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Bank of Canada Quarterly Research Update

2024Q1

This quarterly newsletter features the latest research publications by Bank of Canada economists. The report includes papers appearing in external publications and staff working papers published on the Bank of Canada's website.

PUBLISHED PAPERS

In-Press

Michelle Alexopoulos & **Xinfen Han** & **Oleksiy Kryvtsov** & **Xu Zhang**, "More than Words: Fed Chairs' Communication During Congressional Testimonies", *Journal of Monetary Economics*, Vol. 142, March 2024

Jason Allen & Milena Wittwer, "Centralizing Over-the-Counter Markets", *Journal of Political Economy*, Vol. 131(12): 3267-3540, December 2023

Narayan Bulusu, "Disentangling the Supply and Announcement Effects of Open Market Operations", *Journal of Financial Markets*, Vol. 67, January 2024

Alberto Cavallo & **Oleksiy Kryvtsov**, "What Can Stockouts Tell Us About Inflation? Evidence from Online Micro Data", *Journal of International Economics*, Vol. 146, December 2023

David Cimon & **Adrian Walton**, "Central Bank Liquidity Facilities and Market Making", *Journal of Banking and Finance*, Vol. 162, May 2024

Carola Conces Binder & **Rodrigo Sekkel**, "Central Bank Forecasting: A Survey", *Journal of Economic Surveys*, Vol. 38(2): 342-364, April 2024

Ajit Desai & **Zhentong Lu** & **Hiru Rodrigo** & **Jacob Sharples** & **Phoebe Tian** & **Nellie Zhang**, "From Lvts to Lynx: Quantitative Assessment of Payment System Transition", *Journal of Payments Strategy and Systems*, Vol. 17: 291-314

Benedikt Franke & Qi Gao & **Andre Stenzel**, "The (Limited) Power of Blockchain Networks for Information Provision", *Management Science*, Vol. 70(2): 671-1342, February 2024

Cars Hommes & Stefanie Huber & Daria Minina & Isabelle Salle, "Learning in a Complex World: Insights from an OLG Lab Experiment", *Journal of Economic Behaviour and Organization*, Vol. 220: 813-837, April 2024

Serdar Kabaca & **Kerem Tuzcuoglu**, "International Transmission of Quantitative Easing Policies: Evidence from Canada", *Journal of Economic Dynamics and Control*, Vol. 162, May 2024

Ingomar Krohn & Philippe Mueller & Paul Whelan, "Foreign Exchange Fixings and Returns Around the Clock", *Journal of Finance*, Vol. 79(1): 541-578, February 2024

Belicia Rodriguez & **Kim P. Huynh** & David T. Jacho-Chávez & Leonardo Sánchez-Aragón, "Abstract Readability: Evidence from Top-5 Economics Journals", *Economic Letters*, Vol. 235, February 2024

Angelika Welte & **Joy Wu**, "The Acceptance of Cash by Canadian Merchants: Evidence from the 2021-22 Merchant Acceptance Survey", *Journal of Payments Strategy and Systems*, Vol. 17: 238-249, 2023

Forthcoming

Sangheon Ahn & **Soojin Jo**, "Transmissions of Structural Oil Shocks to Core Prices", *Global Economic Review*

Serdar Birinci & **Kurt See** & **Shu Lin Wee**, "Job Applications and Labor Market Flows", *Review of Economic Studies*

Jing Cynthia Wu & **Yinxi Xie** & Ji Zhang, "The Role of International Financial Integration in Monetary Policy Transmission", *IMF Economic Review*

Monica Jain & **Olena Kostyshyna** & **Xu Zhang**, "How Do People View Wage and Price Inflation?", *Journal of Monetary Economics*

Joel Rodrigue, "Trade Policy Uncertainty & Resource Misallocation", *European Economic Review*

STAFF WORKING PAPERS

Shihan Xie & Victoria Wenxin Xie & **Xu Zhang**, "Extreme Weather and Low-Income Household Finance: Evidence from Payday Loans", Bank of Canada Staff Working Paper 2024-1

Phoebe Tian, "The Role of Long-Term Contracting in Business Lending", Bank of Canada Staff Working Paper 2024-2

Jing Cynthia Wu & **Yinxi Xie** & Ji Zhang, "The Role of International Financial Integration in Monetary Policy Transmission", Bank of Canada Staff Working Paper 2024-3

Jiaqi Li & **Andrew Usher** & Yu Zhu, "Central Bank Digital Currency and Banking Choices", Bank of Canada Staff Working Paper 2024-4

Tao Wang, "How Do Agents Form Macroeconomic Expectations? Evidence from Inflation Uncertainty", Bank of Canada Staff Working Paper 2024-5

Radoslav Raykov, "Decomposing Large Banks' Systematic Trading Losses", Bank of Canada Staff Working Paper 2024-6

Brantly Callaway & Tong Li & **Joel Rodrigue** & Yuya Sasaki & Yong Tan, "Regulation, Emissions and Productivity: Evidence from China's Eleventh Five-Year Plan", Bank of Canada Staff Working Paper 2024-7

Amina Enkhbold, "Monetary Policy Transmission Throuh Shadow and Traditional Banks", Bank of Canada Staff Working Paper 2024-8

Yuteng Cheng & Ryuichiro Izumi, "CBDC: Banking and Anonymity", Bank of Canada Staff Working Paper 2024-9

Antoine Poulin-Moore & **Kerem Tuzcuoglu**, "Forecasting Recessions in Canada: An Autoregressive Probit Model Approach", Bank of Canada Staff Working Paper 2024-10

STAFF DISCUSSION PAPERS

Christopher Henry & **Doina Rusu** & **Matthew Shimoda**, "2022 Methods-of-Payment Survey Report: Cash Use Over 13 Years", Bank of Canada Staff Discussion Paper 2024-1

Angelika Welte & **Katrina Talavera** & **Liang Wang** & **Joy Wu**, "Covid-19 Hasn't Killed Merchant Acceptance of Cash: Results from the 2023 Merchant Acceptance Survey", Bank of Canada Staff Discussion Paper 2024-2

ABSTRACTS

In-Press Published Papers

More than Words: Fed Chairs' Communication During Congressional Testimonies

We study soft information contained in congressional testimonies by the Federal Reserve Chairs and analyze its effects on financial markets. Using machine learning, we construct high-frequency measures of Fed Chair's and Congress members' emotions expressed via their words, voice and face. Increases in the Chair's text-, voice-, or face-emotion indices during the testimony generally raise the S&P500 index and lower the VIX. Stock prices are particularly sensitive to the Fed Chair's answers to questions directly related to monetary policy. The effects during the testimony add up and propagate after the testimony, reaching magnitudes comparable to those after a policy rate cut. Our findings resonate with the view in psychology that communication is much more than words and underscore the need for a holistic approach to central bank communication.

Centralizing Over-the-Counter Markets

In traditional over-the-counter markets, investors trade bilaterally through intermediaries. We assess whether and how to shift trades on a centralized platform with trade-level data on the Canadian government bond market. We document that intermediaries charge a markup when trading with investors and specify a model to quantify price and welfare effects from market centralization. We find that many investors would not use the platform, even if they could, because it is costly, competition for investors is low, and investors value relationships with intermediaries. Market centralization can even decrease welfare, unless competition is sufficiently strong.

Disentangling the Supply and Announcement Effects of Open Market Operations

Central banks use open market operations (OMOs) to adjust the liquidity available to the financial system to maintain the short-term borrowing rate within the desired target range. Using the conditional event study methodology to decompose the impact of OMOs into supply and announcement effects, this paper finds that when OMO announcements are unexpected, the decrease in the lending rate as a result of the higher supply is significantly moderated by the announcement effect. The results highlight that central banks communicate not just through signals of their desired policy stance, but also through their announcements of operations that implement the stance.

What Can Stockouts Tell Us About Inflation? Evidence from Online Micro Data

We use a detailed micro dataset on product availability and stockouts to construct a direct high-frequency measure of consumer product shortages during the 2020–2022 pandemic. We document a widespread multi-fold rise in stockouts in nearly all sectors early in the pandemic. Over time, the composition evolved from temporary to more permanently discontinued products, concentrated in fewer sectors. We show that unexpected shocks to stockout levels have significant inflationary effects within three months. These effects are larger and more persistent for imported goods and import-intensive sectors. We develop a model of inventories in a sector facing both demand and cost disturbances, and use the observed joint dynamics of stockouts and prices to show that these effects can be associated with elevated costs of replenishing inventories and higher exposure to trade.

Central Bank Liquidity Facilities and Market Making

Central banks have used asset purchase programs to keep markets operational in times of crisis. We model how central bank asset purchases alleviate dealers' balance-sheet constraints, preventing markets from becoming one sided, improving price efficiency and reducing dealer risk positions. Central banks can fully alleviate dealers' balance-sheet constraints by purchasing assets at their fair value; an action which maximizes welfare when dealers are competitive. However, when there is imperfect competition amongst dealers, a central bank which bears costs from intervening may only purchase assets at a discount. We offer additional analysis on the role of lending programs when dealers have leverage constraints, dealers who are unable to net out all balance sheet costs, and cross-asset impacts from interventions.

Central Bank Forecasting: A Survey

Central banks' forecasts are important monetary policy inputs and tools for central bank communication. We survey the literature on forecasting at the Federal Reserve, European Central Bank, Bank of England, and Bank of Canada, focusing especially on recent developments. After describing these central banks' forecasting frameworks, we discuss the literature on central bank forecast evaluation and new tests of unbiasedness and efficiency. We also discuss evidence of central banks' informational advantage over private sector forecasters, which appears to have weakened over time, and how central bank forecasts may affect private sector expectations even in the absence of an informational advantage. We discuss how the Great Recession led central banks to evaluate their forecasting frameworks, how the Covid-19 pandemic has further challenged central bank forecasting, and directions for future research.

From Lvts to Lynx: Quantitative Assessment of Payment System Transition

Modernizing Canada's wholesale payments system to Lynx from the Large Value Transfer System (LVTS) brings two key changes: (1) the settlement model shifts from a hybrid system that combined components of both real-time gross settlement (RTGS) and deferred net settlement (DNS) to an RTGS system; (2) the policy regarding queue usage changes from discouraging it to encouraging the adoption of the new liquidity-saving mechanism. We utilize this unique opportunity to quantitatively assess the effects of those changes on the behaviour of participants in the high-value payments system. Our analysis reveals the following: (1) At the system level, most payments are settled in a single stream with the liquidity-savings mechanism in Lynx—facilitating liquidity pooling and leading to higher efficiency than LVTS where payments were distributed in two streams. Moreover, due to Lynx's liquidity-saving mechanism, many payments arrive earlier than those in LVTS, providing more opportunities for liquidity saving at the cost of slightly increased payment delay. (2) At the participant level, the responses are rather heterogeneous; however, our analysis suggests that liquidity efficiency is improved for several participants, and most experience slightly longer payment delays in Lynx than in LVTS

The (Limited) Power of Blockchain Networks for Information Provision

We investigate the potential and limits of privacy-preserving corporate blockchain applications for information provision. We provide a theoretical model in which heterogeneous firms choose between adopting a blockchain application or relying on traditional third-party intermediaries to inform the capital market. The blockchain's ability to generate information depends on each firm's data profile and all firms' endogenous adoption decisions. We show that blockchain technology can improve the information environment and outperform traditional institutions with firms' adoption decisions serving as a credible value signal and the application uncovering firm values by analyzing all participating firms' data. However, we also characterize an adverse mixed-adoption equilibrium in which neither of the two channels realizes its full potential and information provision declines not only for individual firms, but also in aggregate. The equilibrium is a warning sign that has broad implications for policymakers' regulatory effort and investors' assessment of corporate blockchain applications.

Learning in a Complex World: Insights from an OLG Lab Experiment

This paper brings novel insights into group coordination and price dynamics in complex environments. We implement an overlapping-generation model in the lab, where the output dynamics is given by the well-known chaotic quadratic map. This model structure allows us to study previously unexplored parameter regions where the perfect-foresight dynamics exhibits chaotic dynamics. This paper highlights three key findings. First, the price converges to the simplest equilibria, namely the monetary steady state or the two-cycle, in all markets. Second, we document a novel and intriguing finding: we observe a non-monotonicity of the behavior when complexity increases. Convergence to the two-cycle occurs for the intermediate parameter range, while both the extreme scenarios of a simple stable two-cycle and highly non-linear dynamics (with chaos) lead to coordination on the steady state in the lab. All indicators of coordination and convergence significantly exhibit this non-monotonic relationship in the learning-to-forecast experiments and this non-monotonicity persists in the learning-to-optimize design. Third, convergence in the learning-to-optimize experiment is more challenging to achieve: coordination on the two-cycle is never observed, although the two-cycle Pareto-dominates the steady state in our design.

International Transmission of Quantitative Easing Policies: Evidence from Canada

What are the cross-border spillovers from major economies' quantitative easing policies to their trading partners? We provide evidence by concentrating on spillovers from the US to Canada during the ZLB period when QE policies were actively used. We identify QE shocks in the US and estimate their impact on a large number of Canadian macroeconomic and financial variables. Then we analyze transmission channels of foreign QE shocks to the domestic economy. Our results suggest that US QE shocks are expansionary for Canada despite a currency appreciation. This is because they spill over to domestic borrowing costs, lowering long-term rates as well as financial premiums, and increasing asset prices. We find evidence for both portfolio balance and risk channels.

Foreign Exchange Fixings and Returns Around the Clock

The U.S. dollar appreciates in the run-up to foreign exchange (FX) fixes and depreciates thereafter, tracing a W-shaped return pattern around the clock. Return reversals for the top nine traded currencies over a 21-year period are pervasive and highly statistically significant, and they imply daily swings of more than one billion U.S. dollars based on spot volumes. Using natural experiments, we document the existence of a published reference rate determines the timing of intraday return reversals. We present evidence consistent with an inventory risk explanation whereby FX dealers intermediate unconditional demand for U.S. dollars at the fixes.

Abstract Readability: Evidence from Top-5 Economics Journals

Readability is a measure of how easy it is to read a text. Over time, general-interest journals have become more technical. This affects how accessible research is to a general audience. Our analysis looks at how readable abstracts are. We study the readability of abstracts of top five economics journals between 2000–2019. We collect the characteristics of the abstracts, papers, and authors of these papers. We find that abstracts with higher proportion of women co-authors are more readable. These results are robust to various readability measures and model specifications.

The Acceptance of Cash by Canadian Merchants: Evidence from the 2021-22 Merchant Acceptance Survey

In recent years, the rise in digital payments has spurred discussion about the future of cash at the point of sale. The COVID-19 pandemic has also contributed to this discussion. To better understand cash acceptance and the impact of payment innovations such as mobile payments in Canada, the Bank of Canada conducted the 2021–22 Merchant Acceptance Survey Pilot Study — a survey of around 500 small and medium-sized businesses. We find that 97 per cent of small and medium-sized businesses in Canada accepted cash in 2021–22 and only 3 per cent have plans to stop accepting cash. For cards and digital payments, merchant acceptance has increased over the last few years. Therefore, cash and digital payments continue to co-exist at the point of sale, and Canada is far from being a cashless society.

Forthcoming Published Papers

Transmissions of Structural Oil Shocks to Core Prices

This paper investigates how structural oil market shocks transmit through real oil price changes to the U.S. core prices. Separating out the sources of oil price increases reveals that supply shocks lead to significant and persistent increases in core prices while oil inventory demand shocks pull them down. Other demand-driven shocks do not cause any significant core price fluctuations. Examining different sample periods, we find empirical evidence supporting the strengthening of the oil price pass-through to some degree since mid-1980; however, not much change in the pass-through has been observed since the outbreak of Covid-19. Our findings highlight that understanding the sources of oil price changes is crucial for gauging their impacts on core prices and furthermore, for the conduct of monetary policy.

Job Applications and Labor Market Flows

Job applications have risen over time yet job-finding rates remain unchanged. Meanwhile, separations have declined. We argue that increased applications raise the probability of a good match rather than the probability of job-finding. Using a search model with multiple applications and costly information, we show that when applications increase, firms invest in identifying good matches, reducing separations. Concurrently, increased congestion and selectivity over which offer to accept temper increases in job-finding rates. Our framework contains testable implications for changes in offers, acceptances, reservation wages, applicants per vacancy, and tenure, objects that enable it to generate the trends in unemployment flows.

The Role of International Financial Integration in Monetary Policy Transmission

Motivated by empirical evidence, we propose an open-economy New Keynesian model with financial integration that allows financial intermediaries to hold foreign long-term bonds. We find financial integration features an amplification for a domestic monetary policy shock and a negative spillover for a foreign shock. These results hold for conventional and unconventional monetary policies. Among various aspects of financial integration, the bond duration plays a major role, and our results cannot be replicated by a standard model of perfect risk sharing between households. Finally, we observe an important interaction between financial integration and trade openness, and demonstrate trade alone does not have an economically meaningful impact on monetary policy transmission.

How Do People View Wage and Price Inflation?

Using household-level data from the Canadian Survey of Consumer Expectations over 2014Q4–2023Q2, we study wage growth expectations and their link with inflation expectations. We document novel facts about wage growth expectations and the uncertainty around them. Households associate higher wage growth with a stronger economy. The link between wage and inflation expectations is weak, but stronger during the high-inflation period, in tighter labour markets, among new hires, for workers with above-inflation wage gains or higher levels of education or income. Uncertainty about wage gains is strongly positively linked to uncertainty about expected inflation, particularly during the high-inflation period.

Trade Policy Uncertainty & Resource Misallocation

This paper investigates the role of trade policy uncertainty (TPU) on resource allocationacross heterogeneous Chinese producers and aggregate productivity in the Chinese man-ufacturing sector. Using detailed Chinese data and common cost minimization conditionswe measure the difference between optimal capital and labor holdings for each firm, or theefficiency gap. We document that (i) efficiency gaps decline sharply with China's accessionto the WTO and the declines are disproportionately pronounced among industries mostexposed to TPU; (ii) efficiency gap declines were larger among Chinese exporters; (iii) effi-ciency gap declines occur simultaneously with a rise in the variance of firm-level employ-ment and investment in new capital. Using China's accession to the WTO as an exogenouschange in the degree of uncertainty faced by Chinese producers, we quantify the impliedchange in productivity due to the reduction in TPU. Our estimates imply that the reductionin TPU induced by WTO accession accounted for a 17% increase in aggregate productivitythrough reduced resource misallocation.

Staff Working Papers

Extreme Weather and Low-Income Household Finance: Evidence from Payday Loans

This paper explores the impact of extreme weather exposures on the financial outcomes of low-income households. Using a novel dataset comprising individual-level payday loan applications and loan-level information, we find that extreme temperature days—both hot and cold—lead to surges in demand for payday loans. An increase in the number of days with extreme heat results in an increase in delinquency and default rates and a reduction of total credit issued, indicating a contraction in loan supply. These effects are especially noticeable for online payday loans. Our findings highlight the heightened financial vulnerability of low-income households to environmental shocks and underscore the need for targeted policies.

The Role of Long-Term Contracting in Business Lending

This paper examines inefficiencies arising from a lack of long-term contracting in small business lending in China. I develop and estimate a dynamic model where firms repeatedly interact with the same lender. All loans are short-term. Collateral can be used to deter a strategic default by a firm, but the lender cannot recover the full value of the collateral in the case of a default. The endogenous contract terms—including interest rates, loan size and collateral—reflect a firm's probability of default in equilibrium. Learning drives the dynamics of contract terms because a firm's profitability type is unknown. Long-term contracts improve welfare mainly by mitigating the incentives for a firm to default.

The Role of International Financial Integration in Monetary Policy Transmission

Motivated by empirical evidence, we propose an open-economy New Keynesian model with financial integration that allows financial intermediaries to hold foreign long-term bonds. We find financial integration features an amplification for a domestic monetary policy shock and a negative spillover for a foreign shock. These results hold for conventional and unconventional monetary policies. Among various aspects of financial integration, the bond duration plays a major role, and our results cannot be replicated by a standard model of perfect risk sharing between households. Finally, we observe an important interaction between financial integration and trade openness and demonstrate trade alone does not have an economically meaningful impact on monetary policy transmission.

Central Bank Digital Currency and Banking Choices

To what extent does a central bank digital currency (CBDC) compete with bank deposits? To answer this question, we develop and estimate a structural model where each household chooses which financial institution to deposit their digital money with. Households value the interest paid on digital money, the possibility of obtaining complementary financial products, and the access to in-branch services. A non-interest-bearing CBDC that does not provide complementary financial products can substantially crowd out bank deposits only if it provides an extensive service network. Imposing a large limit on CBDC holding would effectively mitigate this crowding out.

How Do Agents Form Macroeconomic Expectations? Evidence from Inflation Uncertainty

This paper studies the behaviors of uncertainty through the lens of several popular models of expectation formation. The full-information rational expectations model (FIRE) predicts that both the ex ante uncertainty and the variance of ex post forecast errors are equal to the conditional volatility of shocks to the fundamentals. Incomplete-information models such as Sticky Expectation (SE) and Noisy Information (NI) and non-rational models such as Diagnostic Expectations (DE) predict distinctive rankings of these moments. The paper also shows that uncertainty provides additional parametric restrictions to favor SE over NI as a model of information rigidity, although both predict similar aggregate patterns of forecast errors and disagreement.

Decomposing Large Banks' Systematic Trading Losses

Do banks realize simultaneous trading losses because they invest in the same assets, or because different assets are subject to the same macro shocks? This paper decomposes the comovements of bank trading losses into two orthogonal channels: portfolio overlap and common shocks. While portfolio overlap generates strong comovements, I find that the sensitivity to common shocks from non-overlapping assets is larger. This sensitivity operates through two sub-channels: the short-long interest rate correlation and the stock-bond correlation, driven by macroeconomic factors. This reveals a new trade-off whereby reductions in portfolio overlap can increase the comovement of trading losses by adding exposures to macro shocks.

Regulation, Emissions and Productivity: Evidence from China's Eleventh Five-Year Plan

Leveraging the sharp changes in environmental regulation embedded in China's 11th Five-Year Plan (FYP), which covered the period from 2006 to 2010, we characterize the degree to which the plan softens trade-offs between emissions and output. We document that the 11th FYP is associated with modest changes in average or total sulphur dioxide (SO2) emissions among manufacturers, but a sharp decline in the variance in the distribution of emissions intensity. Extending well-known distributional estimators to characterize dynamic firm-level responses to policy change, we find large causal declines in emissions intensity in the upper quantiles of the distribution, modest evidence of increases in the lower quantiles and no change in the middle quantiles. Differential changes in firm-level emissions intensity are consistent with the differential investment in emissions-mitigating technology, energy switching and productivity improvements. Interpreted through the lens of a resource misallocation framework, China's 11th FYP increased aggregate productivity and output by 1.8% and 10.2%, respectively, through improved resource allocation. Our model suggests efficient regulation could have further increased aggregate productivity by 3.5% and output by 4.7% without any increase in aggregate emissions.

Monetary Policy Transmission Throuh Shadow and Traditional Banks

I investigate how monetary policy transmits to mortgage rates via the mortgage market concentration channel for both traditional and shadow banks in the United States from 2009 to 2019. On average, shadow and traditional banks exhibit only a slight disparity in transmitting monetary shocks to mortgage rates. Nonetheless, in highly concentrated mortgage markets, shadow banks transmit marginally 35 basis points (bps) more, whereas traditional banks transmit marginally 25 bps less in response to a monetary policy surprise of more than 100 bps. Lastly, banks serve different parts of the mortgage rate distribution: (i) fintech lenders compete with traditional banks for the highest rates, (ii) traditional banks target primarily the middle of the mortgage rate distribution, and (iii) non-fintech lenders specialize in the lowest rates by transmitting monetary policy the least.

CBDC: Banking and Anonymity

We examine the optimal amount of user anonymity in a central bank digital currency (CBDC) in the context of bank lending. Anonymity, defined as the lender's inability to discern an entrepreneur's actions that enable fund diversion, influences the choice of payment instrument due to its impact on a bank's lending decisions. We show that moderate anonymity in CBDC leads to an inefficient pooling equilibrium. To avoid this, CBDC anonymity should be either low, reducing attractiveness, or high, discouraging bank lending. Specifically, the anonymity should be high when CBDC significantly benefits sales, and low otherwise. However, competition between deposits and CBDC may hinder the implementation of low anonymity.

Forecasting Recessions in Canada: An Autoregressive Probit Model Approach

We forecast recessions in Canada using an autoregressive (AR) probit model. In this model, the presence of the lagged latent variable, which captures the autocorrelation in the recession binary variable, results in an intractable likelihood with a high dimensional integral. Therefore, we employ composite likelihood methods to facilitate the estimation of this complex model, and we provide their asymptotic results. We perform a variable selection procedure on a large variety of Canadian and foreign macro-financial variables by using the area under the receiver operating characteristic curve (AUROC) as the performance criterion. Our findings suggest that the AR model meaningfully improves the ability to forecast Canadian recessions, relative to a variety of probit models proposed in the Canadian literature. These results are robust to changes in the performance criteria or the sample considered. Our findings also highlight the short-term predictive power of US economic activity and suggest that financial indicators are reliable predictors of Canadian recessions.

Staff Discussion Papers

2022 Methods-of-Payment Survey Report: Cash Use Over 13 Years

We present results from the 2022 Methods-of-Payment Survey, including updated payment shares based on a three-day shopping diary. We highlight long-term trends in cash holdings, management and use observed across results from previous surveys in 2009, 2013 and 2017. We also review recent trends relating to the COVID-19 pandemic using data from 2020 and 2021. We assess various factors associated with long-term trends in cash use.

Covid-19 Hasn’t Killed Merchant Acceptance of Cash: Results from the 2023 Merchant Acceptance Survey

In recent years, the rise in digital payments has spurred a discussion in Canada and other countries about the future of cash at the point of sale. To better understand trends in payment methods accepted by Canadian businesses, including cash acceptance and the impact of innovations such as mobile payments, the Bank of Canada conducts the Merchant Acceptance Survey, a survey of small and medium-sized businesses. We find that 96% of these businesses in Canada accepted cash in 2023. Acceptance of debit and credit cards has increased since 2021 to 89%, and acceptance of digital payments has increased as well. However, the vast majority of merchants (92%) have no plans to go cashless in the future. Therefore, cash and digital payments continue to coexist at the point of sale, and Canada is far from being a cashless society.

UPCOMING EVENTS

Daniella Puzzello (Indiana University)
Organizer: EFR BAP Visiting Speaker
Date: 2 April 2024

Adrien Auclert (Stanford)
Organizer: EFR CEA/FMD Speaker
Date: 5 April 2024

Zijian Wang (Wilfrid Laurier University)
Organizer: EFR BAP Visiting Speaker
Date: 9 April 2024

Steven Riddiough (University of Toronto)
Organizer: INT/CEA EFR Seminar Series
Date: 12 April 2024

Huan Tang (University of Pennsylvania)
Organizer: FMD/FSD EFR Seminar Series
Date: 16 April 2024

Yu-Ting Chiang (Federal Reserve Board of St. Louis)
Organizer: FMD/FSD EFR Seminar Series
Date: 19 April 2024

Georg Schaur (University of Tennessee)
Organizer: INT/CEA EFR Seminar Series
Date: 26 April 2024

David Schumacher (McGill University)
Organizer: FMD/FSD EFR Seminar Series
Date: 30 April 2024