

Discussion of  
'Commodity Prices, Macroeconomic  
Volatility and Canada's Exchange Rate  
Regime'  
by Russell Barnett, Rhys Mendes and  
Andrew Rennison

Felix Delbrück  
Reserve Bank of New Zealand  
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# Motivation

- Flexible exchange rates can help buffer economies against idiosyncratic shocks and idiosyncratic responses to common shocks
- How big are the volatility costs for Canada of a currency union with the US, given the types of economic shocks that hit the US and Canada, and allowing in particular for asymmetric effects of commodity price movements (energy and non-energy, exogenous and endogenous to US demand)?

# The model

- The Bank of Canada's new projection model ToTEM, augmented with a US economy bloc and a ROW bloc jointly determining the price of commodities
- Estimated using Bayesian techniques

# Commodity prices in the model

- Commodity price determination
  - World USD price determined by US demand and a simple ROW supply function
- Commodity price effects
  - Canada exports commodities to US at world USD prices
  - In both Canada and US, commodity prices are
    - an input in final goods production
    - directly consumed by households
  - Slow pass-through to domestic commodity prices: distribution margins absorb world price jumps

# Commodity prices in the model

- An issue: commodity supply and demand elasticities
  - All long-run parameters (including elasticities of supply and substitution) are calibrated
  - Elasticity of substitution in production and consumption the same for commodities as for other goods (0.5)
  - No real frictions in ROW commodity supply or Canadian/US commodity expenditure switching: including these might allow estimation of short-run elasticities

# Results

- On balance a currency union with the US would lead to a substantially more volatile Canadian economy
- Shutting off energy commodity price shocks reduces, but does not eliminate the difference
- The authors suggest that the remaining volatility difference is due to endogenous movements in commodity prices and US demand for Canadian exports

# Some questions

- Sources of volatility under fixed/floating ER: how much do endogenous commodity prices matter?
  - Relative volatilities really vary across different common shocks (monetary policy, consumption, productivity) – how important is the stabilising effect of Canadian monetary policy rule?
  - What if US and Canada's monetary policy rule, frictions were set to be identical?

# Some questions

- Empirical evidence of stabilising effect of floating exchange rate not strong (e.g. Flood and Rose, 1995)
- Lucas critique issues – how much do the following affect the results?
  - correlation between US and Canadian shocks - imposed to fit empirical business cycle correlation
  - risk premium shocks - continue to buffet Canadian economy (and affect Canadian interest rate) under currency union
  - nominal frictions (degree of commodity/import price pass-through)
  - what about other buffers: fiscal policy, international factor mobility?

# Overall

- Endogenous commodity price setup a really interesting extension of the Canada-US currency union debate
- Results work in progress; still room for sensitivity analysis
- But the micro-foundations will help tease out the different channels through which the exchange rates regime matters