

Comments on B. Tabak - M. Laiz and D. Cajueiro
"Financial Stability and Monetary Policy" and D. Hunter
"Financial Market Openness and Monetary Control"
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The usual disclaimer

The views expressed are not necessarily those of the Bank of Finland ...

- Before the most recent crisis we thought we had it!
 - successful monetary policy - stabilizing the macroeconomy - not only conducive to financial stability but all we need
- We concentrated on modelling "normal business cycles"
 - banks or financial intermediation not seen important
 - monetary policy geared to these normal times - zero lower bound not seen in the horizon
 - financial intermediaries often take the back seat in those macromodels that many central banks use that focus on interaction between macroeconomic interaction

More like central banking

- The crisis seems to have changed all this, not least because of the perceived importance of *interbank markets* for financial (in)stability
- Now, monetary policy and financial stability issues seem more intertwined than ever, with financial frictions impinging on the monetary policy trade offs faced by central banks
- MTN in euroarea: the 1st research network among euroarea central research staff focusing on the monetary transmission
 - what is the role of banks/credit markets/financial intermediation in monetary policy transmission
- This was and is not a novel issue in monetary economics (, but the effort to collect and analyze country specific microdata in a coherent and comparable way was!)
- Tabak *et al* visit this theme of "are banks special (for monetary policy transmission)" in their paper with a special focus on Brazil

Banks are special in Brazil? Outline

- Motivation
- Specification and econometrics
- Estimation results
- Comments

- The paper is an interesting variation on the empirics of the credit channel theme with interesting breakdowns of the microlevel banking panel data along different dimension, eg.
 - bank size, bank ownership
 - tight vs. loose monetary policy
- The paper seeks evidence on the existence of two channels for monetary policy transmission
 - bank lending channel (BLC)
 - risk taking channel (RTC)
- BLC operates through the impact of monetary policy on deposits
- RTC operates through banks' risk appetite/tolerance
 - low (high) interest rate regime tend to strengthen (weaken) banks' incentive for more risk taking

- Panel data collected from monthly reports that banks have to submit to the Central Bank of Brazil (CBB)
 - unbalanced panel with 5183 observations
 - income statements and balance sheet data from 99 banks from the period January 2003 to February 2009
- Focus on commercial banks engaging in loan operations
- Data at the level of bank conglomerates + unconsolidated accounts for individual banks
- Rule for handling data from mergers
- Ownership data from the CBB database

- Pretty standard empirical specifications with the choice of (explanatory) variables finetuned to reflect the institutional set up of the financial market environment surrounding the CBB
- Equations capturing the balance sheet channel (loan growth) and risk-taking channel (non-performing loans and credit risk exposure)
 - loan growth, growth of non-performing loans and changes in credit risk exposure explained, via a bi-linear form (eg. with cross-terms), by variables like (lagged changes in) size, capitalization, policy variable and a number of dummies
- Different models are estimated with Feasible Generalized Least Squares (FGLS) with robustness checks through Least Squares Dummy Variable with Bias Correction for dynamic panels (LSDVC)

Estimation results: bank lending and risk-taking channels suggested by the data

- Typical variable deemed indicative of a bank lending channel statistically significant
 - capitalization, size, policy variable (Selic) statistically significant (generally) across specifications
 - the importance of cross-terms varies from one model to another, but quite generally at least one cross-term significant → specific non-linearities present
 - the distinction between loose and tight monetary policy regime seems to be important
 - of the ownership dummies, 'public' appears the one as generally statistically significant → special to the Brazilian economy?
- These results survive the robustness tests

- I really enjoyed reading the paper: very rich in details, informative (this is not a small comment!)
- Authors respect the tradition here in that the estimated models are typical reduced form equations with relatively little theoretical backing for imposing informative constraints to be tested
 - currently the tests are significance tests which, at best, suggest a bank lending and/or risk-taking channel
 - interpretation of the results tailored to the specific result: indicative of the lack of systematic theoretical background
- Functional forms: growth or growth rates?
- Evaluation of how well do the different models explain the data
- The paper says that growth of NPL is persistent (p. 9), but the 1st order acf is negative

- The role of public banks should be analyzed and reported more thoroughly
- The 'Size' variable: interpretation?
 - existing literature tends to take 'Size' as a proxy for informational frictions (intuition: smaller banks are more opaque)
 - if this is not the interpretation, then is it monopoly power that enables bigger banks to obtain funds at lower costs, ie. buffer eg. monetary policy shocks more efficiently
- Finally, Disyatat (2010) develops an interesting interpretation of the bank lending channel based on the external finance premium in the financial intermediation sector
 - gives the strength of the intermediaries' balance sheet a special role
 - the interaction between macroeconomic aggregates and intermediaries' balance sheet also the core focus in the various recent papers by Adrian and Shin

- The interaction between macroeconomic aggregates and intermediaries' balance also put in the centre place in recent contributions to quantitative business cycle modelling and unconventional monetary policy (Gertler - Karadi, Gertler - Kiyotaki)
- Empirical implications of this approach? A more promising way to seek evidence of the importance of banks for monetary policy transmission?
 - puts the emphasis on the structure of credit risk and the effect of monetary policy on it

Emerging financial markets, liberalizations and effectiveness of monetary policy

- An often heard view insists that the effectiveness of monetary policy falls once financial market integration progresses and, in particular, once emerging financial markets are liberalized
- We can find arguments to sustain this view: eg.
 - with more sophisticated financial markets agents can hedge against shocks more efficiently, or
 - binding regulatory constraints on financial market behaviour provide authorities with effective means to affect financial markets and maybe also more generally aggregate economic outcomes
- In the end much depends on the transmission mechanism of monetary policy, how it changes when markets are liberalized and, of course, how the evidence bears on the issue

D. Hunter's paper: key question

- An extensive empirical exploration
- Key question: "has emerging market liberalization led to a loss of monetary control?"
- "Loss of monetary control"
 - *the country's monetary authority is unable to influence in an economically meaningful way local asset prices and, hence, broader economy* **through unanticipated changes in policy interest rates, monetary aggregates or both** (p. 4)
- Context: emerging markets
 - has not been systematically investigated yet
 - many emerging markets created conditions for the loss of local monetary control in the late 1980's

"Impossible trinity" in the background

- I.e. "impossible trinity" of financial market integration, exchange rate stability and monetary independence
- Hunter focuses on the more basic/specific question: "Is local monetary policy in emerging markets able to influence local asset prices in the post-liberalization period?" (p. 4)
 - if not, is it because firms have greater access to foreign capital?
 - if yes, is it because the effects are confined to local assets which are not open to foreign capital?
- Paper focuses on the effects on equity markets
 - these markets are forward-looking and informationally efficient
- Differences in the response of investable and non-investable stocks to policy shocks to provide evidence on the relationship between monetary control and financial market openness

Four main hypotheses

- Monetary policy has smaller effect impact on investable than on non-investable stocks
- Foreign monetary policy has a greater impact on investable stocks than on non-investable stocks
- Accounting for foreign monetary policy any impact of local monetary policy on investable stocks should diminish
- Local monetary policy has no effect on aggregate stock market because of the insensitivity of investable stock to local policy, but high sensitivity to foreign policy

- 28 emerging aggregate stock market returns, returns on investable and non-investable stocks
- International Finance Corporation's Emerging Market DataBase
 - value-weighted market index (Global Index)
 - thinvestable index
- No corresponding index of non-investable component for the Global Index → follow Boyer, Kumagai and Yuan (2006) to calculate returns on non-investable stocks
- Table 1 (p. 50) suggests considerable variation in the mean returns across countries for all the returns
- The number of investable stock in the data set is large

Monetary policy instrument and other variables

- Interbank interest rate and the discount rate (availability: 50% of the sample countries)
- Complementing the set of policy instruments for other countries: Treasury bill rate, the money market rate and 10-year government bond rate
- Monetary aggregate M1 used when the interest rate does not affect stock prices
- US monetary policy used as a proxy for foreign monetary policy to each emerging market
- Returns on the world stock market converted to local-currency returns using bilateral exchange rates with the US\$

- Policy shocks

- shocks to Fed funds rate with expected Fed funds rate constructed from Fed funds futures rates á la Kuttner (2001)
- residuals from ARMA(p,q) model for the change in monetary policy instrument
- residuals from a two 2-dimensional VAR(p) consisting of the change in monetary policy instrument and stock market returns with different identification schemes

- ① Does monetary policy affect stock market returns in the post liberalization period?
 - a. the overall conclusion seems to be that monetary authorities have not lost monetary control in emerging markets
- ② The impact of crises and foreign monetary policy on local monetary control
 - a. in 20 out 28 countries monetary policy significantly affects stock market returns (foreign monetary policy accounted for)

3. Monetary policy more effective under more flexible exchange rates (controlling also for crises)
 - a. results indicate that monetary policy effective also under fixed exchange rates; in some cases the tests do not even pick a significant monetary control under flex rates
4. Controlling for the possible endogeneity of local monetary policy does not (materially) affect the results

5. Evidence indicates that local monetary control in emerging markets is exerted through the entire stock market (despite the presence of US monetary policy)
6. Some evidence that local monetary control significantly affects investable stocks, but not non-investable stocks
7. These results are not driven by exchange rate flexibility

- A comprehensive empirical study of the effects of local monetary control on emerging economy stock markets
- Combines different approaches to measuring monetary policy shocks that are used to estimate the effects of these shocks
- Paper is well written, various steps of the analysis well thought and argued for
- Paper very long!
- Difficult to comment on the results as I tend to agree with the most basic result, ie. liberalization does not by itself weaken monetary policy effectiveness
- However, some smaller and some bigger comments
- First, most of the variation of stock market returns still remains unexplained as the R^2 :s remain fairly low

- Investable vs non-investable stocks:
 - although investables have access to foreign capital, it does not necessarily drive credit spreads, country spreads etc. to zero
 - hence, both investables and non-investables may be subject to time varying spreads, although investables less so
 - could, in principle, explain why no significant differences between the two
 - to what extent are non-investables really non-investables: can their returns be replicated in any way using existing assets?
 - if can, reduces the set of non-investables and this could contribute to explaining no significant differences
- Policy shocks vs systematic policy: liberalization may induce important changes in behaviour and the propagation mechanism of shocks (eg. forward-looking behaviour strengthened)

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