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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

Anderson, Stacey, Jean Philippe Dion and Hector Perez-Saiz, "To link or not to link? Netting and exposures between central counterparties", Journal of Financial Market Infrastructures Volume 1/Number 4, Summer 2013 (1–27)

Bi, Huixin, and Nora Traum, "Estimating Fiscal Limits: The Case of Greece", The Journal of Applied Econometrics

Godbout, Claudia, and Sean Langcake, "Demand for Manufacturing imports in China", Reserve Bank of Australia bulletin article, 2013 June Quarter

Forthcoming

WORKING PAPERS

Bulusu, Narayan, Jefferson Duarte, and Carles Vergara-Alert, "Booms and Busts in House Prices Explained by Constraints in Housing Supply", Bank of Canada Working Paper 2013-18

Xu, TengTeng, and M. Hashem Pesaran, "Business Cycle Effects of Credit Shocks in a DSGE Model with Firm Defaults", Bank of Canada Working Paper 2013-19

Xu, TengTeng, and Nathan Porter, "Money Market Rates and Retail Interest Regulation in China: The Disconnect between Interbank and Retail Credit Conditions", Bank of Canada Working Paper 2013-20

ABSTRACTS

To link or not to link? Netting and exposures between central counterparties

This paper provides a framework for comparing linked and unlinked central counterparty (CCP) configurations in terms of total netting achieved by market participants and the total system default exposure that exists between participants and CCPs. A total system perspective – taking both market participant and CCP exposures into account – is required to determine whether or not to consider linking a domestic CCP with an offshore CCP. Using a two-country model, with a global CCP serving both markets and a local CCP clearing only domestic country participants' transactions, we show that establishing links between two CCPs leads to higher exposures for the domestic

CCP. We also show that establishing links can result in a decrease in overall netting efficiency and higher total system exposure when the number of participants at the local CCP is small relative to the number of participants at the global CCP. As the relative importance assigned by decision makers to CCP exposures compared with market participants'exposures increases, so does the number of domestic participants required to make the linked case preferred. Our results imply that the establishment of a link between a small domestic CCP and a larger global CCP is unlikely to be desirable from a total system perspective in the majority of cases.

Estimating Fiscal Limits: The Case of Greece

This paper uses Bayesian methods to estimate the 'fiscal limit' distribution for Greece implied by a rational expectations framework. We build a real business cycle model that allows for interactions among fiscal policy instruments, the stochastic 'fiscal limit,' and sovereign default. A fiscal limit measures the debt level beyond which the government is no longer willing to finance, causing a partial default to occur. Using the particle filter to perform likelihood-based inference, we estimate the full nonlinear model with post-EMU data until 2010Q4. We find that the probability of default on Greek debt remained close to zero until 2009, and then rose sharply to the range of 5% to 10% by 2010Q4. The model predicts a probability of default between 60-80% by 2011Q4, while the 2011 surge in the Greek real interest rate is within model forecast bands. The results suggest that a nonlinear rational expectations environment can account for the Greek interest rate path.

Demand for Manufacturing imports in China

Fluctuations in Chinese imports are often viewed by analysts as containing information about domestic demand in China. However, identifying the extent to which imports of manufactured goods depend on domestic demand is difficult given the integration of Chinese trade in regional manufacturing supply networks. This article analyses Chinese imports of manufactured goods and assesses whether the determinants of manufactured goods imports have changed over the past few years. Over time, imports have declined as a share of Chinese sales of manufactured goods and appear to have become less affected by domestic demand and instead become more sensitive to exports.

Booms and Busts in House Prices Explained by Constraints in Housing Supply

We study the importance of supply constraints in explaining the heterogeneity in house price cycles across geographies in the United States. Comparing the equilibrium house price generated with and without supply constraints in a representative-agent model under irreversibility of housing investment, we derive a relationship between housing returns and changes in supply constraints and determinants of housing demand. Our empirical analysis shows that supply constraints play an important role in Metropolitan Statistical Areas (MSAs) with boom-and-bust behavior. We estimate that, in 19 of the largest MSAs in the United States, supply constraints contributed 25% to the dramatic rise in house prices from 2000 to 2006, and 17% to their sharp fall from 2006 to 2010.

Business Cycle Effects of Credit Shocks in a DSGE Model with Firm Defaults

This paper proposes a theoretical framework to analyze the relationship between credit shocks, firm defaults and volatility, and to study the impact of credit shocks on business cycle dynamics. Firms are identical ex ante but differ ex post due to different realizations of firm-specific technology shocks, possibly leading to default by some firms. The paper advances a new modelling approach for the analysis of firm defaults and financial intermediation that takes account of the financial implications of such defaults for both households and banks. Results from a calibrated version of the model suggest that, in the steady state, a firm's default probability rises with its leverage ratio and the level of uncertainty in the economy. A positive credit shock, defined as a rise in the loan-to-deposit ratio, increases output, consumption, hours and productivity, and reduces the spread between loan and deposit rates. The effects of the credit shock tend to be highly persistent, even without price rigidities and habit persistence in consumption behavior.

Money Market Rates and Retail Interest Regulation in China: The Disconnect between Interbank and Retail Credit Conditions

Interest rates in China are composed of a mix of both market-determined interest rates (interbank rates and bond yields), and regulated interest rates (retail lending and deposit rates), reflecting China's gradual process of interest rate liberalization. This paper investigates the main drivers of China's interbank rates by developing a stylized theoretical model of China's interbank market and estimating an EGARCH model for 7-day interbank repo rates. Our empirical findings suggest that movements in administered interest rates (part of the People's Bank of China's monetary policy toolkit) are important determinants of market-determined interbank rates, in both levels and volatility. The announcement effects of reserve requirement changes also influence interbank rates, as well as liquidity injections from open market operations in recent years. Our results indicate that the regulation of key retail interest rates influences the behaviour of market-determined interbank rates, which may have limited their independence as price signals. Further deposit rate liberalization should allow short-term interbank rates to play a more effective role as the primary indirect monetary policy tool.