literature, our study has a broader firm and hazard type coverage expanding to non-U.S. firms and events.

· A framework to quantify and manage climate hazard concentration risk

A novel framework to tackle credit concentration risks arising from physical damage from climate hazard events, such as cyclones and storms. The framework can be used to satisfy regulatory (BoE, ECB, FED, among others) and disclosure (TCFD) requirements, as well as internal risk management.

PRESENTATIONS

2021: Irish Economic Association Conference; Symposium on Money, Banking and Finance; Warsaw Money-Macro-Finance Conference; European Economic Association Congress; Money Macro and Finance Society Conference

2020: University of Surrey; Moody's Analytics; European Economic Association Congress

2019: Higher School of Economics Moscow

2018: University of Surrey; Washington University in St. Louis

TEACHING

University of Washington

Macroeconomics (MBA) [evaluations]	15 quarters
Intro to Macroeconomics	5 quarters
Intro to Microeconomics	2 quarters

Novosibirsk State University: Intermediate Macroeconomics	1 semester

OTHER

Citizenship: Russia; Tier-2 UK visa

Languages: English (fluent), Russian (native), French (basic)