Bank of Canada Monthly Research Update

February 2014

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

Casadesus-Masanell, Ramon, and Hanna Halaburda, "When Does a Platform Create Value by Limiting Choice?", Journal of Economics and Management Strategy, Vol. 23, No. 2 (Summer 2014), Pages 258-292

Chiu, Jonathan, "Endogenously Segmented Asset Market in an Inventory-theoretic Model of Money", Macroeconomic Dynamics, 2014, Volume 18, Issue 02, Pages 438-472

Reza, Abeer, "Consumption Response to Investment Shocks Under Financial Frictions", Economics Letters, Volume 123, Issue 1, April 2014, Pages 50-53

Forthcoming

Feunou, Bruno, Mohammad R. Jahan-Parvar, and Roméo Tédongap, "Which Parametric Model for Conditional Skewness?", European Journal of Finance

WORKING PAPERS

Allen, Jason, Robert Clark and Jean-François Houde, "Search Frictions and Market Power in Negotiated Price Markets", NBER Working Paper No. 19883

Alpanda, Sami, Gino Cateau and Césaire Meh, "A Policy Model to Analyze Macroprudential Regulations and Monetary Policy", Bank of Canada Working Paper 2014-6

Beers, David and Jean-Sébastien Nadeau, "Introducing a New Database of Sovereign Defaults", Bank of Canada Technical Report No. 101

Damar, Evren H., Reint Gropp and Adi Mordel, "Banks' Financial Distress, Lending Supply and Consumption Expenditure", Bank of Canada Working Paper 2014-7

Paligorova, Teodora and Jun Yang, "Corporate Governance, Product Market Competition and Debt Financing", Bank of Canada Working Paper 2014-5

ABSTRACTS

When Does a Platform Create Value by Limiting Choice?

We present a theory for why it might be rational for a platform to limit the number of applications available on it. Our model is based on the observation that even if users prefer application variety, applications often also exhibit direct network effects. When there are direct network effects, users prefer to consume the same applications to benefit from consumption complementarities. We show that the combination of preference for variety and consumption complementarities gives rise to (i) a commons problem (to better satisfy their individual preference for variety, users have an incentive to consume more applications than the number that maximizes joint utility); (ii) an equilibrium selection problem (consumption complementarities often lead to multiple equilibria, which result in different utility levels for the users); and (iii) a coordination problem (lacking perfect foresight, it is unlikely that users will end up buying the same set of applications). The analysis shows that the platform can resolve these problems and create value by limiting the number of applications available. By limiting choice, the platform may create new equilibria (including the allocation that maximizes users' utility); eliminate equilibria that give lower utility to the users; and reduce the severity of the coordination problem faced by users.

Endogenously Segmented Asset Market in an Inventory-theoretic Model of Money

This paper studies the effects of monetary policy in an inventory-theoretic model of money demand. In this model, agents keep inventories of money, despite the fact that money is dominated in rate of return by interest-bearing assets, because they must pay a fixed cost to transfer funds between the asset market and the goods market. In contrast to exogenous segmentation models in the literature, the timing of money transfers is endogenous. As a result, the model endogenizes the degree of market segmentation as well as the magnitudes of liquidity effects, price sluggishness, and the variability of velocity. I first show that the endogenous segmentation model can generate the positive long-run relationship between money growth and velocity observed in the data, which the exogenous segmentation model fails to capture. I also show that the short-run effects of money shocks on prices, inflation, and nominal interest rates are not robust.

Consumption Response to Investment Shocks Under Financial Frictions

Consumption falls counter-factually on impact for investment-specific technology shocks, which, recent literature suggests, are important drivers of business cycles. Introducing financial frictions and variable capacity utilization to the standard New-Keynesian setup can overturn this co-movement problem, without imposing restrictions on wealth effects, or wage rigidities.

Which Parametric Model for Conditional Skewness?

This paper addresses an existing gap in the developing literature on conditional skewness. We develop a simple procedure to evaluate parametric conditional skewness models. This procedure is based on regressing the realized skewness measures on model-implied conditional skewness values. We find that an asymmetric GARCH-type specification on shape parameters with a skewed generalized error distribution provides the best in-sample fit for the data, as well as reasonable predictions of the realized skewness measure. Our empirical findings imply significant asymmetry with respect to positive and negative news in both conditional asymmetry and kurtosis processes.

Search Frictions and Market Power in Negotiated Price Markets

This paper develops and estimates a search and bargaining model designed to measure the welfare loss associated with frictions in oligopoly markets with negotiated prices. We use the model to quantify the consumer surplus loss induced by the presence of search frictions in the Canadian mortgage market, and evaluate the relative importance of market power, inefficient allocation, and direct search costs in explaining the loss. Our results suggest that search frictions reduce consumer surplus by almost $20 per month on a $100, 000 loan, and that 17% of this reduction can be associated with discrimination, 30% with inefficient matching, and the remainder with the search cost. In addition, we find that product differentiation attenuates the effect of search frictions by reducing the cost of gathering quotes and improving efficiency, while posted prices do so through the ability of the first-mover to price discriminate. In contrast, competition amplifies the welfare effect of search frictions. Despite this, the overall effect of competition is to increase aggregate consumer surplus and drive prices down, but these effects are not spread equally across consumers: those with low search costs benefit more from competition.

A Policy Model to Analyze Macroprudential Regulations and Monetary Policy

We construct a small-open-economy, New Keynesian dynamic stochastic general-equilibrium model with real-financial linkages to analyze the effects of financial shocks and macroprudential policies on the Canadian economy. Our model has four key features. First, it allows for non-trivial interactions between the balance sheets of households, firms and banks within a unified framework. Second, it incorporates a risk-taking channel by allowing the risk appetite of investors to depend on aggregate economic activity and funding conditions. Third, it incorporates long-term debt by allowing households and businesses to pay back their stock of debt over multiple periods. Fourth, it incorporates targeted and broader macroprudential instruments to analyze the interaction between macroprudential and monetary policy. The model also features nominal and real rigidities, and is calibrated to match dynamics in Canadian macroeconomic and financial data. We study the transmission of monetary policy and financial shocks in the model economy, and analyze the effectiveness of various policies in simultaneously achieving macroeconomic and financial stability. We find that, in terms of reducing household debt, more targeted tools such as loan-to-value regulations are the most effective and least costly, followed by bank capital regulations and monetary policy, respectively.

Introducing a New Database of Sovereign Defaults

Until recently, there have been few efforts to systematically measure and aggregate the nominal value of the different types of sovereign government debt in default. To help fill this gap, the Bank of Canada's Credit Rating Assessment Group (CRAG) has developed a comprehensive database of sovereign defaults posted on the Bank of Canada's website. Our database draws on previously published data sets compiled by various official and private sector sources. It combines elements of these, together with new information, to develop estimates of stocks of government obligations in default, including bonds and other marketable securities, bank loans, and official loans in default, valued in U.S. dollars, for the years 1975 to 2013 on both a country-by-country and a global basis. CRAG's new database, and subsequent updates, will be useful to researchers analyzing the economic and financial effects of individual sovereign defaults and, importantly, the impact on global financial stability of episodes involving multiple sovereign defaults.

Banks' Financial Distress, Lending Supply and Consumption Expenditure

The paper employs a unique identification strategy that links survey data on household consumption expenditure to bank-level data in order to estimate the effects of bank financial distress on consumer credit and consumption expenditures. Specifically, we show that households whose banks were more exposed to funding shocks report significantly lower levels of non-mortgage liabilities compared to a matched sample of households. The reduced access to credit, however, does not result in lower levels of consumption. Instead, we show that households compensate by drawing down liquid assets. Only households without the ability to draw on liquid assets reduce consumption. The results are consistent with consumption smoothing in the face of a temporary adverse lending supply shock. The results contrast with recent evidence on the real effects of finance on firms' investment, where even temporary adverse credit supply shocks are associated with significant real effects.

Corporate Governance, Product Market Competition and Debt Financing

This paper examines the impact of product market competition and corporate governance on the cost of debt financing and the use of bond covenants. We find that more anti-takeover provisions are associated with a lower cost of debt only in competitive industries. Because they are exposed to higher takeover risk in competitive industries, bondholders charge higher bond spreads to firms that have fewer anti-takeover provisions. Once firms' anti-takeover provisions are in place, we find that bondholders use fewer payment and debt priority covenants in competitive industries. Our results suggest that product market competition plays a crucial role in explaining the way a firm's anti-takeover protection affects the cost of debt and the use of bond covenants.