



## The Fundamentals of Procyclicality of the Financial System

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The unfolding of the ongoing global financial crisis brought back to fore the issue of the procyclicality of the financial system. It has been observed that financial conditions tend to improve during economic upswings, amplifying the expansion, and to deteriorate during downswings, exacerbating the contraction. Thus, there have been arguments that policies leaning against such procyclicality could make an important contribution to financial stability. In particular, there have been calls to reduce the procyclical aspects of existing regulations – that is, the tendency of accounting rules and capital requirements to aggravate both financial retrenchment during a slowdown and financial excesses during a boom.

What is the concept of procyclicality? Can and should prudential regulations be countercyclical? These are the questions that this article will attempt to tackle.

### PROCYCLICALITY: DEFINITION AND SOURCES

Banks are said to behave in a procyclical manner as their actions tend to reinforce the momentum of underlying economic cycles – their lending, credit rating policy and provisioning practices move in correlation with the economy's short-term business cycles. The banking sector tends to increase the impact of a business cycle by intensifying lending during economic booms and by imposing loan restrictions during economic downturns.

During an economic boom (or a cyclical upswing), banks tend to be excessively optimistic about the economy and hence their customers' position. Banks advance loans

against poorer collateral (possibly overrated due to asset price bubbles created during the cycle), reduce the applied risk premia and allocate less loan-loss reserves to cover expected risks. At the same time, there is usually an upsurge in banks' profitability during an economic boom. Subsequently, banks' procyclicality during an economic upturn contributes to rapid credit growth, the rise in collateral values, artificially low lending spreads, and a decline in loan-loss provisions.

On the other hand, the opposite is true during an economic downturn. When business cycles trend down and the optimism exhibited during a cyclical upswing vanishes, formerly hidden shortcomings become suddenly visible. At such times, banks will typically behave in a way that further aggravates the situation – responding, for instance, with an excessive cutback in lending, which can result in a credit crunch, or setting up disproportionately large loss provisions, which can undermine their profitability and worsen their capital situation. In extreme scenarios, banks' procyclical behavior can even precipitate a system-wide banking crisis.

There are several possible reasons for the co-movement of financial and economic indicators. A common explanation for the procyclicality of the financial system is the *information asymmetry* between borrowers and lenders.<sup>2</sup> For example, when economic conditions are depressed and collateral values are low, even borrowers with good credit history may find it difficult to obtain funding. It is only when economic conditions improve and

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<sup>2</sup> Information asymmetry occurs when one party to a transaction has more or better information than the other party. It causes markets to become inefficient since not all market participants have access to the information they need for decision-making. Because of information asymmetry, one party can defraud another party and, hence, not many people will be willing to take the risk of being fooled or ripped off.

collateral values rise that these firms can obtain funding.

Another source of procyclicality in the financial sector is the *inappropriate response of financial market participants to changes in risk over time*, as reflected in lending and financial investment decisions. Market participants behave as if risk declines during the upswing phase and rises only as the downswing sets in. This is caused mainly by difficulties in measuring the time dimension of risk, often leading to risk being underestimated during boom times and overestimated during recessions.

The problem in measuring risk arises from a variety of reasons: difficulties in forecasting overall economic activity and its link with credit losses; and, difficulties in assessing how correlations of credit losses across borrowers and institutions in the financial system change over time. This encourages financial institutions to focus on the short-term, foregoing longer-term considerations in the measurement of risk. The ability to measure risk on a longer horizon, while considering system-wide developments, will not only contribute to the soundness of financial institutions but also to the reduction in the financial amplification of economic cycles.

## **INSTITUTING COUNTERCYCLICAL PRUDENTIAL REGULATIONS**

**P**olicy options proposed to address financial system procyclicality are generally grouped into three types: (1) supervisory policies; (2) disclosure and accounting standards; and (3) macroeconomic policy.

Supervisors could modify supervisory policies and use prudential instruments in a counter-cyclical fashion to ameliorate the procyclical behavior of institutions subject to prudential regulation. Some instruments which they can use include: modification of capital adequacy regulations, restrictions on loan-to-value ratios, limits on the growth of bank lending, changes in loan provisioning requirements and restrictions on the type of borrowers who can access bank loans or other funding.

Any of the instruments mentioned could be used in a counter-cyclical manner to contain a build-up of risk in financial institutions that supervisors view as excessive. A number could also be used to generate buffers in financial institutions during good times to be drawn upon during bad times.

Regulators may use supervisory instruments, if and when required, in a discretionary fashion on the basis of their own views about the level of risk in the financial system. This could be done by changing regulatory requirements or enforcing more stringent standards above the minimum. For example, supervisory authorities can increase the minimum capital adequacy ratios enforceable either for the banking sector as a whole or for certain individual banks if they feel that during the economic boom, banks are assessing credit risks inadequately, or if they feel that systemic risks have begun to emerge.

A second broad option is to improve the quality of information available to the market. This is to address systematic error in measuring risk which is one of the sources of procyclical financial behavior. Two broad classes of relevant information include (1) information that relates to the determinants and assessments of risk at the system-wide level and (2) information that relates to individual firms.

The first group is macroeconomic in nature, including details on the growth and structure of balance sheets, and the concentration of exposures. Macro-surveillance activities undertaken by the authorities to assist with the identification of aggregate risks in the financial system such as financial stability reviews are also included in the first category.

The second class of information typically covers accounting information. In this regard, the issue seems to be the adoption of fair value accounting, which, to some observers, is likely to exacerbate procyclicality, insofar as periods of unusually high or low market sentiment could affect the valuations of various assets and lead to greater volatility of profits. On the other hand, it can be argued that the use of fair value accounting should promote both the efficiency and stability of capital markets as well as promote greater market discipline.

A third option is counter-cyclical macroeconomic policy, and the policy instrument usually used is policy interest rates. Monetary policy could be used as a counter-cyclical measure but only as long as monetary outlook/conditions would allow. Fiscal policy might also be used although the difficulties are likely to be even larger. There are two options to this process. The first is to tighten fiscal policy when there are signs that risks are being underestimated and imbalances are developing. The second is to ease fiscal policy aggressively immediately after the “bust” in an effort to alleviate the contractionary effects of the reduced supply of funding and balance sheet restructuring.

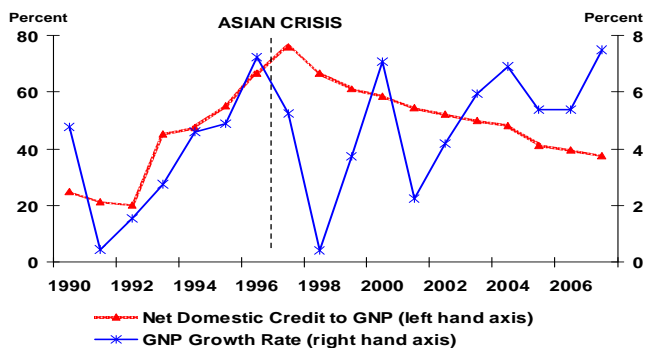
## PHILIPPINE CASE

### Procyclicality of the Philippine financial system

In the case of the Philippines, the latest significant upswing and downturn were observed in the 1990s. A look at the behavior of bank lending and provisioning during the period shows that the Philippine banking system had exhibited procyclicality. During times of economic boom (early 1990s), domestic credit grew, while at times of economic downturn (late 1990s), domestic credit contracted.

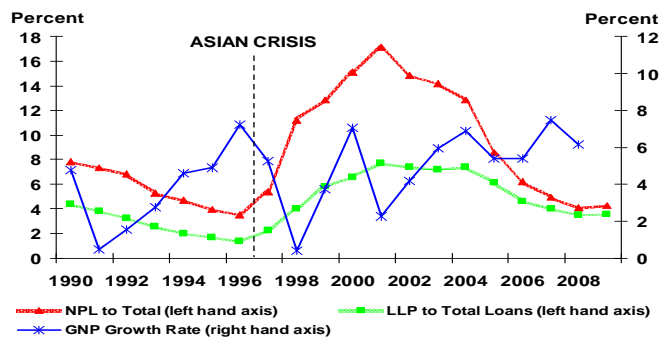
Lending by Philippine banks, as indicated by the ratio of net domestic credit to GNP, soared from 21.4 percent in 1991 to a high of 76.0 percent in 1997 before dropping to 66.7 percent in 1998 when the economy reeled from the effects of the Asian financial crisis. Since then, the ratio of net domestic credit to GNP has tracked a downward trend.

#### 1. Net Domestic Credit to GNP



Meanwhile, the ratio of loan-loss provisions to total loan portfolio declined during the early 1990s which coincided with the decline in the non-performing loan (NPL) ratio. After the 1997 crisis, banks increased their loan-loss provisions as non-performing loans continued to build up. Provisioning has loosened up as banks’ asset quality improved in recent years although total provisions as a percentage of loans remain higher than pre-1997 levels.

#### 2. Ratios of NPL and Loan Loss Provisions to Total Loans



### Recent policy measures implemented in the Philippines to counter procyclicality

Vital and Laquindanum (2004) studied the extent of policy adjustments by the BSP in response to swings in asset prices in the past. They noted that while banks’ exposure to the property sector was manageable during the real estate boom in the first half of the 1990s, the BSP recognized the potential risks associated with the concentration of lending and investments in the real estate sector. Thus, the BSP, in 1996, conducted studies on banks’ exposure to the real estate sector and adopted various prudential measures to ensure that credit exposure to the real sector stayed within manageable levels.

Particularly, the BSP placed a cap on loans to the real estate sector prescribing the regulatory limit that banks’ loans to the real estate sector should not exceed 20 percent of a bank’s total loan portfolio, exclusive of loans to finance the acquisition or improvement of residential units amounting to not more than ₱3.5 million. Furthermore, the BSP directed commercial banks to reduce the loan value of the real estate used as collateral for bank loans from not more than 70 percent to not more than 60

percent of the appraised value of the real estate property, exclusive of individual loans not exceeding ₱3.5 million.

The BSP also raised the minimum capital requirement for banks to promote stronger financial institutions in the midst of the boom in the mid-1990s.

Meanwhile, the BSP tightened provisioning rules to guard against high credit risk-taking by banks and to ensure that they are adequately covered against potential loan loss defaults. For instance, the BSP required a general loan-loss (GLL) provision over and above the provision for probable losses linked to individually identified bad accounts. When the move aggravated the downswing in credit expansion, the BSP relaxed the GLL provision requirement to encourage growth in credit to the private sector.

To stem the credit crunch brought about by the 1997 financial crisis, the BSP moved to free up the enormous holdings of non-performing assets (NPAs) of banks. The BSP supported the enactment into law of the Special Purpose Vehicle Act (SPVA) of 2002 on 23 December 2002. The SPVA is expected to hasten the removal of banks' NPAs from their balance sheets by granting fiscal incentives, among other measures.

The BSP supplemented the fiscal incentives under the SPV Law with regulatory relief measures to jump start the asset clean-up. Banks were allowed to stagger loss recognition over a 10-year period for purposes of compliance with regulatory capital requirements, subject only to full disclosure for financial transparency. This measure essentially allowed banks to spread out the impact of losses that may arise from the sale or transfer of NPAs at deep discounts.

Banks were also authorized to enter into Joint Venture Agreements (JVAs) with real estate developers as a means to convert idle real estate and other acquired properties into income generating assets. This provided banks with an effective means of reducing their foreclosed real estate assets.

Cognizant that the global financial crisis could exacerbate the procyclicality of the financial

system and lead to a credit crunch, the BSP instituted measures to ensure that there would be no credit gridlock and, at the same time, to provide sufficient liquidity to fund the country's growth requirements. Key measures included:

#### Monetary policy measures

- Reduction in key policy rates by a total of 200 basis points since December 2008 on the back of easing inflation, bringing the overnight borrowing or reverse repurchase rate to 4.0 percent and the overnight lending or repurchase rate to 6.0 percent;
- Reduction in the regular reserve requirement on bank deposits and deposit substitutes by two percentage points effective 14 November 2008;
- Increase in the rediscounting budget from ₱20 billion to ₱40 billion effective 6 November 2008, and further to ₱60 billion, effective 2 March 2009. In addition, the rediscounting guidelines were liberalized to enable banks to rediscount more loan papers and therefore have easier access to additional funds that they can relend to the public;
- Establishment of a US dollar repurchase agreement facility (with foreign-denominated sovereign debt securities such as ROP bonds as collateral) to augment dollar liquidity in the foreign exchange market; and
- Launch of the Credit Surety Fund Program (CSFP). The CSFP is a credit enhancement scheme that allows micro, small and medium enterprises (MSMEs) that are members of cooperatives to borrow from banks even without collateral.

#### Banking sector measures

- Grant of flexibility to banks not to deduct unrealized mark-to-market losses in computing for the 100 percent asset cover of their foreign currency deposit units (FCDUs), to reduce the need for banks to source dollars from the foreign exchange market to cover their mark-to-market losses (effective until 30 September 2009); and



- Reclassification of financial assets from categories measured at fair value to those measured at amortized cost to give financial institutions flexibility in valuing their assets.

## CONCLUSION

Each of the policy options discussed to minimize the procyclicality of the financial system has advantages and disadvantages, with the appropriate response depending mainly on the particular circumstances. The best that policymakers can do is to establish a regulatory framework that contributes to financial stability, and to be prepared to act quickly whenever financial instability threatens the health of the macroeconomy.

A promising approach is to implement supervisory rules and encourage practices that can reduce procyclicality without leading to cycle-related frequent changes in supervisory requirements. One definite move that has to be done is to improve the understanding, measurement and monitoring of risks and this should be applied to all financial system participants including the regulatory authorities themselves, but most especially to systemically important financial institutions. The time horizon for the assessment of risk should also be lengthened so as to be able to encompass business cycles in the analysis. Supervisors could engage the accounting profession in more active dialogue and encourage banks to adopt longer time horizons in their assessments of risk.

Further studies should be made on how the implementation of Basel II and the standards on fair value accounting will affect procyclicality. Emphasis should be placed on the identification of measures that could be done to minimize, if not neutralize, the procyclical effects of Basel II and fair value accounting.

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