



## Macroprudential policy: could it have been different this time?

**Jaime Caruana**

General Manager, Bank for International Settlements

People's Bank of China seminar on macroprudential policy in cooperation with the  
International Monetary Fund

Shanghai, Monday 18 October 2010

Let me start by thanking the People's Bank of China and the International Monetary Fund for the opportunity to join my colleagues Norman Chan and Philipp Hildebrand. It is particularly appropriate to look at macroprudential policy from an Asian perspective, as central banks in this region have undertaken to use such policies.

I have reflected on the Asian experience on other occasions. Today, therefore, I shall take a different tack. I should like to highlight how Basel III provides a solid foundation for a macroprudential framework: it is macroprudential policy in the making. And rather than presenting a dry description of its macroprudential elements, I ask a counterfactual question: could the new standards have made a difference in the course of the recent crisis? This mental experiment can make macroprudential policy come alive.

My answer is yes. I shall argue that banks would have faced the recent financial crisis with much stronger capital bases, and would have been better able to draw on them. The financial system would have been much better prepared to withstand the shock of falling housing prices and losses on securitised assets. As a result, the negative feedback from losses to credit supply would have been milder, and governments would have had to provide less support. The aggravation of the business cycle (procyclicality) due to the financial system distress would have been significantly reduced.

Before entering the time machine, however, let me emphasise the timeless theme of the responsibility of the authorities. While Basel III brings macroprudential policy into the mainstream of financial supervision, it remains the responsibility of the national authorities to put it into practice. Granted, they will benefit from internationally agreed minimum standards, a shared perspective and common reference points. But make no mistake: the national authorities, not some committee in Basel, will have to implement the policy. They will have to defend their decisions in an uncertain context that will inevitably open them to criticism: it is never easy to take the punch bowl away when the party gets going.

As a prelude, let us quickly review the new elements of Basel III that will feature in the counterfactual scenario:

- A new, tighter definition of capital, raising banks' loss absorption capacity.
- A broader and tougher definition of risk-weighted assets, thanks to the more restrictive treatment of the trading book, counterparty risk and securitisations.
- A new, higher minimum capital requirement in terms of common equity, up from 2% to 4.5% of risk-weighted assets – an effective increase from roughly 1% to 4.5% once deductions from eligible capital are taken into account.



Then we have what might be called a “macroprudential overlay”:

- A capital conservation buffer, adding another 2.5%, set as a fixed proportion of risk-weighted assets. A salient feature of this buffer is that, unlike the minimum, it can be drawn down as banks experience losses, thereby lessening pressure to restrict credit. Dipping into it, however, will involve some costs, in the form of restrictions on capital distributions to shareholders. This will help to conserve capital, but will also make bank managers somewhat reluctant to draw on the buffer. While designed primarily to strengthen the individual firm, the buffer has macro implications through its impact on credit supply.
- A countercyclical buffer, set as a variable proportion of the minimum of up to 2.5%. The countercyclical buffer is purely system-wide in its design. It is based on the fact that private sector credit growth that is out of line with historical experience often ultimately imposes losses on the lenders. Thus the ratio of credit to GDP would serve as a common reference for the build-up phase of the buffer, which would be encouraged through restrictions on capital distributions identical to those that apply to the conservation buffer. Authorities would then release the buffer based on incipient signs of strains, such as aggregate losses or tighter credit terms. In contrast to the conservation buffer, drawdowns of this countercyclical buffer will not be subject to any restrictions, in order to maximise banks’ willingness to use it. And this tool is based more on discretion: the common reference for the build-up phase would just be a starting point from which to exercise judgment, and the decision to release would only be subject to some general guidelines.
- Provisions to increase the loss-absorbing capacity of systemically important banks. Measures are needed *both* to make their failure less likely – stronger capital and liquidity – and to reduce the severity of any such failure (eg resolution regimes and resilient trading infrastructure).

Please join me now in entering the time machine. We will be going back to the boom years before 2008 in the United States, the United Kingdom and Spain.

As we get out of the time machine in the middle of the decade in the United States, we observe mortgage bankers chasing customers. House price appreciation has replaced savings as the way to build up personal wealth. Private credit is growing rapidly, induced by, and supporting, a rapid rise in property prices [slide 2].

We then cross the Atlantic to the United Kingdom and observe much the same, though credit growth is not quite as rapid, and property prices are rising even faster [slide 3].

We go on to Spain, noting that some of the English on board are travelling to their second homes [slide 4]. Again, credit is growing faster than output and property prices are buoyant.

Here time travel gets interesting. What would have happened if the authorities in these three countries had had at their disposal the analysis behind the countercyclical buffer of Basel III?

Experience does not suggest that there is some invariant threshold of private credit to GDP that, once surpassed, makes a financial crisis likely. Nor does experience suggest that private credit growing faster than GDP necessarily makes a financial crisis more likely. Economies seem to exhibit both different levels and different trends in credit deepening.



However, when the ratio of private credit accelerates well above its established trend for a sustained period, the likelihood of substantial credit losses and even a financial crisis increases.<sup>1</sup> This pattern guides the transformation shown on the next slides.

Starting around the turn of the century, what would the US authorities have seen, through the current lens but on the basis of then available data? The ratio of private credit to GDP and property prices both breaking above their trends *at much the same time* [slide 5].

In the United Kingdom, the authorities would also have observed property prices rising above trend then, but the ratio of private credit to GDP breaking above trend only some years later [slide 6].

In contrast, the Spanish authorities would have observed the ratio of private credit to GDP breaking above trend first and property prices doing likewise only later [slide 7].

What if the authorities in the three countries had responded to these observations in a manner consistent with the new countercyclical buffer? Recall that it amounts to additional capital of up to 2.5% of risk-weighted assets and constrains capital distributions in order to accumulate the buffer.

- In the United States, the countercyclical buffer would have gone from zero to 2.5% early in the century [slide 8]. With some subsequent variation, banks in the United States would have entered the 2007–09 crisis with the buffer at its maximum.
- In the United Kingdom, this buffer would have kicked in mid-decade [slide 9].
- In Spain, above trend credit growth would have signalled an early addition to the capital of banks operating there [slide 10].<sup>2</sup>

In countries where, as in the United States and Spain, the countercyclical capital requirement remained at more or less its maximum for some years, the authorities would have been well advised to consider doing more. For example, loan-to-value ratios could have been lowered or tax deductions for mortgage interest rates on second homes could have been limited.<sup>3</sup> In short, a countercyclical buffer at its maximum should be taken as a signal for further action.

Consider how different a world with Basel III could have been. Banks went into the financial crisis with required equity of just 2% – in fact, roughly 1% when a tighter definition of capital is used. Instead, with the countercyclical capital buffer filled, they would have had the 4.5% minimum, plus the capital conservation buffer of 2.5% and the countercyclical buffer of 2.5%, for a total of 9.5%. Factoring in banks' tendency to give themselves a bit of a cushion over required equity, a ratio of 11% of risk-weighted assets could have been the norm. And this does not take into account any additional loss absorption capacity for systemically important banks, or any supplementary measures.

---

<sup>1</sup> M Drehmann, C Borio, L Gambacorta, G Jimenez and C Trucharte, "Countercyclical capital buffers: exploring options", *BIS Working Papers*, no 317, July 2010.

<sup>2</sup> As with the forward-looking provisioning that the Spanish authorities in fact implemented, such a gap between a mandated protective measure and the materialisation of the downturn in asset prices and credit losses poses a challenge in communication. See J Caruana, "The challenge of taking macroprudential decisions: who will press which button(s)?", speech at the 13th Annual International Banking Conference, Federal Reserve Bank of Chicago, in cooperation with the International Monetary Fund, Chicago, 24 September 2010.

<sup>3</sup> Committee on the Global Financial System, "Macroprudential instruments and frameworks: a stocktaking of issues and experiences", *CGFS Papers*, no 38, May 2010. See also J Caruana, "Macroprudential policy: what we have learned and where we are going", keynote speech at the Second Financial Stability Conference of the *International Journal of Central Banking*, Bank of Spain, Madrid, 17 June 2010.



Even in the worst case, in which on the upturn the build-up of this capital would not have had any material effect to contain excesses in credit extension or asset prices, the downturn would certainly have been different, as these buffers would have made for a less acute crisis and less sizeable government intervention.

In all three economies, the countercyclical buffer could have been released some time after mid-2007 in response to financial strains and accumulating losses. However, it should be noted that a late release of the countercyclical buffer would not have the same unwelcome consequences as a late requirement for it to be accumulated. If the authorities *mandate* the buffer too late, banks are left vulnerable to losses resulting from asset price declines. But if the authorities *release* the buffer late, banks can still draw on it, but at the cost of constrained distributions to shareholders.

Let me complete the counterfactual experiment with a number of observations, which will also highlight other elements of Basel III bearing on the procyclicality of the financial system.

First, you may be asking yourselves how the countercyclical capital buffer would have worked for banks domiciled in countries that did *not* experience domestic credit booms. After all, both German and Swiss banks were in the eye of the storm, despite muted credit growth at home. The answer is that the buffer is related to the weighted average of the exposures of banks' portfolios, based on the ultimate source of the risk. For example, if 50% of their risk is vis-à-vis US counterparties, then 50% of the buffer would respond to the US credit cycle, in accord with the determinations of the US authorities. On this basis, German and Swiss banks would have had to hold a substantial countercyclical buffer.

This also implies that buffer decisions call for some coordination across jurisdictions. Hence the Basel Committee on Banking Supervision envisages a senior group of supervisors to share the logic used in taking those decisions and to distil best practice.

Second, the main objective of the countercyclical buffer is to ensure that banks have additional capital at their disposal to deal with losses arising from the righting of financial imbalances, so as to moderate the cycle's bust. The second objective is to help to mitigate credit and asset price booms themselves. The impact on this may be more limited and less obvious, as booms provide cheap capital, plentiful profits and very strong price dynamics. Effectively restraining the build-up would probably require other macroprudential tools, such as varying loan-to-value ratios or margin requirements and macro policies, to help.

Third, during periods of stress, the much higher level and quality of capital cushions in addition to the countercyclical buffer would no doubt have helped to limit procyclicality. They would have reduced the strains faced by banks and the flight to "capital quality".

Finally, other elements of Basel III, not explicitly considered here, would also have helped:

- (i) The use of data from times of stress in calculating risk-weighted assets for the trading book and counterparty credit risk would have reduced the procyclicality of capital requirements;
- (ii) So would have the proposal to rely on probability of default estimates from bad times for the banking book.<sup>4</sup>
- (iii) The minimum leverage ratio could have restrained leverage if it became binding during the boom, preventing banks from capitalising on any gaps in risk weighting.

---

<sup>4</sup> This is analogous to the recommended use of downturn loss-given-defaults already required in Basel II.



- (iv) Tighter liquidity standards could have prevented the build-up of maturity mismatches.
- (v) The Basel Committee is working with the International Accounting Standards Board on the expected loss approach to loan loss provisioning. Forward-looking loan loss provisions which take into account more credit information and anticipate and quantify better the expected losses of a portfolio can provide additional buffers and better incentives to mitigate procyclicality. A recent working paper from the Federal Reserve of Boston analyses the hypothetical application of the Spanish dynamic provisioning system to the commercial banks which received government TARP support in the United States. One of the conclusions is that “about half of these banks would not have needed the TARP funds had the dynamic provisioning system been in place”.<sup>5</sup>

I hope that I have convinced you that Basel III provides a solid, internationally agreed foundation for macroprudential policy. On this foundation, national authorities can build fully elaborated national frameworks. The counterfactual scenario suggests that the financial system would have been much stronger and more resilient had Basel III been in place before the recent crisis. Correspondingly, the procyclicality of the financial system would have been mitigated.

That said, macroprudential settings do not run solely on autopilot. They rely on the exercise of judgment and discretion by national supervisory authorities. The responsibility for effective macroprudential policy ultimately rests on their shoulders.

At the same time, as I have argued on many occasions, macroprudential policy cannot deliver financial stability on its own; monetary and fiscal policies must provide support. And, at the international level, the mutual assessment of macroeconomic policies, with critical input from the IMF, also needs to play a part.

---

<sup>5</sup> J Fillat and J Montoriol-Garriga, “Addressing the pro-cyclicality of capital requirements with a dynamic loan loss provision system”, *Federal Reserve Bank of Boston Working Papers*, QAU10-4.