

## MARTSELLA DAVITAYA

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## REFERENCES

### Hassan Afrouzi

Assistant Professor of Economics

Columbia University

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### Michael Woodford

John Bates Clark Professor of Political  
Economy

Columbia University

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### Andres Drenik

Assistant Professor of Economics

The University of Texas at Austin

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## EDUCATION

### Columbia University

*Ph.D. in Economics Candidate*

2023

(expected)

*M.Phil. in Economics*

2020

*M.A. in Economics*

2019

- Fields: Macroeconomics, Econometrics (secondary)

### NRU Higher School of Economics and University of London

### International College of Economics and Finance / International Programs under the academic direction of the London School of Economics

*B.Sc. in Economics (HSE) / B.Sc. in Economics and Finance (UoL)*

2013 – 2017

- Graduated with Honors (HSE) and First-Class Honors (UoL)

## RESEARCH

My research agenda lies at the intersection of household finance and macroeconomics, combining individual-level, high-frequency data, and heterogeneous agent modeling to identify the heterogeneous nature of household financial decisions and parameters that have important policy implications.

### Job Market Paper

*Monetary Policy Implications of Heterogeneous Mortgage Refinancing* with A. Burya

We show that credit score heterogeneity dampens monetary policy transmission through fixed-rate mortgages. Using Fannie Mae Single-Family Loan-Level historical data, we show that a 1% increase in mortgage rate increases the refinancing probability for borrowers with a FICO credit score of 800 twice as much as that of borrowers with a FICO score of 700. We then develop a refinancing model and find that credit score heterogeneity dampens consumption response to monetary policy by 11%, compared to a standard model with only mortgage rate heterogeneity. Borrowers with lower credit scores face tighter borrowing limits and benefit from refinancing more than borrowers with higher credit scores, but face more difficulties obtaining refinance loans, resulting in a smaller consumption response.

If far-ahead inflation compensation is insensitive to incoming economic news, then inflation expectations remain anchored. Using daily bond yield data, we show that inflation compensation is less sensitive to monetary policy shocks in the U.S. if the Fed is more responsive to inflation during the most recent CPI release. The empirical strategy consists of two steps. First, we construct a measure of market expectations about the Fed's reaction to inflation, which equals changes in different interest rates unexplained by the size of the inflation shock or exogenous monetary policy. Second, we estimate the sensitivity of inflation compensation's response to monetary policy conditional on the expectations of the Fed's reaction to inflation. Our estimates suggest anchoring of long-term inflation expectations in the U.S.

*Recessions, Social Security, and Retirement*

The main difficulty in studying the effect of retirement income on labor supply is that factors that affect retirement income correlate with the labor force participation rate. Using the Health and Retirement Study and Social Security Administration income data, I overcome this difficulty by utilizing the fact that the Social Security benefit is a function of the economic conditions when the worker turns 60. My estimates suggest that the labor supply elasticity of older workers is -0.19 at the extensive margin and -0.57 at the intensive margin. This estimate is relevant for optimizing public and fiscal policy and calibrating life-cycle models.

*Games of Cheating* with Kosmas Marinakis

We develop a model of risky information transmission between a higher and a lower ability agent, which closely resembles academic cheating behavior. Assuming no synergy effects between agents or correlation of outputs, we derive a substitution and a strategic effect, both of which dictate the behavior of agents when information transmission is feasible. We show that the higher ability agent may find it strategically useful to moderate her effort in order to limit the supply of information and curb her risk. We also find that the use of a relative compensation scheme may cause cheating activity to increase when the coefficient of relative incentives is not sufficiently high. Even when relative incentives are powerful enough to mitigate cheating, this seriously distorts the incentives, causing high-ability agents to further cut down on effort. We conclude that performance in the group is higher when similar ability agents are matched, and that the only cost-free way to deter cheating is to match agents of similar abilities together, since the risk of transmitting information will offset its benefit. We also extend the model to include the case where the higher ability agent can choose the level of her cheating supply.

**AWARDS, FELLOWSHIPS & GRANTS**

**Awards**

Wueller Teaching Award, best teaching assistant in M.A. courses (Columbia University)	2021 – 2022
Wueller Teaching Award, runner-up for best teaching assistant in M.A. courses, online format (Columbia University)	2020 – 2021
Wueller Teaching Award, runner-up for best teaching assistant in M.A. courses (Columbia University)	2019 – 2020
Prize for Academic Achievement (University of London)	2017
Academic Excellence Award (University of London)	2017
Top 8 <sup>th</sup> in Econometrics Universiade organized by Moscow State University	2017
Top 15% High-Quality Award in Sanofi Health Guardians Business Consulting Case Competition (1,380 competitors)	2016

## Fellowships

Dean's Fellowship (Columbia University)	2017 – 2023
Dissertation Fellowship (Columbia University)	2022
Wueller Fellowship (Columbia University)	2017 – 2022
Merit-based scholarship covering 75% of tuition fees (Higher School of Economics)	2014 – 2017
Merit-based scholarship covering 60% of tuition fees (Higher School of Economics)	2013 – 2014

## Grants

GSAS Matching Travel Grant (Graduate School of Arts and Sciences, Columbia University)	2022
Economics Fluctuations Colloquium Travel Grant (Department of Economics, Columbia University)	2022
The Program for Economic Research (PER) Travel Grant (Columbia University)	2022

## TEACHING EXPERIENCE & TRAINING

### Columbia University

<i>Teaching Development Program (Foundational Track)</i> at the Center for Teaching and Learning	Fall 2022
<i>Teaching Assistant</i> in Introduction to Econometrics I (Graduate) for Professor Seyhan Erden	Fall 2021
<i>Junior Instructor</i> in Introduction to Business, Finance, and Economics (Programs for High School Students) for Professor Raheem A. Haji	Summer 2021
<i>Teaching Assistant</i> in Advanced Macroeconomics (Undergraduate) for Professor Irasema Alonso	Spring 2021
<i>Teaching Assistant</i> in Introduction to Econometrics I (Graduate) for Professor Seyhan Erden	Fall 2020
<i>Teaching Assistant</i> in Financial Economics (Graduate) for Professor Steven Wei Ho	Spring 2020
<i>Teaching Assistant</i> in Introduction to Econometrics I (Graduate) for Professor Seyhan Erden	Fall 2019
<i>Teaching Assistant</i> in Intermediate Microeconomics (Undergraduate) for Professor Steven Olley	Spring 2019
<i>Teaching Assistant</i> in Principles of Economics (Undergraduate) for Professor Caterina Musatti	Fall 2018

### National Research University - Higher School of Economics

<i>Teaching Assistant</i> at the Department of Economics (Undergraduate) for Professor Lubov Schukina	2015 – 2016
<i>Lecturer and Class Teacher</i> at the ICEF Evening School (Programs for High School Students)	2015 – 2016

## WORK EXPERIENCE

### Columbia Business School

<i>Research Assistant</i> for Professor Steven Zeldes	2019 – 2020
- Tested cointegration between stock prices and GDP per capita for 49 countries using the Global Financial Database	

### Promsvyazbank

<i>Summer Intern</i> at the Department of Corporate Business Development	2015
- Developed the VBA code for filtering and analyzing the data on corporate bank clients	

## CONFERENCES & PRESENTATIONS

<i>AREUEA (The American Real Estate and Urban Economics) National Conference: Monetary Policy Implications of Heterogeneous Mortgage Refinancing</i>	2022
<i>Successfully Navigating Your PhD: A Mentoring Workshop for 3rd Year + Women &amp; Non-Binary PhD Students in Economics &amp; Economics-Adjacent Fields: Recessions, Social Security, and Retirement</i>	2020

## SKILLS

*Technical:* MATLAB, STATA, R, EViews, SAS, VBA Excel

*Languages:* Russian (Native), Georgian (Native), English (Fluent), Spanish (Intermediate)

## MISCELLANEOUS

<i>Member of Econ Soccer Team "The New Kanesians=Keynes+H.Kane" (Columbia University)</i>	Sep 2021 –
<i>Board Member of Association of Graduate Economics Students (Columbia University)</i>	Sep 2017 –
<i>President of Association of Graduate Economics Students (Columbia University)</i>	2019 – 2020
<i>Member of Mentoring Program (International College of Economics and Finance, Higher School Economics)</i>	2014 – 2016
<i>Member of IcefCrew – student community that organizes all extracurricular events (International College of Economics and Finance, Higher School Economics)</i>	2013 – 2016
<i>Member of the Association of Intellectual Clubs (Higher School of Economics)</i>	2013 – 2016