

Bank of Canada

Monthly Research Update

March 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

Forthcoming

Halaburda, Hanna, and Felix Oberholzer-Gee, “The Limits of Scale: Companies That Get Big Fast Are Often Left Behind. Here's Why” , Harvard Business Review 92, no. 4 (April 2014): 95–99.

Jin, Jianjian, “Jump-Diffusion Long-Run Risks Models, Variance Risk Premium, and Volatility Dynamics”, Review of Finance

WORKING PAPERS

Ampudia, Miguel and Michael Ehrmann, “Macroeconomic Experiences and Risk Taking of Euro Area Households”, Bank of Canada Working Paper 2014-10 and European Central Bank Working Paper series No. 1652

Arifovic, Jasmina and Janet Hua Jiang, “Do Sunspots Matter? Evidence from an Experimental Study of Bank Runs”, Bank of Canada Working Paper 2014-12

Baumeister, Christiane, Pierre Guérin and Lutz Kilian, “Do High-Frequency Financial Data Help Forecast Oil Prices? The MIDAS Touch at Work”, Bank of Canada Working Paper 2014-11

Campolmi, Alessia and Stefano Gnocchi, “Labor Market Participation, Unemployment and Monetary Policy”, Bank of Canada Working Paper 2014-9

Paligorova, Teodora and João Santos, “Rollover Risk and the Maturity Transformation Function of Banks”, Bank of Canada Working Paper 2014-8

ABSTRACTS

The Limits of Scale: Companies That Get Big Fast Are Often Left Behind. Here's Why

Jump-Diffusion Long-Run Risks Models, Variance Risk Premium, and Volatility Dynamics

This paper calibrates a class of jump-diffusion long-run risks models and quantifies how well they can account for both equity and variance risk premiums while generating realistic volatility dynamics. I find that jumps in the level and the volatility of long-run consumption growth

rates perform equally well in explaining the variance risk premium in stock markets. Moreover, compared to jump-in-growth models, jump-in-volatility models also generate more realistic volatility dynamics and stronger predictability of returns by the variance premium. Finally, both jump-in-volatility and jump-in-growth models suggest that a non-trivial portion of the equity risk premium is due to compensation for jump risks.

Macroeconomic Experiences and Risk Taking of Euro Area Households

This paper studies to what extent the experiences of households shape their willingness to take financial risks. It follows the methodology of Malmendier and Nagel (2011) and applies it to a novel data set on household finances covering euro area households. We show that experienced stock market returns matter in a statistically significant and economically substantial fashion: better experiences increase the financial risk households are willing to take as well as stock market participation along the intensive and the extensive margin. We find that more distant experiences receive a somewhat lower (but still substantial) weight than the corresponding findings suggest for the United States. Furthermore, there are additional effects stemming from the experience of extreme stock market downturns. Households in countries that witnessed a particularly severe 2008 stock market crash give substantially more weight to the most recent experience, suggesting that in these countries an even more pronounced underinvestment in the stock market should be expected in the years to come. The evidence highlights the relevance of personal experiences for household behavior.

Do Sunspots Matter? Evidence from an Experimental Study of Bank Runs

A "sunspot" is a variable that has no direct impact on the economy's fundamental condition, such as preferences, endowments or technologies, but may nonetheless affect economic outcomes through the expectations channel as a coordination device. This paper investigates how people react to sunspots in the context of a bank-run game in a controlled laboratory environment. The sunspot variable is a series of random public announcements predicting withdrawal outcomes. The treatment variable is the coordination parameter, defined as the minimum fraction of depositors required to wait so that waiting entails a higher payoff than withdrawing. We

conduct treatments with a high, low and intermediate value of the coordination parameter. Although theory predicts that sunspot equilibria exist in all treatments, strong responses to sunspots only occur in the treatment featuring the intermediate value of the coordination parameter where strategic uncertainty is high. The policy implication is that people tend to respond strongly to public announcements during times of uncertainty. In those situations, communication to the public must be treated with extra care.

Do High-Frequency Financial Data Help Forecast Oil Prices? The MIDAS Touch at Work

The substantial variation in the real price of oil since 2003 has renewed interest in the question of how to forecast monthly and quarterly oil prices. There also has been increased interest in the link between financial markets and oil markets, including the question of whether financial market information helps forecast the real price of oil in physical markets. An obvious advantage of financial and energy market data in forecasting oil prices is their availability in real time on a daily or weekly basis. We investigate whether mixed-frequency models can be used to take advantage of these rich data sets. We show that, among a range of alternative high-frequency predictors, changes in U.S. crude oil inventories produce substantial and statistically significant real-time improvements in forecast accuracy. The preferred mixed-data sampling (MIDAS) model reduces the mean-squared prediction error by as much as 16 percent compared with the no-change forecast and has statistically significant directional accuracy as high as 80 percent. This MIDAS forecast also is more accurate than a mixed-frequency real-time vector autoregressive forecast, but not systematically more accurate than the corresponding forecast based on monthly inventories. We conclude that typically not much is lost by ignoring high-frequency financial data in forecasting the monthly real price of oil.

Labor Market Participation, Unemployment and Monetary Policy

We incorporate a participation decision in a standard New Keynesian model with matching frictions and show that treating the labor force as constant leads to incorrect evaluation of alternative policies. We also show that the presence of a participation margin mitigates the Shimer critique.

Rollover Risk and the Maturity Transformation Function of Banks

This paper shows that banks that rely heavily on short-term funding engage less in maturity transformation in an attempt to decrease their exposure to rollover risk. These banks shorten both the maturity of their portfolio of loans as well as the maturity of newly issued loans. We find that the loan yield curve becomes steeper with banks' increasing use of short-term funding. The loan maturity shortening is driven by banks and affects borrowers' financing choices - they turn to the bond market for long-term funding. To the extent that borrowers do not manage to compensate for the undesirable shortening of loan maturities by going to the bond market, they may become more exposed to rollover risk due to banks. This potential synchronization of banks' and borrowers' rollover risk can be a source of financial instability once short-term funding suddenly disappears.