

Discussion of
**Monetary Policy and Exchange Rate Stabilization
in Norway and Sweden**

By Hilde C. Bjørnland and Junior Maih

Reform Capacity and Macroeconomic Performance in the Nordic
Countries—Copenhagen Business School

Roberto M. Billi

Sveriges Riksbank

September 20-21, 2013

The plan for this discussion:

- 1 **Why** the analysis is relevant?
- 2 **How** the authors proceed?
- 3 **What** do they find?
- 4 And, **what next** to consider in the analysis?

On the role of the exchange rate for monetary policy

- In theory, international trade can lead central banks to explicitly take into account the exchange rate in setting policy.
- Whether central banks, in actuality, react systematically to the exchange rate to stabilize the business cycle is debatable.
- Empirical evidence suggests that some inflation targeting central banks do respond to the exchange rate.
- Namely, Lubik and Schorfheide (2007) argue that, for instance, Bank of Canada and the Bank of England include the nominal exchange rate in their policy rule, while the central banks of Australia and New Zealand do not.

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A simple, structural open economy model

- Rather than estimating policy reaction functions in a univariate setting, the authors pursue a multivariate approach by estimating the entire structural model.
- The model is based on Lubik and Schorfheide (JME, 2007) and, in turn, on Galí and Monacelli (REStud, 2005).
- Specifically, the model consists of a forward-looking (open economy) IS-equation and a Phillips curve. Monetary policy is described by an interest rate rule, while the exchange rate is introduced via the definition of the CPI and under the assumption of PPP.
- The technical novelty is that, however, the estimation procedure allows for regime switching. Both the policy rule coefficients and the variability of the structural shocks buffeting the economy can change over time.

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Norway and Sweden are similar, yet different

- Regarding similarities, foremost, both countries have successfully adopted inflation targeting.
- Regarding differences, the business cycle has become more stable in Sweden since the early 2000s, as tables 1 and 2 show.
- Another difference, monetary policy has been reacting less to the exchange rate since the early 1980s, as table 3 shows.

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Sweden has a more stable business cycle than Norway

Table 1: Norway and Sweden: Volatility (1983-1999)

	GDP	Inflation	Interest rate	Exchange rate
Norway	1.28	0.62	4.16	3.44
Sweden	0.64	0.96	3.76	2.75

Table 2: Norway and Sweden: Volatility (2000-2011)

	GDP	Inflation	Interest rate	Exchange rate
Norway	1.01	0.65	2.02	2.76
Sweden	1.06	0.44	1.33	2.54

Policy reaction to exchange rate less pronounced in Sweden than in Norway

Table 3: Posterior mode - Interest rate responses

Param	Prior distr	Prior prob	low	high	Norway	Sweden
$\rho_r(\text{coef}, 1)$	Beta	0.9	0.05	0.95	0.07	0.95
$\rho_r(\text{coef}, 2)$	Beta	0.9	0.05	0.95	0.97	0.10
$\gamma_\pi(\text{coef}, 1)$	Gamma	0.9	0.5	3	0.85	0.13
$\gamma_\pi(\text{coef}, 2)$	Gamma	0.9	0.5	3	0.51	0.12
$\gamma_y(\text{coef}, 1)$	Gamma	0.9	0.1	3	2.11	2.00
$\gamma_y(\text{coef}, 2)$	Gamma	0.9	0.1	3	2.94	3.15
$\gamma_e(\text{coef}, 1)$	Gamma	0.9	0.05	3	0.001	0.001
$\gamma_e(\text{coef}, 2)$	Gamma	0.9	0.25	3	4.069	0.061

Some tests may help clarify the empirical findings

- Impose the restriction that the central bank does not react systematically to the exchange rate. Can, then, show whether such restriction is actually rejected by the data.
- The DSGE model imposes cross-equation restrictions in the estimation of the policy rule, while a statistical model does not. Compare the DSGE model estimates to statistical model estimates, to assess the role of the cross-equation restrictions.

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