

MICHAEL BOUTROS

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Experience

2021 – Senior Economist, Bank of Canada
– Model Development and Research Division, Financial Stability Department
– Economics and Financial Research Department

Education

2016 – 2021 Ph.D. in Economics, Duke University
Thesis: Essays on Heterogeneous Households in Macroeconomics
Committee: Francesco Bianchi (chair), David Berger, Cosmin Ilut, and Andrea Lanteri

2019 M.A. in Economics, Duke University

2015 B.Sc. in Financial Economics, *High Distinction*, University of Toronto

Research Areas

Household Finance, Macroeconomics, Bounded Rationality

Publications

1. **Monetary Policy Implementation in a Negative Rate Environment** with Jonathan Witmer. *Journal of Money, Credit Banking*, 52 (2-3), March-April 2020, p. 441-470..

Abstract: To analyze monetary policy implementation in a negative rate environment, we add the option to exchange central bank reserves for cash to the standard workhorse model of monetary policy implementation (Poole 1968). Importantly, we show that monetary policy can be constrained when the target overnight rate is below the yield on cash. At this point, the overnight rate equals the yield on cash instead of the target rate. Modifications to the implementation framework, such as a reserve requirement that varies with cash withdrawals, can help restore the implementation of monetary policy such that the overnight rate equals the target rate.

Under Revision

2. **The Persistence of Miscalibration** with Itzhak Ben-David, John R. Graham, Campbell R. Harvey, and John Payne. October 2023 *NBER Working Paper #28010*. *Revise & Resubmit at The Review of Financial Studies*.

Abstract: Using 14,800 forecasts of one-year S&P 500 returns made by Chief Financial Officers over a 12-year period, we track the individual executives who provide multiple forecasts to study how their beliefs evolve dynamically. While CFOs' return forecasts are systematically unbiased, their confidence intervals are far too narrow, implying significant miscalibration. We find that when return realizations fall outside of ex-ante confidence intervals, CFOs' subsequent confidence intervals widen considerably. These results are consistent with a model of Bayesian learning which suggests that the evolution of beliefs should be impacted by return realizations. However, the magnitude of the updating is dampened by the strong conviction in beliefs inherent in the initial miscalibration and, as a result, miscalibration persists.

3. **Windfall Income Shocks with Finite Planning Horizons**. September 2023 *Bank of Canada Staff Working Paper 2022-40*. *Revise & Resubmit at The Journal of Financial Economics*.

Abstract: How do households respond to unanticipated income shocks? Reflecting the fact that households are not perfect planners, I build and estimate a quantitative model of bounded rationality in which reoptimization is costly. Households respond to windfall income shocks by choosing a finite planning horizon over which to reoptimize. The optimal horizon is increasing in income, wealth, and the magnitude of the income shock. In the estimated model, the distribution of consumption responses is consistent with two key facts: highly liquid households have large consumption responses out of income shocks that cannot be driven by borrowing constraints, and larger income shocks induce smaller consumption responses.

4. **Borrow Now, Pay Even Later: A Quantitative Analysis of Student Debt Payment Plans** with Nuno Clara and Francisco Gomes. October 2023. *Bank of Canada Staff Working Paper 2023-54*.

Abstract: In the United States, student debt currently represents the second largest component of consumer debt, just after mortgage loans. Repayment of those loans reduces disposable income early in the borrower's lifecycle, when marginal utility is particularly high, and limits their ability to build a buffer stock of wealth to insure against background risks. In this paper, we study alternative student debt contracts that offer a 10-year deferral period. Borrowers defer either principal payments only ("Principal Payment Deferral", PPD) or all payments ("Full Payment Deferral", FPD) with the missed interest payments added to the value of the debt outstanding. We first calibrate an equilibrium with the current contracts, and then solve for counterfactual equilibria with the PPD or FPD contracts. We find that both alternatives generate economically large welfare gains, which are robust to different assumptions about the behavior of the lenders and borrower preferences. We decompose the gains into the percentages resulting from loan repricing and from the deferral of debt repayments. We compare these alternative contracts with the changes to Income Driven Repayment Plans being proposed by the current U.S. administration and show that they dominate such proposals. Crucially, the PPD and FPD contracts deliver similar welfare gains to the debt relief program considered by the administration, with no impact on the government budget constraint.

5. **The Macroeconomic Implications of Coholding** with Andrej Mijakovic. June 2023.

Abstract: This paper highlights the importance of the joint distribution of liquid assets and debt in understanding the consumption response of households to income changes. We show that grouping households across the distribution of liquid wealth, as is typically done, confounds two very different types of households. True hand-to-mouth households with low liquid wealth due to low liquid assets, and households with low liquid wealth due to high debt. The former type has a high marginal propensity to consume while the latter type has a high marginal propensity to repay debt. We add a cash-in-advance constraint to a standard consumption-savings model which generates the co-holding of liquid assets and debt observed in the data and matches the empirically observed marginal propensities to consume and repay debt. We apply our model to the study of stimulative fiscal policy and illustrate the role that the joint distribution of assets and debt plays in the aggregate marginal propensity to consume.

6. **Targeted vs. Timely Fiscal Stimulus Payments**. March 2023.

Abstract: This paper analyzes the tradeoff between targeted versus timely fiscal stimulus payments in a quantitative two-sector HANK model. In response to a negative sectoral shock, fiscal policy is specified as the total size of transfers, the degree of targeting towards households in the affected sector, and the length of periods until the policy can be implemented. The key trade-off in the model is that the degree of targeting is increasing in the delay until policy can be implemented. In the baseline calibration of symmetric equilibrium with one household wholly employed in each sector, the key result is that fully targeting the stimulus program to the household in the affected sector yields less total welfare than intermediate levels of targeting.

7. **Backfiring in Bad Times: When Rent Control Keeps Rent Too High**. March 2023.

Abstract: Rent control, intended to benefit renters by capping rent increases, may disincentivize landlords from lowering rents during temporary negative demand shocks because they are unable to quickly increase rent afterward. To test this prediction, I use a unique combination of exogenous variation in rent control policy in Toronto and a negative demand shock induced by the COVID-19 pandemic. In line with theory, rent per square foot decreased by 3.6% for rent controlled units and 6.5% for exempt units. Using a model of differentiated demand, I construct a counterfactual exercise and estimate that in the absence of rent control, rent would have decreased by 9.1% for rent-controlled units and 9.9% for exempt units.

8. **Evaluating the Impact of Economic Impact Payments**. December 2020.

Abstract: As part of the CARES Act, the IRS distributed \$300 billion in Economic Impact Payments (EIPs) directly to US households. In the Census Bureau's Household Pulse Survey (HPS), almost 75% of households receiving an EIP reported mostly spending it. Conditioning on labor status, 63% of employed households reported mostly spending their EIPs, compared to 84% of unemployed households. Both types of households reported spending largely on consumption goods, but unemployed households tended to pay regular bills while employed households paid down debt or increased savings. The evidence suggests that in designing an untargeted stimulus program and trading off potential efficacy for timeliness, Economic Impact Payments were overall very effective in supporting consumer spending.

Works in Progress

9. **Evaluating Hard Paternalism: Evidence from Tightening Credit Card Minimum Payments** with Jason Allen and Benedict Guttman-Kenney.
10. **Don't Lend So Close to Me: Payday Lending Spillover Effects on Formal Credit** with Anson Ho, Sheisha Kulkarni, Sahil Raina, and Barry Scholnick.
11. **Inertia in Mortgage Type Choice** with Nuno Clara and Katya Kartashova.
12. **Risk Management with Correlated Returns and Sectoral Portfolios** with Jacob Wright.

Discussions

1. **Fiscal Stimulus, Inter- and Intratemporal Consumption Spending: Evidence from a 5 Billion Euro Experiment.** Gregor Pfeifer, Davud Rostam-Afschar, Tim Ruberg, Lukas Treber. *Workshop on Household Responses to Direct Stimulus Payments and Other Shocks*. August 2022.
2. **Automation and Inequality in Wealth Management.** Michael Reher, Stanislav Sokolinski. *3rd CEAR-RSI Household Finance Workshop*. November 2022.
3. **Investor Memory and Biased Beliefs: Evidence from the Field.** Zhengyang Jiang, Hongqi Liu, Cameron Peng, Hongjun Yan. *2023 European Winter Finance Conference*. January 2023.
4. **How and Why do Operating Firms Participate in Swap Market?** Ayla Kayhan, Michael Rand. *2023 Southern Finance Association Annual Meeting*. March 2023.
5. **Economic Policy Uncertainty and Institutional Portfolio Investment.** Andi Li. *2023 Southern Finance Association Annual Meeting*. March 2023.
6. **Income-Driven Repayment Plans for Student Loans.** Nadia Karamcheva, Jeffrey Perry, Constantine Yannelis. *2023 Midwestern Finance Association Conference*. March 2023.
7. **Salient Attributes and Household Demand for Security Designs.** Petra Vokata. *2023 Northern Finance Association Annual Meeting*. September 2023.
8. **Risky College Savings, College Attendance, and Student Debt.** Alexey Vasilenko. *2023 Financial Management Association Annual Conference*. October 2023.
9. **Identifying Housing Preferences in Regulated Markets: Evidence From Waiting Lists.** Hans Koster, Jos van Ommeren, Zhiling Wang. *2023 Urban Economics Association North American Meeting*. October 2023.
10. **Unemployment Insurance and Macro-Financial (In)stability.** Yavuz Arslan, Ahmet Degerli, Bulent Guler, Gazi Kabas, Burhan Kuruscu. *2023 Canadian Macroeconomics Study Group*. November 2023.
11. **Skills, Education and Wealth Inequality: the Financial Investments Channel.** Elisa Castagno, Raffaele Corvino, Francesco Ruggiero. *4th CEAR-RSI Household Finance Workshop*. November 2023.

Conferences and Seminars

- 2023 Southwestern Finance Association, Midwest Finance Association, Biennial Consumer Finance and Macroeconomics Conference, Canadian Economics Association Annual Meeting, Financial Consumer Agency of Canada, North American Summer Meeting of the Econometric Society, Bank of Canada & BIS Workshop on Granular Data, University of Oregon Summer Finance Conference, *European Finance Association, Urban Economics Association, Australian National University, OzMac Workshop, University of Sydney, Reserve Bank of Australia
- 2022 Society for Nonlinear Dynamics & Econometrics, McMaster University, International Conference on Applied Theory, Macro and Empirical Finance, Theories and Methods in Macroeconomics, Canadian Economic Association Annual Meeting, Canadian Macro Study Group
- 2021 Bank of Canada, University of British Columbia, University of Guelph, NuCamp Virtual PhD Workshop, European Winter Meeting of the Econometric Society
- 2020 ITAM Finance Conference, VMACS Junior Conference
- 2019 *Miami Behavioral Finance Conference
- 2018 *BFI Conference on Developing and Using Business Expectations Data
- 2017 ECB Workshop on Money Markets, Monetary Policy Implementation and Central Bank Balance Sheets

*Presentation by coauthor. †Scheduled.