

STRUCTURE CONDUCT PERFORMANCE (SCP) PARADIGM IN PAKISTAN BANKING SECTOR: A CONCEPTUAL FRAMEWORK AND PERFORMANCE OF THE FIRST WOMAN BANK UNDER SCP MODEL

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ABSTRACT

The study is aimed to analyze Structure-Conduct-Performance (SCP) model, in the context of Pakistan banking industry, which is to find relationship between market structure, behavior and more particularly the financial performance of the banking sector. The woman bank's market share and business behavior are analyzed in SCP framework to examine performance of the bank being a special institution for women. The regression equation is used to achieve the analytical objectives of this study; using the most common tested relationship by SCP paradigm such as HHI (Hirshman-Herfindahl Index) which is a concentration measure used to analyze banking structure and ROA (Return On Asset), ROE (Return On Equity) and NIM (Net Interest Margin) which are profitability indicators. The results are spread over 35 banks in Pakistan, for analyzing correlation between variables, the time series data comprise the period 2004 to 2013. The results suggest that banking sector in Pakistan carries negative concentration ratios that impact directly on profitability, efficiency and innovation. The result indicated that after analyzing the woman bank there is a minor market share of the bank into the industry which makes us conclude that the reason behind the weak performance is its inefficient participation in banking industry. The study finds that there is a policy draw back that restricts woman banks for their proper operations to carry out.

Keywords: Structure, Conduct, Performance model, Profitability, Concentration, Financial Stability, Regression

INTRODUCTION

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Banking is normally recognized as a main component in economy's growth and development. The banks playing a pivotal role in economy, promote capital formation, remove deficiency of capital by saving and investment, mobilize the small and scattered savings of the people and make them available for investment in productive enterprises. As the commercial banks are an important source of institutional credit in economy, they are believed to be the heart of financial system (K.K Davit; 2005 and Meenai; 1984).

Rose (2002) mentions that successful and developing businesses of banking can be regarded as a measure contributing towards all inclusive macroeconomic robustness and potential. According to Chishti (1998), banking is the most important business which provides a way out for socio-economic change and catalyst to the growth of the economy. The economic and social infrastructure requires a well-organized, growing and stable banking system. Along the side of this comprehensive economic aspect, many years ago, business administration started already to make the more of microeconomic attributes that says that market structure and competition have an intense impact on profitability in any industry. Thus, Structure-Conduct Performance (SCP) Paradigm, has been given much more importance in banking system, theoretically in their literature and even empirically. The present study examines the financial stability of banking sector in Pakistan by analyzing their performance. Parameters such as Capital adequacy, Asset quality, Profitability, Liquidity, Sensitivity to market risk, are arranged in statistical framework of regression. The paper is divided into five parts. Part one is introduction, part two reviews the relevant literature and deduces study rationale, part three provides the historical perspective of Pakistan banking sector and the role of woman bank in banking system. Part four is a summary of specific objectives methodology and analytical framework, part five provides results and discussions. Part six concludes the result with recommendations with adequate references that are used to construct theoretical framework for divisions of operation plan.

LITERATURE REVIEW

There are numerous important studies based on the field of "Industrial Organization" and its traditional structure, conduct, performance (SCP) model. Waldman and Jensen (1998) have mentioned that, SCP model was developed and introduced by Edward Mason (1930) and his colleague and student Joe S. Bain in 1940s suggested a direct relationship between structure conduct and performance paradigm. Further, according to Miller

and Van Hoose (1993), Carton and Perloof (1994), every market has a structure that determines the competitiveness of the market, and that influences the conduct, which is a pattern of behavior of the firm. The conduct in turn determines the performance of the bank which is a success of the firm. Carton and Perloof (1994), pointed out that SCP paradigm typically uses data at industry level. Various aspects of banking market structure conduct and performance have been empirically studied and specific focus is given to the relationship between market structure and performance, such literature includes R. Alton Gilbert (1984), Timothy H. Hannan (1991), Evanoff and Fortier (1988), William, Molyneux and Thornton (1994).

S. Sathye and M. Sathye (2004) have discussed above approach in the way that the SCP paradigm postulates that firms are able to derive higher profits in concentrated markets because they can resort to oligopolistic behavior and collusive arrangements. Miller and Van Hoose (1993), William, Molyneux and Thornton (1994), said that analysis of industry structure and performance which is called "Concentration- Performance" approach, which is based on two basic perspectives, one is structure- conduct-performance (SCP) paradigm, that emphasizes market collusion wherein few highly concentrated banks dominate the market. The other is Efficient Structure (ES) theory, which highlights the superior operating efficiency of a particular firm and the most cost efficient firms.

Careful perusal of literature as mentioned above reveals that as per SCP approach, Ferguson (1994) says that the relationship between structure conduct and performance depends upon combined structural features opposed to the model of perfect competition, monopolistic competition and oligopoly and monopoly. Behind the SCP approach, both the intuition and the organizing principle was that, in the market structure where all markets recline, the perfect competition and monopoly are usually considered as opposite ends of a spectrum.

Figure 1: Structure conduct performance Paradigm

Structure	Conduct	Performance
<ul style="list-style-type: none"> •Concentration •Market share •Size (Asset) •Entry and exit 	<ul style="list-style-type: none"> •Pricing policy •Productivity •Expense-preference behavior and risk avoidance 	<ul style="list-style-type: none"> •Productive and allocative efficiency •Progress •Full employment

Source: Adopted from Neuberger (1997)

Figure 1 shows model of SCP which describes each part of Structure Conduct and Paradigm.

Banking Sector of Pakistan

Historically, banking in Pakistan redeveloped after partition from India and passed from different phases of development during the years. The State Bank of Pakistan was established and inaugurated as a developed Central Bank on 1 July 1948 in execution of State Bank of Pakistan Order 1948 and private banks were also permitted to operate (Asrar H. Siddiqi; 1988).

Khan (2004) and Siddiqi (1988) state that the second phase was the nationalization of domestic banks. Due to that it was considered necessary for the banks to be a better channel or resource for the nation, therefore, on January 1st, The Banks (Nationalization) Act, 1974 was issued thereby Pakistani scheduled banks were nationalized. The banking industry of Pakistan faced major upsets during the period of seventies of the nationalization of the domestic banks, the entire perspective of the banking industry was changed at that time. With the top unfavorable decisions, all the commercial banks were supervised by the bureaucracy and political leadership. Isharat (2005) reports that in 1980s, it was realized that the national socio-economic goals were not being achieved due to modification and the new models of accountability which caused the changes in the business ethics of industry and began to fail the business of the banks. The reforms and other limitations in the banking industry were made necessary to deal with the above said issues to enhance the due role of the banking industry for economic growth and development.

Consequently, the third phase taken place for reformation of industries. The privatization initiates in nineties along with deregulation and restructuring on the domestic banking industry and financial institutions. Except national bank of Pakistan all the nationalized commercial banks were privatized

(Siddiqi, 1988).

As a key factor in the economic growth and development banking sector plays major role in economy. Pakistan banking sector consist of two-tier system including the State Bank of Pakistan (SBP), commercial banks, specialized banks, Development Finance Institutions (DFIs), Microfinance banks and Islamic, in conformity with the State Bank of Pakistan Act. In June 2013, there were 38 commercial banks (including 22 local private banks, 5 public sector commercial banks and 7 foreign banks) and 4 specialized banks in banking sector. Among the all commercial banks, 5 full- fledged Islamic banks are also included in sector (State bank Of Pakistan, 2013).

The market share conduct and performance of The First Woman bank

The women bank is the one of the five public sector banks of Pakistan, established in November 1989 with the aim of empowerment of women and contribution of women services towards countries economy. The first woman prime minister Mohtarma Benazir Bhutto (Shaheed) of Islamic republic of Pakistan brings this institute in front of banking market with an idea that:

“let the women’s bank be a pioneer in helping Muslim woman secure economic independence and career satisfaction within cultural ambience and social values of an Islamic society”

The concept behind the organizing an institution for woman is to empower the women and participation in economic activities and design in a manner to meet special needs of women and encourage and assist them in promoting women in any practice of professions also administering of trade and industry (FWBL; 2014).

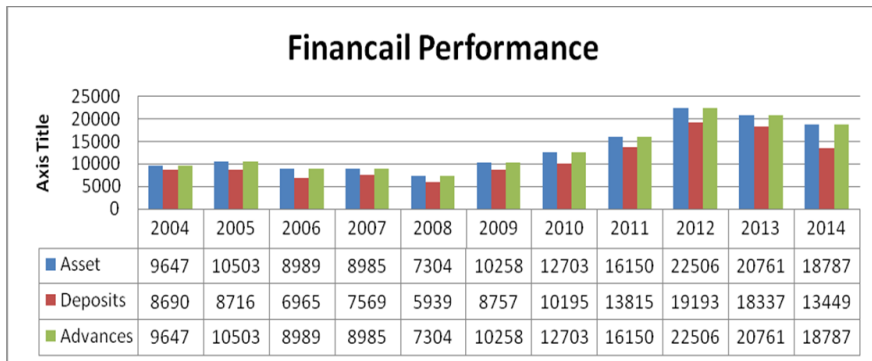
With the Combined shareholding of large public sector bank the First Woman Bank Ltd was established. In 2009, the shares of private shareholder banks were decided to purchase by Government of Pakistan to hold on First Women Bank Ltd. (FWBL) in the public sector through State Bank of Pakistan, such banks private were i.e. MCB, HBL, ABL and UBL. In light of this decision the majority of shares (96%) are owned by the Ministry of Finance, Government of Pakistan and National Bank of Pakistan. Bank has 50% of shareholding of women’s so also the managing Director in the bank is a woman. Women’s ratio of

employment is above 50 % who are working as employees in the bank. But, the deposits come from and bank furnished services to both genders. (TBP; 2014).

Women's ratio appeared around 50% of the total world Population and about 49% population of Pakistan. Female entrepreneurship in Pakistan is comparatively lowest from other countries in the world. Due to very low female participation in the economy of the country, the percentage of female employers is even less than one percent. The issues arise from the hidden statistical data of women. Women's in Pakistan have lower access to financial services, but the strength is established and women's share towards financial access is increasing gradually. The percentage of female borrowers in Pakistan is only 13% of the whole banking sectors (FWBL; 2014).

As mention in the book of Kaplan (2013), the words of successful business woman Mary Roebing that, *"woman's bank can be better listener for women and give them more time, advice and direction than an ordinary bank would give"*. Keeping in view the comments in Kaplan's book woman bank not only motivate women to play an active role in banking business but also to provide other business women to come and acquire all financial opportunities and become a part of productive factor of the economy. To create value for our stakeholders and contribute towards country's economic development through main streaming women by creating enabling environment as the dynamic agent of change and prosperity.

Ellis, Kirkwood and Malhotra (2010), Gender equality is important for economic growth because gender inequality can accurate considerable cost in term of lost growth. Therefore, gender equality is correlated significantly not only with lower poverty rate but also with higher growth. Krismann (2005) mention the point that, the goal or objective of establishing of women bank was to serve the need of women depositors and to the businesses owned by women. Author further discussed that at the time other banks usually refused loaning to the women entrepreneur for reason that it was too risky.

Figure2: Financial performance of woman bank

Source: The First Woman bank (Annual Reports 2014)

Figure 2 shows a significant growth in financial performance during the period of 2004 to 2013

Rewards and Successful Stories

Year	Agency	Rewards
2012	From Advisor of the Chief Minister (Caretaker) Government of Sindh.	Consumer choice award
2010 to 2013	By Prime Minister of Pakistan	Brand of the year Award (Women Banking)
2005	United Nations Development Programme, Mr. Haoliang Xu	Runners-up Award for client of FWBL / ILO / IPEC, Global Micro Entrepreneurship Award
2005	Asian Banking Award	Runners-up Award for FWBL / ILO / IPEC Micro-Credit Programme for combating Child Labour
2001	Women World Banking	Leader in Micro-Finance
1994	Euromoney Excellence Award	For Low Administrative Cost
1992	ILO Geneva Study	Major innovations in Management in Pakistan:

Source: FWBL (First women bank limited) <http://www.fwbl.com.pk/>

RESEARCH METHODOLOGY

The methodology of this research is based on quantitative methods, techniques and procedures which are used to analyze the relationship between structure, conduct and performance of banking sector. Regression analysis as a statistical tool is used to investigate relationship between variables. Secondary source of data collection is applied to collect the sample from the population. The population of the study is based on all 35 commercial banks including seven foreign banks of the banking sector. Data are also taken from central bank from FSR (Financial Soundness Review) for the period 2004 to 2013. The sample of banking data for three large banks and forth public sector bank such as the First Woman Bank is taken bank wise from the official websites of the banks to analyze concentration ratio.

THE MODEL

The regression equation is used to analyze the traditional SCP hypothesis for Pakistan banking industry. Many studies have utilized this model to examine the relationship between structure and performance of banking system; such studies include Maudos (1998) Evanoff and Fortier (1988), William, Molyneux and Thorton (1994), William G. Shafered (1979), Gilbert (1984).

The equation of the model reads:

$$\Pi = \alpha_0 + \beta_1 \text{HHI} + \beta_2 \text{MS} + \sum \alpha_i X_i \dots \dots \bar{e} \quad (1)$$

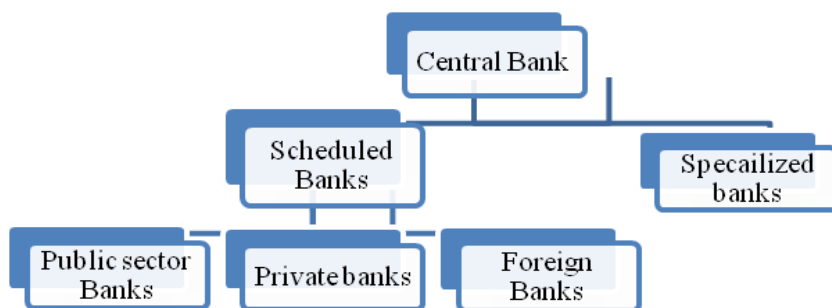
Where, the performance of bank “ π ” is measured as Profitability such as, ROA (return on asset), ROE (return on equity), NIM (net interest margin), and alternative measures for market structure (HHI “Hirshman-Herfindahl Index” which is usually called concentration ratio). The coefficient of HHI is sign for B_1 which is believed to be positively significant for the SCP hypothesis. The proxy to measure competition in the banking market is the market share of banks. Additional controlled variables are shown by X, specific to the market that earlier studies have accepted to have impact on the profitability of banks.

RESULTS AND DISCUSSION

Structure

Structure describes the characteristics and composition of markets and industries in an economy, and refers to the number and size distribution of the firm in an economy as a whole (Ferguson: 1994).

Figure 3: Banking Structure



Source: State Bank of Pakistan

The HHI (Hirshman-Herfindahl Index) is the alternative measure of market structure which accounts for all firms in the market, while CR3 does not. HHI is bank i 's $\text{HHI} (\text{MS})^2$ taken as a measure of market concentration. HHI is an organized definition used as market share; antitrust practitioners have typically moved the decimal point two places to the right, using percentage of market instead. Using this convention, the HHI approximates 0 for perfectly competitive industry and equal to 10,000 for a monopoly. The more concentrated the industry the higher the level of profitability will be (D.F Greer; 1992).

Table 1: Three Dominant Banks' Concentration Ratio

Year	HLB (MS)	NBP (MS)	UBL (MS)	CR 3(a)	HHI (3 bank)	Woman bank (MS)(b)	CR4 (a+b)	HHI (4 bank)
2004	16.02908	17.5232	8.958682	42.51097	1807.182	0.328443	44.37079	1968.767
2005	14.45066	15.78467	9.894754	40.13008	1610.423	0.296132	41.70787	1739.547
2006	13.64719	14.5907	10.04516	38.28305	1465.592	0.212307	39.57169	1565.919

2007	11.38826	14.73693	10.59277	36.71796	1348.209	0.178118	37.82483	1430.718
2008	13.3228	14.53017	11.15563	39.0086	1521.671	0.132855	40.06592	1605.278
2009	13.25852	14.49636	9.980909	37.73579	1423.99	0.160876	38.72313	1499.481
2010	12.99282	14.58128	10.3471	37.9212	1438.018	0.182183	38.88845	1512.312
2011	13.94746	14.069	10.0709	38.08736	1450.647	0.201331	38.99804	1520.847
2012	16.58402	13.485	9.70727	39.77628	1582.153	0.235635	40.67741	1654.652
2013	16.99971	13.52171	10.47721	40.99863	1680.888	0.209204	41.89438	1755.139

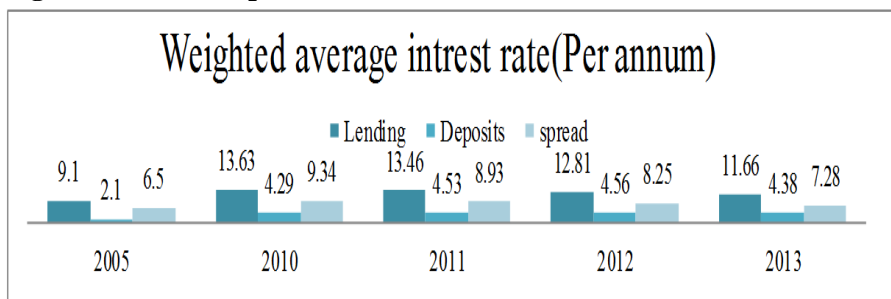
Source: Annual Reports (Assets 2004 to 2013 of Habib Bank Ltd, National Bank Ltd, United Bank Ltd and the Women Bank Ltd)

Table 1 shows market share (MS) and the concentration ratio of three largest banks working as dominant banks in Pakistan and a small but well known bank the First Woman Bank of Pakistan. The data indicates that there is a large competition between the banks. Although, the Women Bank has little contribution towards market structure, its small share affected the whole market competition and the above figures show the change after addition of the Women Banks market share.

CONDUCT

According to Ferguson (1994) and D.F Greer (1992), conduct refers to the behavior (action) of the firm in a market in the decision making process, which focuses on the firm's set of prices whether in collusion with other in the market or independently.

Figure 4: Interest Spread



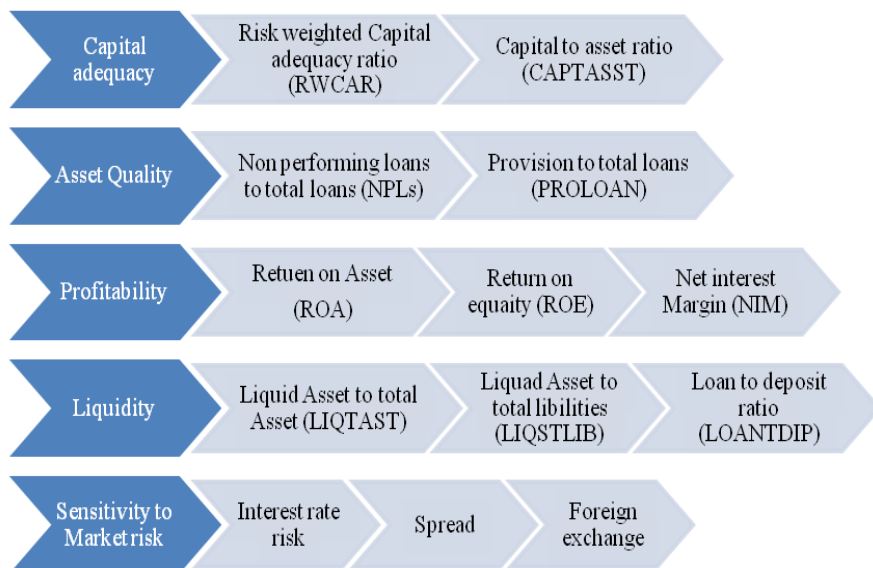
Source: State Bank of Pakistan (Annual Report 2007/2008)

The figure # 4 shows the interest rate spread of Pakistan banking industry and the rate of spread shows a rising position in graph.

PERFORMANCE

The economists take an interest in the performance of the banking firm. The main question arises whether banking firm operations enhance welfare of economy or not. The consumer satisfaction is considered as a firm's performance in the current time period (Miller and VanHoose; 1993). Financial Soundness Indicator (FSIs) Model has been developed and is being coordinated as an experimental indicator for performance measures by the International Monetary Fund (IMF) with the coordination of other international organizations, such as the World Bank, the Bank for International Settlements (BIS), the Organization for Economic Co-operation and Development (OECD), and the European Central Bank (ECB), plus IMF member countries in all geographic areas (IMF).

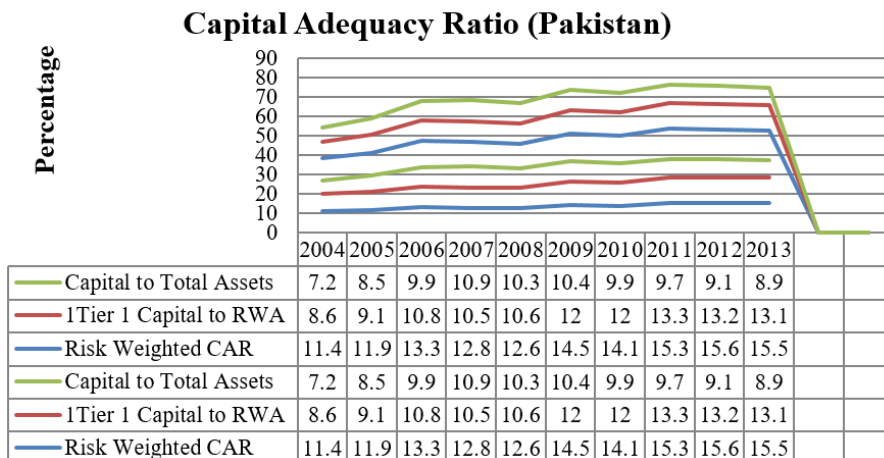
Figure 5: Parameters of Regression Model



Source: International Monetary Fund: Financial Soundness Indicators

CAPITAL ADEQUACY

The essential indicator for estimating banking sector resilience is the capital adequacy ratio as it reflects its ability to absorb unforeseen shocks and unexpected losses.

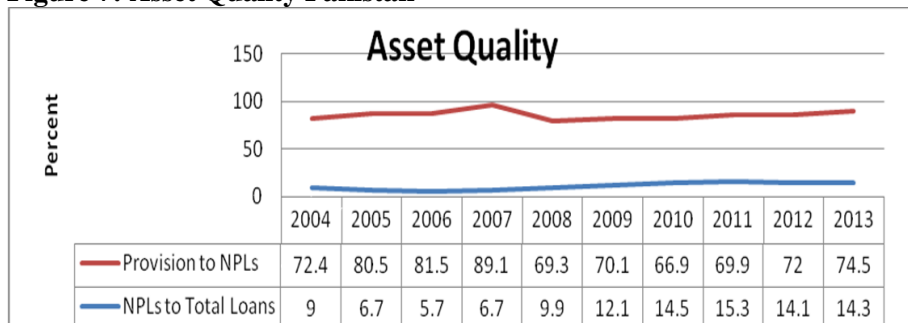
Figure 6: Capital Adequacy Ratio Pakistan

Source: State Bank of Pakistan (FSR 2012)

The figure # 6 contains the data for weighted average capital adequacy ratio of banks, and rate of CAR in 2004 was 11.4 which is raised in 2013 at 15.6

Asset Quality

Asset quality indicators are directly associated with potential risks to the solvency of the banking sector.

Figure 7: Asset Quality Pakistan

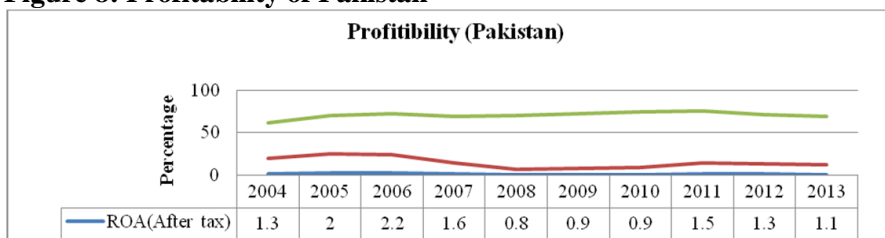
Source: State bank of Pakistan (FSR 2012)

Asset quality remained healthy in 2010 which was 14.5. There is a clear risk to the solvency of Pakistan banking as its NPLs are in greater value with low percentage of provision ie 66.9 % in 2010.

Profitability

Profitability presents the performance of banking sector, and measures in Return on Asset (ROA) which indicates the strength of capital in banking firm, which will depend on the industry. Banks with large initial investments will generally have lower return on assets. Return on Equity (ROE) measures efficiency at generating profits from every unit of shareholders' equity (also known as net assets or assets minus liabilities), as well as the rate of return on the ownership interest (shareholders' equity) of the common stock owners, and Net Interest Margin (NIM) is the pricing ability of a bank. The increased rate of interest on lending can make change in inflation rate in market, thus, the negative sign is expected on inflation.

Figure 8: Profitability of Pakistan

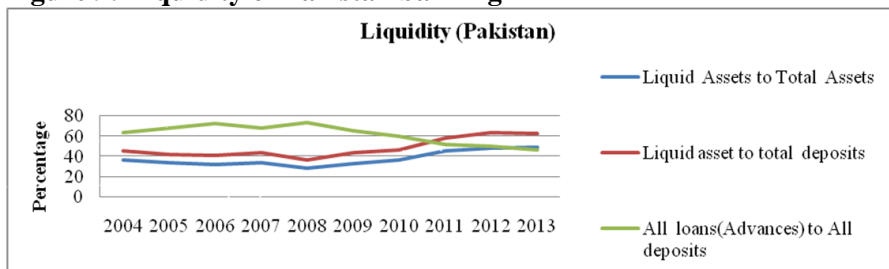


Source: State Bank of Pakistan. (FSR 2007, 2008 and 2012)

Liquidity

The degree to which an asset or security can be bought or sold in the market without affecting the asset's price is known as liquid assets. Liquidity is characterized by a high level of trading activity. Liquidity indicators reflect the resilience of banks to absorb cash flow shocks.

Figure 9: Liquidity of Pakistan banking



Source: State Bank of Pakistan (FSR 2007, 2008 and 2012)

Table 2: Summery Statistics of Models

Dependent Variables	R	R ²	Std. Error	Mean Std Res	Df1	Df2	Durbin-Watson	F value	Sign
ROA	.97	.95	.197	.000	6	3	3.285	9.759	.044
ROE	.96	.92	2.636	.000	5	4	2.554	9.330	0.025
NIM	1.00	1.00	.033	.000	8	1	3.193	500.486	.035

Table 2 presents the dependent variables which in all regressions are ROA, ROE, NIM and the R² which reflects the strength of regression model and relationship between variables. In the table, regression equations such as ROA, ROE, NIM, contain the value of R² = 95%, 96% and 1.00% respectively. The results suggest that there is a strong relationship available between variables to fit the model. Further, it is described by F value which is ROA (9.759), ROE (9.330), NIM (500.486), and statistically significant with Probe values 0.044, 0.025, and 0.035, respectively. The Durbin-Watson statistic explains the correlation between the variables in the model and the values are ROA (3.285), ROE (2.554), NIM (3.193).

Table 3: Regression Results (Coefficient)

	Dependant variable								
	ROA			ROE			NIM		
IND: Var:	Constant (-93.92)	T.stat (-2.115)	P.Value (.125)	Constant (200.70)	T.stat (3.19)	P.Value (.033)	Constant (-193.13)	T.state (-22.285)	P.Value (.029)
HHI	-.073	-2.481	.089	-.053	-2.699	.054	-.120	-23.956	.027
MS	5.493	2.393	.096	-	-	-	9.593	23.161	.027
Asset	-	-	-	-	-	-	-1.5890	1.745	.331
RW CAR	.022	-0.98	.928	-	-	-	-	-	-
CAPTASST	-	-	-	-4.627	-2.013	.114	-	-	-
NPLTLOAN	-	-	-	-4.329	-2.776	.050	-	-	-
PROVLOAN	.027	1.372	.264	-.864	-1.589	.187	-	-	-
LIQATAST	-	-	-	1.327	2.794	.049	.631	8.320	.076
LIQATLIB	-	-	-	-	-	-	-.432	-6.343	.100
LOANTDIP	-.089	-4.453	.021	-	-	-	-	-	-
IRR	-	-	-	-	-	-	.163	18.854	.034
SPREAD	-	-	-	-	-	-	.412	5.855	.108
CURIXCH	-.066	-2.371	0.098	-	-	-	-.062	-10.618	.060

Table 3 above is consistent with the theory and they all exhibit the expected signs. The correlation between dependent variables and independent variable shows mixed figure as both positive and negative correlations are

found between variables.

1. Independent variable ROA is shown in the table with the present result such as the coefficient of HHI, and CUREXCH are -.073, and -.066 respectively, both contain negative signs with non-significant level. But LOANTDIP is -.089 which is negative and is significant with ROA. The coefficient of MS (5.493), RWCAR (.022), and PROVLOAN (.021) hold positive and non-significant impact on ROA.
2. ROE is dependent variable and in equation 2, the coefficient of independent variables are HHI (-.050) and NPLTLOAN (-4.329), and negatively significant with ROE. CAPASST (-4.627) and PROVLOAN (-.864) are negative and non-significant with ROE. The coefficient of LIQATAST was 1.327 positive and significant for ROE.
3. NIM is the dependent variable of equation 3 and presents the result for independent variables such as, the coefficient of HHI is -.120 negatively significant on NIM. The coefficients of MS (9.593) and IRR (.163) are positively significant with NIM. The coefficient of ASSET (-1.58E) LIQATLIB is (-.432), and CURXCH (-.062) are negative and non-significant statistically. LIQATAST (.850) and SPREAD (.412) are positive and non-significant with NIM. The coefficient of MS is (8.666) and SPREAD is (.644) statistically non-significant with NIM. The coefficient of LIQATLIB is (-.622) negative and non-significant statistically, IRR is (.158) positively significant at value .015 with NIM.

Conclusions & Recommendations

The paper has examined structure, conduct and performance of banking sector taking parameters of financial soundness indicators to assess banking system of Pakistan. The results highlight that three banks dominate the entire banking system of Pakistan whose share exceed beyond 40%. As the theory suggests that higher profitability is derived from high concentrated markets and concentration is proxy for market share from which it is concluded that the banks with a larger share in market can enhance economic growth by their role of financial source to economic activities. Looking at the performance of the First Woman Bank till date, it is revealed that the Women Bank comparatively has a small share in the market but its performance has increased annually. It will not be out of place to mention

here, keeping in view the female managerial staff of the bank, that women in Pakistan are more responsive, adaptive and dynamic to promoting economic needs and prosperity in the country. They can offer the best practices and financial services to the banking system. The Women Bank not only motivates women to play an active role in banking business but also it aims at providing other business to women to come and acquire all financial opportunities and become a part of productive factor of the economy. Therefore, it is recommended that there is need of a better and more efficient banking behavior of the Women Bank since performance matters a lot for sustainable economic growth.

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