

Comments on “Credit growth and macroprudential policies: preliminary evidence on the firm level”

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Summary

This paper deals with important policy issues relating to macroprudential policies (MPPs), such as how to assess the effectiveness of different MPPs on firms’ short-term vs long-term external financing, and also how to test heterogeneity of the relationships across different types of firm (eg small vs large, young vs old), country (emerging market vs advanced) and macroprudential instrument (eg borrower-targeted vs financial institution-targeted). For this purpose, the authors combine firm-level data for over 1.3 million firms for the period between 2000 and 2011 in 59 countries that have adopted 12 different MPPs, and conduct panel regression analyses.

The authors find that MPPs matter more for smaller firms with limited non-bank financing sources, that only borrower-targeted MPPs are negatively associated with growth of long-term debts, and that both borrower- and financial institutions-targeted MPPs are negatively associated with the growth of short-term and overall debt. On the heterogeneity of the empirical results, they find that mostly smaller firms are affected by MPPs in advanced countries, while in emerging market economies both small and young firms are affected. Also, they find that mainly borrower-targeted MPPs seem to work in emerging market economies, while both borrower- and bank-related MPPs seem to work in reducing credit growth in advanced countries. Finally, they find that MPPs targeting borrowers are more effective in emerging market economies.

The important main contribution of this paper is that this is the first paper that explores the impact of MPPs on specific firm-level credit growth, rather than typical macro-level impacts, such as GDP or total credit growth. Also, this paper uses a massive amount of firm-level data of both listed and unlisted private firms with different sizes and ages.

Comments on data

My comments start with the quality of the data used in this paper. The authors used data for over 1.3 million firms, including both listed and unlisted private firms with different sizes and ages in 59 countries. It is well known that data for small firms, particularly those for unlisted firms in emerging market economies, have serious reliability problems. Even in advanced countries, data for small and medium-sized enterprises (SMEs) as well as unlisted private firms have serious reliability problems.

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Therefore, I suggest that the authors assess the costs and benefits of including data for a large number of small, unlisted firms.

In Table A1, the country and firm coverage of data used in this paper are specified. However, the authors do not provide information on which countries are advanced or emerging market, and how many firms in each country are small, medium or large. For our information, Cerutti et al (2015) covers 31 advanced countries, 64 emerging market economies and 24 low-income developing countries. I suggest checking the robustness of the empirical results depending on the group of countries and firms.

Finally, the number of surveyed firms for each country varies too much, as the authors also admit. Usually, small firms are more dominant in emerging market economies than they are in advanced countries. Even in advanced countries, the number of firms is quite unbalanced, such as 355, 851 firms in France, 12,165 firms in the United States, and only 115 firms in Switzerland. I wonder if the authors can fix this problem by using a more balanced number of firms for each country. In particular, how about using only listed firms by deleting private firms that may have significantly different characteristics across countries? If data for only listed firms were to be used in this paper, the authors could also use stock price data. In that case, I would suggest including Tobin's Q variable in the regression model to control investment opportunities on the assumption that firms may increase debt for investment purposes.

Comments on empirical specifications

On the empirical specifications, I have couple of comments. First, I suggest the authors consider including a new control variable, $\log \text{debt}_{i,t-1}$, since highly indebted firms may have difficulty in receiving fresh loans because of a debt overhang. And, a hypothesis can be tested if highly indebted firms are more sensitive to MPPs.

Second, I suggest including a new control variable to test if firms with alternative financing sources are more weakly associated with MPPs. In that case, the authors could check if MPPs do not work for the firms that can easily finance themselves from alternative sources, such as capital markets or foreign financial institutions.

Third, related to the impact of the Great Financial Crisis in 2008, this paper simply includes a time dummy variable, GFC. However, a GFC variable can only capture the impact of financial crisis on firms' total debt growth. To test the impact of MPPs pre- and post-crisis, I suggest estimating regressions separately for the periods before and after the crisis.

Fourth, some recent financial researchers, such as Hadlock et al (2010), proposed measuring firms' financial constraints by size and age. I am curious if the findings of this paper can be linked to the outcome of those researches. More specifically, is it possible to interpret the results of this paper as "Are those firms with more serious financial constraints influenced by MPPs?"

Fifth, since country-specific effects are not considered in this paper, the error term (ε_{ijt}), might be serially correlated due to the individual country j 's trend in adopting MPPs. To check the robustness of this correlation problem, applying the Generalised Method of Moments (GMM) may be considered:

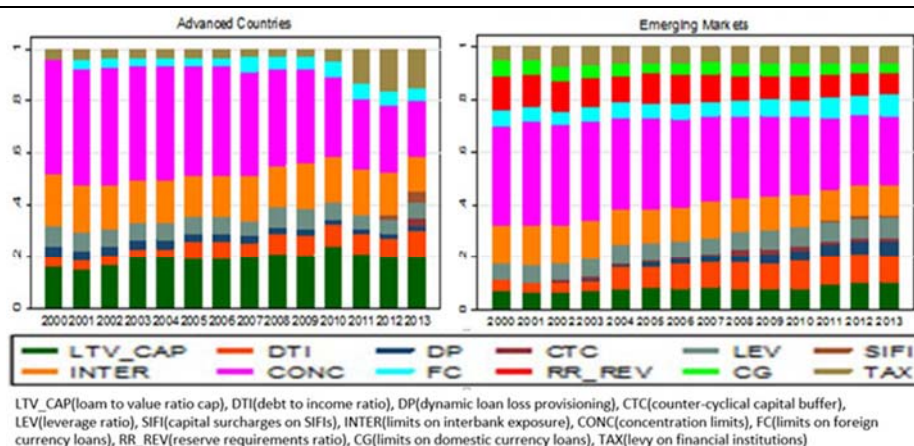
Finally, to test possibility of co-movements among countries' implementation of MPPs, I suggest applying a panel co-integration estimation method.

Comments on the effects of macroprudential policies

When we review the macroprudential instruments actually used in advanced and emerging market economies, LTV limits are used relatively more in advanced countries, while debt-service-to-income limits are used more in emerging market economies. Also, the financial institution-targeted instruments, such as limits on the growth in domestic currency loans (CG) and reserve requirements (RR_REV), are mainly used in emerging market economies. As we see in the graphs below, the portion of financial institution-targeted MPPs in emerging market economies is greater than that of advanced countries, and furthermore emerging market economies are heavily dependent on limits on foreign currency loans.

The relative use of macroprudential policies over time by group

Graph 1



LTV_CAP(loan to value ratio cap), DTI(debt to income ratio), DP(dynamic loan loss provisioning), CTC(counter-cyclical capital buffer), LEV(leverage ratio), SIFI(capital surcharges on SIFIs), INTER(limits on interbank exposure), CONC(concentration limits), FC(limits on foreign currency loans), RR_REV(reserve requirements ratio), CG(limits on domestic currency loans), TAX(levy on financial institutions)

Source: Cerutti, Claessens and Laeven(2015), "The use of effectiveness of macroprudential policies," presented at CBRT/BIS/IMF conference, Istanbul, Turkey on 26-27 Oct. 2015

A question can be raised on the relationship between these facts and the empirical evidence found in this paper. More specifically, why are financial institutions-targeted MPPs more effective in advanced countries even though they do not use them as the main instruments, such as CG or RR_REV?

Another question can be raised on the inconsistency between the findings in the empirical results in Table 3 (pages 27 and 28). The main text (page 30, first paragraph) and the three panels in Table 3 show that borrower-related policies (BOR) have no significant relationship with short-term financing growth in the case of firms in advanced countries with 10 or more employees or firms with three or fewer years since incorporation, but have a significant relationship with short-term financing growth in the case of smaller firms with fewer than 10 employees.

My final comment is on the reasons why MPPs work better for small firms. The authors explain that it is because small firms are able to borrow against the owners' collateral. However, I think MPPs are more effective for small firms, particularly in emerging market economies, because they cannot easily circumvent MPPs but large

firms can easily borrow abroad or from another sources thanks to their relatively strong reputation. Cerutti et al (2015) also found that MPPs have weaker effects in more developed and more financially open economies.

References

Cerutti, E, S Claessens and L Laeven (2015): "The use and effectiveness of macroprudential policies", presented at CBRT/BIS/IMF conference, Istanbul, Turkey on 26–27 October 2015.

Hadlock, C and J Pierce (2010): "New evidence on measuring financial constraints: moving beyond the KZ index", *Review of Financial Studies*, vol 23, issue 5, pp 1909-40, March.