

# The banking industry of pakistan finance essay

[Finance](#), [Banks](#)



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## **ABSTRACT**

This study is undertaken to explore the determinants of high banking spreads in the banking industry of Pakistan. Bank level data of 55 commercial banks from 2001-2011 published by State Bank of Pakistan in Annual Banking Statistics report has been used for analysis. In addition, some macroeconomic variables have also been included in the model. The results suggest that administration expense, bank size, capital ratio, inflation rate, GDP growth and foreign ownership are significant factors affecting profitability. Moreover concentration in the banking sector is also found to be influencing profitability considerably. Concentration ratios were also

calculated to identify the type of market structure of the banking system. The measures of concentration ratio i. e. HHI and M- concentration demonstrate remarkable improvement over the period of analysis. A decline in both of the ratio was observed suggesting a competitive market structure in the banking industry. Despite of these positive developments, market cannot be termed as competitive as there is evidence of high banking spreads enjoyed by the banks. To assess whether concentration really exists, this study explored a new dimension of analysis i. e. creation of market segmentation index. This index was constructed in order to determine whether banks extends loan to specific sectors of economy on the basis of low risks. The results reflected a high degree of market segmentation over the last three years highlighting the notion that a large part of the economy is being neglected as the banks distribute loans to specific sectors leading to industry concentration. The study suggests some policy inferences for the government, central bank and management of the commercial banks.

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CHAPTER 1 :

## **CHAPTER 1**

### **INTRODUCTION**

The growth of an economy is closely linked with the developments in the financial system. A stable and an efficient financial system not only utilizes financial resources in the most optimal manner but also puts them to the best use in the real sector, thereby promoting economic growth. There is a two way causal relationship between finance and growth. As the level of economic activity intensifies in any economy, the demand for financing also increases leading to a growth in both the financial sector and the economy. In developed countries, financing generally flows both from the banking system and the capital markets, while in most developing and transition economies the capital markets are also dependent upon the banking system to thrive, which shifts the burden of financing on the banking system. Pakistan in this case is no exception and has a predominantly bank-based financial system which caters to the financing needs of the entire economy[1]. Recently, the occurrence of high profitability in line with rising

banking spreads (i. e. a high interest is charged from borrowers and a low deposits rate is paid to the depositors) has raised concerns regarding the degree of concentration and competition prevalent in the banking industry of Pakistan. High banking spread pose strong negative implication on the overall economy in terms of low savings, dwindling investment and sluggish business growth. 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. The banking spread in Pakistan is more than 7. 0 percent which is one of the highest as compared to 3. 0 percent in USA, 1. 7 percent in Japan, 4. 0 percent in India, 4. 4 percent in Sir Lanka and 5. 5 percent in Nepal. These high banking spreads also results from extending loans to particular segments that involves low risks. Currently banks serve only 15 per cent of Pakistan's population and only 7 per cent of bank lending is to the rural population, whose share in national deposits is also meager amounting to 10 per cent of aggregate deposits[2]. Thus, risk aversion has lead to neglect of the rural population and under privileged sectors providing no benefits to the real economy. Furthermore according to the Financial Development Report of 2011, Pakistan was ranked 55th amongst 60 countries on the basis of financial development measured by institutional environment, business environment, financial access and stability and banking services etc. In the light of the arguments stated above, there is an immense need to probe into the fallacies of the system and determine the factors that are leading to high banking spreads.

## **1. 1 STATEMENT OF THE PROBLEM**

While the banking sector in Pakistan has made a rapid progress in terms of profitability in recent years, there have been consistent discussions about the level of concentration and its impact on high banking spreads enjoyed by the banking industry. This study investigates the determinants of profitability and impact of concentration on the profitability of the banking industry of Pakistan.

## **1. 2 SIGNIFICANCE OF THE STUDY**

This study will be a significant contribution to existing literature as it provides a comprehensive account of the effect of internal and industry-specific determinants on bank profitability for the last ten years, thus providing more appropriate and recent empirical evidence. The calculation of market segmentation index will open new dimension for future research. It will allow researchers to explore the impact of loan concentration on industry concentration which has not been dealt in detail before. Moreover, the study establishes a relationship between market concentration and profitability. The results will be helpful for competition commission and state bank for the development of a regulatory framework and policy reforms.

## **1. 3 OBJECTIVES OF THE STUDY**

The study is based on the following objectives: To identify the determinants of high banking spreads i. e. profitability in the banking industry of Pakistan. To explore the type of market structure of the banking industry of Pakistan. To examine whether concentration is leading to high spreads/ profitability of the banking industry i. e. to investigate the relationship between HHI

(concentration measure & NIM i. e. profitability). To construct a market segmentation index in order to observe whether loans are disbursed in particular markets leading to concentration within the loan portfolio structure of the banking system.

## **1. 4 ORGANIZATION OF THE STUDY**

The remaining study is organized as: Chapter 2 is based on review of related literature. Chapter 3 presents data sources and research methodology. Results and discussions are given in Chapter 4. Chapter 5 includes conclusion and recommendations.

## **CHAPTER 2**

### **LITERATURE REVIEW**

Following the early studies of Short (1979) and Bourke (1989), it was observed that market structure and entry barriers are the primary indicators influencing bank profits. Typical empirical studies of bank concentration and competition examined that market structure of banks operating in U. S. Banks in more concentrated local markets, as measured by HHI or CR<sub>n</sub>, were found to be charging higher rates from borrowers and were paying lower rates to depositors (Hannan and Berger 1991, Neumark and Sharpe 1992). However recent studies have contributed much to the existing body of literature and illustrated that market structure represented by regulatory conditions or concentration is just one from the number of other external factors that affect bank profitability. Also earlier studies that explained the determinants of banks' profits relied on two commonly used measures of profit performance. The first is the return on assets (ROA). As return on

assets ratio gives an idea as to how efficient management is at using its assets to generate earnings; it is considered as a measure for profitability. The second is the net interest margin. Considering that markets operate in an imperfect manner, financial intermediation necessarily occurs in order for their effective functioning. This financial intermediation affects the net return to savings, and the gross return for investment. The spread between these two returns mirrors the bank interest margins. This suggests that bank interest spreads can be interpreted as an indicator of the efficiency of the banking system. Furthermore, bank profitability is usually expressed as a function of bank specific, industry specific and industry specific variables (Levine, 1996). Kunt and Huizinga (1998) using bank level data for 80 countries in the period 1988–95 examined how bank characteristics (such as size, leverage, type of business, foreign ownership), macro indicators, taxation and regulatory variables, financial structure variables, and legal and institutional indices affect both interest rate margins and bank returns. Regression technique was applied to study the underlying determinants of interest spreads and bank profitability. The results signify that bank characteristics, macro indicators, implicit and explicit financial taxation, deposit insurance, overall financial structure, and the legal and institutional environment all significantly affect bank interest spreads and profitability. Siddiqui (1998) while analyzing the determinants of profitability for banking sector in Pakistan highlighted the relationship between the level of economic activity and bank profits. For this purpose the level of bank advances, the level of bank deposits, the difference between the rate of return on advances and the rate of return on deposits (often referred as 'spread'), and



the liquidity ratio were taken as the main measures for the profitability of the banking sector. The analysis showed that the intensity of economic activity (measured in terms of GDP) is the main determinant of the profitability of the banking sector. An intensification of the economic activity increases bank advances and bank deposits. The 'spread' is also positively affected by the level of economic activity. Naceur (2003) investigated the impact of bank's characteristics, financial structure and macroeconomic indicators on bank's net interest margins in the Tunisian banking industry for the 1980-2000 period. High net interest margin and profitability were found to be associated with banks holding a relatively high amount of capital and administrative expense. The impact of bank size on profitability was significant but negative due to scale inefficiencies. Secondly macro-economic indicators such inflation and growth rates had no impact on bank's interest margins and profitability. Amongst financial structure, stock market development casted a positive effect on bank profitability while concentration wasn't found beneficial for Tunisian commercial banks. Athanasoglou, et al. (2005) explored the effect of bank-specific (liquidity risk, operating expenses, size, capital, labor productivity), industry-specific (i. e. industry concentration and the ownership status of banks) and macroeconomic determinants (i. e. cyclical output and expected inflation) on bank profitability. The study utilized the data from the Greek banking sector over the years 1985-2001. All bank-specific determinants, with the exception of size, significantly affect bank profitability. Labor productivity cast a positive impact on bank's profitability whereas operating expenses are negatively related to it. Industry specific variables were found insignificant in explaining bank profitability

while macro economic variables such as inflation and cyclical output affect the performance of the banking sector positively. Kosmidou, et al (2007) inspected the impact of bank-specific characteristics, macroeconomic conditions and financial market structure on the profit of UK owned commercial banks measured by return on average assets (ROA) and net interest margins (NIM), during the period 1995-2002. The bank-specific determinants included cost to income ratio, liquidity ratio, loan loss reserves to gross reserves, equity ratio and size. Macroeconomic variables comprised of real GDP growth rate and inflation while financial market measures consisted of banking industry concentration and stock market capitalization. Cost to income ratio was found to be a significant determinant of bank profits. The impact of cost to income ratio and liquidity ratio was negative on ROA and NIM both. However the affect of loan loss reserves was positive and significant on NIM but insignificant on ROA. Capital strength was observed to be making a significant contribution to the profitability of the UK banks. An inverse relationship between bank size and profitability was determined suggesting that larger banks tend to earn lower margins and profits. On the other hand the macro economic and financial market structure variables were found to be influencing banks profitability in a positive manner. Taking the same set of variables, Vong and Chan (2007) looked at the contribution of bank-specific as well as macroeconomic and financial structure factors to the variation in profitability across banks in Macao. Utilising bank level data for the period 1993-2007, a panel data regression was used to determine the important factors in achieving high profitability. In this study, the performance of a bank is measured by its return on assets (ROA). The results

show that the capital strength of a bank is of paramount importance in affecting its profitability. On the other hand, the asset quality, as measured by the loan-loss provisions and bank size affects the performance of banks adversely. With regard to macroeconomic variables, only the rate of inflation exhibits a significant relationship with banks' performance. Sufian and Chong (2008) identified the determinants of Philippines banks profitability during the period 1990–2005. All the bank-specific determinant variables were found to be having a statistically significantly impact on bank profitability. The empirical findings suggested that size, credit and risk are negatively related to banks' profitability, while non-interest income and capitalization have a positive impact. Amongst macro economic variables, inflation was observed to have a negative impact on bank profitability, while the impact of economic growth, money supply, and stock market capitalization did not significantly explained the variations in the profitability of the Philippines banks. Flamini, et al. (2009) used a sample of 389 banks in Sub Sahara Africa for the period 1998-2006 to identify the determinants of bank profitability. For this purpose, regression and granger causality tests were replied. The study concluded that bank specific and macro economic variables are the primary factors affecting bank profitability while no significant results were found for bank concentration. Amongst bank specific factors, bank size, product diversification, private ownership were found to be highly significant. A study conducted by Rasiah (2010), established a theoretical framework to determine the variables that should be included in profitability models of banks. The study highlighted the variables that affect bank's revenue and cost and offered an insight into specification of internal, external and

dependent variables along with their measurements. The internal variables included in this study are asset portfolio mix, total expenses, liability composition, liquidity ratio and capital structure. The external determinants taken into consideration were competition, regulation, inflation, market share, market growth, firm size and interest rate. Saad and Moussawi (2012) highlighted the impact of organizational and environmental variables on net interest margin in their analysis of 39 commercial banks operating in Lebanon for the period 2000-2010. The analytical framework used to identify the main determinants of the net interest margin of Lebanese banks was based on the approach of dealership model proposed by Ho and Saunders (1981). Credit risk, capitalization of the bank, the market structure, off-balance sheet operations, size and economic growth, HHI were found to be affecting net interest rate margins significantly.

## **CHAPTER 3**

### **RESEARCH DESIGN & METHODOLOGY**

#### **3. 1 DATA SET AND SAMPLING:**

This study uses an unbalanced panel data of all 55 commercial banks working in Pakistan for the period 2001-2011. Banking Statistics of Pakistan (2011) is used as main data source for balance sheet and income statement information in addition to Financial Statements Analysis of Financial Sector (various issues, 2001-2010) published by Statistics & DWH Department of State Bank of Pakistan. With regard to macroeconomic variable, the data for growth rate of real GDP and inflation has been taken from various issues of Economic Survey of Pakistan.

### 3. 2 VARIABLE SELECTION CRITERIA:

A theoretical framework is established that contains the variables that are included in the profitability model. The theoretical review highlights the dependent variable namely bank profitability followed by the description of internal and external determinants of bank profitability. As profitability is simply the difference between total revenue and total cost, the bank specific factors which affect commercial bank profitability would be those that affect banks' revenue and costs. Table 3. 1 presents the list, symbols and brief description of explanatory variables for bank profitability. Table 3. 1: List, Symbols and Proxies of Variables

S. NO.	Variable	Symbol	Proxy	Dependent Variable
1	Bank Profitability	NIM	Net Interest Margin	Dependent Variable: Bank Profitability
2	Bank Specific Variables: Size	TALN	Total Assets/ Total Asset of Banking Industry	Explanatory Variables: A.
3	Capital	EAE	Equity / Asset	Administrative Expense
4	Administrative expense	AE	Administrative expense	B. Industry Specific Variables: Ownership
5	D1	D1= 1	for a public sector & 0 for a private bank	D2 D2= 1 for foreign bank (i. e. incorporated outside Pakistan) & 0 for a domestic bank (that is incorporated inside Pakistan).
6	D3	D3= 1	for new banks & 0 for old banks	Concentration HHI
7	Herfindhal-Hirschman w. r. t asset, advance, deposit	C.	Macroeconomic Specific Variables: 7. GDP Growth	GDPR
8	Growth rate of GDP	8. Inflation	INFR	Rate of Inflation

#### 3. 2. 1 DEPENDENT VARIABLE:

In line with literature review, the profitability variable is represented by net interest margin (NIM). Net Interest Margin: The second measure is the net interest margin (NIM), which is expressed as a percentage of earning assets, thereby showing the profitability of the bank's interest-earning business. A

negative Net Interest Margin indicates that the firm was unable to make an optimal decision, as interest expenses were higher than the amount of returns produced by investments. It is calculated as:  $\text{Net Interest Margin} = (\text{Interest Earned} - \text{Interest Expenses}) / \text{Total Assets}$  Where interest earned is the total interest income earned on a bank's loans, investment securities, and short-term investments (like on interest-bearing deposits with other banks) during a period of time while expense is the cost related to the funds used to make loans and investments.

### **3. 2. 2 BANK SPECIFIC DETERMINANTS:**

**Size:** Size is considered as an important variable influencing bank profitability. Large size might result in economies of scale leading to product diversification and low costs. Thus banks with larger sizes operate in a non competitive environment, have a greater market access and enjoy high earnings. For this reason, the effect of size on profitability is taken as positive (Flameini, et al. 2009). However there has been little evidence to support the above mentioned hypothesis. For banks that become extremely large, the effect of size on profitability can be negative due to managerial inefficiencies and bureaucratic bottlenecks suffered by banks. Hence this study expects a negative relationship of size with profitability as indicated by Heggested (1977), Smirlock (1985), Athanasoglou and Brissimis, 2005). To capture the relationship between size and bank profitability, bank size is measured as: 
$$TA_{it} = \frac{1}{n} \sum_{i=1}^n TA_{it}$$
 Where  $TA_{it}$  represents total asset of bank  $i$  at time  $t$  where  $n$  denotes sum of the total assets of  $n$  number of banks in the industry. **Capital:** Capital could be a significant variable in determining bank profitability. It reveals capital adequacy and captures the general average safety and

soundness of the financial institution. The banks with a high amount of capital are less dependent upon external funding. Well-capitalized banks are, in this regard, less risky and make high profits (Kosmidou, 2006). To measure this relationship, ratio of equity (including Share Capital, Unappropriated Profits, Reserves and Surplus/Deficit on Revaluation of Assets) to total assets is used as a proxy variable for capital. Bourke (1989) observed a significant positive relation between capital adequacy and profitability. He concluded that the higher the capital ratio, the more profitable a bank will be. Similarly, the studies of Berger (1995) and Anghazo (1997) demonstrated that banks which are well-capitalized are more profitable than the others in the USA. Hence a positive relationship between profitability and capital ratio is expected. Administrative Expenses: The cost of labor, salaries, property, rents, and benefits extended to the staff would be the most significant cost items in the commercial banks operating expenses. This is referred as administrative expense in the model. Studies carried out by Molyneux and Thornton (1992), Naceur (2003) and Guru, et al. (2002) identified that banks extending higher salaries and benefits per employee will require high net interest margins in order to pay those expenses. Hence a positive relationship between profitability and administrative expense is expected.

### **3. 2. 3 INDUSTRY SPECIFIC DETERMINANTS:**

Market power/Concentration: Market power is expected to be a major determinant of profits. In an industry, there might be few banks operating with exceptional efficiency. These efficient banks carry low cost structure that leads to super normal profits. They are then assumed to expand and

gain large market shares, thus ensuing in high market concentration. The returns of these banks with high market power stay unaffected as they are capable of adjusting spreads in response to unstable macro economic conditions (Flamini, et al. 2009). Consequently, efficient firms are assumed to be driving both profits and market structure establishing a positive relationship between the two (Raisah, 2010). This study in line with the studies by Smirlock (1985), Bourke (1989) and Staikouras and Wood (2003) expect that industry concentration has a positive impact on banking performance. To explain this relationship between concentration and profitability, Herfindhal-Hirschman (H-H) index has been used to measure market concentration in this study and it is expressed as: is squared market share of the  $i$ th bank at time  $t$ . Ownership: A relationship between bank profitability and ownership may exist due to spillover effects from the superior performance of privately-owned banks compared with publicly-owned banks and foreign banks than local banks. Public owned banks are found to be less profitable than private banks as they don't maximize their profits and also due to imperfectly designed incentives. Moreover, in developing countries, foreign banks are likely to have technological and efficiency advantages. These advantages translate into high profits. To test this relationship dummy variables for ownership have been included in the model. Public ownership is expected to affect bank profits negatively as public enterprises suffer from managerial inefficiencies. Foreign ownership is also expected to cast a negative effect as foreign banks suffer from informational disadvantages as compared to local banks (Flamini, et al. 2009).



### **3. 2. 4 EXTERNAL DETERMINANTS:**

Apart from the bank specific/internal determinants that affect revenue and costs, a plethora of other factors operate outside the control of the banking system. These external determinants might be uncontrollable but influence bank profitability. These indirect factors are discussed below: GDP Growth: This study also explores the relationship between bank profitability and business cycles. Bank performance is expected to be sensitive to macroeconomic control variables. Economic boom strengthen the demand for credit and stock market transactions. This triggers the revenues to grow faster than costs leading to increased profits (Athanasoglou and Brissimis, 2005). On other hand during recessions, credit quality deteriorates and defaults increase, thus reducing bank returns. Hence a positive relationship between GDP growth and profitability is expected. In order to capture the direction of this relationship, the rate of real GDP growth has been used to reflect the state of the business cycle in the model. Inflation: Inflation had been one of the least researched issues in earlier bank profitability studies. The classical belief is that, because bank assets and liabilities are expressed in monetary terms and assets normally grow in line with growth in money supply, banks stay unaffected from the effects of inflation. However, the growth in money supply is directly associated with inflation as Central bank controls availability of credit according to aggregate demand and inflationary pressures. During inflation, the Central bank raises the cost of borrowing and reduces the credit creating capacity of commercial banks. This makes borrowing more costly than before and thereby the demand for funds is reduced. Similarly with a reduction in their credit creating capacity, the

banks will be more cautious in their lending policies. The result will be a fall in the volume of spending. In a time series analysis of profitability such as this, it would certainly be important to consider whether the profitability gains are real. To this extent, if the rate of increase in profits were less than the rate of inflation then the commercial bank profitability would stand to lose in real terms (Rasiah, 2010). Hence this study also estimates a change in bank's profitability due to inflationary pressure in the economy. Generally, as high inflation rates are associated with high interest rates for loan and high profits, this study expects a positive relationship between inflation and profitability as determined by Bourke (1989), Molyneux and Thornton (1992). Inflation is measured by the current period Consumer Price Index.

### **3. 3 METHODOLOGY:**

In this section the theoretical development of the model is discussed which makes it possible to calculate the impact of bank specific, industry specific and macroeconomic determinants on profitability of banks. Panel regression techniques are used to analyze the internal determinants as well as the external determinants. Panel data is useful for such analysis as it combines both the cross sectional information which captures individual variability and times series information that accounts for dynamic adjustment.

#### **3. 3. 1 MULTIPLE REGRESSION ANALYSIS:**

Regression analysis investigates the dependence of the dependent variable on the independent variables. A regression is run which expresses bank profitability as a function of the following independent variables: Bank Profitability (NIM) = f (bank specific, industry specific, macroeconomic

factors)The study uses Pooled Ordinary Least Squares of the following form:

+ -----Eq. (1)Where NIM is the dependent variable and shows observation on profitability for bank  $i$  at time  $t$ . The independent variables include the intercept  $C$ ,  $X_{1t}$  i. e. set of all bank-specific characteristics which varies across bank and time,  $Z_t$  i. e. set of all industry specific and macroeconomic variables that varies over time only as all the banks face the same industry regulations and macroeconomic environment at a given point in time..  $B_0$ ,  $\beta_1$  and  $\beta_2$  are vector of coefficients of bank specific, industry specific and macroeconomic variables respectively while  $\epsilon$  is the error term. In order to allow for contemporaneous correlations in the residual of the banks, the option of " white cross sections' has been used. Furthermore, an AR term is included to capture autocorrelation in error, which generally leads to a large bias in the standard errors of pooled OLS.

### 3. 3. 2 BANKING STRUCTURE AND MEASURES OF CONCENTRATION

The structure of the banking industry has long been an issue of the policy interest as it is the primary factor to determine the degree of competitiveness present in the banking system. The recent trend in mergers and acquisitions witnessed around the globe has further intensified the discussions on the increasing tendency towards concentration and its effects upon banks profitability. Traditional theory of Industrial Organization Economics, also known as structure conduct performance hypothesis explains the relationship between market structure i. e. concentration and profitability. It implies that concentration encourages collusive behavior of firms within the market. Few large firms may impede competition by

exercising the market power in setting the prices resulting in profitability (Mahmood 2009). Keeping in mind the wide ranging implications of market power on stability, efficiency and profitability, this study measures the degree of concentration in the banking system of Pakistan for the years 2001-2011. The measures of concentration used are as follows:

### **M-CONCENTRATION RATIO:**

The M-concentration ratio (CRM) indicates the market share of M big participants in the industry where M is the specified number of firms. It is expressed as  $CRM = S_1 + S_2 + S_3 + \dots + S_m$  where  $s_i$  is the market share of  $i$ th firm. The M-concentration ratio has been calculated for top 5 and top 10 banks (CR5 and CR10) with respect to advances, deposits, and assets. If the m-concentration ratio is less than 40% (indicating that 4th largest firm owns less than 40% of the market), then the industry is considered as highly competitive. On the other extreme a ratio more than 90% indicates that those firms are controlling more than 90% of the market share

### **HHI – INDEX:**

The most widely used measure for concentration is the HHI index. It is a cumulative measure of concentration explaining the entire size distribution of banks implying that structural changes in all parts of the distribution influence the value of the concentration index. The HHI index is defined as the sum of the squares of the bank size measured as market shares. It stresses the importance of larger banks by assigning them a greater weight than smaller banks, and it incorporates each bank individually, so that arbitrary cut offs and insensitivity to the share distribution are avoided.

(Bikker and Katharina, 2002) HHI is calculated as follows: is squared market share of the  $i$ th bank at time  $t$ . The HHI index for deposits, assets and advances have been calculated for the year 2001-2011.

### **3. 3. 3 INDEX OF MARKET SEGMENTATION**

#### **SEGMENTATION:**

The all time high profitability experienced by banks during the recent years because of high spreads and low rates of return to depositors highlight the presence of weak competitive forces in the banking industry. In order to assess the level of competition, this paper contributes to a new dimension of analysis, i. e. investigating concentration in loan advances termed as market segmentation. The study investigates whether banks in Pakistan are making advances in particular sectors on the basis of lower risk associated with them. Many sectors of the economy are presently receiving lesser attention from the financing institutions as a major chunk of the funds are being channelized towards privileged industries. The potential business opportunities of underprivileged sectors are not being tapped as concentrated lending behavior followed by bank is rendering them useless. To exhibit the rate of concentrated in loan portfolio of the overall banking sector, a market segmentation index has been constructed. It is stated as follows:  $n$  Where  $S_{i,j}$  represents amount of loan extended by  $i$ th bank group (e. g. top 5) to  $j$ th sector and  $S_j$  represents the total share of a particular sector  $j$  in loan portfolio.  $N$  represents the total number of sectors in the economy. Due to unavailability of data, the index has been calculated for 2012, 2011 and 2010 only. Its value ranges from 0 to 1. The value is 0 when no segmentation exists in the market and loans are distributed uniformly

within the sectors while the value is 1 in case of complete segmentation within the loan portfolio.

## CHAPTER 4

### RESULTS & DISCUSSION

#### 4. 1 REGRESSION

Summary statistics for regression results are presented in the table below:

TABLE 4. 1 ESTIMATION AND RESULTS OF THE MODEL

Dependent Variable:  
NIM  
Method: Panel EGLS (Cross-section weights)  
Date: 11/05/12 Time: 01:  
28  
Sample (adjusted): 2002 2011  
Periods included: 10  
Cross-sections included:  
50  
Total panel (unbalanced) observations: 326  
Iterate coefficients after one-  
step weighting matrix  
White cross-section standard errors & covariance (d. f.  
corrected)  
Convergence achieved after 14 total coef iterations  
Coefficient Std.  
Error t-Statistic Prob. C2. 8698130. 7220653. 9744500. 0001D1-2. 1149751.  
295839-1. 6321270. 1037D2-1. 8286960. 917667-1. 9927680. 0471D32.  
5560861. 4713431. 7372470. 0833HHIADV0. 0007460. 0001315. 7009420.  
0000AE1. 42E-073. 34E-084. 2358680. 0000EA0. 0235630. 0122411.  
9249260. 0551INF0. 0380850. 0090524. 2072900. 0000GDPG0. 0576260.  
0265772. 1682280. 0309TALN-0. 0359450. 006561-5. 4786910. 0000AR(1)0.  
9132670. 02597135. 164400. 0000Weighted StatisticsR-squared0.  
838537Mean dependent var4. 358225Adjusted R-squared0. 833411S. D.  
dependent var2. 843255S. E. of regression0. 846047Sum squared resid225.  
4757F-statistic163. 5905Durbin-Watson stat2. 060438Prob(F-statistic)0.  
000000Unweighted StatisticsR-squared0. 720029Mean dependent var2.  
927301Sum squared resid238. 8231Durbin-Watson stat1. 970277Inverted  
AR Roots. 91

## 4. 2 EXPLANATION OF FINDINGS:

Dependent Variable is taken as the function of the following: Bank

Profitability = f (ownership, concentration, administrative expenses, Capital equity ratio, inflation, growth in GDP, Size). The equation estimated turns out to be:  $NIM = 2.869813 - 2.114975 D1 - 1.828696 D2 + 2.556086 D3 + 0.000746 HHI ADV + 1.42 AE + 0.023563 EA + 0.038085 INF + 0.057626$

$GDPG - 0.035945 TALN$

The results obtained are as follows: All variables (excluding D1 i. e. ownership of public banks and D3 i. e. ownership of new banks) are found to be significantly affecting banks profitability. R square is the coefficient of determination and it tells the percentage of variation in the dependent variable which is explained by the independent variables. The Coefficient of Determination (R<sup>2</sup>) is calculated to be 83.8537 percent.

Therefore it can be concluded that the independent variables considered in the model explained 83.9% of the variation in banks profitability. The results show that the Durbin Watson "d" statistic measuring autocorrelation is 2.

060438 which indicate that upon testing the residuals, there is no significant autocorrelation in the model. It can be concluded that this value is greater

than 1.4, which is the accepted standard for declaring autocorrelation

minimal among error terms in a model. Ownership of foreign banks i. e. D2 is significant at 95% confidence interval but has a negative impact on

profitability. This suggests that foreign banks suffer from informational disadvantages and hence experience low margins as compared to local

banks. Local banks being the key players enjoy greater access to domestic market which results in high earnings. The other two dummy variables are

found to be insignificant. The value of the coefficient of the dummy variable

for foreign ownership gives the ratio of the proportional change in banks profitability with respect to proportional change in ownership of foreign banks. The value is 1.828696, which illustrates that a 1% change in foreign ownership of banks will lead to 1.828696 % decline in the total profitability. Industry concentration that is measured by calculating HHI with respect to advances is highly significant at 100% confidence level. HHI is found to be positively affecting profitability. A positive effect of this variable signifies that banks in highly concentrated markets tend to collude and therefore earn monopoly profits as per SCP Hypothesis (Short, 1979; Gilbert, 1984; Molyneux et al., 1996). Admin expense is another variable that is statistically significant at 100% confidence interval. The banks with high admin expense have to maintain high margins in order to pay the expenses. Such banks pass their overheads to depositors and borrowers in terms of lower deposit rates or high lending assets and thus maintain high net margins. The positive signs signify a positive relationship between two variables. Capital ratio is considered as one of the basic ratios for capital strength (Golin, 2001). It is statistically significant at 95% confidence interval. The positive relationship implies that a well capitalized bank will add to its profits. A sound bank does not need to borrow from external sources to finance its operations (Berger, 1995 & Staikouras and Wood, 2003). Hence, positive coefficient indicates an efficient management of banks' capital. The coefficient of GDP growth is positive and statistically significant at 97% confidence interval. The positive relationship between GDP growth and profitability confirms the association between growth and financial sector performance (Kosmidou, 2006 & Hassan and Bashir, 2003). There will be a higher demand for bank credit in times of



economic boom triggering aggregate demand and thereby improving profitability. Inflation and size are both highly significant at confidence intervals of 100%. The positive connection between inflation and bank performance is consistent with the findings of previous studies (e. g. Claessens et al., 1998; Demirguc-Kunt and Huizinga, 1999). It supports the hypothesis that inflation was anticipated giving banks the opportunity to adjust interest rates accordingly, resulting in revenues that increased faster than costs, thus implying higher profits. In other words, banks increase the lending rates on account of inflation but the deposit rates are not adjusted leading to high margins. The relationship between size and profitability is found to be negative suggesting that larger banks tend to earn lower margins and profits due to managerial inefficiencies encountered because of large sizes.

## **RESULTS FOR CONCENTRATION**

### **4. 3 M- CONCENTRATION RATIOS (TOP 10 BANKS)**

#### **M- CONCENTRATION RATIOS FOR TOP 10 BANKS**

##### **YEAR**

##### **DEPOSITS**

##### **ASSETS**

##### **ADVANCES**

2001 8376. 177. 3200285. 276. 476200383. 37572200481. 372. 971.

9200580. 572. 274200677. 675. 175. 5200776. 974. 574. 3200877. 27475.

6200976. 775. 476. 7201075. 874. 376201177. 376. 477. 1

Table 4. 2: M- Concentration Ratio (Top 10 Banks)

BanksThe above table and figure shows the market shares of top 10 banks amongst assets, deposits and advances. The decrease in concentration is visible in all three major variables of the banking sector. Specifically, the deposit share of the big ten banks has declined from 83 percent in FY 01 to 77. 3 percent in FY 11. However, the concentration in assets and advances has almost remained the same.

#### **4. 4 M- CONCENTRATION RATIOS (TOP 5 BANKS)**

#### **M- CONCENTRATION RATIOS FOR TOP 5 BANKS**

#### **YEAR**

#### **DEPOSITS**

#### **ASSETS**

#### **ADVANCES**

200170. 561. 360. 2200270. 560. 855200367. 760. 053200463. 556. 454.  
5200560. 754. 154. 9200654. 852. 553. 7200753. 651. 852. 4200854. 851.  
453. 1200954. 152. 554. 720105351. 752. 9201153. 953. 354

Table 4. 3: M- Concentration Ratio (Top 5 Banks)

Figure 4. 2: Market Shares of Top 5

BanksThe above table and figure shows the market share of top 5 banks amongst assets, deposits and advances. The concentration has decreased substantially in all three variables of the banking sector. The decrease in market share of big 5 banks clearly suggests that top 5 banks are losing the market share as compared to top ten banks. The second tier of top ten banks are gaining ground in the business sector as the concentration in assets and advances has remained the same. The ratio for both number of banks

represent massive change in market structure implying that the concentration has decreased over the years.

#### **4. 5 HHI INDEX:**

#### **CONCENTRATION RATIOS**

#### **YEAR**

#### **HHI (DEPOSITS)**

#### **HHI (ADVANCES)**

#### **HHI (ASSETS)**

2001 1264. 8849. 2992. 6200 21252. 7805. 6974. 5200 31154. 6748. 7915.

1200 41055. 3729. 1852. 4200 5921. 1764. 3760. 0200 6800. 5745. 1745.

3200 7786. 0732. 0738. 2200 8792. 4753. 6742. 1200 9785. 9777. 9750.

0201 0758. 7751. 2730. 5201 1798. 1801. 1774. 5

Table 4. 4: HHI INDEX  
The developments in the market structure over the last ten years can be gauged from HHI Index calculated above. The value of HHI ranges from 0 to 10, 000.

The value of 10, 000 implies that the market structure is that of a monopoly whereas 0 signifies that the banking industry consists of large number of banks with almost equal size.

It is evident from the table that the degree of concentration has improved as the value of HHI for all three major indicators has reduced significantly over the period of analysis.

In absolute term, the calculated value of HHI has declined to below 1000 since the year 2004.

This indicates that the banking sector of Pakistan falls in the range of a competitive market structure. A graphical representation of HHI for all three indicators is provided on the next page.

As both the measures of concentration have shown a visible improvement, it can be concluded that

the market structure of banking industry is not concentrated. The credit for this decrease in concentration can be attributed to Competition Commission of Pakistan for creating an environment and introducing policies that prevents anti competitive behavior by all banks and restrains abuse of market power by dominant firms. However, concentration alone does not guarantee the presence of competitive behavior amongst firms in an industry. Even in a highly concentrated market, competitive behavior can still be witnessed if properly regulated. In case of Pakistan, despite the positive developments in terms of low market concentration, the low rates of return to depositors (negative in real terms) and high banking spreads, all point towards a relatively less competitive market structure. Keeping this in mind, an intuitive assessment regarding the status of concentration in loan portfolio structure of the banking industry is undertaken in the next section.

Figure 4. 3: HHI Deposits Figure 4. 4: HHI Advances Figure 4. 5: HHI Assets.

## 4. 6 MARKET SEGMENTATION INDEX

### 2012

Sectoral Distribution Of Loans TOP 5 BANKS 6-10 BANKS 11-20 BANKS REST ALL

### 2012

Corporate Sector 44% 27. 5% 24. 7% 3. 8% SME's 39. 5% 15. 1% 36. 6% 8.

8% Agriculture 24. 2% 9. 1% 3. 9% 62. 8% Consumer

Finance 53% 27% 10% 10% Commodity Finance 42. 3% 42. 2% 15. 5% 0% Staff

Loans 46. 4% 11. 9% 31. 9% 9. 8% Others 93. 8% 3. 7% 0. 1% 2. 4% TABLE 4. 5:

SECTORAL DISTRIBUTION OF LOANS 2012

## MARKET SEGMENTATION INDEX FOR TOP 5 BANKS:

N

### Substituting the values:

Corporate Sector:  $|0.44 - 1|$  \_\_\_\_\_ = 0.087 SME's :  $|0.39 - 1|$  \_\_\_\_\_ = 0.

097 Agriculture :  $|0.24 - 1|$  \_\_\_\_\_ = 0.117 Consumer Finance:  $|0.53 - 1|$

\_\_\_\_\_ = 0.077 Commodity Finance:  $|0.42 - 1|$  \_\_\_\_\_ = 0.087 Staff

Loans:  $|0.46 - 1|$  \_\_\_\_\_ = 0.087 Others :  $|0.93 - 1|$  \_\_\_\_\_ = 0.017 Taking

the sum of all individual sectors:  $0.08 + 0.09 + 0.11 + 0.07 + 0.08 + 0.$

$08 + 0.01$

**I = 0.51**

As the value of I is greater than 0 and less than 1, there is slight

segmentation present in loan portfolio of top 5 banks.

## MARKET SEGMENTATION INDEX FOR 6-10 BANKS:

N

### Substituting the values:

Corporate Sector:  $|0.27 - 1|$  \_\_\_\_\_ = 0.17 SME's :  $|0.15 - 1|$  \_\_\_\_\_ = 0.

127 Agriculture :  $|0.09 - 1|$  \_\_\_\_\_ = 0.137 Consumer Finance:  $|0.27 - 1|$

\_\_\_\_\_ = 0.17 Commodity Finance:  $|0.42 - 1|$  \_\_\_\_\_ = 0.087 Staff Loans:

$|0.12 - 1|$  \_\_\_\_\_ = 0.137 Others:  $|0.03 - 1|$  \_\_\_\_\_ = 0.147 Taking the

sum of all individual sectors:  $0.1 + 0.12 + 0.13 + 0.1 + 0.08 + 0.13 + 0.$

14

$$I = 0.8$$

As the value of I is closer to 1, there is considerable degree of segmentation present in loan portfolio of top 10 banks.

## MARKET SEGMENTATION INDEX FOR 11-20 BANKS:

N

### Substituting the values:

Corporate Sector:  $|0.24 - 1|$  \_\_\_\_\_ = 0.117 SME's :  $|0.36 - 1|$  \_\_\_\_\_ = 0.

097 Agriculture :  $|0.04 - 1|$  \_\_\_\_\_ = 0.147 Consumer Finance:  $|0.10 - 1|$

\_\_\_\_\_ = 0.137 Commodity Finance:  $|0.15 - 1|$  \_\_\_\_\_ = 0.127 Staff

Loans:  $|0.31 - 1|$  \_\_\_\_\_ = 0.170 Others:  $|0.01 - 1|$  \_\_\_\_\_ = 0.147 Taking

the sum of all individual sectors:  $0.11 + 0.09 + 0.14 + 0.13 + 0.12 + 0.1$   
+ 0.14

$$I = 0.83$$

As the value of I is closer to 1, there is a higher degree of segmentation present in loan portfolio of top 11-20 banks.

## MARKET SEGMENTATION INDEX FOR REST OF THE BANKS:

N

### Substituting the values:

Corporate Sector:  $|0.038 - 1|$  \_\_\_\_\_ = 0.147 SME's :  $|0.08 - 1|$

\_\_\_\_\_ = 0.137 Agriculture :  $|0.62 - 1|$  \_\_\_\_\_ = 0.057 Consumer

Finance:  $|0.1 - 1|$  \_\_\_\_\_ = 0.137 Commodity Finance:  $|0 - 1|$  \_\_\_\_\_ =

07 Staff Loans:  $|0.10 - 1|$  \_\_\_\_\_ = 0.137 Others:  $|0.02 - 1|$  \_\_\_\_\_ = 0.

147 Taking the sum of all individual sectors:  $0.14 + 0.13 + 0.05 + 0.13 + 0.13 + 0.14$

$$I = 0.72$$

As the value of I is closer to 1, there is a high degree of segmentation present in loan portfolio of all other banks.

## 2011

Sectoral Distribution Of Loans TOP 5 BANKS 6-10 BANKS 11-20 BANKS REST ALL

## 2011

Corporate Sector 49.5% 23.2% 21.5% 5.7% SME's 45.9% 0.18% 30.9% 4.

5% Agriculture 30.6% 9.1% 5.2% 55% Consumer Finance 57% 22.5% 11.8% 8.

6% Commodity Finance 66.6% 21.3% 9.5% 2.6% Staff Loans 56% 19.6% 14.

1% 10.2% Others 85% 8.1% 1.3% 5.7% TABLE 4. 6: SECTORAL DISTRIBUTION

OF LOANS 2011

## MARKET SEGMENTATION INDEX FOR TOP 5 BANKS:

N

### Substituting the values:

Corporate Sector:  $|0.49 - 1|$  \_\_\_\_\_ = 0.077 SME's :  $|0.45 - 1|$  \_\_\_\_\_ = 0.

0.77 Agriculture :  $|0.30 - 1|$  \_\_\_\_\_ = 0.17 Consumer Finance:  $|0.57 - 1|$

\_\_\_\_\_ = 0.067 Commodity Finance:  $|0.66 - 1|$  \_\_\_\_\_ = 0.047 Staff

Loans:  $|0.56 - 1|$  \_\_\_\_\_ = 0.067 Others :  $|0.85 - 1|$  \_\_\_\_\_ = 0.027 Taking

the sum of all individual sectors:  $0.07 + 0.07 + 0.1 + 0.06 + 0.04 + 0.06$

+ 0.02

$$I = 0.43$$

As the value of I is greater than 0 and less than 1, there is slight segmentation present in loan portfolio of top 5 banks.

## MARKET SEGMENTATION INDEX FOR 6-10 BANKS:

N

### Substituting the values:

Corporate Sector:  $| 0.23 - 1 | \frac{1}{N} = 0.117$  SME's :  $| 0.18 - 1 | \frac{1}{N} = 0.127$  Agriculture :  $| 0.09 - 1 | \frac{1}{N} = 0.137$  Consumer Finance:  $| 0.22 - 1 | \frac{1}{N} = 0.17$  Commodity Finance:  $| 0.21 - 1 | \frac{1}{N} = 0.17$  Staff Loans:  $| 0.19 - 1 | \frac{1}{N} = 0.127$  Others:  $| 0.08 - 1 | \frac{1}{N} = 0.137$  Taking the sum of all individual sectors:  $0.11 + 0.12 + 0.13 + 0.1 + 0.1 + 0.12 + 0.13$

$$I = 0.81$$

As the value of I is closer to 1, there is considerable degree of segmentation present in loan portfolio of top 10 banks.

## MARKET SEGMENTATION INDEX FOR 11-20 BANKS:

N

### Substituting the values:

Corporate Sector:  $| 0.21 - 1 | \frac{1}{N} = 0.117$  SME's :  $| 0.30 - 1 | \frac{1}{N} = 0.17$  Agriculture :  $| 0.05 - 1 | \frac{1}{N} = 0.127$  Consumer Finance:  $| 0.11 - 1 | \frac{1}{N} = 0.137$  Commodity Finance:  $| 0.09 - 1 | \frac{1}{N} = 0.137$  Staff Loans:  $| 0.14 - 1 | \frac{1}{N} = 0.127$  Others:  $| 0.01 - 1 | \frac{1}{N} = 0.147$  Taking the sum of all individual sectors:  $0.11 + 0.1 + 0.12 + 0.13 + 0.13 + 0.12 + 0.14$



$$I = 0.85$$

As the value of I is closer to 1, there is a higher degree of segmentation present in loan portfolio of top 11-20 banks.

## MARKET SEGMENTATION INDEX FOR REST OF THE BANKS:

N

### Substituting the values:

Corporate Sector:  $|0.05 - 1|$  \_\_\_\_\_ = 0.137 SME's :  $|0.04 - 1|$  \_\_\_\_\_ = 0.

137 Agriculture :  $|0.55 - 1|$  \_\_\_\_\_ = 0.067 Consumer Finance:  $|0.08 - 1|$

\_\_\_\_\_ = 0.137 Commodity Finance:  $|0.02 - 1|$  \_\_\_\_\_ = 0.147 Staff

Loans:  $|0.10 - 1|$  \_\_\_\_\_ = 0.137 Others:  $|0.05 - 1|$  \_\_\_\_\_ = 0.147 Taking

the sum of all individual sectors:  $0.13 + 0.13 + 0.06 + 0.13 + 0.14 + 0.$

$13 + 0.14$

$$I = 0.86$$

As the value of I is closer to 1, there is a high degree of segmentation present in loan portfolio of all other banks.

## 2010

Sectoral Distribution Of Loans TOP 5 BANKS 6-10 BANKS 11-20 BANKS REST ALL

## 2010

Corporate Sector 49.3% 24.5% 18.0% 8.2% SME's 44.2% 19.1% 25.1% 11.

6% Agriculture 28.8% 9.7% 57.0% 4.5% Consumer Finance 53.3% 24.4% 14.

8% 7.5% Commodity Finance 74.3% 16.4% 7.0% 2.3% Staff Loans 55.8% 19.

4%16. 4%8. 4%Others86. 6%8. 5%0. 3%4. 6%TABLE 4. 7: SECTORAL  
DISTRIBUTION OF LOANS 2010

## MARKET SEGMENTATION INDEX FOR TOP 5 BANKS:

N

### Substituting the values:

Corporate Sector:  $|0.49 - 1|$  \_\_\_\_\_ = 0.077SME's :  $|0.44 - 1|$  \_\_\_\_\_ = 0.

087Agriculture :  $|0.28 - 1|$  \_\_\_\_\_ = 0.17Consumer Finance:  $|0.53 - 1|$

\_\_\_\_\_ = 0.077Commodity Finance:  $|0.74 - 1|$  \_\_\_\_\_ = 0.047Staff

Loans:  $|0.55 - 1|$  \_\_\_\_\_ = 0.067Others :  $|0.86 - 1|$  \_\_\_\_\_ = 0.027Taking

the sum of all individual sectors:  $0.07 + 0.08 + 0.1 + 0.07 + 0.04 + 0.06$   
 $+ 0.02$

**I = 0.44**

As the value of I is greater than 0 and less than 1, there is slight  
segmentation present in loan portfolio of top 5 banks.

## MARKET SEGMENTATION INDEX FOR 6-10 BANKS:

N

### Substituting the values:

Corporate Sector:  $|0.25 - 1|$  \_\_\_\_\_ = 0.127SME's :  $|0.19 - 1|$  \_\_\_\_\_ = 0.

127Agriculture :  $|0.09 - 1|$  \_\_\_\_\_ = 0.137Consumer Finance:  $|0.24 - 1|$

\_\_\_\_\_ = 0.127Commodity Finance:  $|0.16 - 1|$  \_\_\_\_\_ = 0.127Staff

Loans:  $|0.19 - 1|$  \_\_\_\_\_ = 0.127Others:  $|0.08 - 1|$  \_\_\_\_\_ = 0.137Taking

the sum of all individual sectors:  $0.12 + 0.12 + 0.13 + 0.12 + 0.12 + 0.$   
 $12 + 0.13$

$$I = 0.86$$

As the value of I is closer to 1, there is considerable degree of segmentation present in loan portfolio of top 10 banks.

## MARKET SEGMENTATION INDEX FOR 11-20 BANKS:

N

### Substituting the values:

Corporate Sector:  $|0.18 - 1|$  \_\_\_\_\_ = 0.127 SME's :  $|0.25 - 1|$  \_\_\_\_\_ = 0.

117 Agriculture :  $|0.57 - 1|$  \_\_\_\_\_ = 0.067 Consumer Finance:  $|0.14 - 1|$

\_\_\_\_\_ = 0.127 Commodity Finance:  $|0.07 - 1|$  \_\_\_\_\_ = 0.137 Staff

Loans:  $|0.16 - 1|$  \_\_\_\_\_ = 0.127 Others:  $|0.03 - 1|$  \_\_\_\_\_ = 0.147 Taking

the sum of all individual sectors:  $0.12 + 0.11 + 0.06 + 0.12 + 0.13 + 0.$

$12 + 0.14$

$$I = 0.8$$

As the value of I is closer to 1, there is a higher degree of segmentation present in loan portfolio of top 11-20 banks.

## MARKET SEGMENTATION INDEX FOR REST OF THE BANKS:

N

### Substituting the values:

Corporate Sector:  $|0.08 - 1|$  \_\_\_\_\_ = 0.137 SME's :  $|0.12 - 1|$  \_\_\_\_\_ = 0.

137 Agriculture :  $|0.05 - 1|$  \_\_\_\_\_ = 0.147 Consumer Finance:  $|0.08 - 1|$

\_\_\_\_\_ = 0.137 Commodity Finance:  $|0.02 - 1|$  \_\_\_\_\_ = 0.147 Staff

Loans:  $|0.08 - 1|$  \_\_\_\_\_ = 0.137 Others:  $|0.05 - 1|$  \_\_\_\_\_ = 0.147 Taking

the sum of all individual sectors:  $0.13 + 0.13 + 0.14 + 0.13 + 0.14 + 0.13 + 0.14$

$$I = 0.94$$

As the value of  $I$  is closer to 1, there is a high degree of segmentation present in loan portfolio of all other banks. TABLE 4. 8: SUMMARY TABLE OF INDEX

## **SUMMARY TABLE**

### **MARKET SEGMENTATION INDEX**

#### **TOP 5 BANKS**

#### **6-10 BANKS**

#### **11-20 BANKS**

#### **REST ALL**

20120. 510. 800. 830. 7220110. 430. 810. 850. 8620100. 440. 860. 800.

94The results presented in the summary table show an increased segmentation in the loan portfolios of the overall banking sector over the sample period as evident by positive and significant trend values. This clearly indicates that the banking system has effectively concentrated its efforts on the 'bankable' areas and segments of the economy leaving the rest to informal, high-cost alternatives. Hence, in spite of low concentration in the overall banking industry, it has been observed that banks have colluded to provide benefits to the lucrative markets only. This collusive behavior of banks not only neglects the rural economy but also leads to high monopoly rents as their targets sectors carry low amount of risk. This phenomenon of risk aversion and market segmentation needs serious policy

action by the competition commission and state bank of Pakistan as it will lead to cartelization not only in the banking sector but also within the industries. The markets getting high amount will funds will grow leading to large shares and concentrated markets causing negative implications on the overall economic activities.

## **CHAPTER 5**

### **CONCLUSION**

This study is a first attempt to explore the causes of high profitability/spreads in the banking industry of Pakistan. It offers an insight into the internal and external determinants of profitability of commercial banks along with identification of market structure of the banking industry. The results conclude that in addition to macroeconomic factors such as GDP growth and inflation, the most significant determinants of interest rate spreads are high administrative costs, size, capital ratios, foreign ownership and concentration. Moreover, although the market structure turned out to be competitive according to HHI and M-Concentration ratio, the sector still can't be termed competitive due to the existing high spreads. High spreads and profitability implies some degree of inefficiency in the sector as it's generally believed that lack of competition allows bank to extract above normal profits. It was also identified that high banking spreads can be due to risk aversion and collusive behavior of banks to provide benefits to lucrative sectors only. This can lead to industry concentration and neglect of all the other potential sectors of the entire economy. Market segmentation and industry concentration of such kind needs serious policy actions. Some recommendations are given below:

## RECOMMENDATIONS

In order to maintain competition, full public disclosure and operational transparency regarding fixing of interest rates on deposits should be made essential by the state bank of Pakistan. Mark up rates should be brought down to trigger savings, investment and growth in business activities. Inflation reduces credit expansion by contributing to higher net interest margins. With rise in inflation, high premium is charged from borrowers to accommodate changes in inflation rate but depositors are not adjusted for a hike and hence they are paid less. Therefore, policies aimed at controlling inflation should be given priority in fostering financial intermediation. Since the output cycle matters for bank profits, fiscal and monetary policies that are designed to promote output stability and sustainable growth are good for financial intermediation. As there is evidence of foreign ownership leading to more profitability, foreign banks should be extended more support in terms of removal of entry barriers and other obstacles. Many foreign banks have been closed in recent years on account of low profitability. Public policy that encourages the presence of foreign banks should be initiated. Sound bank i. e. banks with a high capital to equity ratio charge a premium for their soundness in the form of high NIM's which reduces growth. Sound bank might be financially sound but state bank needs to probe into their functioning and the difference in the lending and deposits rates charged by them. Concentration was found to be having a significant impact upon profitability. Concentration allows banks to set their own price i. e. they charge more from borrowers and pay less to depositors. Due to unfair behavior, both agents will get de-motivated and will have serious economic

implications. Competition commission of Pakistan should take more measures to introduce a level playing field. It has been observed that banks have created their own segments and prefer to transact business with the government and with large, strong counterparties to curtail credit risk. Notably, these changes in the overall loan portfolio have increased the element of credit concentration risk in the banking system. Specifically, policies directed towards infusing greater competition in the banking industry together with a proactive supervision on the sectoral distribution of loans are the key elements that will help in reducing banking spreads. Administration cost is also considered to be a significant factor affecting the profitability and high banking spreads. It represents the resources used on the administration of intermediation activities such as salaries etc. Banks tend to break-even this cost by maintaining a high spread between lending and deposits rates or by charging fees, commission etc. The results indicate that there is a positive and statistically significant effect of the administration expenses to net interest margins. Banks should be encouraged to cut back their administrative expenses, increase their core business activities, and follow prudent lending policies.

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