



EUROPEAN CENTRAL BANK

EUROSYSTEM

“Vulnerabilities and Cyclical Macroprudential Policies” Discussion by Luc Laeven (ECB and CEPR)

59th Economic Conference at the Federal
Reserve Bank of Boston, October 2-3, 2015

*Disclaimer: The views expressed here are my
own and not those of the ECB.*

The paper

- Studies the effects of shocks to indicators of financial vulnerabilities – credit-to-GDP gap and investor risk appetite – on macroeconomic performance in a Bayesian VAR that also includes proxies for macroprudential “policy” – aggregate bank capital and loan-to-value ratios
- Uses the estimated system to generate conditional forecasts based on hypothetical changes to the macroprudential variables with a view to evaluate the effectiveness of monetary and macroprudential policies
- Considers differences across household and business credit, and bank versus nonbank credit

Findings

- Timeseries dynamics of financial vulnerability indicators
 - Financial cycle based on credit-to-GDP gap has lower frequency than the business cycle, but frequency depends on sub-sectors—more cycles for business and bank credit than for household and nonbank credit
- The VAR results show that financial shocks have real effects
 - In periods of high credit-to-GDP gap, a positive credit shock results in a delayed decline in real output and an increase in unemployment
- Monetary policy can contain credit only in the early phase of the financial cycle when vulnerabilities are low
 - Positive monetary policy shocks lead to a contraction in credit-to-GDP only in low credit gap periods, but have no effect when the credit-to-GDP gap is high
- Macroprudential policy is effective in containing credit also when vulnerabilities are high
 - An increase in bank capital would have resulted in a reduction of credit-to-GDP but at the cost of short-run declines in real output, prices, and employment

Technical comments

- The VAR includes macroprudential variables alongside traditional ones, with monetary policy fully endogenous, reacting to all shocks (also macroprudential): way beyond traditional (Taylor) policy rules
- The conditional forecasts to draw inference about the effectiveness of macroprudential policy are problematic
 - Lucas critique (acknowledged): cannot use reduced-form results to evaluate the response under alternative regime (VAR coefficients would be different)
 - Endogeneity: Changes to the macroprudential variables are not exogenous policy shocks; the system will assume that such changes come about from within, including say from monetary policy shocks
- Small sample to draw strong conclusions: sample period covers only two financial cycles
- Changes in average bank capital is different from changes in capital requirements: which is binding?

Suggestions

- Exploit structural breaks such as the increase in bank capital following the Basel capital accord in the early 1990s to help identify the real effects of policy-induced changes in capital
- Apply your methodology to other countries where macroprudential policies have actually been used (exploit the cross-country database on macroprudential measures in Cerutti, Claessens, and Laeven, 2015)
- Consider also real credit growth as alternative measure (to avoid missing episodes of rapidly growing credit that grow with economic activity) as most economies cannot sustain high loan growth rates without misallocation of credit

Financial cycles: Distinct from business cycles?

- Recent work by Ruenstler and Vlekke (2015) confirms earlier evidence by Borio, Drehmann, and Tstsaronis (2012) of large, long, and persistent financial (credit) cycles using multivariate structural time series models (as opposed to univariate band-pass filters)
- However they also find that financial cycles are highly correlated with a medium-term component in GDP cycles, raising questions about the degree to which financial and business cycles are different phenomena

Financial stability as a dual mandate

- Some have argued that financial instability is inherently more difficult to measure than price stability (Blanchard, Dell'Ariccia, Di Mauro 2013), raising questions about whether macroprudential policy should be conducted by monetary policy institutions under a dual mandate
- But if financial (credit) cycles are indeed larger, longer, and more persistent than business cycles, this should make it at least as easy (or hard) to identify financial excesses in real time as economic overheating
- This paper adds to the literature by proposing a simple measure of financial instability (credit gaps) and showing that shocks to this variable usefully capture real effects

Killing good booms

- The paper is quite quick to conclude that “policymakers might wish to use macroprudential tools” to end growing gaps between credit
- Using international data on 170 countries over the period 1970-2010, Dell’Ariccia, Igan, Laeven, and Tong (2015) show that only about **1-in-3** credit booms (defined either on the basis of real credit growth or deviations from trend) end up in a financial crisis or below-trend economic performance
- This implies that the cost of intervening too early and running the risk of stopping a good boom have to be carefully weighted against the desire to prevent financial crises

Credit booms gone wrong

| Table 3. Credit Booms Gone Wrong | | | | | | | |
|--|--------|------------------------|--------|------------------------|--------|------------------------|--|
| Followed by economic underperformance? | | | | | | | |
| Followed by financial crisis? | No | | Yes | | Total | | |
| | Number | Percent of total cases | Number | Percent of total cases | Number | Percent of total cases | |
| No | 54 | 31% | 64 | 37% | 118 | 67% | |
| Yes | 16 | 9% | 41 | 23% | 57 | 33% | |
| Total | 70 | 40% | 105 | 60% | 175 | | |

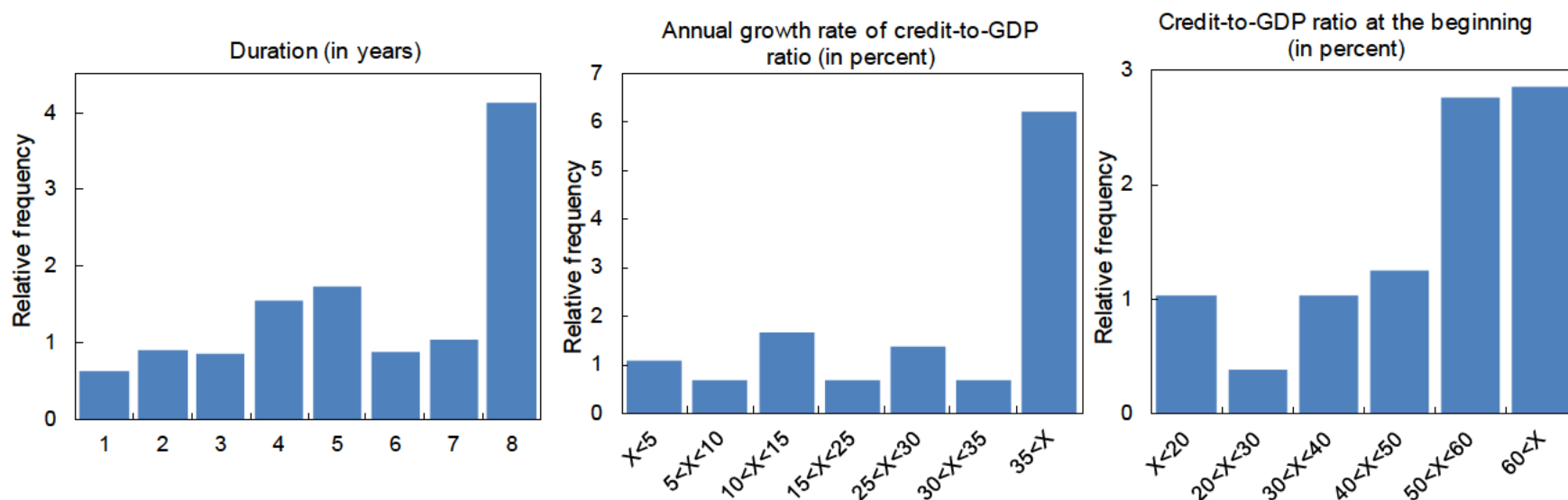
Notes: Number and proportion of credit boom episodes are shown. A boom is followed by a financial crisis if a banking crisis happened within the three-year period after the end of the boom and is followed by economic underperformance if real GDP growth was below its trend, calculated by applying a moving-average filter, within the six-year period after the end of the boom.

Source: Table 3 in Dell'Ariccia, Igan, Laeven, and Tong (2015)

Results in international comparison

Figure 7. Bad versus Good Booms

Booms that last longer and that develop faster are more likely to end up badly. Booms that start at a high level of credit-to-GDP also tend to be bad.



Sources: IMF *International Financial Statistics*; staff calculations.

Notes: Relative frequency is the frequency of a given attribute in bad booms divided by the frequency in good booms. Credit booms are identified as episodes during which the growth rate of credit-to-GDP ratio exceeds the growth rate implied by this ratio's backward-looking, country-specific trend by a certain threshold. Bad booms are those that are followed by a banking crisis within three years of their end.

Source: Dell'Ariccia, Igan, Laeven, and Tong (2015)

Risk-taking channel of monetary policy

- There is growing evidence of search for yield (Rajan 2015) and risk shifting (Adrian and Shin 2011) in response to lax monetary policy
- But the overall effects on monetary policy on risk-taking are theoretically ambiguous (Dell'Ariccia-Laeven-Marquez 2014), trading off risk shifting with portfolio rebalancing, and will depend on bank leverage
- Empirical studies find evidence of risk taking (Jimenez et al 2014 and Dell'Ariccia-Laeven-Suarez 2013) but effects vary depending on bank leverage and offer no guide to optimal risk

Evidence on effectiveness of macroprudential policies is mixed

- The evidence on the effectiveness of macroprudential policies in preventing credit booms is mixed (“effect is more on the growth rate of credit than the level”)—possibly due to circumvention—and they provide little support in busts (Cerutti-Claessens-Laeven 2015)
- Monetary policy may be the “more blunt tool” but may actually “get into the cracks” (Stein 2013); but there are limits to what monetary policy can achieve especially at the lower bound
- Sectoral imbalances often are at the root of crises, requiring a rebalancing between savers and borrowers; may require also other policies (fiscal/restructuring) (Calomiris-Klingebiel-Laeven 2005)
- Advanced economies have been slow to restructure, weighing heavily on monetary policy, as opposed to emerging markets in previous crises (Laeven and Valencia 2010)

Overall

- Nice paper; more work needed
- Speaks to a growing literature on measuring financial vulnerabilities, their ability to amplify shocks to the real economy, and the rationale for macroprudential policy