

Comments on *Foreign Effects of
Higher US Interest Rates*
by Iacoviello and Navarro

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An Important and Under-Studied Question

- So good motivation

Issues with Theory

- None; the paper is wholly empirical!
- So should judge paper by its two empirical parts

Issues with First Step (exogenous monetary policy shock)

- None

Only 2 Problems with Second Step (linking foreign output to monetary policy shock)

1. Data

2. Methodology

- Especially in Spillovers
 - Choice of Mechanisms
 - Methodology

Data Problems

- 50 Countries, 1965Q1-2014Q4
- “Hmm”s ...
 - Converting annual to quarterly data
 - Extrapolating data backwards
 - Footnote 10: “To avoid dropping observations relative to our benchmark analysis, we fill in the missing observations using backward extrapolation. ***For instance, we assume that the current account position of a country in 1965-1969 is equal to its 1970 value...***”
 - Affects 26/50 countries!
 - Most missing data is early in sample, during fixed exchange rate regime (selection bias?)

Some Nationalistic Bitching

- P13: “Canada, for instance, was closely pegged to the dollar until 2002, kept a managed floating regime between 2002 and 2010 ...”



B A C K G R O U N D E R S

Intervention in the Foreign Exchange Market

The external value of the Canadian dollar, like that of other major currencies, floats. A floating currency is a key component of Canada's monetary policy framework, helping the economy to adjust to shocks and playing an important part in the transmission of monetary policy.

Neither the government nor the Bank of Canada target any particular level for the currency, believing that this should be determined by the market. Over time, the value of the Canadian dollar is influenced by fundamental factors, such as Canada's economic growth and inflation, level of interest rates, fiscal position, productivity performance, etc. These factors are assessed by the market relative to other countries, particularly the United States, our major trade partner. Because Canada is a key producer of raw materials, the world demand for and the prices of commodities are also an important driver of the value of the Canadian dollar.

Policy on foreign exchange intervention

Currency markets can be volatile, and the Bank of Canada may intervene in the foreign exchange markets on behalf of the federal government to counter disruptive short-term movements in the Canadian dollar. Any intervention is governed by an intervention policy, which is established by the government in close consultation with the Bank of Canada.

Prior to September 1998, Canada's policy was to intervene systematically in the foreign exchange market to resist, in an automatic fashion, significant upward or downward pressure on the Canadian dollar. In September 1998, the policy was changed because of the ineffectiveness of intervening to resist movements in the exchange rate caused by changes in fundamental factors. Canada's current policy is to intervene in foreign exchange markets on a discretionary, rather than a systematic, basis and only in exceptional circumstances.

Intervention might be considered if there were signs of a serious near-term market breakdown (e.g., extreme price volatility with buyers or sellers increasingly unwilling to transact), indicating a severe lack of liquidity in the Canadian-dollar market. It might also be considered if extreme currency movements seriously threatened the conditions that support sustainable long-term growth of the Canadian economy, with the goal of helping to stabilize the currency and to signal a commitment to back up the intervention with further policy actions, as necessary.

The mechanics of foreign exchange intervention

Foreign exchange market intervention is conducted by the Bank of Canada, acting as agent for the federal government, using the government's holdings of foreign currencies in the Exchange Fund Account.





If the government and the Bank want to moderate a decline in the relative price of the Canadian dollar, the Bank buys Canadian dollars in foreign exchange markets in exchange for other currencies, mainly U.S. dollars, which come from the Exchange Fund Account. This boosts demand for Canadian dollars and helps support the dollar's value. To make sure that the Bank's purchases do not take money out of circulation and create a shortage of Canadian dollars, which could put upward pressure on Canadian interest rates, the Bank "sterilizes" its purchases by redepositing the same amount of Canadian-dollar balances in the financial system.

Conversely, if the government and the Bank want to slow the currency's rate of appreciation, the Bank sells Canadian dollars from its Canadian-dollar cash balances and purchases other currencies. By selling Canadian dollars, the Bank increases the supply of Canadian dollars in foreign exchange markets, and this provides some resistance to the upward movement in the currency. To sterilize the effect of the Bank's sales of Canadian dollars (and prevent downward pressure on Canadian interest rates), the Bank withdraws the same amount of Canadian-dollar balances from the financial system. The foreign currencies purchased when Canadian dollars are sold are added to the Exchange Fund Account.

When an intervention occurs, an announcement indicating the intervention is made on the Bank's website. The amount of the intervention undertaken is publicly available in the government's monthly official press release on international reserves.

Notes

1. The last time the Bank intervened in foreign exchange markets to affect movements in the Canadian dollar was in September 1998.
2. This backgrounder deals with intervention directed at affecting movements in the Canadian dollar. From time to time, however, Canada participates with other countries in coordinated intervention aimed at affecting the value of a foreign currency. In March, 2011, for example, the Bank of Canada joined authorities in the U.S., the U.K., Europe and Japan in a concerted intervention to stabilize the Japanese currency (press release). In September 2000, the Bank of Canada joined the European Central Bank, the Federal Reserve Bank of New York, the Bank of Japan, and the Bank of England in a concerted intervention to support the euro.
3. The Exchange Fund Account holds foreign reserves, such as U.S. dollars, Japanese yen, European euros, as well as other assets like Special Drawing Rights (SDRs) with the International Monetary Fund (IMF), and gold.

March 2011



Footnote

“1. The last time the Bank intervened in foreign exchange markets to affect movements in the Canadian dollar was in September 1998.”

- Written in March 2011!

Europe: Problematic for \$-Bilateral Approach

50 Countries

- Some countries moved from 2nd world to 3rd world to 1st world
 - China, Czech Republic, Hungary, Poland (China has made first step)
 - Seems odd to estimate time-invariant functions for these

More Serious: Europe *per se*

- 12 countries in EMU – **a large open economy**, mostly unaffected by America after 1971 (compared with Germany)
- 8 are affected by EMU/Germany more than America
 - Czech Rep, Denmark, Iceland, Norway, Poland, Sweden, Switzerland, UK
- These 19 should be re-centered on Germany (and Germany dropped)
 - Reason for excessively large number of rich floating exchange rate observations (80%)

Mechanisms

- Here:

1. Exchange Rate Regime against US\$
2. Trade Openness vis-à-vis US
3. Index of “Financial Conditions” – *Vulnerability Index*
 - Itself a principal component of inflation, output gap, current account deficit
 - Don’t seem mostly financial
 - Why this list?

What About?

1. International Reserves (East Asians, Frankel)
2. External Debt (especially if denominated in FX, Calvo)
3. Capital Controls (most academics)
4. Credit Growth (Borio)
5. Government Debt (Germans)
6. Asset Price Bubbles (MacroPru types)

Methodology

- Why use a PC of 3 variables (inflation ...) rather than 9 separately?
- Foreign GDP is a cause of US monetary shocks (eqn 1)
 - Legal?
 - Note: also *caused* by US monetary shock
 - Note: also part of transmission mechanism (in index of financial conditions)
 - May be hard to disentangle roles

Methodology: somewhat contrived

- Ex 1: Interactions of section 5.1 consists of 5 (!) steps:
 1. Standardization
 2. Logistic transformation
 3. Re-centering
 4. Interacting
 5. Recursively orthogonalizing
- Ex 2: Index of financial conditions is principal component of 3-year moving averages of 3 fundamentals (inflation, ...) truncated at 5%
- Is this complexity really necessary?
 - Simpler is more plausible, perhaps less sensitive
 - Why not just add interactions directly or split sample?

Bottom Line

- Their conclusions:
 - *Using a panel* (with cross-section AND time-series variation) is best
 - *Large* response of foreign output (\approx US) to tighter American monetary policy
 - *Lots of Heterogeneity* in foreign responses
 - Advanced: Tighter trade and FX links (fixing) make for bigger response (classic SOE)
 - Emerging: Financial vulnerability makes for bigger response
- All completely sensible, well-aligned with my priors
- Large Number of Issues with Empirics
- So ... I believe their conclusions
 - Don't believe their evidence
 - No Bayesian updating

Minor

- Tabulate results of estimation of (1)
- Why **68%** confidence intervals?
- Dynamic responses of Figure 4 seem way too slow compared to conventional wisdom of Debt and Tequila crises
 - Foreign effects look permanent ... are they?
- 5.1 and 6.1 are hard to follow
- Make figures readable in B&W