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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

Christensen, Ian and Fuchun Li, "Predicting Financial Stress Events: A Signal Extraction Approach", Journal of Financial Stability, 14, p. 54-65

Bekaert, Geert, Michael Ehrmann, Marcel Fratzscher, and Arnaud Mehl, "The Global Crisis and Equity Market Contagion", Journal of Finance, 69 (6), p.2597-2649

Ehrmann, Michael, Chiara Osbat, Jan Strasky, and Lenno Uusküla, "The Euro Exchange Rate During the European Sovereign Debt Crisis – Dancing to its Own Tune?", Journal of International Money and Finance, 49, p.319-339

Forthcoming

Halaburda, Hanna and Yaron Yehezkel, "The Role of Coordination Bias in Platform Competition", Journal of Economics & Manegement Strategy

WORKING PAPERS

Gungor, Sermin and Richard Luger, "Bootstrap Tests of Mean-Variance Efficiency with Multiple Portfolio Groupings", Bank of Canada Working Paper 2014-51

Imura, Yuko, "Credit Market Frictions and Sudden Stops", Bank of Canada Working Paper 2014-49

Rai, Vikram and Lena Suchanek, "The Effect of the Federal Reserve's Tapering Announcements on Emerging Markets", Bank of Canada Working Paper 2014-50

ABSTRACTS

Predicting Financial Stress Events: A Signal Extraction Approach

The objective of this paper is to propose an early warning system that can predict the likelihood of the occurrence of financial stress events within a given period of time. To achieve this goal, the signal extraction approach proposed by Kaminsky, Lizondo and Reinhart (1998) is used to monitor the evolution of a number of economic indicators that tend to exhibit an unusual behaviour in the periods preceding a financial stress event. Based on the individual indicators, we propose three different composite indicators, the summed composite indicator, the extreme composite indicator and the weighted composite indicator. In-sample forecasting results indicate that the three composite indicators are useful tools for predicting financial stress events. The out-of-sample forecasting results suggest that for most countries, including Canada, the weighted composite indicator performs better than the two others across all criteria considered.

The Global Crisis and Equity Market Contagion

We analyze the transmission of the 2007 to 2009 financial crisis to 415 country-industry equity portfolios. We use a factor model to predict crisis returns, defining unexplained increases in factor loadings and residual correlations as indicative of contagion. While we find evidence of contagion from the United States and the global financial sector, the effects are small. By contrast, there has been substantial contagion from domestic markets to individual domestic portfolios, with its severity inversely related to the quality of countries' economic fundamentals. This confirms the "wake-up call" hypothesis, with markets focusing more on country-specific characteristics during the crisis.

The Euro Exchange Rate During the European Sovereign Debt Crisis – Dancing to its Own Tune?

This paper studies the determinants of the euro exchange rate volatility during the European sovereign debt crisis, allowing a role for macroeconomic fundamentals, policy actions and the public debate by policy makers. It finds that the euro exchange rate mainly danced to its own tune, with a particularly low explanatory power for macroeconomic fundamentals. The findings of the paper also suggest that financial markets might have been less reactive to the public debate by policy makers than previously feared. Still, there are instances where exchange rate volatility increased in response to news, such as on days when several politicians from AAA-rated countries went public with negative statements, suggesting that communication by policy makers at times of crisis should be cautious about triggering undesirable financial market reactions.

The Role of Coordination Bias in Platform Competition

This paper considers platform competition in a two-sided market that includes buyers and sellers. One of the platforms benefits from a favorable coordination bias in the market, in that for this platform it is less costly than for the other platform to convince customers that the two sides will coordinate on joining it. We find that the degree of the coordination bias affects the platform's decision regarding the business model (i.e., whether to subsidize buyers or sellers), the access fees and the size of the platform. A slight increase in the coordination bias may induce the advantaged platform to switch from subsidizing sellers to subsidizing buyers, or induce the disadvantaged platform to switch from subsidizing buyers to subsidizing sellers. Moreover, in such a case the advantaged platform switches from oversupplying to undersupplying sellers, and the disadvantaged platform switches from undersupplying to oversupplying sellers.

Bootstrap Tests of Mean-Variance Efficiency with Multiple Portfolio Groupings

We propose double bootstrap methods to test the mean-variance efficiency hypothesis when multiple portfolio groupings of the test assets are considered jointly rather than individually. A direct test of the joint null hypothesis may not be possible with standard methods when the total number of test assets grows large relative to the number of available time-series observations, since the estimate of the disturbance covariance matrix eventually becomes singular. The suggested residual bootstrap procedures based on combining the individual group p-values avoid this problem while controlling the overall significance level. Simulation and empirical results illustrate the usefulness of the joint mean-variance efficiency tests.

Credit Market Frictions and Sudden Stops

Financial crises in emerging economies in the 1980s and 1990s often entailed abrupt declines in foreign capital inflows, improvements in trade balance, and large declines in output and total factor productivity (TFP). This paper develops a two-sector small open economy model wherein heterogeneous firms face collateralized credit constraints for investment loans. The model is calibrated using Mexican data, and explains the economic downturn and subsequent recoveries following financial crises.

In response to a sudden tightening of credit availability, the model generates a large decline in external debt, an improvement in trade balance, and declines in output and TFP, consistent with the stylized facts of sudden stop episodes. Tighter borrowing constraints lead firms to reduce investment and production, which in turn results in some firms holding capital stock disproportionate to their productivity levels. This disrupts the optimal allocation of capital across firms, and generates an endogenous fall in measured TFP. Furthermore, the subsequent recovery is driven by the traded sector, since the credit crunch is more persistent among domestic financing sources relative to foreign financing sources. This is consistent with the experience of Mexico, where the relatively fast recovery from the 1994-95 crisis was driven mainly by the traded sector, which had access to international financial markets.

The Effect of the Federal Reserve's Tapering Announcements on Emerging Markets

The Federal Reserve's quantitative easing (QE) program has been accompanied by a flow of funds into emerging-market economies (EMEs) in search of higher returns. When Federal Reserve officials first mentioned an eventual slowdown and end of purchases under the central bank's QE program in May and June 2013, foreign investors started to withdraw some of these funds, leading to capital outflows, a drop in EME currencies and stock markets, and a rise in bond yields. Using an event-study approach, this paper estimates the impact of "Fed tapering" on EME financial markets and capital flows for 19 EMEs. Results suggest that EMEs with strong fundamentals (e.g., stronger growth and current account position, lower debt, and higher growth in business confidence and productivity), saw more favourable responses to Fed communications on tapering. Capital account openness initially played a role as well, but diminished in importance in subsequent tapering announcements.