# **Special Section 1:** NPLs of the Banking System - Cyclical or Structural?

An increased element of credit risk is one of the key challenges being faced by the banking sector since Q1-CY08. Non-performing loans (NPLs) of the banking sector increased by 68.4 percent to Rs 359.3 billion during CY08 (**Table 1**). Although the pace of growth decelerated in the first two quarters of CY09, the stock of NPLs increased to Rs 397.9 billion by end H1-CY09. While a large part of this rise in NPLs emanates from the economic slowdown at the domestic and international level, some deterioration in the quality of the loan portfolio was also expected to transpire due to the rapid credit expansion in recent years (CY03 to CY07).

**Table 1: NPLs of the Banking System**

| | Dec-07* | Mar-08 | Jun-08 | Sep-08 | Dec-08* | Mar-09 | Jun-09 |
|---|---|---|---|---|---|---|---|
| NPLs (billion Rupees) | 218.0 | 231.4 | 241.3 | 278.2 | 359.3 | 379.3 | 397.9 |
| NPLs to Loan Ratio (%) | 7.6 | 7.7 | 7.7 | 8.4 | 10.5 | 11.5 | 11.5 |
| Net NPLs to Loan Ratio (%) | 1.1 | 1.3 | 1.1 | 1.9 | 3.4 | 3.9 | 3.7 |

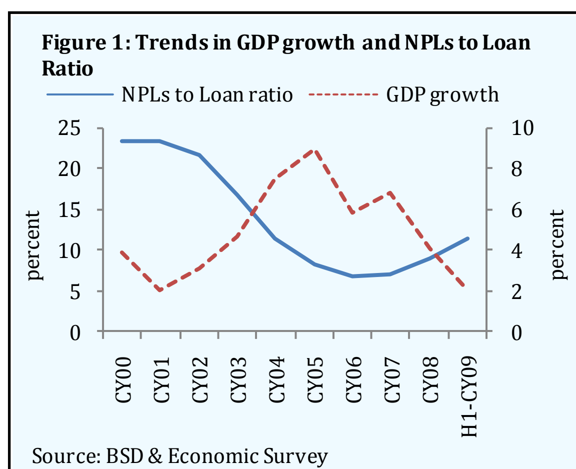
*Numbers are based on Annual Audited Accounts
Source: BSD, SBP

The heightened degree of credit risk has far reaching implications for the performance and stability of the banking sector. Provisioning requirements are likely to increase during the year which will affect the profitability of banks. As the regulator and supervisor of the banking system, the ultimate impact on the solvency position of banks is of great importance to SBP. This short note is thus an attempt to explore two key issues related to the subject. First, whether this substantial increase in the volume of NPLs is cyclical in nature or whether it is also partly attributed to structural weaknesses in the banking system, and secondly, how does this increase in NPLs affect the stability of the banking sector. Both these issues are reviewed in detail in the following discussion.

**Nature of NPLs: Cyclical Vs Structural**

A negative association between NPLs of the banking sector and overall economic activities (generally proxied by GDP growth) is well documented in both theoretical as well as empirical literature.[1] Regression analysis for Macro stress testing in the Financial Stability Review 2007-08[2] and a graphical presentation of data in **Figure 1** depict a similar relation in case of Pakistan. Bank-level data provides further support to this argument, given the negative correlation between the NPLs to loans ratio of banks and GDP growth, as reflected in **Figure 2**. This information clearly suggests that a large part of the increase in NPLs is attributed to the contraction of GDP growth, i.e. a phenomenon which is cyclical in nature. A simple arithmetic calculation based on the Macro stress testing exercise in FSR 2007-08 suggests that a 400 bps reduction in the economic growth rate during the last two years is expected to push up the NPLs to loans ratio by 326 bps to 10.5 percent. The difference between the expected increase in the ratio and the actual level of the NPLs to loan ratio (11.5 percent) can be attributed to the rapid expansion of credit in recent years.

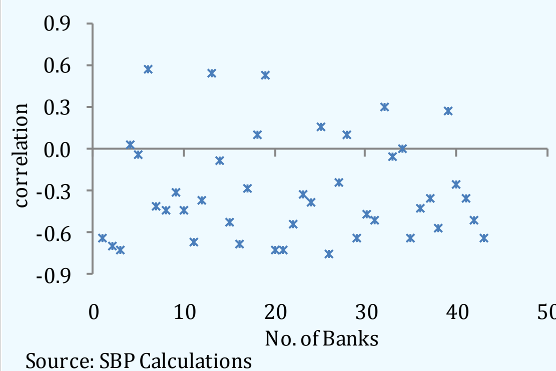
**Figure 1: Trends in GDP growth and NPLs to Loan Ratio**




Source: BSD & Economic Survey

[1] Regression analysis in Hoggarth and Whitley (2003), Virolainen (2004), Gasha and Morales (2004), and Misina, Tessier and Dey (2006) indicates negative correlation between GDP growth and measures used for credit risk (NPLs & default probability).

[2] Special Section on "Framework for Macro Stress Testing" in SBP FSR 2007-08 elaborates that a decline in GDP growth of 200 bps is likely to increase the NPLs to loans ratio of the banking sector by 163 percentage points. Moreover, there is also a 5 percent chance that the NPLs to loan ratio may increase by more than 356 bps.




Rapid credit expansion is considered to be an important leading indicator of banks' performance as it increases the probability of default in subsequent years.[3] The loan portfolio of banks in Pakistan increased by an annual average rate of 24.7 percent during CY03-CY07: well above the average growth in nominal GDP of 14.6 percent during FY03-FY07. Furthermore, banks' foray into relatively new and risky areas including consumer, agriculture and SME finance, was also likely to affect their asset quality, given the time it takes to develop appropriate risk assessment expertise in each area. Also, Agriculture and SME sector are relatively riskier by nature, as their respective NPLs to loan ratio has generally been higher than other sectors (**Table 2**).

**Table 2: Segment wise NPLs to Loans ratio**
percent

| | CY04 | CY05 | CY06 | CY07 | CY08 | CY09* |
|---|---|---|---|---|---|---|
| Corporate | 10.9 | 7.2 | 6.5 | 7.2 | 8.9 | 12.1 |
| SME Financing | 10.6 | 11.9 | 8.8 | 9.4 | 15.8 | 22.4 |
| Agri. Financing | 38.2 | 31.2 | 20.8 | 18.7 | 15.8 | 14.6 |
| Commodity Financing | 1.0 | 0.9 | 0.8 | 1.1 | 1.4 | 1.0 |
| Consumer Financing | 0.9 | 1.9 | 2.2 | 4.4 | 6.9 | 9.1 |

*Data for End June 2009
Source: BSD, SBP

Although aggressive lending to areas other than the corporate sector has helped banks in diversifying their loan portfolio, concentration risk as evidenced by the proportion of lending to the top 20 corporate borrowers continues to be an overriding concern. The share of the corporate sector in the loan portfolio of banks has remained over 50 percent since Jun-03 (**Annexure**). Furthermore, only 0.5 percent of the total number of bank borrowers with loans sizes of more than Rs 10.0 million each, utilize 71.7 percent of banks' aggregate loan portfolio.[4] These structural weaknesses have also contributed to the recent surge in NPLs. As of end Jun-09, the NPLs to loan ratio for the corporate sector was 12.1 percent compared to 7.2 percent as of end CY07. Within the corporate sector, NPLs of the textile sector at 18.8 percent stand out particularly.

## Implications for the Banking Sector[5]

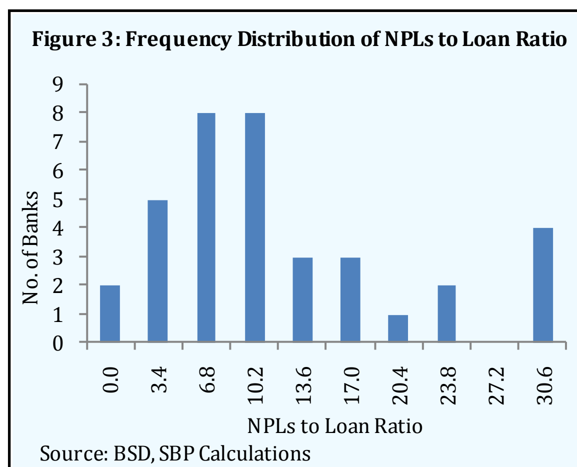
Despite the increase in banks' NPLs in recent times, commercial banks (in aggregate) have shown strong resilience to early headwinds of credit risk. The Net NPLs to Loans ratio is 3.6 percent at end-June CY09, and owing to SBP's prudent regulatory requirements, the capital adequacy ratio of commercial banks has remained largely immune to the deterioration in asset quality, at 14.0 percent (under Basel II requirements) as of end June CY09, against the minimum requirement of 10.0 percent. The (after-tax) return on assets (ROA) of the commercial banks was 1.0 percent during H1-CY09: only slightly lower than the levels realized in the past. The provisioning coverage ratio also registered some deterioration to 70.2 percent at end June CY09, as against 89.1 percent as of end Dec-07. Although the decline in the coverage ratio is largely attributed to partial provisioning requirements for the

[3] Borio and Lowe (2002).
[4] Detailed analysis on these issues presented in SBP FSR 2006 and SBP FSR2007-08.
[5] Data for commercial banks is used as the scheduled banks were already facing problem of high NPLs.

initial classifications of NPLs (the 'doubtful' category), this has pushed up the net NPLs to capital ratio to 17.8 percent compared to only 3.7 percent as of end Dec-07.

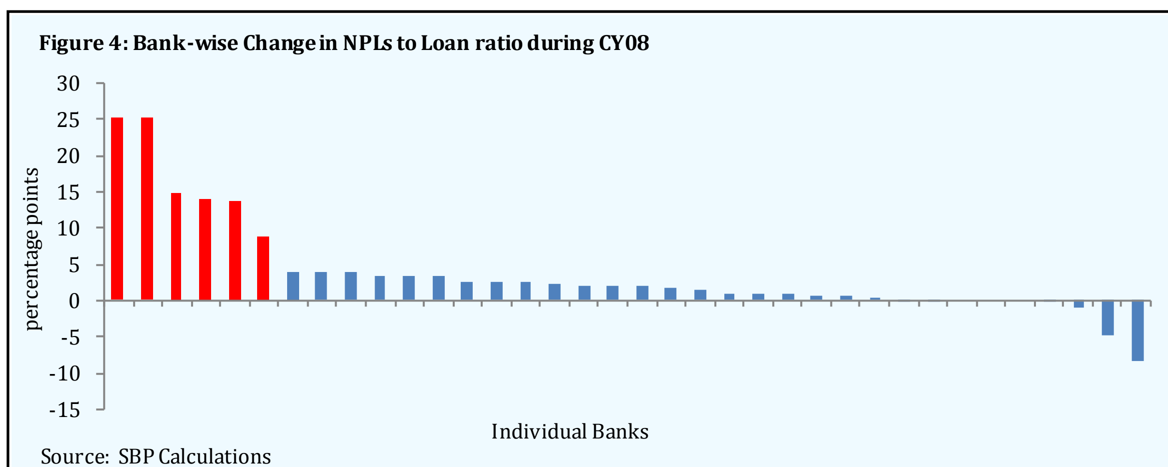
While the resilience of the banking sector to the increased credit risk based on aggregate data, is quite evident, it tends to conceal important information about the infection level of the loan portfolio of individual banks. Bank level information indicates that the NPLs to loans ratio of commercial banks ranges from zero to 30.6 percent for H1-CY09 (**Figure 3**). The distribution shows that 13 out of 36 commercial banks, with an asset share of 45.4 percent, have NPLs to loans ratios in excess of 10 percent (**Figure 4**). This particular group includes 3 public sector commercial banks, and 10 domestic private banks. On the other hand, 9 commercial banks with an asset share of 9.6 percent have their NPLs to loan ratios at less than 5 percent: this group includes 4 foreign banks, 2 Islamic banks and 3 domestic conventional banks.

**Figure 3: Frequency Distribution of NPLs to Loan Ratio**




Source: BSD, SBP Calculations

**Figure 4: Bank-wise Change in NPLs to Loan ratio during CY08**

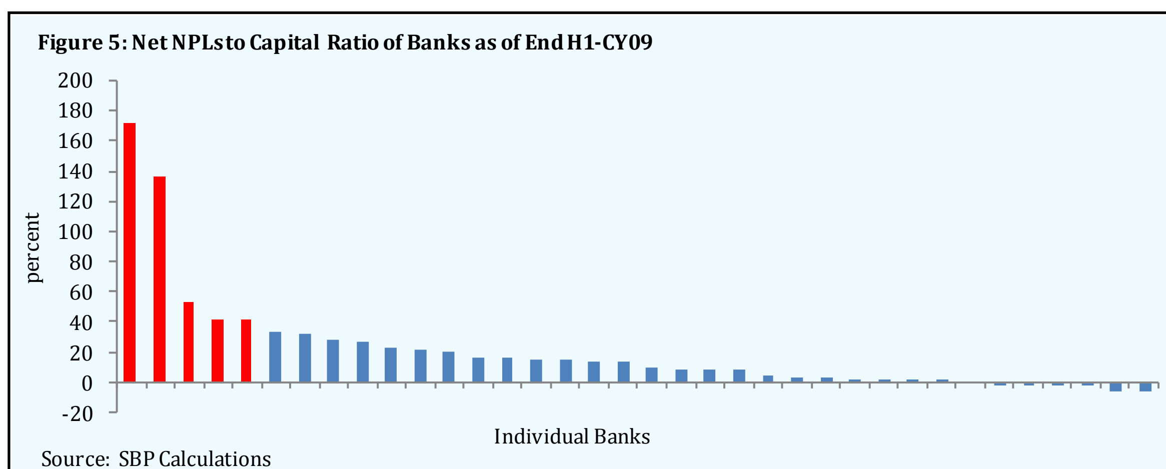



Source: SBP Calculations

Bank-wise movements in the NPLs to loans ratio during CY08 reinforces the observation made earlier that, despite structural issues, the surge in NPLs is largely attributed to the slowdown in economic activities, as 29 out of 36 commercial banks registered an increase in their respective ratio (**Figure 4**). Small to mid-sized domestic private banks (including one PSCB) were the worst hit in this respect.

As an obvious consequence, the deterioration in asset quality carries negative implications for the profitability as well as solvency of these banks. Bank-wise information on the net NPLs to capital ratio suggests that the entire capital of 2 banks will be wiped out if the net NPLs are fully provided for as of end June CY09 (**Figure 5**). Another private bank also has a high net NPLs to capital ratio of 53.3 percent. On a positive note, 24 out of 36 commercial banks with asset share of 69.5 percent have a ratio of below 20 percent.

In sum, bank level information indicates that at least 5 domestic commercial banks have been increasingly challenged by the rise in NPLs. Correspondingly, the profitability of these banks has been eroded by the increased expense on provisioning and the overall weak business environment. Given SBP's requirement of increasing the minimum paid up capital to Rs 6.0 billion by end Dec-09, some of these banks will have to necessarily join hands with




other compatible market players to remain in business. Although SBP has already scaled down its minimum capital requirements in the wake of the difficult operating environment, some of the small sized domestic private banks are still likely to face problems in meeting even the revised capital requirements. The counter cyclical provisioning requirements, i.e. allowing partial benefit of the forced sale value of collateral for the calculation of provision requirement, introduced by the SBP are less likely to provide significant relief to these small banks. However, it is reassuring to see that none of these banks is big enough (among the top 5) to threaten the stability of the banking system. Only one mid-sized PSCB, which is in the list of top-ten banks, is facing severe solvency problems due to reasons specific to its operations (financial management and political lending). There has been a capital injection of Rs 10.0 billion in its balance sheet and its financial position is expected to stabilize in due course.

***Policy Recommendation***

On the policy front, it is recommended that SBP continues its existing regulatory framework for loan classification and provisioning requirements. Allowing 40 percent benefit of forced sale value of collateral against non-performing loans for the calculation of provisioning requirement is an important counter cyclical measure. However, any policy change to accommodate small banks can be considered as regulatory forbearance. Bank specific interventions and close coordination with bank-management may be the best way to address bank-specific issues. The distortions attached to bank-specific interventions should be clearly weighed against the expected benefits to the banking system. The cyclical nature of the rising volume of NPLs itself highlights the fact that regulatory directives can only mitigate credit risk to a certain degree.

## Annexure

**Table: Segment Wise Loans of the Banking System**

billion Rupees

| | CY03 | CY04 | CY05 | CY06 | CY07 | CY08 | H1-CY09 |
|---|---|---|---|---|---|---|---|
| Corporate | 606.5 | 873.0 | 1076.2 | 1278.9 | 1520.2 | 2015.8 | 1952.6 |
| SMEs | 215.0 | 284.0 | 361.4 | 408.3 | 437.3 | 375.0 | 335.1 |
| Agriculture | 104.7 | 119.3 | 138.0 | 141.9 | 150.8 | 155.5 | 150.5 |
| Consumer | 65.6 | 152.6 | 252.8 | 325.5 | 371.4 | 332.2 | 299.8 |
| Commodity Financing | 90.3 | 122.1 | 140.6 | 171.9 | 148.4 | 235.4 | 398.7 |
| Staff Loans | | 40.8 | 42.4 | 48.0 | 52.2 | 64.5 | 69.7 |
| Others | 78.7 | 28.6 | 31.6 | 26.4 | 20.6 | 13.5 | 19.5 |
| Total | 1160.7 | 1620.4 | 2043.0 | 2400.8 | 2700.9 | 3191.8 | 3225.9 |
| | | | | **Shares in Percent** | | | |
| Corporate | 52.3 | 53.9 | 52.7 | 53.3 | 56.3 | 63.2 | 60.5 |
| SMEs | 18.5 | 17.5 | 17.7 | 17.0 | 16.2 | 11.7 | 10.4 |
| Agriculture | 9.0 | 7.4 | 6.8 | 5.9 | 5.6 | 4.9 | 4.7 |
| Consumer | 5.6 | 9.4 | 12.4 | 13.6 | 13.8 | 10.4 | 9.3 |
| Commodity Financing | 7.8 | 7.5 | 6.9 | 7.2 | 5.5 | 7.4 | 12.4 |
| Others | 6.8 | 4.3 | 3.6 | 3.1 | 2.7 | 2.4 | 2.7 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 |