Jon Danielsson, Robert Macrae, Dimitri Tsomocos and Jean-Pierre Zigrand

Why macropru can end up being procyclical

Website (Opinion Piece) (Published version)

Why macropru can end up being procyclical | VOX, CEPR's Policy Portal

Jon Danielsson, Robert Macrae, Dimitri Tsomocos, Jean-Pierre Zigrand

15 December 2016

Discretionary macroprudential policies aim to be countercyclical by adjusting risk-taking across the financial cycle. This column argues that the opposite effect may happen in certain cases. Depending on how regulators measure risk and how they react, the eventual outcome may well be procyclical, with serious unintended consequences.

The purpose of macroprudential policies, or 'macropru', is to prevent excessive risk accumulating in the financial system, to contain financial crises when they happen, and to ensure the financial system contributes to economic growth.

There are many directions the authorities can take when implementing macropru (e.g. Cerutti et al. 2016). Most are passive, focusing on crisis resolution and fixed rules that hold through the financial cycle. Such macropru implementations have been very successful in preventing crises, with the banning of buying stocks on margin in the US in 1933 just one example.

More ambitious macroprudential policies aim to lean against the wind in a discretionary manner, with policymakers exercising their discretion to deviate from fixed rules when they deem it necessary. They may tighten capital and liquidity requirements during upswings or 'bubbles' when the market perceives risk to be low, and then relax the same rules during and after a crisis when the market acts too risk-averse. They also cut through the amplifying feedback loops that are at the heart of both bubbles and crashes. In doing so, such discretionary macropru policies aim to be countercyclical. If successful, discretionary macropru is of considerable benefit to the wider economy.

However, discretionary macropru is tricky to get right. There are several situations under which it could end up doing exactly opposite of what was promised and perversely exacerbating boom-and-bust financial cycles instead of mitigating them – in other words, it can end up being procyclical instead of countercyclical.

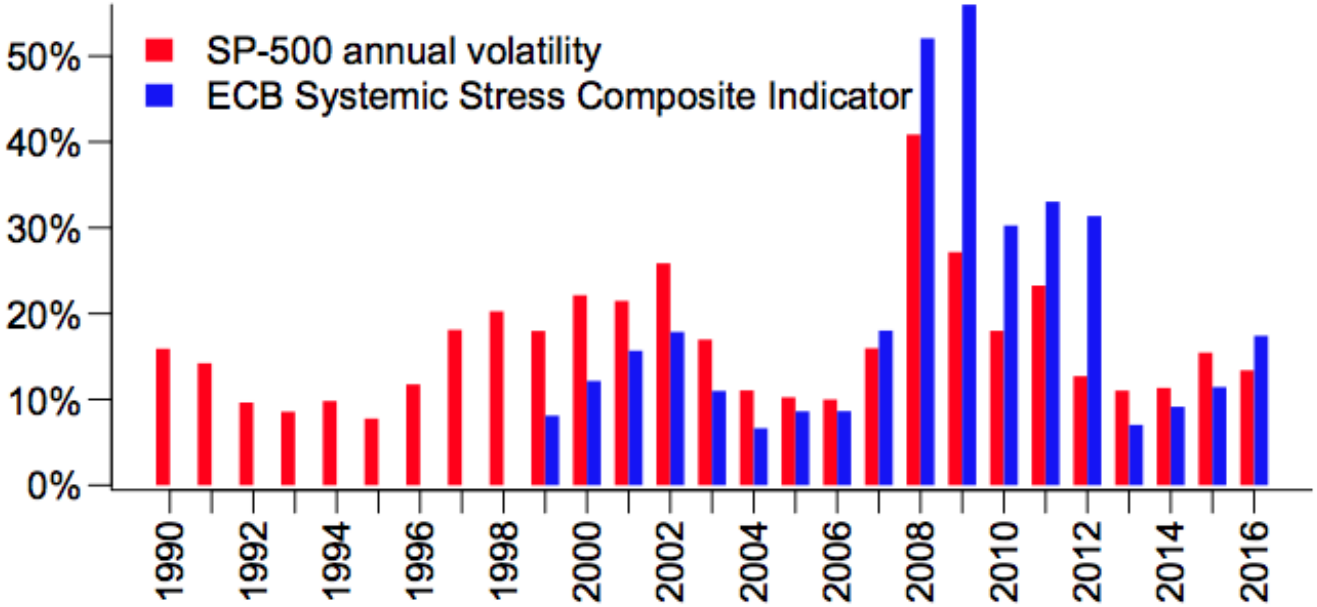
Our objective here is to identify some of the potential real-world scenarios where that might actually occur, based on the constraints, imperfections and limited information that the macropru authorities face.

The measurability of risk is especially important. In a recent working paper, Danielsson et al. (2012) argue that it may be impossible to accurately measure financial risk, especially systemic risk. They distinguish between *perceived risk*, which is what is reported by standard measurement methodologies, from *actual risk*, which is the underlying latent and hence non-measurable risk in the financial system. Indeed, perceived and actual risks are typically negatively correlated.

Challenges

Once a crisis is underway, the authorities can do little other than attempt to mitigate its adverse consequences. They cannot reverse the decisions taken years or decades before that led to the crisis.

Figure 1



Take the last quarter-century as an example. Figure 1 shows that the average annual volatility of the SP–500 index was around 10% in the three years before both the 2008 crisis and the series of stress events in the years from 1997. The ECB's Systemic Stress Composite Indicator finds systemic risk in 2008 and 2009 was on average 54%, whereas from 1999 until 2006 it was only 11%

This means that perceived financial risk was low and falling before the two crisis events. Observing that low risk environment, market participants were encouraged to load up on risk and thus eventually arrived at the 'Minsky moment' - the sudden realisation that too much risk has been taken - that precipitated the crises.

The authorities - seeing the global environment as benign because measured risk was low - were not concerned. It is exactly this failure of market discipline and micropru in pre-empting crises that the ambitious ex-ante discretionary branch of macropru purports to correct.

This poses three important questions:

1. Are the authorities able to identify promptly that high actual risk is encouraging excessive risk-taking?
2. Are they able to identify whether rapid credit growth is sustainable by accurately measuring deviations from the optimal savings-to-investment ratio?
3. Can the authorities implement corrective policies sufficiently quickly to prevent further deterioration of financial stability?

Why macropru may be procyclical

These concerns lead us to six reasons why discretionary macropru policies may not only fail, but may even further amplify the financial cycles and become procyclical.

1. The first is a Minsky argument (e.g. Bhattacharya et al. 2015). If the authorities smooth out the credit cycle, they contribute to a perceived low-risk environment that in turn encourages further risk-taking, as did the 'Greenspan Put' (the monetary policy approach believed by markets to be being taken by Federal Reserve chairman Alan Greenspan in the late 20th century). Macropru is meant to prevent socially costly build-ups that arise from and give rise to externalities, but should not smooth natural volatility that reflects fundamentals.
2. The authorities need to be able to monitor and control aggregate credit expansion. The easiest way to do that is to have financial intermediation done via regulated banks and other tightly regulated institutions. However, this may homogenize the financial system. Subjecting financial institutions, including the ones in the parallel financial system (known as 'shadow banks'), to Basel-style rules forces market participants

to make more similar portfolio decisions, thus making them more procyclical.

3. Most, if not all, current indicators of systemic risk, like the ECB's Systemic Stress Composite Indicator, SRISK and CoVaR, are not forward looking and only identify perceived risk, hence often giving the wrong message until it is too late. Most currently used market data based indicators can only react to contemporaneous price fluctuations. They therefore only provide warnings when it is too late to prevent the decisions that lead to the adverse outcomes picked up by the indicator.
4. This means that by the time the authorities implement countercyclical policies, they are reacting with some time lag to the postulated indicators that are themselves measured with a time lag. Therefore, there is a real danger that the policy intervention could be out of sync with the financial cycle and make things worse, not better, for example by restricting credit late, when the economy is already facing a credit crunch. A recent example is Japan in 2007, when the authorities issued guidance restricting bank lending to real estate developers just at the time foreign lenders were also withdrawing from this market, leading to a severe credit crunch.
5. Furthermore, suppose the macropru policy is known to the market and known to react with a lag to official and public information where also the market and banks know more about the outstanding credit structure because they effectively created and distributed it. In that case, the market/banks rationally expect that in a few quarters a countercyclical credit restriction will come in, and therefore will push for early credit expansion even stronger so as to beat that moment of macropru coming in. That means bringing all trades forward, reducing credit quality, and forcing an unsustainable and abrupt increase in credit while still under the radar, thereby amplifying the cycle.
6. The authorities should be willing to reduce aggregate risk-taking and leverage during booms and increase it in times of stress. They may want to do the former, but it is uncertain how much they would want to do in the latter case. They might find it difficult, and might even take advantage of a crisis to raise capital standards and restrict credit, as they did after the 2008 crisis. In that case, the post-crisis response was procyclical - the micropru logic dominated the macropru logic. One may hear objections like "banks are failing because they already extended too much credit", or "surely bank capital needs injections rather than allowing the banks' capital to absorb losses", or "helping the City to increase lending now leads to even bigger moral hazard", or "macropru is discredited because it was supposed to have prevented this credit event in the first place, why should it do better this time?" All of these objections call for a procyclical policy response.

Conclusion

The modern concept of macroprudential policy makes the financial authorities responsible for the stability of the financial system. There is a clear need to prevent excessive risk-taking and respond appropriately in times of crisis, so this can only be welcomed. The study of financial system vulnerabilities, crisis resolution, and the implementation of a range of non-risk-based methods like loan-to-value ratios and margin restrictions are all constructive developments, potentially conducive to financial stability.

There is, however, one side to macropru that may not work well: discretionary macropru that aims to lean against the wind, adjusting aggregate risk-taking in the financial system across the financial cycle.

Such discretionary policy action faces immense challenges at every stage: the successful identification of bubble conditions; obtaining the political mandate to act; managing the measurement and reaction lags involved; and the will to act in a sufficiently simulative manner in the aftermath.

Consequently, discretionary macropru policies can easily achieve the opposite of their intent, and be procyclical.

References

Bhattacharya, S, C A E Goodhart, D P Tsomocos and A P Vardoulakis (2015), "A Reconsideration of Minsky's Financial Instability Hypothesis", *Journal of Money, Credit and Banking* 47(5): 931–973.

Cerutti, E, S Claessens and L Laeven (2016), "The use and effectiveness of macroprudential policies: New evidence", VoxEU.org, 10 February.

Daníelsson, J, H Shin, and J-P Zigrand (2012), "Endogenous extreme events and the dual role of prices", *Annual Reviews* 4.

Daníelsson, J, M Valenzuela and I Zer (2016), "Learning from history: Volatility and financial crises".

Danielsson, J and J-P Zigrand (2015), "A proposed research and policy agenda for systemic risk", VoxEU.org, 7 August.