

# **Rethinking Procyclicality: What is it now and what can be done? \***

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First, let me thank FSI and the EMEAP Working Group on Banking Supervision for the invitation, and also a special thanks to our host, the Bank of Japan and the Financial Services Agency, for the excellent arrangement.

The topic of this session is procyclicality and macroprudential supervision. As the first speaker, I have been asked to give an overview of the issue. A good starting point to discuss the issue is to remind ourselves that the issue of procyclicality, especially procyclicality of the financial system, is not new. Discussion about interactions between the financial system and the real economy, especially the idea that the financial sector can amplify economic activities and business cycles, has been well documented by economists, for example, in the financial accelerator model.

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Here in Asia, the issue of procyclicality had been brought to the fore during the Asian financial crisis, after which the issue was extensively discussed. Two important conclusions emerged from those early discussions. First, procyclicality of the financial system poses risk to financial stability, and to address it, efforts call for policy to dampen the procyclical effects through counter-cyclical financial regulation and macroprudential measures. Second, to avoid large build-up of excesses, macroeconomic policy especially monetary policy has an important role to play. And in the case of emerging markets, the procyclical behaviour of international capital flows adds another dimension of challenge because of its effects on domestic monetary conditions. Hence, to effectively address the issue, a combination of macroeconomic policy and financial regulation is needed to restrain the build-up of imbalance, a process to which procyclical financial behaviour is a key contributing factor.

The current financial crisis also raises the issue of procyclicality. Apart from its global nature, a key feature of the current crisis when compared with past crises is the scale of excessive risk-taking and leverage that took place that was accentuated by procyclical financial behaviour. This, therefore, puts the issue of procyclicality and financial regulation into the policy spotlight.

What I want to do this afternoon is to discuss procyclicality and the policy approach to address it from a wider perspective of macroeconomic management aimed at ensuring financial stability. My focus is to offer a framework for analyzing procyclicality, and to propose a view that policies from different orientations, especially financial regulation, are needed to deal effectively with the issue.

In its simplest form, procyclicality refers to the interactions between the financial system and the real economy which are mutually reinforcing. Such interactions tend to amplify the amplitude of the business cycle, thereby heightening the risk to financial stability. This description of procyclicality presupposes the existence of two cycles, namely the business cycle and the financial cycle, that interact and reinforce each other. However, economic and financial decisions underlying the two cycles are not independent. They are inherently linked by the risk-taking behaviour of economic agents: the behaviour which is prone to change in response to incentive, perception of risk, regulation, and new information. It is this change in risk-taking behaviour that explains large swings in investor sentiment, from a period of optimism when risk is disregarded to a period of pessimism when there is no willingness to take risk. And it is this change in risk-taking behaviour that underscores the abrupt change in financial behaviour, and in the direction and momentum of economic activities.

It follows therefore that procyclicality is a mechanism that encompasses the interactions of at least three reinforcing cycles that move in tandem. They are the business cycle, the financial cycle, and the cycle of risk-taking behaviour represented by fluctuations in asset prices or the asset price cycle. The three cycles are self-reinforcing, and it is the ways the cycles interact with each others that define the amplitude and the momentum of the cyclical fluctuations, as well as risk of a financial crisis.

Interactions of the three cycles can be illustrated with reference to a typical boom-bust cycle. In the beginning, a period of low macroeconomic volatility usually brings about an expansionary phase of the business cycle. As the period of stability grows longer, we have rising investor and consumer confidence, depicting a bout of optimism. The rise in optimism leads to increased risk-taking, resulting in increased demand for credit and rise in asset prices.

In this period of optimism, the pricing of risk tends to fall, lending spread narrows, and banks tend to provision less as they focus more on a short-term outlook rather than a longer-term perspective of risk. This leads to an upswing in the financial cycle. Demand for credit is further bolstered by a rise in asset price which raises the valuation of collateral, further raising confidence and magnifying the risk-taking behaviour and leverage.

Next, greater availability of credit leads to more spending and adds to the expansionary forces as business outlook is elevated by perception of low risk and strong profitability.

It is when confidence changes that the interactions of the three cycles go into reverse. Decline in confidence closes down the risk-taking behaviour, leading to a fall in credit demand. Banks respond to this re-assessment of risk by de-risking their financial exposure, exacerbating the downturn in the financial cycle. This results in large adverse impacts on the real economy that further weaken confidence. In the downturn, the three cycles interact and move in synchronization, propagated by deteriorations in the balance sheets. It is only when confidence improves, typically following a major policy intervention, that the downturn both in the business and financial cycles begin to stabilize.

With reference to the current crisis, there were at least two specific features of the financial structures in the advanced economies that amplified the procyclical tendencies in the three cycles I have just described, thereby making the situations worse than might have been.

First, the duration of the upswing in the financial cycle was made longer by changes in the financial structures that resulted from financial

innovation, misplaced incentives, and the way businesses had expanded by circumventing financial regulation which allowed risk to be underrecognized for a long period. A case in point is the originate-to-distribute model, the CDO derivatives, and the use of SIVs as a vehicle for taking risk out of banks' balance sheets.

Second, in this crisis the downturn of the cycles were particularly damaging partly because of the interactions or feedbacks within the financial system, as opposed to the interactions between the financial system and the real economy. These within-the-system interactions took the form of positive feedback loops in various market segments that were set in motion in the downturn as market participants responded to the emerging problems and distress. Such feedback loops included the SIV shutdown and its compounding effects on CDO losses, the asset fire sales driven by risk management response by banks, and heightened concern about counterparty risk that precipitated the hoarding of liquidity. Moreover, while these feedback loops were important in setting into motion self-reinforcing losses and deleveraging, it was also the interactions amongst them, through joint exposure to common risk drivers and network linkages, that contributed to the multiplication of losses.

Let me now turn to the second part of my talk which I will focus on the policy approach to deal with procyclicality.

A good starting point to discuss policy is to recognize that business cycles are a normal feature of market economies and their existence – especially the interaction of the three cycles – can not be eliminated. The best we can do is to recognize the cycles and find ways to manage them in a way that markets continue to function without risking systemic instability. Reflecting this, it is clear that the objective of policy is to reduce the amplification of the cycles and their interactions by limiting the build-up of excesses. A common wisdom at this time is that policy should aim to limit the build-up of excess in the good time and ensure that the system has adequate capacity or buffers to manage the downturn in the bad time. But because the build-up of financial excess tends to be a result of many factors, some of which are not related to financial institutions, therefore, a broader approach to policy is needed so that many measures, both macro and micro, are used to help solve the problem. Apart from being more comprehensive, such approach will help ensure that the economic cost of policy or regulation is spreaded out, thereby avoiding an undue burden falling on a particular sector of the economy or measure.

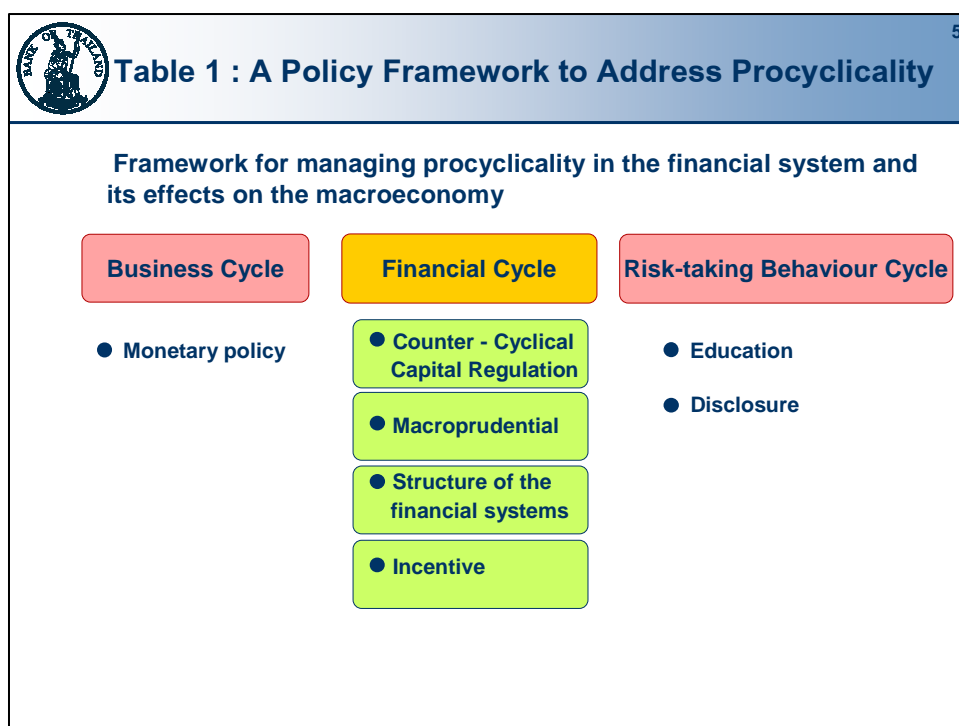


Table 1. summarizes the policy framework along the line I have just described. The framework encompasses a three-pronged approach to address procyclicality, focusing on taming the business cycle, the financial cycle, and the risk-taking behaviour cycle through a combined use of macroeconomic policy, financial regulation, and other education and disclosure measures.

On macroeconomic policy, especially monetary policy, the role of policy is to achieve long-term economic growth with stability. This means avoiding too-eased monetary conditions for too long by tightening policy when there are signs that risk is being underestimated and imbalance is

developing. For financial regulation, its role is to reduce the procyclical behaviour in the financial institutions by limiting excessive risk-taking. And the role of education and disclosure is to promote greater awareness of risk by making available information to improve risk assessment by market, so that extreme shifts in sentiment and confidence are avoided. Important in this context for emerging markets is the abrupt shift in investors' confidence that drives sudden reversals of capital flows and liquidity. But amongst all these measures, financial regulation remains the core approach to addressing procyclicality. This is because large and sustained booms on credit and asset prices, once they occur, are typically a reflection of the failure of financial institutions to manage risk.

Let me now turn specifically to financial regulation. To the extent that financial regulation contributes to procyclicality and excessive risk-taking, supervisors could design their regulation in a counter-cyclical fashion to reduce procyclical behaviour of financial institutions. Reflecting this thinking, discussion to date on the role of financial regulation to address procyclicality has focused on four areas.

The first is to reduce procyclical tendencies of the Basel II capital regulation by aligning capital requirement more with a longer-term perspective of risk. On this, key measures under discussion include: (1)

building capital buffers by capital conservation measures; (2) reducing procyclical effects of minimum capital requirement by adopting through-the-cycle risk parameters to achieve a less pro-cyclical capital ratio; (3) promoting forward-looking provision that can cover loan losses that are not yet incurred but expected, with supporting accounting rule and valuation; and (4) using additional capital charge for the large and more complex banks based on indicators of systemic relevance.

The second area of focus is the use of macroprudential supervision. The aim is to use prudential measures, when needed, to restrain the build-up of risk either in the overall financial markets or in specific asset class. Examples here include use of loan-to-value ratio on real estate loans and margin requirements for derivatives and securities transactions. Also, a recent idea of using leverage ratio to help take account of the unknown risk beyond those identified by the risk-adjusted capital regulation also falls into this category.

The third area of focus is the macro-surveillance of the financial system to monitor aggregate risk and identify structural change that opens up new vulnerabilities by making liquidity and capital regulations less binding, thereby exacerbating the procyclical financial behaviour. Important in this context is the subtle shifts in market due to financial innovation or

changes in business model that effectively dilute or even arbitrage regulations that are designed to dampen procyclicality. In the current crisis, the combination of the originate-to-distribute model, together with CDOs, unregulated hedged funds, and undercapitalized investment banks creates an interlinked market structure that adds vulnerability to the system, by effectively removing the liquidity and capital constraints of banks in underwriting loans and in investing in securitized products.

Finally, the fourth area is to contain incentives in the context of remuneration to limit excessive risk-taking. The argument is that, in this crisis, misaligned incentives based on short-term performance did encourage excessive risk-taking and contributed to increased leverage. The solution under discussion is to align compensation scheme more with a longer-term perspective of risk and profitability, as well as to promote greater transparency of rewards and incentives through public disclosure.

What I have outlined is an overview of the procyclicality issue and the direction that the current policy effort is taking to address it. My view is that, to be effective, a consistent set of policies at both the macro and the micro levels is needed to address the issue. As I noted at the outset, procyclicality is not a new issue. It has long been a feature of the financial system in the market economies and always has a role to play in a financial

crisis. The current crisis is no exception. The difference this time is that efforts are being made at the global level to systemically address the issue through the revision of international regulatory standards. The hope is that we can make progress on the issue by taking the right and balanced approach so that the issue can be tackled without unsettling the level playing field, without repressing financial developments and liberalization which is important for emerging markets, and without undermining the spirit of innovation which is the hall-mark of market economies.