1 EFFICIENCY OF FINANCIAL INTERMEDIATION: AN ANALYSIS OF BANKING SPREADS

The occurrence of rising banking spreads, concurrent with increasing profitability of the banking sector, has raised important policy issues related to the efficiency of financial intermediation and the degree of competition in the industry. In order to assess the level of efficiency, this article explores the determinants of banking spreads by using bank-wise annual data from CY97 to CY06. Panel regression results indicate that administration costs, provisions against NPLs, non-interest income, ownership structure and competition in the banking sector are some of the important determinants of banking spreads. Furthermore, the underlying structure of deposits, which signifies depositors' preferences for liquidity as opposed to returns, indicates that a 25 percent share of non-remunerative (zero return) deposits tends to suppress the average rate of return on deposits. The impact of these deposits on banking spread for CY06 is more than 100 bps.

1.1 Introduction

The primary function of the banking sector is financial intermediation, which is defined as the process of channeling funds mobilized from the surplus sectors of the economy (savers), towards the deficit sectors (investors). The efficiency of performing this basic function is gauged by the cost of financial intermediation (COFI). High COFI is undesirable as it increases the cost of borrowing for investors and renders some of the profitable investment activities economically unfeasible. Moreover, high COFI increases the cost of managing risk for individuals by increasing their cost of maintaining smooth consumption patterns over time.

In practice, there is no single measure that can be used to gauge COFI in the true sense. However, it is proxied by different indicators such as interest rate margins and banking spreads, indicating a gap between the representative lending and deposit rates of the banking sector. The most widely used indicators of COFI are: (1) the net interest margin (NIM) – the gap between interest earned and interest paid, normalized by average earning assets or total assets; and (2) interest rate spread – the gap between (simply) lending and deposits rates. Both definitions are subject to limitations. For instance, NIM suffers from a number of problems such as: (1) it does not include any fee and commission, which can change the effective margin; (2) it conceals important information related to marginal spreads due to the inclusion of either all earning assets or total assets; and (3) it presents a distorted picture of COFI if banks are capitalized by issuing government bonds, which usually offer low returns.

On the other hand, interest rate spread based on the gap between (average) lending and deposit rates is also unable to quantify COFI accurately. In practice, banks do not charge a single rate to all borrowers nor do they offer a uniform rate to all depositors. Banks' lending and deposit rates vary over time and across customers. Hence we are left with no option but to use indicative lending and deposits rates. The widely used representative rates for this purpose are the (weighted) average lending and deposits rates. It may be noted however that these average rates conceal important information regarding variations in lending and deposits rates across different sectors of the economy and across economic agents.

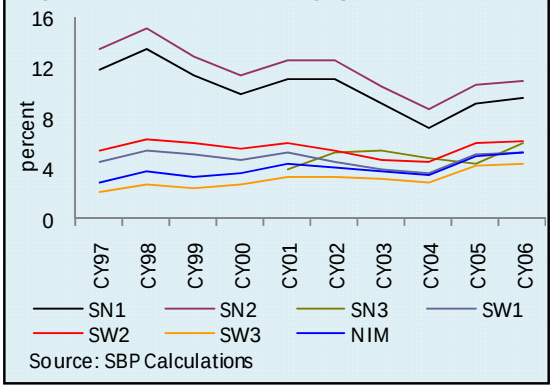
In this backdrop, a visible rise in margins/banking spreads of the banking sector in Pakistan over the last three years should be interpreted with caution. High levels of banking spreads accompanied with the all time high profitability of the banking sector have raised important policy issues related to the efficiency and the degree of competition in the industry. High banking spreads also have strong implications for the stability of the overall financial sector. Low returns to savers have a negative impact on incentives to save, which in turn affects the fund mobilization capacity of the financial sector. On the other hand, high lending rates have negative implications for investment activities in the economy.

Keeping these issues and recent developments in view, this article is primarily focused on explaining the dynamics of banking spreads in Pakistan. Efforts have been made to explore the factors behind the high banking spreads using bank-level data from 1997 to 2006. The analysis is then followed by some policy suggestions.

1.2 Banking Spreads in Pakistan: Stylized Facts

Following the approach of Brock and Suarez (2000) and Koeve (2003), six different indicators of banking spread have been computed using data of all scheduled banks in Pakistan. These six indicators range from a narrow definition to a considerably wide definition of the term.[1] A quick view of **Figure 1.1** and **Table 1.1** indicates that the level of banking spreads has increased in the last two years (CY05 & CY06). All six definitions of banking spread registered an increase in CY06. The widely used measure i.e. NIM also jumped from 5.0 percent in CY05 to 5.2 percent in CY06. An interesting point to note is the wide variation in banking spreads across different definitions – the level of spreads for CY06 ranges from 4.4 to 11.0 percent, depending on the definition used.

Figure 1.1: Trends in Banking Spread



Source: SBP Calculations

Table 1.1: Banking Spreads in Pakistan

percent

	CY97	CY98	CY99	CY00	CY01	CY02	CY03	CY04	CY05	CY06
SN1	11.8	13.5	11.4	10.0	11.2	11.1	9.1	7.2	9.2	9.6
SN2	13.4	15.1	12.9	11.4	12.5	12.5	10.6	8.8	10.7	11.0
SN3	n.a.	n.a.	n.a.	n.a.	3.9	5.3	5.4	4.8	4.4	6.1
SW1	4.5	5.4	5.0	4.7	5.2	4.6	3.8	3.6	5.1	5.3
SW2	5.5	6.4	6.0	5.6	6.1	5.4	4.6	4.5	6.0	6.2
SW3	2.1	2.8	2.4	2.7	3.4	3.3	3.1	2.9	4.2	4.4
NIM	2.8	3.7	3.3	3.5	4.3	4.1	3.7	3.5	5.0	5.2

Source: SBP Calculations based on annual audited accounts of all Scheduled Banks
S: Spread; N: Narrow; and W: Wide
SN1= ((Int. earned/Average Loans) – (Int. Exp./Average Deposits))*100
SN2 = ((Int. earned + Comm.)/Average Loans –(Int. Exp./Average Deposits))*100
SN3 = ((Int. earned on loans/Av. Loans)- (Int. paid on deposits/Av. Deposits))*100
SW1 = ((Int. earned/Av. Int. bearing assets) – (Int. paid/Int. bearing liabilities))*100
SW2 = ((Int. plus commission earned/Av. Int. bearing assets) – (Int. paid/Int. bearing liabilities))*100
SW3 =(Interest earned – Interest paid)/ Average Assets*100
NIM = (Interest earned - Interest paid)/ Average Earning Assets*100

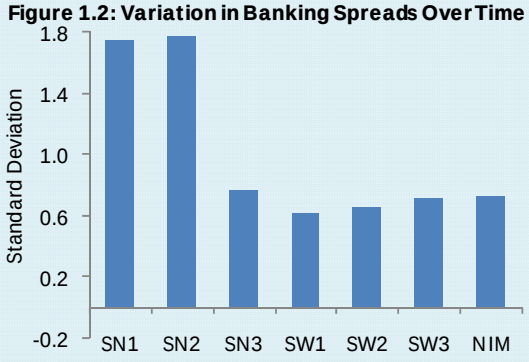
1. With the exception of SN3,[2] narrowly defined banking spreads are consistently higher as compared to broadly defined levels. This difference in levels primarily arises from the use of different basis for calculation of banking spread. This implies that the behavior of banking spread over time, based on a consistent definition, is more relevant for the analysis of COFI, or the efficiency of the banking sector, than the actual level of the spread at one point in time.

[1] In narrow definitions, the spread is generally calculated on the basis of advances and deposits of the banking sector, while in wide definitions a broader set of banking activities including investments, borrowings and other interest bearing activities on both sides of the balance sheet (assets and liabilities) are included.

[2] One may be wondering why the SN3 definition of banking spread behaves differently than the other narrowly defined terms. Three points are worth noting here. First, the distinction between narrow and broad definitions is based on the base (denominator) for calculating banking spreads, not the numerator. Second, SN3 and broad definitions are closer to reality than SN1 and SN2. Finally, one should not forget that different definitions have been used to illustrate how the level of banking spread depends on how it is defined, instead of anything else.

2. Barring SN3, narrowly defined banking spreads have been more volatile over time as compared to the wide definitions of the term (**Figure 1.2**). This variation again arises largely from the differences in the base used for calculation, as the deposit base is generally larger than the loans and advances of the banking system.[3] Therefore in a changing interest rate scenario, a one to one corresponding increase or decrease in the lending and deposit rates is unlikely to be observed. Specifically, in an increasing interest rate environment, a rise in lending rates is generally larger than the rise in deposit rates, which results in pushing up the banking spread. On the other hand, in a declining interest rate scenario, the opposite is likely happen. Besides these changes in banking spread due to base effect, the magnitude of spread is also affected by different adjustment lags of lending and deposit rates. Specifically, when interest rates are rising, lending rates tend to adjust more quickly (in terms of time) than the deposit rates, while in a declining interest rate scenario, deposit rates adjust faster than the lending rates. Needless to say, difference in adjustment lags is not a universally applicable phenomenon, given the varying level of competition on the lending and funds mobilization activities in different economies. In the afore-mentioned discussion it is assumed that there is greater competition in extending loans than in deposit mobilization, as has been the case in Pakistan during recent times. This is particularly so because banks have focused more on asset growth as compared to innovations in liability products in recent years.

Figure 1.2: Variation in Banking Spreads Over Time

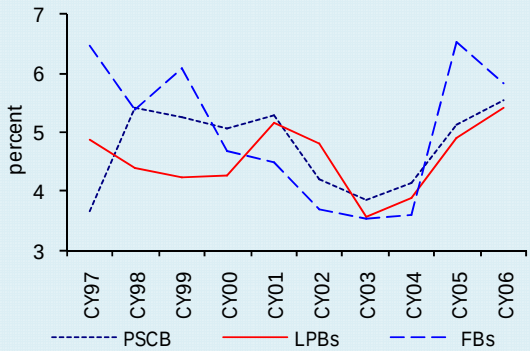


Source: SBP Calculations

3. Although one can argue in support of a specific definition of banking spread and its level, this view lacks consensus – a specific definition of banking spread may be more relevant at one point in time than the other.

For a detailed analysis of banking spreads, we employ the SW1 definition, which is also widely used to comment on its trends. The banking spread based on this definition has increased from 3.6 percent in CY04 (the lowest point) to 5.3 percent by end CY06, indicating an increase of 170 basis points in a span of just two years. Notably, this visible rise in banking spread was not equally shared across various categories of banks within the industry (**Figure 1.3**). Specifically, the banking spread of foreign banks (FBs) surged to 6.5 percent in CY05 before declining to 5.8 percent in CY06 – still significantly higher than the spread levels of other banking groups. On the other hand, the levels of banking spread for Public-sector Commercial Banks (PSCBs) and Local Private Banks (LPBs) are also on the rise, but follow a more closely aligned pattern. Besides these trends, banking spreads of foreign banks also witnessed greater variation over the period of analysis compared to other banking groups.

Figure 1.3: Banking Spread by Groups



Source: SBP Calculations

[3] Deposits of the banking sector reached Rs 3,201.9 billion by end CY06 compared to net outstanding loans of Rs 2,389.1 billion.

While it is clear from **Figure 1.3** that banking spread for LPBs was the lowest among the three categories over the last two years (CY05 & CY06), this does not convey the entire story, as the average spread level conceals some very important information. To be specific, we analyze bank-level spreads for the years CY05 and CY06 by using data for 35 banks. The ranking of banks based on average spreads over the past two years (CY05 and CY06) indicates that the top 15 banks with high spreads include representatives of all three banking groups (PSCBs, LPBs and FBs). Specifically, 4 out of 15 banks are foreign banks and 2 are public sector commercial banks. The remaining 9 banks are domestic private banks. The ranking of these 15 banks with respect to the average deposits rate (ADR) and average lending rate (ALR) provides interesting information. The findings based on this information are summarized below:

- 10 of the 15 banks with high spreads are also ranked among the top 15 banks with higher average lending rates. Moreover, 4 of the top 5 banks with respect to the highest average lending rates are actively involved in consumer financing. The outstanding amount of consumer financing of these banks constitutes 27.5 percent of the overall lending to consumers by the banking sector, while their share in total outstanding advances is only 8.8 percent. This implies that one of the contributory factors towards the high banking spread of these banks is their exposure towards consumer financing, which generally carries higher rates in line with its risk characteristic.

- The big 5 banks are also among the top 10 banks with high banking spreads. With the exception of one bank, none of these banks are in the list of the top 15 banks with high average lending rates. This suggests that the high banking spread of these banks primarily arise from low average deposits rates. Factors such as the confidence of the public in these banks due to their established reputation built over many years, and relatively large branch-network have contributed to the higher proportion of their deposit base.

- With the exception of one bank, none of the others are part of the list of the top 15 banks with high average deposits rates. While big banks are generally ranked the lowest in terms of the average deposit rate, foreign banks' ranking falls somewhere around the middle of the list. This again suggests that banks are taking advantage of low competition in mobilizing deposits.

- The general perception that foreign banks provide better returns on deposits does not hold true over the period of analysis. Not a single foreign bank with a high banking spread is on the list of the top 15 banks with high average deposit rates. It is observed that mid-sized local private banks provide better returns to depositors.

1.3 Banking Spreads: An International Comparison

Continuing the analysis of SW1 in Pakistan, **Table 1.2** shows that the level of banking spread varies considerably across countries. For instance, the banking spread for Japan is only 1.0 percent for CY06, while it is 6.1 percent for Brazil. Pakistan is categorized among countries with high banking spreads, as it is ranked the 4th highest in a selected sample of 10 countries. However, it may be noted that the usefulness of a direct comparison of banking spreads across countries is constrained by definitional issues, as the calculation methodologies of key banking variables differ across various geographical jurisdictions.[4] It may further be noted that the varying pace of financial liberalization in emerging economies can also affect the respective level of their banking spread.

The most helpful information drawn from **Table 1.2** is about the trends in banking spreads over the period of analysis. Specifically, banking spread in most of the selected countries has narrowed over the past few years, whereas in Pakistan it has widened to over 5 percent in recent times. The banking sector in Pakistan has usually defended itself by arguing that

[4] We use IFS data which does not specify how the lending and deposit rates for different countries are calculated.

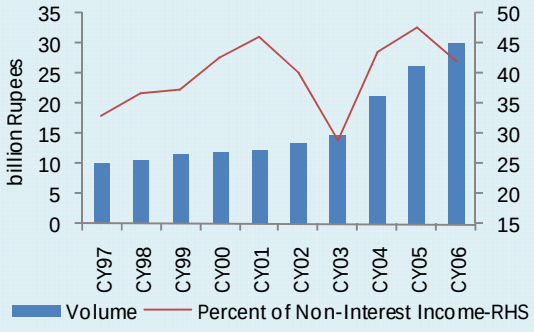
other bank charges (fees and commission) on the banking services offered are considerably lower than international norms. While a detailed analysis of bank charges will add to this discussion, few observations can still be made. First, it is quite difficult to compare bank charges across the banking industry due to a wide variation in the fees and commission structure of banks. This is clearly evident from the major bank charges of the big five banks in case of Pakistan. Secondly, there are no specifically accepted international norms that can be used as a benchmark for the comparison of fees and commissions. Besides these issues, differences in regulatory environments also complicate the results of an international comparison of bank charges.

Table 1.2: Cross Country Comparison of Banking Spreads
percent

	CY97	CY98	CY99	CY00	CY01	CY02	CY03	CY04	CY05	CY06
Pakistan*	4.5	5.4	5.0	4.7	5.2	4.6	3.8	3.6	5.1	5.3
Bangladesh[1]	5.9	5.6	5.4	6.9	7.3	7.8	8.2	7.6	5.9	6.2
Brazil	7.1	7.7	8.2	8.3	9.1	8.6	7.4	6.5	6.5	6.1
South Africa	4.6	5.3	5.8	5.3	4.4	5.0	5.2	4.7	4.6	4.0
East Asian Countries										
Malaysia[3]	2.9	3.6	4.4	4.3	3.8	3.3	3.2	3.0	3.0	3.3
Indonesia[2]	1.8	n.a.	1.9	6.0	3.1	3.4	6.3	7.7	6.0	4.6
Philippines[3]	6.1	4.7	3.6	2.6	3.7	4.5	4.3	3.9	4.6	4.5
Developed Countries										
Switzerland	3.5	3.4	2.7	1.3	2.6	3.5	3.1	3.0	2.6	1.6
Australia	4.6	4.4	4.5	5.1	5.5	5.1	5.2	5.2	5.4	5.5
Japan	2.1	2.1	2.0	2.0	1.9	1.8	1.8	1.7	1.4	1.0

Source: International Financial Statistics
Spread= lending rate - deposit rate
*:spread =((Interest earned/Average Interest bearing assets) - (Interest paid/Average Interest bearing liabilities))*100
1:gap between lending rates and 3 to 6 month deposit rates
2: gap between lending rate for working capital and 3-month deposit rate
3: gap between average lending rate and 3-month deposit rate

Figure 1.4: Fee, Commission and Brokerage Income of Banking Sector



Source: Annual Audited Accounts of Banks

While the above factors play an important role in analyzing bank charges at a micro level, non-interest income of the banking sector can be used as a broad indicator of banks' fees and charges. In case of Pakistan, the aggregate fee, commission and brokerage income (FCBI) of the banking sector has surged to Rs 30.0 billion during CY06, compared to only Rs 14.7 billion in CY03 – indicating a compound annual average growth of over 25.0 percent. Moreover, the share of FCBI in total non-interest income, which declined to 28.8 percent in CY03, has jumped to over 40 percent in recent years (**Figure 1.4**). Importantly, this rise in both the volume and the share of FCBI has been accompanied with increasing interest rate spreads and the all time high profitability of the banking sector. Furthermore, a visible jump in FCBI was observed after the removal of restrictions on bank charges by SBP.[5]

The above discussion suggests that there is an indication of increase in bank charges subsequent to the removal of associated restrictions by SBP. However, a detailed analysis of bank charges should be carried out to gain an adequate understanding of the fee and commission structure of the banking sector. Moreover, efforts should also be made to

[5] SBP liberalized the policy for bank charges vide BPD Circular No 33 dated October 2, 2003, which gave banks the discretion to determine their respective charges for the various services provided to the customers.

understand the major determinants of banking spread, as discussed and analyzed in the next section.

1.4 Determinants of Banking Spread in Pakistan

In general, banking spread is primarily determined by: (1) bank-specific factors including administration cost, structure of the balance sheet, non-core revenues etc.; (2) industry-specific indicators like the degree of competition, regulatory requirements including minimum capital requirements, cash reserve requirements and statutory reserve requirement etc.; and (3) macroeconomic indicators including real GDP growth, inflation and interest rates, etc.[6] Mathematically, this can be specified as follows:

$$SP_{i.t} = f(BSI_{i,t}, ISI_t, M_t) + \varepsilon_{i,t}$$

Where $SP_{i,t}$ denotes the banking spread of bank i at time t; $BSI_{i,t}$ stands for bank-specific indicators of bank i at time t; ISI_t are industry-specific indicators in time t; and MI_t denotes macro indicators in time t. The subscripts attached to the indicators show that bank-specific factors are allowed to vary over time and across banks, as these indicators generally depend on banks' respective operational policies. However, industry-specific and macroeconomic indicators are allowed to vary over time only, as all the banks face the same industry regulations and macroeconomic environment at a given point in time.

Table 1.3: Results of Fixed Effect Panel Regression

Banking Spread: Dependent variable

Variable	Coefficient	t-Stat
Intercept	-1.0543	-1.0696
Bank Specific Indicators		
Share of Non-int. in total income	-0.0188*	-7.3303
Provision to NPL Ratio$_{t-1}$	0.0030*	3.7643
Admin. expense to total assets	0.2185**	2.5216
Dummy for Foreign banks	1.0278**	2.2658
Industry Specific		
Herfindhal Index	0.0031*	3.2313
Macroeconomic Indicators		
Real GDP growth$_{t-1}$	0.1876*	5.0027
Interest Rate volatility	0.1151*	5.0028
Lag of dependent Variable	0.2258*	4.3231
Weighted Statistics		
Adjusted R-squared	0.8869	
S.E. of regression	1.0757	
F-statistic (Probability)	0.0000	
Durbin-Watson stat	1.6655	
No. of Observations	279	

* and ** indicate 1 and 5 percent level of significance respectively.
Source: SBP Calculations

The above equation is estimated by using a fixed-effect panel regression technique based on balanced panel data of 31 banks, from 1997 to 2006. We use the option of 'white cross sections' to allow contemporaneous correlations in the residuals of the banks. Moreover, an AR term is included to capture autocorrelation in error, which generally leads to a large bias in the standard errors of pooled OLS. The results of the best-fitted panel regression are presented in **Table 1.3**,[7] which explains 88.7 percent variation in banking spread over the estimation period. With the exception of the intercept, all other parameter estimates are statistically significant at the 1 or 5 percent level of significance. The interpretation of the coefficients is given below.

1.4.1 Non-Interest Income and Banking Spread

It is generally expected that an increase in non-interest income (income from fee, commission, brokerage activities and foreign exchange transactions) is negatively correlated with banking spread as it helps to finance a portion of administrative expenses and provisioning requirements. The regression estimate supports this expectation. However, the magnitude of the coefficient is small. A 100 basis points (bps) increase in the share of non-

[6] A similar exercise was carried out in 'Pakistan: Financial Sector Assessment 2005', State Bank of Pakistan. We build on the regression analysis by updating the data for CY06 and refining the definition of variables. It may also be noted that the year 1996 has been dropped from the analysis, as banking spread for CY96 cannot be calculated due to data constraints for CY95.

[7] It may be noted that the fixed effects of the regression are not reported in the table, however the estimates can be obtained from SBP.

interest income to total income is likely to reduce the spread by 2 bps only. However, this result should not be taken at face value, as the share of non-interest income in total income has witnessed considerable variation over the period of analysis.[8] Furthermore, a 23 bps increase in banking spread over the estimation period is explained by the lagged value of the spread. Therefore, the magnitude of the coefficients represents marginal changes in banking spread in response to a change in the explanatory variables.

1.4.2 Provisions and Banking Spread

Banks are in the business of taking risks and may accumulate some non-performing loans (assets) in the course of conducting their regular business. These non-performing loans/assets should be fully provided for in the ongoing operations of the banks, for which regulators around the globe generally impose some prudential requirements. SBP has also issued similar provisioning requirements for banks to ensure their safe and sound functioning. In an accounting framework, provisions are considered to be an expense. Therefore, a positive relation between provisions and banking spread is generally envisaged. The results indicate that the provision to NPL ratio is positively correlated with the banking spread over the period of estimation. Specifically, a 100 bps increase in the provision to NPL ratio in time period *t-1* is likely to increase the banking spread by 0.3 bps in time period *t*.

1.4.3 Administration Expense and Banking Spread

Like the overall level of banking spread, administration cost is also considered to be a component of the cost of intermediation. It represents the resources used on the administration of intermediation activities. Banks tend to break-even this cost by maintaining a spread between lending and deposits rates or by charging fees, commission etc. Therefore, a positive association between the administration cost and the overall banking spread is expected. The results indicate that there is a positive and statistically significant effect of the administration expenses to total assets ratio on the banking spread. Specifically, a 100 bps increase in the said ratio is likely to increase the banking spread by 21.9 bps over the estimation period. This result seems economically significant as well, as it represents the marginal effect in the presence of AR terms.

1.4.4 Ownership and Banking Spread

Results indicate that ownership plays an important role in determining banking spreads. Specifically, foreign banks have significantly higher banking spreads (by over 100 bps over the estimation period) compared to domestic banks. This is also evident from the bank-wise analysis of banking spread, as a number of foreign banks fall in the list of banks with high banking spread. Relatively higher exposure towards consumer financing, offering innovative product solutions tailored to the needs of customers, and technological advantages are some of the factors that help these banks in maintaining high bank spreads.[9]

1.4.5 Competition and Banking Spreads

The presence of high banking spreads generally gives rise to policy issues regarding the competition in, and efficiency of, the banking sector. Lack of competition in the banking sector allows banks to maintain high spreads and extract above normal profits. This does not bode well not only for the overall efficiency of the banking sector, but also for its long-term sustainability. For the purpose of this analysis, we use the Herfindahl index (HHI) to assess the extent of competition in the banking sector. HHI is a measure of concentration and higher concentration represents a lower degree of competition, as banking business is then concentrated in a few big banks. These big banks can then use their market share to extract high returns. Therefore, the coefficient of HHI is expected to be positive in the banking spread regression.

[8] Bank-wise data indicates that the standard deviation of non-interest income to total income varies from 3.99 to over 100.

[9] The ownership dummy variable in the presence of fixed effects was included to distinguish the impact of ownership from bank-specific characteristics.

Results indicate that the sign of the coefficient is in line with expectations and statistically significant. The magnitude of the coefficient i.e. 0.003 seems quite reasonable as the value of HHI varies from 1045 (CY97) to 745 (CY06) over the estimation period. To be more specific, a change in HHI during CY06 lead to a 5.3 bps decline in banking spread during the period. In other words, a rise in the overall banking spread during CY06 would have been higher had this positive development not taken place during CY06.

1.4.6 Macroeconomic Factors and Banking Spread

Among macroeconomic factors, real GDP growth generally affects the banking spread by influencing the credit risk factor. High GDP growth not only contributes towards deposits growth, but also increases the demand for advances and strengthens the ability of the borrower to repay their obligations. Therefore a positive relation between real GDP growth and banking spread is expected. The results indicate a positive and statistically significant impact on banking spread. Specifically, a 100 bps increase in real GDP growth is expected to increase banking spread by 18.7 bps over the estimation period.

Another important macroeconomic variable taken into account in the analysis is the interest rate volatility (IRV). In general, the liquidity position of the banking sector and monetary policy changes affect the variability of interest rates. It is observed that the pass-through effect of changes in short-term benchmark interest rates to the lending rate is higher and quicker as compared to the deposit rate.[10] Therefore, interest rate volatility increases during the transition periods and positively affects the banking spread. This is also supported by the expectation theory of interest rates, as the causality runs from very short-term interest rates towards long-term interest rates. In this setting, a positive association is expected between interest rate volatility and banking spread. The results indicate that a 100 bps change in IRV increases banking spread by 11.5 bps during the estimation period.

1.5 Further Determinants of Banking Spread

The determinants of banking spread based on panel regression results do not represent an exhaustive set of factors, as regression results cannot completely explain the variation in banking spreads over the estimation period. Over 10 percent unexplained variation is attributed to a number of other factors which could not be captured in the regression equation. Specifically, there are at least two factors that play an important role in determining the banking spread, but could not surface in the regression analysis due to the problems of *confounding* and *variability*. These two factors are the reserve requirements and structure of bank deposits. A brief discussion of these factors will help to explain how they can affect the level of banking spread.

1.5.1 Reserve Requirement and Banking Spreads

At present, two types of reserve requirements are in place, namely the cash reserve requirement (CRR) and statutory reserve requirement (SLR). Infrequent changes in these requirements over the period of analysis seem to be the primary reason why their impact was not captured in the regression results. Non-remunerative CRR of 7.0 percent on demand liabilities (including time deposits of less than one year maturity) suggests that the banking sector is left with a maximum of 93 percent of demand liabilities to channelize into productive assets. This creates room for the emergence of banking spread. Simple arithmetic suggests that increase in CRR will increase banking spread and vice versa. SLR is also considered to be an implicit tax on the banking sector as it requires banks to invest a certain portion of their demand and time liabilities into government securities (which usually have low returns because of their zero risk characteristic). An increase in SLR should have a positive effect on banking spread and vice versa. However, the impact of SLR is expected to be much smaller as compared to CRR, as banks do earn on investments in government securities.

While the positive relation between reserve requirements and banking spread is obvious, one should not overlook the importance of these requirements from the point of view of financial

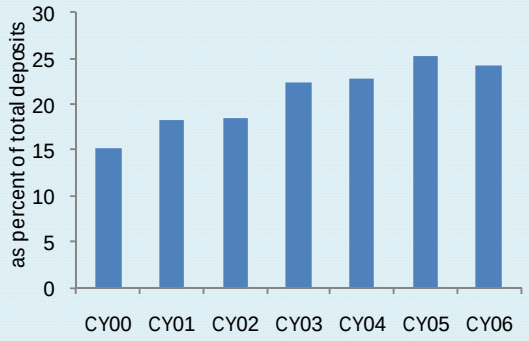
[10] Detailed analysis was carried out in 'Pakistan: Financial Sector Assessment 2005', State Bank of Pakistan.

stability, especially in case of developing countries like Pakistan. Investments for SLR entail an implicit tax on the banking sector at one hand, while reducing the riskiness of the investment portfolio on the other hand.

1.5.2 Structure of Deposits and Banking Spreads

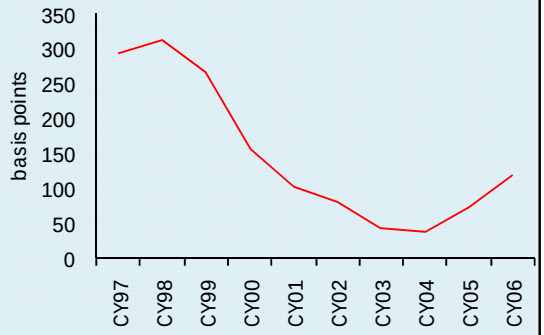
In general, the deposit structure of the banking sector is considered to be an important determinant of banking spread. However, none of the proxies for deposit structure were statistically significant in the regression analysis. One possible explanation for this could be the presence of fixed effects for each bank, as bank-specific intercepts might have captured the effect of the deposit structure on banking spread. Another reason could be that most of the banks have a similar deposit structure. Recognizing such limitations of the regression analysis, the impact of the deposit structure on the level of banking spread can be explained by calculating the impact of non-remunerative deposits on the spread. **Figure 1.5** indicates that around a quarter of the total deposits of the banking sector are non-remunerative. This huge and increasing volume of deposits at a zero rate of interest suppresses the average cost of deposits. Specifically, if we exclude these deposits from total deposits, the average cost of funding increases by 118 bps for the year CY06 (**Figure 1.6**). Consequently, the banking spread also narrows down by 118 bps.

Figure 1.5: Non-Remunerative Deposits



Source: Banking Surveillance Department, SBP

Figure 1.6: Impact of Non-Remunerative Deposits on Average Cost of funding



Source: SBP Calculations

In addition to zero rate deposits, around 90 percent share of PLS deposits in the overall deposits of the banking sector reflects the extent of flexibility available to banks for managing their overall cost of deposits. Banks have the discretion to revise the indicative rates on PLS deposits disclosed at the time of accepting the deposit.

The distribution of deposits by types of accounts also provides useful information in understanding the deposit structure of the banking sector. **Table 1.4** indicates that the share of fixed deposits in total deposits was around 25 percent at end-June 2006, and a large portion of these fixed deposits fall in the category of less than six months maturity. The greater share of short term deposits also contribute towards low deposit rates as the return on these deposits is lower than fixed deposits of longer maturity. However, SBP's policy measure of introducing tiered cash reserve requirements for demand and time liabilities[11] provides a strong incentive to banks to mobilize fixed deposits of longer maturities. Data for end-December 2006 indicates that the incentive has started to show the desired results, as the share of fixed deposits in total deposits jumped from 24.2 percent as of June 2006 to 30.7 percent by end 2006. In recognition of this positive development, SBP issued another directive in freeing up the CRR requirement of 7.0 percent for deposits with maturities of one year and more,[12] to further incentivize banks in mobilizing fixed deposits to improve the overall return on deposits, while also reducing the asset-liability mismatch.

[11] BSD Circular No. 9 dated July 18, 2006 and BSD Circular No. 10 dated July 22, 2006.
[12] BSD Circulars No.4 and No. 5 dated August 1, 2007.

Table 1.4: Distribution of Deposits by Types of Accounts
Share in total deposits

					Fix Deposits							
	Current	Call	Others	Savings	< 6-m	< or = 6-m < 1-Y	< or = 1-Y < 2-Y	< or = 2-Y < 3-Y	< or = 3-Y < 4-Y	< or = 4-Y < 5-Y	< or = 5-Y	Total Fixed Deposits
Jun-04	24.1	2.0	1.7	55.8	5.8	2.4	2.7	0.8	1.2	0.1	3.4	16.4
Dec-04	25.9	1.4	2.0	54.1	7.2	2.3	2.3	0.5	1.1	0.1	2.9	16.6
Jun-05	26.0	1.6	1.4	52.1	9.4	3.1	2.5	0.5	0.8	0.2	2.5	18.9
Dec-05	26.1	1.3	1.4	46.0	13.7	4.0	3.8	0.5	0.7	0.2	2.5	25.3
Jun-06	25.7	1.4	1.5	47.3	11.9	3.6	4.5	0.6	0.9	0.2	2.6	24.2
Dec-06	24.7	1.0	1.2	42.4	14.2	4.8	5.5	0.7	1.5	0.2	3.7	30.7

Source: Statistical Bulletin, State Bank of Pakistan

Another important way to assess at the deposit structure is the distribution of deposits by size. **Table 1.5** shows that over 40 percent of total deposits are of an amount less than Rs 0.5 million. Industry experience suggests that these deposits are relatively less interest-rate sensitive. However, deposit sizes in excess of Rs 10 million are generally considered to be more interest-rate sensitive.

Table 1.5: Distribution of Deposits by Size
percent of total deposits

	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Jun-06	Dec-06
Upto Rs 10,000	4.2	3.3	2.7	1.4	1.0	0.9	1.1
Upto Rs 50,000	27.3	25.9	19.0	15.7	11.8	11.1	9.2
Upto Rs 100,000	35.0	34.1	29.0	27.5	23.1	22.4	17.6
Upto Rs 500,000	54.6	54.5	49.4	49.2	44.5	43.8	41.1
Upto Rs 1,000,000	61.0	61.3	55.9	55.7	50.8	50.1	48.0
Upto Rs 10,000,000	73.5	75.2	72.1	69.8	65.0	65.5	64.9
Rs 10,000,000 and More	26.5	24.8	27.9	30.2	35.0	34.5	35.1

Source: Statistical Bulletin, State Bank of Pakistan

In sum, assessing the deposit structure from different angles clearly indicates that low deposit rates are primarily supported by customers' liquidity preferences. Stronger liquidity preference of the customer in turn helps the banking sector to reduce its average cost of mobilizing funds, which ultimately contributes towards higher banking spread.

1.6 Policy Suggestions

The appropriate way to deal with high banking spread is to influence its determinants in a way which helps in narrowing its level. The discussion on the determinants of banking spread provides very useful information in this respect. For instance, increase in real GDP growth is associated with high banking spread. As economic growth continues to be sustained, the consequent policy prescription is that its positive impact on banking spread is offset by the indirect effect of GDP growth on NPLs and deposits mobilization. Furthermore, efforts to reduce interest rate volatility and increasing competition in the banking sector will also help in reducing the banking spread. Banks should be encouraged to curtail their administrative expenses, increase their core business activities, and follow prudent lending policies. All these factors will help in reducing the currently wide level of banking spread. Some of the other possible measures are discussed below.

1.6.1 Customer Awareness

Keeping the structure of deposits in mind, the first step in reducing banking spread could be to create awareness among the depositors so that they can place their deposits in relatively high return fixed deposit schemes offered by banks, given that returns on fixed deposits are significantly higher than those on the call, savings and current deposits (**Table 1.6**). Therefore, depositors should be encouraged to shift their extra funds from the regular savings and call deposits towards the more lucrative term deposits.

Table 1.6 : Return on Bank Deposits
percent per annum

			Term Deposits							
	Call Deposits	Savings Deposits	Less than 3- months	3-m & over but less than 6-m	6-m & over but less than 1-year	1-year & over but less than 2-years	2-years & over but less than 3-years	3-years & over but less than 4-years	4-years & over but less than 5-years	5-years & over
Jun-04	1.12	0.98	1.15	1.51	2.20	2.71	2.80	3.01	2.98	3.23
Dec-04	1.33	0.93	1.93	1.93	2.63	2.73	2.87	3.24	3.06	3.57
Jun-05	1.39	1.24	2.98	3.62	4.21	4.28	3.99	4.02	3.84	3.98
Dec-05	1.34	1.66	3.62	3.27	4.78	5.75	5.27	5.51	6.19	4.96
Jun-06	1.45	1.67	4.24	4.49	4.64	5.26	5.44	5.44	4.9	5.57
Dec-06	1.68	1.92	4.32	5.56	5.88	5.95	5.67	7.14	7.09	6.01

Source: Statistical Bulletin, State Bank of Pakistan

Although no sea change can be expected in customer behavior over a short span of time, efforts to educate them along with providing more information on rates of returns on different types of term deposits, is likely to yield positive results. For this purpose, a web-link (potentially on the SBP website) that provides a comparison of deposit rates and other bank charges across the banking sector can be a helpful tool.

1.6.2 Rationalizing Bank charges

It may be noted that whereas banks follow the practice of disclosing their deposit rates and schedule of charges on their respective websites and in their branches, drawing a comparison across banks is a difficult process as the rates and charges vary according to minor and major characteristics of the deposit schemes. It is hence recommended that some of the basic charges should be made consistent across the banking sector. For instance, services such as issuance of cheque books, ATM cards, pay orders, demand drafts, traveler's cheques, services charges on conventional banking accounts, etc. could be consistently priced. This is not to suggest that all bank charges should be the same, as some charges depend on the marketing strategy and the level of technological advancement of a given bank. The suggestion is to have a consistent level of charges for those bank services which generally entail almost similar costs. Fixation of services charges of Rs 50 per month on accounts maintaining balances below the minimum monthly average balance is one such instance of rationalizing charges.[13]

1.6.3 PLS status of deposits

It is also clear from the structure of deposits that PLS deposits are the main source of funding for the banking sector. One of the important characteristics of these deposits is that banks retain the discretion to revise the returns on these deposits retrospectively due to their profit-loss sharing nature. Specifically, banks generally announce indicative rates in January and July on various types of PLS deposits and have the flexibility to revise these announced rates downward or upwards at the time of the final declaration of the returns on deposits. This characteristic of PLS deposits is the upshot of Banking Control Department (BCD) Circular No 13 dated 20th June 1984, issued for the elimination of 'Riba' from the banking sector. Two points are worth noting here. *First*, with the passage of time it has been realized that these deposits are not *shariah* compliant, as initial efforts to Islamize the banking system were declared un-Islamic in 1991.[14] *Second*, in recent years, Islamic banking in Pakistan has emerged in parallel with conventional banking and the conventional banks also have the opportunity to set up stand-alone Islamic bank braches and to establish subsidiaries. The business products (both asset and liability) of Islamic banks are *shariah* compliant. In these

[13] BPRD Circular Letter No 20 dated August 1, 2007.
[14] The conventional PLS mark-up based procedure of the banking sector was declared un-Islamic by the Federal Shariat Court (FSC) in November 1991. The verdict was endorsed by the Supreme Court of Pakistan on December 23, 1999.

circumstances it is suggested that the notion of PLS deposits residing with conventional commercial banks should be revisited.

1.6.4 Enhanced competition and greater disclosure

The most desirable option is the continuation of SBP policies to instill and promote competition in the banking sector, which have an important role in the overall development of the economy. Specifically, policies directed towards infusing greater competition in the banking industry together with an increase in disclosure requirements and proactive supervision are the key elements that will help in reducing banking spreads.