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Bank of Canada Monthly Research Update

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

PUBLISHED PAPERS

In Press

Cunado, Juncal, Soojin Jo and Fernando Perez de Gracia, "Macroeconomic Impacts of Oil Price Shocks in Asian Economies", Energy Policy, Volume 89, November 2015, Pages 867-879

Bailliu, Jeannine, Cesaire Meh and Yahong Zhang, "Macroprudential Rules and Monetary Policy when Financial Frictions Matter" Economic Modelling, Volume 50, November 2015, Pages 148-161

Foroni, Claudia, Pierre Guerin and Massimiliano Marcellino, "Markov-Switching Mixed-Frequency VAR Models", International Journal of Forecasting, Volume 31, Issue 3, October 2015, Pages 692-711

Forthcoming

Bruneau, Gabriel and Kevin Moran, "Exchange Rate Fluctuations and Labour Market Adjustments in Canadian Manufacturing Industries", Canadian Journal of Economics

Chiu, Jonathan and Thorsten Keoppl, "Trading Dynamics with Adverse Selection and Search: Market Freeze, Intervention and Recovery", Review of Economic Studies

WORKING PAPERS

Aizenman, Joshua, Martin Bijsterbosch, Matteo Falagiarda and Gurnain Pasricha,"Domestic and Multilateral Effects of Capital controls in Emerging Markets", Bank of Canada Working Paper 2015-37

Binette, Andre, Daniel de Munnik and Julie Melanson, "An Update - Canadian Non-Energy Exports: Past Performance and Future Prospects", Bank of Canada Discussion Paper 2015-10

Cao, Shutao, Mohanad Salameh, Mai Seki and Pierre St-Amant, "Trends in Form Entry and New Entrepreneurship in Canada", Bank of Canada Discussion Paper 2015-11

Dahlhaus, Tatjana, Justin-Damien Guenette and Garima Vasishtha, "Nowcasting BRIC+M in Real Time" Bank of Canada Working Paper 2015-38

Feunou, Bruno, Mohammad R. Jahan-Parvar and Cedric Okou, "Downside Variance Risk Premium" Bank of Canada Working Paper 2015-36

Khan, Mikael, Louis Morel and Patrick Sabourin, "A Comprehensive Evaluation of Measures of Core Inflation for Canada", Bank of Canada Discussion Paper 2015-12

Khan, Mikael, Laurence Savoie-Chabot, "Exchange Rate Pass-Through to Consumer Process: Theory and Recent evidence", Bank of Canada Discussion Paper 2015-9

Kryvtsov, Oleksiy, Rhys R. Mendes, "The Optimal Level of the Inflation Target: A Selective Review of the Literature and Outstanding Issues", Bank of Canada Discussion Paper 2015-8

ABSTRACTS

Macroeconomic Impacts of Oil Price Shocks in Asian Economies

This paper analyzes the macroeconomic impact of structural oil shocks in four of the top oil-consuming Asian economies, using a VAR model. We identify three different structural oil shocks via sign restrictions: an oil supply shock, an oil demand shock driven by global economic activity and an oil-specific demand shock. The main results suggest that economic activity and prices respond very differently to oil price shocks depending on their types. In particular, an oil supply shock has a limited impact, while a demand shock driven by global economic activity has a significant positive effect in all four Asian countries examined. Our finding also includes that policy tools such as interest rates and exchange rates help mitigating the effects of supply shocks in Japan and Korea; however, they can be more actively used in response to demands shocks.

Macroprudential Rules and Monetary Policy when Financial Frictions Matter

This paper examines the interaction between monetary policy and macroprudential rules and whether policy makers should respond to financial imbalances. To address this issue, we build a dynamic general equilibrium model that features financial market frictions and financial shocks as well as standard macroeconomic shocks. We estimate the model using Canadian data. Based on these estimates, we show that it is beneficial to react to financial imbalances. The size of these benefits depends on the nature of the shock where the benefits are larger in the presence of financial shocks that have broader effects on the macroeconomy.

Markov-Switching Mixed-Frequency VAR Models

This paper introduces regime switching parameters to the Mixed-Frequency VAR model. We begin by discussing estimation and inference for Markov-switching Mixed-Frequency VAR (MSMF-VAR) models. Next, we assess the finite sample performance of the technique in Monte-Carlo experiments. Finally, the MSMF-VAR model is used to predict GDP growth and business cycle turning points in the euro area. Its performance is then compared with those of a number of competing models, including linear and regime switching mixed data sampling (MIDAS) models. The results suggest that MSMF-VAR models are particularly useful for estimating the status of economic activity.

Exchange Rate Fluctuations and Labour Market Adjustments in Canadian Manufacturing Industries

We estimate the link between exchange rate fluctuations and the labour input of Canadian manufacturing industries. The analysis is based on a dynamic model of labour demand and the econometric strategy employs a panel two- step approach for cointegrating regressions. Our data is drawn from a panel of 20 manufacturing industries from the KLEMS database and covers a long sample period that includes two full cycles of appreciation and depreciation of the Canadian dollar. Our results indicate that exchange rate fluctuations have significant long-term effects on the labour input of Canada’s manufacturing industries, especially so for trade-oriented industries, but that these long-term impacts only materialize gradually following shocks.

Trading dynamics with Adverse Selection and Search: Market Freeze, Intervention and Recovery

We study trading dynamics in an asset market where the quality of assets is private information and finding a counterparty takes time. When trading ceases in equilibrium as a response to an adverse shock to asset quality, a government can resurrect trading by buying up lemons which involves a financial loss. The optimal policy is centred around an announcement effect where trading starts already before the intervention for two reasons. First, delaying the intervention allows selling pressure to build up thereby improving the average quality of assets for sale. Second, intervening at a higher price increases the return from buying an asset of unknown quality. It is optimal to intervene immediately at the lowest price when the market is sufficiently important. For less important markets, when the shock to quality and search frictions are small, it is optimal to rely on the announcement effect. Here delaying the intervention and fostering the effect by intervening at the highest price tend to be complements.

Domestic and Multilateral Effects of Capital Controls in Emerging Markets

Using a novel data set on capital control actions in 17 emerging-market economies (EMEs) over the period 2001–11, we provide new evidence on domestic and multilateral (or spillover) effects of capital controls. Our results, based on panel vector autoregressions, suggest that capital control actions had limited impact on the variables of the monetary policy trilemma, as a result of offsetting resident flows and ample investment opportunities in EMEs. These findings highlight the importance of the macroeconomic context and of the increasing role of resident flows in understanding the effectiveness of capital inflow management. Tightening of capital inflow restrictions in Brazil, Russia, India, China and South Africa (the BRICS) generated significant spillovers via bank lending and exchange rates, particularly in the post-2008 environment of abundant global liquidity. Spillovers seem to be strongest among the BRICS and in Latin America. These results are robust to various specifications of our models.

An Update - Canadian Non-Energy Exports: Past Performance and Future Prospects

In light of the fact that Canada was continuing to lose market share in the United States, Binette, de Munnik and Gouin-Bonenfant (2014) studied 31 Canadian non-energy export (NEX) categories to assess their individual performance. From this list, about half were expected to lead the recovery in exports. Since that time, NEX growth has picked up: about 80 per cent of the 31 categories have grown in line with, or outperformed, their respective U.S. benchmarks. Furthermore, about half are currently showing upward momentum. Many export categories highly sensitive to the exchange rate have been a key source of strength, as they benefited from the further depreciation of the Canadian dollar. In addition, a more granular analysis finds that export product categories are emerging or re-emerging from low levels. On the downside, however, some categories closely linked to commodity prices have been affected by weak activity and lower prices.

Trends in Firm Entry and New Entrepreneurship in Canada

Recently released data show downward trends for both the firm entry rate and the rate of new entrepreneurship since the early 1980s in Canada. This paper documents these trends and discusses potential explanations. A shift-share analysis suggests that changes to Canada's industrial and demographic structures cannot explain the long-term downward trends, although population aging accounts for part of the decline in new entrepreneurship since around 2000. The paper also discusses other factors potentially contributing to the downward trends: increased industrial concentration, changing labour market conditions, an increased college wage premium and higher student debt. In-depth analysis of these factors is left for future research.

Nowcasting BRIC+M in Real Time

Emerging-market economies have become increasingly important in driving global GDP growth over the past 10 to 15 years. This has made timely and accurate assessment of current and future economic activity in emerging markets important for policy-makers not only in these countries but also in advanced economies. This paper uses state-of-theart dynamic factor models (DFMs) to nowcast real GDP growth in five major emerging markets—Brazil, Russia, India, China and Mexico ("BRIC+M"). The DFM framework allows us to efficiently handle data series characterized by different publication lags, frequencies and sample lengths. This framework is particularly suitable for emerging markets for which many indicators are subject to significant publication lags and/or have been compiled only recently. The methodology also allows us to extract model-based "news" from a data release and assess the impact of this news on nowcast revisions. Results show that the DFMs generally outperform simple univariate benchmark models for the BRIC+M. Overall, our results suggest that the DFM framework provides reliable nowcasts for GDP growth for the emerging markets under consideration.

Downside Variance Risk Premium

We decompose the variance risk premium into upside and downside variance risk premia. These components reflect market compensation for changes in good and bad uncertainties. Their difference is a measure of the skewness risk premium (SRP), which captures asymmetric views on favorable versus undesirable risks. Empirically, we establish that the downside variance risk premium (DVRP) is the main component of the variance risk premium. We find a positive and significant link between the DVRP and the equity premium, and a negative and significant relation between the SRP and the equity premium. A simple equilibrium consumption-based asset pricing model supports our decomposition.

A Comprehensive Evaluation of Measures of Core Inflation for Canada

This paper evaluates the usefulness of various measures of core inflation for the conduct of monetary policy. Traditional exclusion-based measures of core inflation are found to perform relatively poorly across a range of evaluation criteria, in part due to their inability to filter unanticipated transitory shocks. In contrast, measures such as the trimmed mean and the common component of CPI perform favorably, since they better capture persistent price movements and tend to move with macroeconomic drivers. All measures of core inflation, however, have limitations – consequently, there is merit in monitoring a set of measures. Moreover, core inflation measures are best viewed as complements to, rather than substitutes for, the thorough analysis of inflation and capacity pressures that informs the monetary policy process.

Exchange Rate Pass-Through to Consumer Process: Theory and Recent evidence

In an open economy such as Canada's, exchange rate movements can have a material impact on consumer prices. This is particularly important in the current context, with the significant depreciation of the Canadian dollar vis-a-vis the U.S. dollar since late 2012. This paper provides a broad overview of the various mechanisms by which exchange rate movements pass through to consumer prices and discusses the implications of exchange rate pass-through (ERPT) for the conduct of monetary policy. It then describes some of the tools used at the Bank of Canada to help quantify ERPT. We conclude by taking a closer look at the current situation in Canada, presenting a range of evidence that suggests ERPT has played an important role in recent inflation dynamics.

The Optimal Level of the Inflation Target: A Selective Review of the Literature and Outstanding Issues

Bank of Canada research done prior to the most recent renewal of the inflation-control agreement in 2011 concluded that the benefits associated with a target below 2 per cent were insufficient to justify the increased risk of being constrained by the zero lower bound (ZLB) on nominal interest rates. International experience and analysis since the 2011 renewal has reinforced the importance of the ZLB. Despite the deployment of unconventional monetary policy measures by many central banks, the ZLB has proven to be a more severe and persistent obstacle to the achievement of policy goals than expected. At the same time, analysis by the Bank and others has found that interest rates are likely to be lower on average in the future than they were during the first two decades of inflation targeting. As a consequence, the probability of being constrained by the ZLB is likely higher. Together, these factors suggest that a target above 2 per cent should be considered. This paper provides an overview of the current state of knowledge and key outstanding issues regarding the costs and benefits of a higher inflation target.