A CREDIT AND BANKING MODEL FOR EMERGING MARKETS AND AN APPLICATION TO THE PHILIPPINES

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Plan of the Presentation

A Credit and Banking Model for EMs and the Philippines

- Rise in Corporate (and not household) Leverage and growing role of “external” finance.
- Key Macro-financial transmission mechanisms
- DSGE model with banking sector and financial accelerator with foreign borrowing by corporates
- Policy simulations and results.
Corporate leverage has risen in ASEAN particularly in the Philippines…

Debt Has Grown Across ASEAN

- Malaysia
- Thailand
- Indonesia
- Philippines
- Singapore

Debt growth is based on reporting currency to remove the effect of variations in foreign exchange rates. Source: S&P estimates from company filings, S&P Capital IQ.

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And is amongst the highest in the region, on average, albeit less vulnerable to rate rises...

**Latest Corporate Debt to Equity Ratios**

**Corporate Debt by Interest Coverage Ratio**

*(In percent of total corporate debt, 2012)*

Sources: Thomson Reuters Worldscope; and IMF staff calculations.
“External” finance of corporates is rising making them more susceptible to financial conditions…
Although the share of corporate borrowing in local currency is rising notwithstanding the greater access by below IG corporates.
Household debt is low although rising real estate prices and leverage will likely become more important in time.
Transmission mechanisms of shocks
Non-FDI capital flows have a significant impact on domestic demand transmitted through lower cost of equity and bank credit.
While bond yields and real estate prices do not appear to be a key driver yet...
Policy interest rate transmission is imperfect and influenced by global financial conditions.
DSGE Model and Impulse Responses
Small open economy DSGE model of Anand, Saxegaard and Peiris (2010) to include an active banking sector along the lines of Gerali and others (2010).

A financial accelerator mechanism similar to Bernanke, Gertler and Gilchrist (1999) but with both domestic bank credit and foreign borrowing.

We allow rigidities in the pass through of policy interest rates to retail (deposit and lending) rates due to adjustment costs.

Banks observe a cash reserve ratio (keeping a fraction of deposits in liquid form, which do not earn any interest) and statutory liquidity ratio (investing a fraction of deposits in government t-bills) imposed by the central bank.

The wholesale lending rate is linked to the overall leverage of the banking system. When leverage increases, the capital-to-asset ratio moves away from the regulatory level and banks pay a cost, which reduces profits. The wholesale deposit rate is linked to the policy rate, t-bill rate and reserve requirements.
A visual representation
Impulse Responses to 100 Bps Contractionary Monetary Policy Shock (Baseline model and no-FA model)
Impulse Responses to 100 Bps Contractionary Monetary Policy Shock (Baseline model, no-BK model, no-BK-FR model and no-B model)
Impulse Responses to a Negative Shock to Bank Capital (Baseline model with different bank capital adjustment costs)
Impulse Responses to a Positive Shock to Cash Reserve Ratio (CRR)
Impulse Responses to a Positive Shock to Statutory Liquidity Ratio (SLR)
Conclusions and future research

Our analysis suggests that the presence of financial frictions result in the amplification and persistence of shocks, while the presence of monopolistic sticky interest rate setting banking sector attenuates the effect of shocks.

Tightening of credit markets have substantive effects on the economy, and when the central bank resorts to using non-monetary tools and/or results in domestic banks holding a greater share of government securities, there is a larger contraction in output as compared to traditional monetary tightening.

By estimating the model using Bayesian techniques we can use it to study the optimality of monetary and unconventional policies in the Philippines (e.g., see Anand, Saxegaard and Peiris 2010).

The global financial crisis also showed that wholesale funding from abroad and short term liquidity pressures of banks could spillover the real economy. In such circumstances, countercyclical macroprudential policies could also help insulate the economy in coordination with monetary policy (see Ghilardi and Peiris 2014).


The End