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Volatile Capital Flows and Economic Growth:
The Role of Macro-prudential Regulation (Summary column)

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Macro-prudential policies, their use, implementation and effectiveness, have been at the centre of a heated debate since the onset of the global financial crisis. The work that has been produced solely focused on the implications of macro-prudential regulation for short-term economic stability. This column sets the emphasis on the long-term effects of financial regulation and finds that macro-prudential regulation promotes economic growth by mitigating the adverse effects of financial volatility. The results support the argument that macro-prudential policy rules designed to ensure financial stability are beneficial to long-run economic growth.

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Macro-prudential regulation and economic growth

The global financial and economic crisis of 2007–09 has highlighted weaknesses in macroeconomic and regulatory practices and market failures that contributed to a buildup of systemic risks. At the international level, this led to the setup of macro-prudential oversight frameworks with the aim to contain systemic risks and achieve greater financial stability, and in this way reduce the adverse consequences of financial volatility for the real economy.

Recent work has examined the effectiveness of macro-prudential regulation on the credit and housing markets, providing evidence that such policies can contribute to reducing systemic risk and financial instability.[1] The effectiveness of macro-prudential rules, however, cannot be fully assessed by limiting the analysis in the short-term objective of financial and economic stability, but also by taking into account the broad objective of economic growth. From this perspective, one can raise the following questions. How does financial volatility affect long-run growth? Can macro-prudential rules designed to reduce the procyclicality of financial systems be detrimental to long-run growth, due to their effect on risk taking, or can they promote growth by attenuating the adverse effects of financial volatility? Evidently, these matters are equally relevant for advanced and developing countries and despite the growing body of research on the effectiveness of macro-prudential policies, evidence on their growth implications available to date is still limited.

The crisis thus provides strong fresh impetus for examining empirically the relationship among macro-prudential regulation, financial volatility, and economic growth. In a new paper (Neanidis, 2015), we assess the success of macro-prudential policy in reducing systemic risks by dampening the procyclicality and the volatility of flows, expected to give rise to a growth-promoting effect.

Broadly defining financial volatility as the volatility of international capital flows, we investigate the relationship between economic growth and volatile capital flows by paying special attention to the role of macro-prudential regulation. This is captured by an interaction term between capital flows volatility and macro-prudential policies in an otherwise standard growth regression, that shows the effect of volatile capital flows on growth in the presence of macro-prudential policies. The types of capital flows we study are total capital flows and its subcomponents, foreign direct investment (FDI), portfolio equity investment, and debt securities. All capital flow variables are expressed as a fraction of GDP and their volatility is measured by the standard deviation of the normalized flows. Macro-prudential regulation is measured by (i) an indicator of prudential regulation and banking sector supervision by Abiad *et al.* (2008) and (ii) a macro-prudential index that combines twelve different macro-prudential instruments by Cerutti *et al.* (2015). We also control for a vector of other relevant macroeconomic variables that include initial GDP per capita, education, the growth rate of the population, private investment, trade openness, government consumption expenditure, inflation, institutional quality of the government, and a measure of financial depth. Our sample covers about 80 countries over the period 1973-2013. In further analysis, we also examine whether our findings are driven by income and regional characteristics of our country sample, or being conditioned by domestic country characteristics.

Empirical results

Our results indicate that (i) the levels of total capital flows and FDI flows are not statistically sig-

1. The main findings are that macro-prudential regulation policies can curb a real estate boom (Crowe *et al.*, 2011), reduce the procyclicality of credit and leverage (Lim *et al.*, 2011), reduce the incidence of general credit booms and decrease the probability that booms end up badly (Dell'Ariccia *et al.*, 2012), and slow down house price inflation (Vandenbussche *et al.*, 2015).

nificant whereas equity flows enhance growth and debt flows diminish growth, (ii) more variable capital flows, of any type, reduce economic growth, and (iii) although macro-prudential regulation by itself has an unclear growth effect, ranging from positive to negative, it does mitigate the negative growth effect induced by more volatile capital flows. This means that macro-prudential policies, by encouraging a greater buildup of buffers, attenuate the adverse growth effects of unstable capital flows and, by so doing, are effective in limiting financial system vulnerabilities.

We assess the economic significance of this effect for the case of total capital flows. Increasing the volatility of total capital flows by one standard deviation decreases the growth rate of GDP per capita by 3.108%, while increasing the interaction term by one standard deviation increases growth by 1.288%. This means that macro-prudential regulation has the capacity to reduce substantially, by about 40%, the negative impact of total capital flows volatility on growth.

Further findings are summarised as follows:

i. The outcomes are mainly restricted in the sample of middle-income countries, since it is this group of countries that have relied more on macro-prudential policies while, at the same time, their not-so-fully-developed financial systems constrain any alternative sources of finance, making it more likely for macro-prudential policies to be effective.

ii. In Sub-Saharan Africa, with an experience of sustained economic growth since the mid-1990s but with the most financially under-developed system in the world, volatile capital flows disrupt economic growth, but more so compared to the average country in the sample. It is for this reason that macro-prudential regulation is found to attenuate the effect of volatile flows at a much greater degree.

iii. The same findings apply for a sub-sample of countries in SSA, in Francophone SSA. This, however, is not the case for an even smaller sub-sample of countries that participate in the West African Economic and Monetary Union (WAEMU/BCEAO). Although these countries benefit from the impact of macro-prudential policies, they do not appear to obtain any additional marginal gains.

iv. The effectiveness of macro-prudential regulation diminishes in magnitude in economies that are relatively open, with deeper financial systems, and exposed to greater macroeconomic instability.

Concluding remarks

There are growing concerns in both advanced and developing countries that large and volatile capital inflows may harm their financial systems and real economies. Historical experiences of capital-inflow bonanzas which created short-term booms but eventually led to crises, lend further weight to such concerns. As response to these events, regulatory reforms in the form of macro-prudential policies have been put in place, aimed at strengthening the safeguards against financial instability. Such regulatory frameworks, however, need to be judged for their effectiveness not only against the objective of short-term economic stability, but also with reference to their long-run growth implications. Our analysis takes this consideration into account and investigates the role of macro-prudential rules in the long-run growth process by focusing on the way financial regulation influences financial volatility. Our empirical results indicate that macro-prudential policies succeed in mitigating the negative growth effects of unstable capital flows and, by so doing, become effective in limiting financial system vulnerabilities. Further results qualify that these outcomes are mainly restricted in the sample of middle-income countries, while countries that are relatively open, with deep financial systems and exposed to macroeconomic volatility experience lower marginal gains—although they still benefit. At the same time, SSA and within it its

Francophone countries gain enormously from the imposition of macro-prudential regulation, over and above the average gains in our country sample. This implies that the marginal benefits in these regions have the potential to continue with the spread of pan-African banking groups so long as financial regulation is not outpaced. In contrast, the group of WAEMU/BCEAO countries by applying uniform bank regulations and supervisory practices may have reached their maximum benefit from utilizing macro-prudential rules given the current size of the financial sector and the inflows of capital.

At a broader level, the results of our empirical analysis confirm the need for policymakers to treat macro-prudential policies as important elements of their toolkit aimed at overall systemic risk mitigation, especially for countries exposed to large and volatile movements in financial flows. This, in turn, then would justify efforts for international cooperation and coordination in setting macro-prudential rules and standards as a way of combating and minimizing financial volatility and its consequences.

References

- **Abiad, A., Detragiache, E.**, and **Tressel, T.**, 2008. "A new database of financial reforms." IMF Working Paper, No. 266.
- **Cerutti, E., Claessens, S.**, and **Laeven, L.**, 2015. "The use and effectiveness of macroprudential policies: new evidence." IMF Working Paper, No. 61.
- **Crowe, C.W., Igan, D., Dell'Ariccia, G.**, and **Rabanal, P.**, 2011. "How to deal with real estate booms: lessons from country experiences." IMF Working Paper, No. 91.
- **Dell'Ariccia, G., Igan, D., Laeven, L.**, and **Tong, H.**, with **Bakker, B., and Vandenbussche, J.**, 2012. "Policies for macrofinancial stability: how to deal with credit booms." IMF Staff Discussion Note, No. 06.
- **Lim, C.H., Columba, F., Costa, A., Kongsamut, P., Otani, A., Saiyid, M., Wezel, T.**, and **Wu, X.**, 2011. "Macroprudential policy: What instruments and how are they used? Lessons from country experiences", IMF Working Paper, No. 238.
- **Neanidis, K.C.**, 2015. "Volatile Capital Flows and Economic Growth: The Role of Macroprudential Regulation." Centre for Growth and Business Cycle Research Discussion Paper Series, University of Manchester, No. 215.
- **Vandenbussche, J., Vogel, U.**, and **Detragiache, E.**, 2015. "Macroprudential policies and housing prices: a new database and empirical evidence for Central, Eastern, and Southeastern Europe." *Journal of Money, Credit and Banking* 47(1), 343-377.

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