

Bank of Canada Monthly Research Update

August 2017

This monthly 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

- Chernis, Tony & Sekkel, Rodrigo “A Dynamic Factor Model for Nowcasting Canadian GDP Growth”, *Empirical Economics*, August 2017, Volume 53, Issue 1, pp 217–234
- Miyamoto, Wataru & Nguyen, Thuy Lan “Business Cycles in Small Open Economies: Evidence from Panel Data between 1900 and 2013”, *International Economic Review*, Vol. 58, Issue 3, August 2017, Pages 1007-1044
- Muellbauer, John & St-Amant, Pierre & Williams, David, “Credit Conditions and Consumption, House Prices and Debt: What Makes Canada Different?”, *Bangko Sentral ng Pilipinas 6th International Research Conference Volume: "Revisiting Macro-Financial Linkages: Looking Back and Looking Ahead"*, Issue no.3, ISSN No. 2350-7837

Forthcoming

- Allen, Jason & Greider, Timothy & Peterson, Brian & Roberts, Tom, “The Impact of Macroprudential housing finance tools in Canada”, *Journal of Financial Intermediation*
- Kartashova, Katya, “Improving Public Equity Markets: No Pain, No Gain?”, *Economics Letters*

STAFF WORKING PAPERS

- Correa, Ricardo & Paligorova, Teodora & Sapriza, Horacio & Zlate, Andrei “Cross-Border Bank Flows and Monetary Policy: Implications for Canada”, *Bank of Canada Staff Working Paper 2017-34*
- Diez de los Rios, Antonio, “Optimal Estimation of Multi-Country Gaussian Dynamic Term Structure Models Using Linear Regressions”, *Bank of Canada Staff Working Paper 2017-23*

ABSTRACTS

A Dynamic Factor Model for Nowcasting Canadian GDP Growth

This paper estimates a dynamic factor model (DFM) for nowcasting Canadian gross domestic product. The model is estimated with a mix of soft and hard indicators, and it features a high share of international data. The model is then used to generate nowcasts, predictions of the recent past and current state of the economy. In a pseudo-real-time setting, we show that the DFM outperforms univariate benchmarks, as well as other commonly used nowcasting models, such as MIDAS and bridge regressions.

Business Cycles in Small Open Economies: Evidence from Panel Data between 1900 and 2013

Using a novel data set for 17 countries between 1900 and 2013, we characterize business cycles in both small developed and developing countries in a model with financial frictions and a common shock structure. We estimate the model jointly for these 17 countries using Bayesian methods. We find that financial frictions are an important feature for not only developing but also small developed countries. Furthermore, business cycles in both groups of countries are marked with trend productivity shocks. Common disturbances explain one third of the fluctuations in small open economies, especially during important worldwide phenomena.

Credit Conditions and Consumption, House Prices and Debt: What Makes Canada Different?

We propose new ways to think about the set of equations governing the household sector in general equilibrium models by incorporating real-financial linkages between consumption, household balance sheets and credit markets. Canada shares similarities with the United States and several other countries in that a long-term increase in households' access to credit has increased consumption relative to income and expanded household portfolios. Canada differs in that higher house prices relative to income have a mostly negative impact on consumption relative to income, except when offset by an easing in credit conditions. Much of the rise in house prices and debt since the late-1990s can be explained by cheaper and easier access to mortgage credit.

The Impact of Macroprudential housing finance tools in Canada

This paper combines loan-level administrative data with household-level survey data to analyze the impact of recent macroprudential

policy changes in Canada using a microsimulation model of mortgage demand of first-time homebuyers. Policies targeting the loan-to-value ratio are found to have a larger impact on demand than policies targeting the debt-service ratio, such as amortization. In addition, we show that loan-to-value policies have a larger role to play in reducing default than income-based policies.

Improving Public Equity Markets: No Pain, No Gain?

This paper studies the effects of improving public equity markets on macroeconomic aggregates and welfare. I use an open-economy extension of Angeletos (2007), where entrepreneurs face idiosyncratic productivity risk in privately held firms. They can diversify by investing in publicly traded firms, but their operation involves costs, which likely differ across countries. To discipline the quantitative experiment of measuring the effect of these differences, I parameterize the model using Ecuadorian and Chilean firm-level and aggregate data. Lower equity costs result in an improvement of economic aggregates, but have differential welfare effects. Entrepreneurs suffer a loss, while workers gain.

Cross-Border Bank Flows and Monetary Policy: Implications for Canada

Using the Bank for International Settlements (BIS) Locational Banking Statistics data on bilateral bank claims from 1995 to 2014, we analyze the impact of monetary policy on cross-border bank flows. We find that monetary policy in a source country is an important determinant of cross-border bank flows. In addition, we find evidence in favor of a cross-border portfolio channel that works in parallel with the traditional bank lending channel. As tighter monetary conditions in source countries erode the net worth and collateral values of domestic borrowers, banks reallocate credit away from relatively risky domestic borrowers toward safer foreign counterparties. The cross-border reallocation of credit is more pronounced for source countries with weaker financial sectors that are likely more risk averse. Also, the reallocation is directed toward borrowers in advanced economies, or those in economies with investment-grade sovereign rating. In particular, source countries with tighter monetary policy increase cross-border credit to Canada. Our study highlights the spillovers of domestic monetary policy on foreign credit, which enhances the understanding of the international monetary transmission mechanism through global banks.

Optimal Estimation of Multi-Country Gaussian Dynamic Term Structure Models Using Linear Regressions

This paper proposes a novel asymptotic least-squares estimator of multi-country Gaussian dynamic term structure models that is easy to compute and asymptotically efficient, even when the number of

countries is relatively large—a situation in which other recently proposed approaches lose their tractability. We illustrate our estimator within the context of a seven-country, 10-factor term structure model.