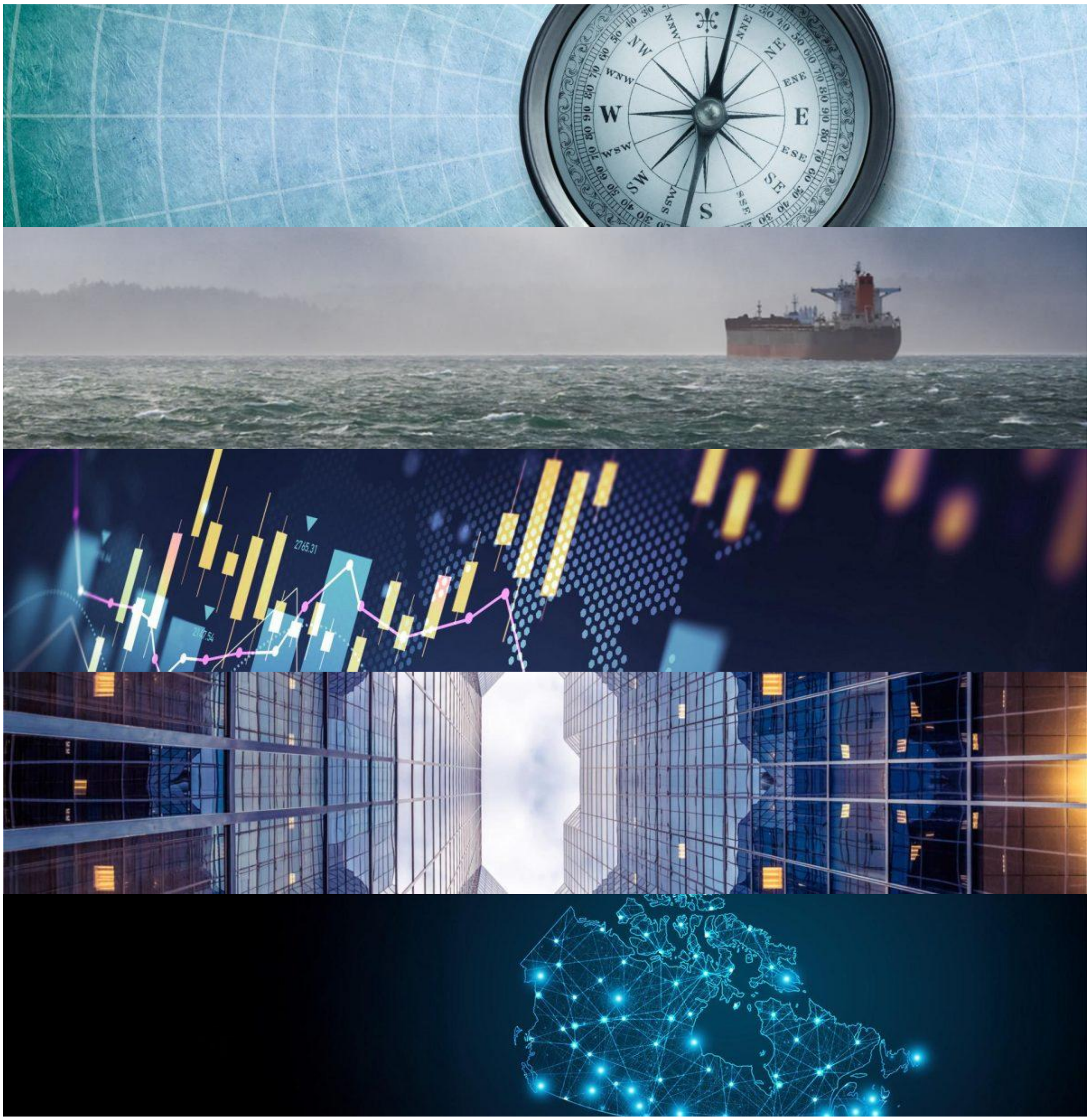
Quarterly Research Newsletter

Second quarter of 2026



Note: In this newsletter, names in **bold** identify researchers from the Bank of Canada as of the publication date.

Monetary policy

In-press academic publications

Quality Adjustment at Scale: Hedonic versus Exact Demand-Based Price Indices

By Gabriel Ehrlich, John Haltiwanger, Ron Jarmin, David Johnson, Ed Olivares, Luke Pardue, Matthew D. Shapiro and **Laura Zhao**

American Economic Review, Vol. 116(6), June 2026

This paper studies how to construct better quality-adjusted price indices using large item-level transactions data. It compares hedonic and demand-based methods and finds substantial quality adjustment in measured prices across goods, including food and high-tech consumer products.

Global common factors and the cross-country heterogeneity of inflation

By Bingxin Ann Xing, **Bruno Feunou** and Romeo Tedongap
International Review of Economics and Finance, Vol. 110, September 2026

This paper examines why inflation differs across countries despite being exposed to the same global shocks. Using CPI data for 181 countries from 1990–2022, the authors show that differences in countries' exposure to global business-cycle conditions, commodity prices, and global uncertainty explain a significant share of cross-country inflation variation.

Forthcoming academic publications

Anchored or Adrift? A Note on Measuring Inflation Expectations Anchoring

By **Olena Kostyshyna**, Isabelle Salle and Hung Truong
Oxford Bulletin of Economics and Statistics, June 2026

This paper develops a behavioural model that measures the risk that inflation expectations become unanchored over the business cycle. Using Canadian and U.S. data, the authors find that the post-pandemic inflation surge was associated with a temporary increase in unanchoring risk; the risk has largely disappeared in Canada but remains somewhat elevated in the United States.

Staff working papers

Supply Shocks in the Fog: The Role of Endogenous Uncertainty

By **Anastasiia Antonova**, **Mykhailo Matvieiev** and Celine Poilly
Bank of Canada Staff Working Paper 2026-12

This paper develops a New Keynesian model in which uncertainty rises endogenously during downturns because economic agents receive lower-quality information. The authors show that after a negative supply shock, the resulting increase in uncertainty can reduce aggregate demand through precautionary saving, potentially offsetting the inflationary effects of the supply shock and even making it deflationary. The paper further finds that monetary policy can eliminate these adverse effects by stabilizing the output gap.

Inflation vs Inclusion: Stabilization Policy in the Wake of the Pandemic

By **Felipe Alves** and Giovanni L. Violante
Bank of Canada Staff Working Paper 2026-13

This paper examines the trade-off between supporting an inclusive labour market recovery and controlling inflation in the aftermath of the pandemic. Using a quantitative model of the U.S. economy, the authors find that prolonged monetary and fiscal stimulus helped improve labour market outcomes but also contributed to inflationary pressures. The paper argues that a combination of inclusive fiscal policy and a more inflation-focused monetary policy would have produced higher welfare for most households while maintaining a strong recovery.

Optimal Conventional and Unconventional Monetary Policy Mix

By Sami Alpanda, **Serdar Kabaca** and Kostas Mavromatis
Bank of Canada Staff Working Paper 2026-18

This paper studies the optimal mix of conventional and unconventional monetary policy in an economy with borrowers, savers, and renters. It finds that after an inflationary cost-push shock, policymakers may want to raise short-term rates while lowering long-term rates to contain inflation and support indebted households, improving the recovery of output and investment.

The Price Impact of Canadian Retaliatory Tariffs

By Alberto Cavallo, **Olena Kostyshyna**, **Oleksiy Kryvtsov** and **Matias Vieyra**
Bank of Canada Staff Working Paper 2026-22

This paper studies how Canada's 2025 retaliatory tariffs affected retail prices. Using daily product-level data, the authors find that prices of tariffed goods rose about 6% within three months—roughly one-quarter of the tariff rate—and fell back quickly after the tariffs were removed.

Staff analytical papers

The Impact of Mortgage Interest Costs on Rental Inflation Amid Population Growth

By Amina Enkhbold and Serdar Kabaca
Bank of Canada Staff Analytical Paper 2026-14

This paper examines how mortgage interest costs (MIC) affect rental inflation. The authors find a positive and nonlinear relationship: rising mortgage interest costs have only a modest effect on rents when population growth is near normal levels, but the effect becomes much stronger when population growth is elevated. The results suggest that housing-related cost pressures are more likely to pass through into rents when housing demand is strong, consistent with a nonlinear Phillips-curve relationship.

Communicating the Future Direction of Policy

By **Jonathan Witmer** and **Monica Jain**
Bank of Canada Staff Analytical Paper 2026-16

This paper examines how the Bank of Canada could communicate more information about the future path of policy interest rates. It reviews approaches used by other central banks and concludes that greater transparency may be helpful, but detailed policy-rate forecasts can be easily misinterpreted and are often not informative beyond the near term.

Integrating Non-traditional Data and AI into Central Banking: A Canadian Perspective

By **James Chapman**, **Ajit Desai**, **Maryam Haghighi** and James (Jim) C. MacGee
Bank of Canada Staff Analytical Paper 2026-17

This paper reviews how the Bank of Canada uses AI and non-traditional data sources (such as text, images, speeches, and transaction data) to improve policy analysis and operations. It highlights both the benefits of AI and the governance challenges involved in deploying it responsibly within a central bank.

Potential output in Canada: 2026 assessment

By **Alex Chernoff**, **Christopher Hajzler**, **Stéphanie Houle**, **Gabriella Ruggero**, **Olena Senyuta**, **Karanbir Sohal**, **Walter Steingress** and **Temel Taskin**
Bank of Canada Staff Analytical Paper 2026-19

This paper updates the Bank of Canada's assessment of potential output. It projects potential growth to slow from 2.3% in 2025 to 1.2% in 2026 due to slower population growth, U.S. tariffs, and trade uncertainty, before recovering as investment and AI adoption support productivity growth.

[Assessing global potential output growth: April 2026]

By **Daniel de Munnik**, **Kristina Hess**, **Walter Muiruri**, **Tuuli McCully**, **Faiza Noor**, **Sabreena Obaid**, **Andrew Plummer**, **Louis Poirier**, **Abeer Reza** and **Jillian Schwartz**
Bank of Canada Staff Analytical Paper 2026-20

This paper updates the Bank of Canada's estimates of global potential output growth. It projects global potential growth to remain just above 3%, supported by productivity gains and AI adoption, but constrained by tariffs, trade-policy uncertainty, and population aging.

[Assessing the US and Canadian neutral rates: 2026 update - Bank of Canada]

By **Felipe Alves**, **William Beaudoin**, **Hélène Desgagnés**, **Wei Dong**, **Jan David Schneider**, **Eugene Trostin**, **Argyn Toktamyssov** and **Hannes Twieling**
Bank of Canada Staff Analytical Paper 2026-21

This paper updates the Bank of Canada's estimates of the neutral interest rate. The authors estimate Canada's nominal neutral rate at 2.25%–3.25% (unchanged from 2025) and the U.S. neutral rate at 2.50%–3.50%, reflecting a stronger outlook for U.S. potential growth.

[Recent Evidence on the Resiliency of Flexible Inflation Targeting]

By **Edoardo Briganti**, **Wei Dong**, **Olena Kostyshyna**, **Soyoung Lee**, Florent Samson and **Rodrigo Sekkel**
Bank of Canada Staff Analytical Paper 2026-23

This paper evaluates whether flexible inflation targeting remains effective in the face of large and persistent supply shocks. Drawing on Canada's post-pandemic experience and evidence from New Zealand, it concludes that the framework remains robust as long as central banks maintain credibility through timely policy action and clear communication.

[Deglobalization and Trade Fragmentation: Implications for the Inflation-Output Trade-Off]

By **Matteo Cacciatore**, **Daniela Hauser** and **Yuko Imura**
Bank of Canada Staff Analytical Paper 2026-24

This paper studies how deglobalization and rising trade barriers affect the inflation–output trade-off faced by central banks. Using a Canada–U.S. model, the authors find that moderate trade-cost shocks can be managed within the existing inflation-targeting framework, but larger or more persistent shocks make it more costly to stabilize inflation without reducing output.

Unpacking interest rate uncertainty in 2025

By **Harshbir Kaur** and **Rishi Vala**
Bank of Canada Staff Analytical Paper 2026-25

This paper examines why uncertainty around Bank of Canada rate decisions increased during the Canada–US trade tensions of 2025. It finds that the uncertainty was driven primarily by uncertainty about the economic outlook, not uncertainty about how the Bank would respond to incoming data.

Monetary Policy in a Volatile World: ToTEM Simulations

By Edward Booth, **Edouard Djeutem**, **Oleksiy Kryvtsov**, **Fanny McKellips** and **Yang Zhang**
Bank of Canada Staff Analytical Paper 2026-27

This paper uses the Bank of Canada's ToTEM model to study how greater supply-shock volatility affects inflation and monetary policy. It finds that large supply shocks make inflation more persistent and increase recession risks, forcing policymakers to confront sharper trade-offs between stabilizing inflation and supporting economic activity.

Structural challenges

In-press academic publications

[Child Skill Production: Accounting for Parental and Market-Based Time and Goods Investments]

By Elizabeth Caucutt, Lance Lochner, Joseph Mullins and **Youngmin Park**
Journal of Political Economy, Vol. 134(1), January 2026, pp. 150-209

This paper estimates how parental time, home inputs and childcare combine to shape children's skill development. It finds that these inputs are complementary, meaning that policies subsidizing childcare or other inputs can have different effects depending on the availability of other investments in children.

[Nonparametric Identification of Incomplete Information Discrete Games With Non-Equilibrium Behaviors]

By **Erhao Xie**
Journal of Applied Econometrics, Vol. 41(4), June 2026, pp. 446-464

This paper develops a nonparametric framework for identifying discrete-choice games when firms may not follow global equilibrium behavior. The paper relaxes the standard equilibrium assumption, derives testable implications, and applies the method to KFC and McDonald's store-hour competition in China, finding evidence against the global-equilibrium assumption.

[AI-assisted teams outperform AI-led teams but not human-only teams in assessing research reproducibility in quantitative social science]

By **Vladimir Skavysh**, **Daneal O'Habib**, **Thibaut Duprey**, **Hossein Hosseini Jebeli** et al.
Proceedings of the National Academy of Sciences of the United States of America, Vol. 123(22), June 2026

This paper evaluates whether large language models (LLMs) improve the reproducibility of quantitative social-science research. It finds that AI-assisted teams performed about as well as human-only teams, while AI-led teams performed substantially worse, suggesting that human expertise remains essential for reliable research verification.

The Origin of the State: Land Productivity or Appropriability? A Comment

By Nikolai Cook, **Thibaut Duprey**, Anthony Heyes and Martino Pelli
Journal of Political Economy, Vol. 134(7), July 2026

This paper is a comment on the influential hypothesis that the emergence of states was driven by the cultivation of appropriable cereals rather than by increases in land productivity. The authors argue that the evidence for the appropriability hypothesis is much weaker than originally claimed: it appears to hold primarily for the transition from chiefdoms to states, and the statistical significance is heavily influenced by a small number of outliers.

Testing collusion and cooperation in binary choice games

By **Erhao Xie**
Econometric Reviews, Vol. 45(6), July 2026, pp. 800-825

This paper develops a test for detecting collusive or cooperative behavior in binary-choice games. Applying the method to the well-known Walmart–Kmart entry game, the author finds that although the data show some warning signs consistent with collusion, the full set of conditions required for collusion is rejected, suggesting the firms did not collude on entry decisions.

Information, prices and buyer entry

By Mei Dong, **Janet Jiang** and Ling Sun
European Economic Review, Vol. 188, August 2026

This paper studies how price transparency affects market outcomes when buyers face costs to enter a market. Contrary to the conventional view that transparency lowers prices by increasing competition among sellers, the authors show that greater transparency can attract more buyers, intensify competition on the demand side, and ultimately increase prices and markups.

Forthcoming academic publications

Techno-nationalism’s paradox in international standard setting

By Qingqing Chen and **Hong Yu Xiao**
Journal of International Business Studies, April 2026

This paper examines the impact of techno-nationalism on international technology standards. It argues that efforts by countries to restrict technology sharing for national-security reasons can create a paradox in which attempts to preserve technological leadership may ultimately weaken a country's influence in global standard-setting processes.

Staff working papers

[Climate Change and Socio-economic inequality in the US]

By Barbara Sadaba and **Tatjana Dahlhaus**
Bank of Canada Staff Working Paper 2026-16

This paper studies how climate change affects income inequality across U.S. states. Using a century of temperature data, the authors find that changes across the entire temperature distribution—not just average warming—can have both positive and negative effects on within-state inequality, with impacts varying substantially across states.

Measuring the AI Economy

By Anton Korinek and **Patrick McKelvey**
Bank of Canada Staff Working Paper 2026-20

This paper develops a measure of the AI economy and proposes an "AI GDP" framework to track AI-related production. The authors estimate extremely rapid growth in AI output driven by expanding computing capacity, improving chip efficiency, and advances in algorithms.

Staff analytical papers

Survey Evidence on Firm AI Adoption and its Implications

By **Chanya Chawla** and **Crystal Arnburg**
Bank of Canada Staff Analytical Paper 2026-22

This paper examines AI adoption among Canadian firms using Business Leaders' Pulse survey data. It finds that while personal use of AI is widespread, business adoption remains limited; firms expect AI to boost capital spending but have modest net negative effects on employment over the next three years.

Financial markets

Staff analytical papers

A buoy on funding tides: How client repo demand and dealer constraints lifted CORRA

By **Jean-Sébastien Fontaine**, **Neil Maru** and **Sofia Tchamova**
Bank of Canada Staff Analytical Paper 2026-15

This paper analyzes the pressures that emerged in the CORRA benchmark interest rate during the fall of 2025. The authors find that an increasing imbalance between repo lenders and borrowers, combined with dealer balance-sheet constraints, pushed funding markets to rely more heavily on Canadian banks. The paper concludes that Bank of Canada adjustments to term repo operations, along with a reduction in the funding imbalance, helped alleviate these pressures and restore market functioning.

Distributing Sovereign Debt in a Rising Debt Environment: Outcomes from Canada's 2024 Debt Distribution Framework Review

By **William Bradley** and **Jeffrey Gao**
Bank of Canada Staff Analytical Paper 2026-18

This paper reviews Canada's 2024 sovereign debt distribution framework review and the reforms implemented in 2025. It finds that rising government debt issuance created a need to broaden the dealer base and attract more international investors, leading to changes in dealer requirements, auction rules, and bond distribution mechanisms.

The investor base for sovereign debt: Why diversification matters

By Sam Foxall and **Jeffrey Gao**
Bank of Canada Staff Analytical Paper 2026-29

This paper examines why a diverse investor base is important for sovereign debt markets. It finds that as government borrowing rises and central banks reduce their holdings, foreign investors and investment funds are absorbing a larger share of sovereign debt; while this supports liquidity, it can also increase vulnerability to market stress and sudden investor withdrawals.

Central Clearing in Repo Markets: Do the Benefits Extend to Non-Dealers?

By **Danny Auger** and **Adrian Walton**
Bank of Canada Staff Analytical Paper 2026-31

This paper examines whether central clearing of repo transactions benefits not only dealers but also non-dealer participants in Canadian fixed-income markets. It argues that broader access to central clearing could improve market efficiency, liquidity, and resilience by lowering frictions in funding markets.

Financial system

In-press academic publications

Democratic Political Economy of Financial Regulation

By **Youngmin Park** and Igor Livshits
International Economic Review, Vol. 67(2), May 2026, pp. 451-473

This paper develops a theory of how lax financial regulation can emerge through democratic voting. It shows that weaker regulation can expand access to mortgages and raise house prices, benefiting prospective homebuyers and existing homeowners, even though it increases financial-system fragility and the risk of bank failures.

Are bank bailouts welfare improving?

By Malik Shukayev and **Alexander Ueberfeldt**
European Economic Review, Vol. 188, August 2026

This paper studies whether government-funded bank bailouts improve welfare once their effects on banks' risk-taking incentives are considered. It finds that bailouts can be welfare improving when capital requirements are sufficiently tight, such as under Basel III-style regulation, but may reduce welfare when regulation is looser.

Staff working papers

Central Bank Crisis Interventions and the Term Structure of Market Fear

By Mattia Bevilacqua, Jon Danielsson, Lerby Ergun, **Andreas Uthemann** and Jean-Pierre Zigrand
Bank of Canada Staff Working Paper 2026-17

This paper studies how Federal Reserve crisis interventions affect market fears during periods of financial stress. Using options data, the authors find that asset purchases mainly reduce short- and medium-term fears, while interest-rate policies primarily influence longer-term expectations.

Staff analytical papers

Understanding Systemic Risks in the Canadian Financial System

By Gabriel Brunneau, Sascha Clazie-Thomson, **Thibaut Duprey**, Ruben Hipp, **Javier Ojea Ferreiro** and Kerem Tuzcuoglu
Bank of Canada Staff Analytical Paper 2026-28

This paper reviews recent approaches to monitoring systemic risk in Canada's financial system and proposes a framework for future system-wide stress testing. It examines how connections across banks, non-bank financial institutions, and international entities can amplify financial stress and affect overall financial stability.

Money and payments

In-press academic publications

[Credit, money and (pseudo-)anonymity]

By Remo Isch-Taudien and **Fabienne Schneider**
Journal of Economic Theory, Vol. 235, June 2026

This paper studies how different levels of identity transparency affect credit markets. It finds that in pseudonymous systems (e.g., blockchain-style environments where transaction histories are public but identities are hidden), credit can exist but is inherently limited, and money becomes essential because efficient credit relationships cannot be fully sustained.

Forthcoming academic publications

Liquidity Optimization in Gross Settlement Systems with Quantum Reordering: Application to TARGET2

By Valerio Astuti, Adriano Baldeschi, Luca Bastianelli, Giuseppe Bruno, **Ajit Desai**, Danica Marsden and Riccardo Russo
Journal of Economic Dynamics and Control, June 2026

This paper studies whether quantum optimization techniques can improve liquidity management in large-value payment systems. The authors find that quantum-inspired optimization can significantly reduce liquidity needs in the TARGET2 payment system by reordering payment queues, generating sizable liquidity savings relative to current settlement arrangements.

Staff working papers

To Tokenize, or Not to Tokenize: The Design Question for a Central Bank Digital Currency

By **Jonathan Chiu**, Cyril Monnet and Oliver Junye Xu
Bank of Canada Staff Working Paper 2026-14

This paper studies how a central bank digital currency (CBDC) should be designed in a financial system where traditional banks coexist with stablecoin-issuing “crypto banks.” The authors compare tokenized and non-tokenized CBDCs and show that the preferred design depends on factors such as the reliability of private digital money providers, the availability of collateral, and the structure of the crypto sector. They find that tokenized CBDCs can improve payment efficiency and crowd out stablecoins under some conditions, but may also reduce bank lending, creating important policy trade-offs.

Patterns and Determinants of Global Cryptocurrency Flows

By **Christian Friedrich** and **Laura Zhao**
Bank of Canada Staff Working Paper 2026-15

This paper examines the patterns and drivers of cross-border cryptocurrency flows, focusing primarily on Bitcoin while also analyzing several major stablecoins. Using data covering up to 162 countries, the authors find that crypto flows are driven by multiple motives, including responding to weak macroeconomic and financial conditions and facilitating international payments and remittances. A case study of the COVID-19 period suggests that these motives became especially important when economic conditions deteriorated and remittance needs increased.

Banking Competition and Access to Cash and Retail Banking Services in Rural Canada

By **Hongyu Xiao**, Robert Petrunia and Sarah Lucky
Bank of Canada Staff Working Paper 2026-19

This paper studies access to retail banking branches and cash services in rural Canada. It finds that retail banking becomes effectively competitive once three branches are present, while access to cash services requires a much smaller local population and varies meaningfully across regions.

Data Externalities, Market Power, and the Optimal Design of Central Bank Digital Currencies

By **Yuteng Cheng**, **Jonathan Chiu**, **Mohammad Davoodalhosseini** and **Janet Hua Jiang**
Bank of Canada Staff Working Paper 2026-21

This paper studies how a CBDC should be designed when private payment providers collect and monetize transaction data. It shows that the optimal CBDC design depends on market power and data-privacy trade-offs, and that a CBDC can either increase or decrease overall data collection in the economy.

Staff analytical paper

DeFi Lending: Returns, Leverage, and Liquidation Risk

By **Jonathan Chiu** and Furkan Danisman
Bank of Canada Staff Analytical Paper 2026-13

This paper studies decentralized finance (DeFi) lending on Aave V3, one of the largest crypto lending platforms. Using transaction-level data, the authors analyze protocol revenues, borrower behaviour, leverage, and liquidation risk. They find that many users employ recursive borrowing strategies to increase leverage, while liquidations tend to occur in concentrated waves but generally have limited spillovers to broader markets. The paper concludes that DeFi lending can be operationally viable but remains vulnerable to capital-efficiency constraints, liquidation risk, and systemic fragility within the crypto ecosystem.

Everything You Want to Know About the Bank's Standing Liquidity Facility… But were too afraid to ask!

By **Kaetlynd McRae** and Jessie Ziqing Chen
Bank of Canada Staff Analytical Paper 2026-26

This paper explains the Bank of Canada's Standing Liquidity Facility (SLF), which helps ensure the smooth settlement of payments in the Lynx payment system and supports monetary policy implementation. It describes how the facility provides liquidity, how collateral is managed, and why the SLF is a key component of Canada's financial infrastructure.