THE EFFECT OF INTERNAL FINANCIAL FACTORS ON THE PERFORMANCE OF COMMERCIAL BANKS IN DEVELOPING COUNTRIES

Hazrat Bilal[1], Lala Rukh[1] & Qamar Afaq Qureshi[2]

[1]Center for Management and Commerce, University of Swat, KP, Pakistan
[2]Department of Public Administration, Gomal University, D. I. Khan

ABSTRACT

This research study examined the effect of internal financial factors including capital, loans, deposits, fixed assets, investments and liabilities on the profitability of commercial banks of Pakistan for a period of six years from 2008 to 2013. Correlation and Regression analysis were applied to examine the effect of independent variables on dependent variable. The results revealed that higher level of capital contributes towards bank's profitability but its impact is insignificant while there is a significant positive relationship between deposits, investment and bank's profitability, which was measured through Return on Assets. On the other hand loans, fixed assets and liabilities have a negative impact on the profitability of commercial banks of Pakistan.

Keywords: *Internal Financial Factors, Profitability, Return on Assets, Commercial Banks Performance*

INTRODUCTION

In Pakistan the financial system is governing by the commercial banks which perform the various general banking functions of borrowing and lending as well as earning profit. These banks play an essential role in the economic expansion of the country. Over the past few years banking sector in Pakistan is facing major challenges and for the economic development of the country it is necessary to maintain the financial stability in a country (Javaid, Anwar, Zaman & Ghafoor, 2011). If the banking system in a country is efficient and effective it will bring the robust progression in different segments of the economy. Therefore it is significant to recognize and examine those aspects that effects the profitability of the banks in Pakistan so that to improve the economic growth of the country and maintain its financial stability.

Banks are the financial intermediaries who accept deposits and make loans. In the economic advancement of the country it plays a very essential role and channel funds from saver to investors by earning profit. If the banking sector of the

country does not perform well, it will adversely affect the economy of a country (Demirgüç-Kunt & Levine, 2004). Rasiah (2010) stated that determinants of commercial banks' profitability can be categorized into two major classes, internal and external determinants. The factors which are not in the control of management are considered external determinants while the factors which are under the control of management are called internal determinants. This study is an effort to pinpoint the internal financial factors that affecting the bank's performance in developing countries like Pakistan.

LITERATURE REVIEW

Researchers have identified many factors that affecting the bank's profitability in relationship to a variety of factors. Samuelson (1945) studied the effects of interest rate on banking system and found a significant positive relationship between interest rate and bank's profitability (Short, 1979; Haron, 1996; Vong & Chan, 2009; Alper & Anbar, 2011). Later on it was also found that the bank's profitability is not only linked with interest rate but it is also related with the amount of capital invested by owners in banks (Bourke, 1989). The same argument was supported by using seven years data of United States banks from 1983 to 1989 and found a positive relationship between bank's capital and earnings (Abreu & Mendes, 2002; Naceur & Bashir, 2003; Kosmidou, Tanna & Pasiuras, 2005; Bennaceur & Goaied, 2008; Ben Naceur & Khandil, 2009; Sufian & Habibullah, 2009a; Liu & Wilson, 2010).

In addition to this Pilloff & Rhoades (2002) also studied the various factors affecting bank's profitability through regression analysis and concluded that deposits have a significant positive relationship with the bank's profitability (Haron, 2004; Alkassim, 2005; Shahcher, 2012). Furthermore, Bashir (2003) determined that bank's profitability is along with other factor also significantly affected by loan to total assets ratio and was braced by Burki & Niazi (2006), Dietrich & Wanzenried (2009), Sufian & Habibullah (2009b), Gul, Irshad, & Zaman (2011) and Shachera (2012). According to investigation made by Athanasoglou, Brissimis & Delis (2008) profitability of banks can also be affected by expense management, capital, credit risk and inflation, which was further confirmed by Riaz (2013) through investigating the impacts of credit risk and interest rate on return on assets ratio. Therefore on the basis of literature the author has developed the following hypothesis to be tested;

H_1: The internal financial factors such as capital, loan and deposits have a positive relationship with bank's profitability.

H_2: Investment has a positive relationship with bank's profitability.
H_3: Fixed asset have a significantly positive association with bank's profitability.
H_4: Liabilities are positively connected with bank's profitability

RESEARCH METHODOLOGY

The data for this research study was collected from consolidated financial statements of the commercial banks and from the website of the State Bank of Pakistan. A total of 26 commercial banks data was collected from year 2008 to 2013. The dependent variable of this study was profitability represented by return on assets and the independent variables of the study were deposits, loans, capital, fixes assets, investment and total liabilities.

The profitability was measured through return on assets; net income divided by total assets in percentage. This ratio shows the banks' ability of earning profit against its total assets utilization and also demonstrates that how effectively and efficiently banks are utilizing their current and non-current assets (Riaz, 2013; Hassan & Bashir, 2003; Sufian, 2011; Alper & Anbar, 2011; Alkassim, 2005). Return on Assets (ROA) was taken in compliance with the studies of Bashir (2003), Sufian (2003) and Riaz (2013). When the ROA value is high it shows that the bank is high profitable (Sufian & Habibullah, 2009; Kosmidou, 2008). This is an important ratio for measuring the performance of the financial sector (Barnes, 1987).

$$Return\ on\ Assets = \frac{\text{Net profit after tax}}{\text{Total Assets}} \times 100$$

Deposits are the liability of the banks and is an important source of bank's funding represented by the following ratio

$$Deposits\ Ratio = \frac{\text{Toatal Deposits}}{\text{Total Assets}} \times 100$$

The banks generate their income through loans. As the banks converts more deposits into loans generates more profitability (Gul, Irshad & Zaman, 2011).

$$Liabilities\ Ratio = \frac{\text{Toatal Loans}}{\text{Total Assets}} \times 100$$

Capital is the claim of owners on the assets of the banks and represented as follows

$$Capital\ Ratio = \frac{\text{Total shareholder equity}}{\text{Total assets}} \times 100$$

Investments are the ratio stating that how much portion of the total assets of banks is used in investment activities.

$$Bank's\ invesments\ Ratio = \frac{Total\ Investments}{\text{Total assets}} \times 100$$

Liability of the bank is the amount borrowed and is expressed in percentage through the following ratio

$$Debts\ to\ Assets = \frac{Debts}{\text{Total assets}} \times 100$$

Fixed assets includes building, furniture, machines for office, and other necessary equipment which is not used for sale and cannot be easily converted into cash (Laird, 1958). Fixed asset is represented by fixed assets ratio shown as:

$$Fixed\ Assets\ Ratio = \frac{\text{Fixed Assets}}{\text{Total assets}} \times 100$$

Statistical Model

Regression Model was used by many researchers to investigate the influence of various factors on the profitability of banks. (Alkassim, 2005; Alper and Anbar, 2011; Bourke, 1989; Vong and Chan, 2009; Obamuyi, 2013; Javaid et al, 2011) .Therefore in the present study, the researcher has also used the following regression model to test the above stated hypotheses:

$Y_{it} = \alpha + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 X3_{it} + \beta_4 X4_{it} + \beta_5 X5_{it} + \beta_6 X6_{it} + \mu_{it}$

In this regression equation "Y" is the dependent variable and X1, X2...X6 are the independent variables.

Y_{it} = represents Return On Assets (ROA) for bank i at time t.

α = represents alpha and is constant.

β_1, β_2 ... β_6 are the coefficient of the regression equation.

$X1_{it}$ = represents capital and is taken as total shareholder's equity to total assets for bank i at time t.

$X2_{it}$ = represents loans and is taken as total loan to total assets for bank i at time t.

$X3_{it}$ = represents deposits and is taken as total deposits to total assets for bank i at time t.

$X4_{it}$ = represents Investments and is taken as total investments to total assets for bank i at time t.

$X5_{it}$ = represents liabilities and is taken as total debts to total assets for bank i at time t.

$X6_{it}$ = It represents fixed assets and is taken as fixed assets to total assets for bank i at time t.

Statistical Analysis

The descriptive statistics for overall variables used in the present study are given in Table1, where the ROA have a mean of .0012 and standard deviation .0189

Table 1

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation
ROA	156	.11	-.07	.03	.0012	.01894
Capital	156	.46	-.03	.43	.1101	.07802
Loans	156	.27	.00	.27	.0397	.04802
Deposits	156	.46	.45	.91	.7598	.09210
Investments	156	.50	.08	.58	.3194	.10948
Liabilities	156	.41	.57	.98	.8909	.06865
Fixed Assets	156	.11	.00	.12	.0324	.01869
Valid N (list wise)	156					

The relationships among the variables used in this study are tested by using correlation analysis which is shown in the given Table 2. The results of the correlation analysis show that capital, loans and fixed assets have a negative correlation whereas deposits, investments and liabilities have a positive correlation with ROA respectively. The negative correlation of capital, loan, and fixed assets with the ROA suggests that increases in capital, loans and fixed assets decreases the ROA. The positive correlation of deposits, investments and liabilities with the ROA suggests that increases in deposits, investments and Liabilities will increase the ROA. The negative correlation of capital and loan with the ROA are similar with the result of, Ali & Sadaqat (2011), Aminu (2013), Ali, Akhtar & Ahmad (2011). The positive correlation of Deposits is in compliance with the result of Burki & Niazi (2006), Riaz (2013), and Javaid, Anwar, Zaman, & Ghafoor (2011).

Table 2

Correlations

	ROA	Capital	Loans	Deposits	Investment	Liabilities	Fixed Assets
ROA	1						
Capital	-.100	1					
Loans	-.137	.288	1				
Deposits	.114	-.695	-.136	1			
Investment	.364	-.193	-.273	.015	1		
Liabilities	.060	-.790	-.320	.645	.180	1	
Fixed Assets	-.367	.266	.030	-.087	-.354	-.296	1

In order to further confirm the strength of this relationship the regression analysis were applied the below Table 3 elaborates the summary of the model used in conducting this research study. ROA is the dependent variable and capital, loans, deposits, fixed Assets, investment and liabilities are the independent variables. The R value represents the degree of correlation and is 0.496. The R^2 value indicates that how much of the total variation in the dependent variable which is ROA, can be explained by the independent variables which are capital, deposits, fixed assets, investment and liabilities. The adjusted R^2 value is 0.215 which means that 21.5% of the total variation in the dependent variable can be explained by the independent variables.

Table 3

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.496[a]	.246	.215	.01678

a. Predictors: (Constant), Fixed Assets, Loans, Deposits, Investments, Liabilities, Capital

The given Table 4 provides information about the level of model significance and predicts the significance of dependent variable (ROA). The value of F is 8.089

and is significant at 0.05 values. Here, $p < 0.05$ shows that the regression model in overall is statistically significant and thus predicts the dependent variable, and is a good fit for the data.

Table 4

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.014	6	.002	8.089	.000[a]
	Residual	.042	149	.000		
	Total	.056	155			

a. Predictors: (Constant), Fixed Assets, Loans, Deposits, Investments, Liabilities, Capital

b. Dependent Variable: ROA

The below Table 5 is the summarized result of the regression equation applied in conducting this research study. Column B of the table represents the value of the constant and the value of regression coefficient. The value of the constant is the expected value of the dependent variable (ROA) when the value of the independent variable is zero. It also provides other necessary information about the value of ROA from the independent variables perspective and also examine that the independent variables contribute statistically significant to the regression model by seeing at the "Sig" Column of the table.

The result shows that Capital is not significant ($p = 0.585$) and the coefficient is positive ($b=0.017$). This positive relationship shows that higher capital contributes to the profitability of the banks which is measured in this study by the ROA but their impact is not significant. This result is similar with the results of Bourke (1989), Vong and Chan (2009) and Obamuyi (2013). Deposit is significant ($p = 0.011$) and the coefficient is positive ($b = 0.056$). This shows that deposits contribute towards the bank's profitability. This result is similar with the results of Javaid, *et al.*, (2011), Riaz, (2013), Khan, Anwar, Choo, & Khan (2011) and Alkassim (2005). Thus the hypothesis that there is a positive impact of Deposits on bank's profitability is accepted. Investment have also significant ($p = 0.01$) and the coefficient is 0.046 which is a positive value and shows that investment have a significant positive impact on bank's profitability.

Hypothesis that there is a positive impact of investment on bank's profitability is accepted. Loan (p = 0.146) and is not significant and the coefficient is -0.045. This result is similar with the result of Vong & Chain (2009), Alper & Anbar (2011). Thus Hypothesis that there is a positive impact of Loans on bank's profitability is rejected. Liabilities (p = 0.051) and is statistically significant but coefficient vale is -0.067 which is a negative value, so it shows that liabilities have a negative significant impact on the bank's profitability. Hence hypothesis that there is positive impact of liabilities on bank's profitability is rejected. Fixed Assets (p = 0.000) and is statistically significant and the coefficient value is negative which is -0.341. This shows that Fixed Assets have a significant negative impact on the bank's profitability. Thus hypothesis that there is a positive impact of Fixed Assets on bank's profitability is rejected.

By putting the values of coefficients the multiple regression equation becomes as under;

ROA = 0.015+ 0.017 Capital – 0.045 Loans + 0.056 Deposits + 0.046 Investment - 0.067 Liabilities – 0.341 Fixed Assets

This equations shows that when one unit of capital increase the ROA will be increased by 0.017 units, increase of one unit of loan will decrease ROA by 0.045, increase of one unit of deposits will increase the ROA by 0.056, increase of one unit of investment will increase ROA by 0.046, increase of one unit of liabilities will decrease ROA by 0.067 and increase of one unit of Fixed Assets will decrease the ROA by 0.341 units.

Table 5

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
Model1	(Constant)	.015	.035		.431	.667
	Capital	.017	.031	.070	.547	.585
	Loans	-.045	.031	-.115	-1.463	.146
	Deposits	.056	.022	.271	2.583	.011
	Investments	.046	.014	.267	3.347	.001
	Liabilities	-.067	.034	-.243	-1.969	.051
	Fixed Assets	-.341	.082	-.336	-4.173	.000

a. Dependent Variable: ROA

CONCLUSION

This study has identified the internal financial factors effect on bank's profitability during the period of 2008 to 2013 in developing countries like Pakistan and imitates the finding of the other researchers. It is concluded on the basis of analysis that higher capital contribute towards bank's profitability but its impact is not significant that demonstrate dependence on one assets may increase the bank's profitability but with less significant impact on the overall profitability of the banks. Deposits and investment have a significant positive impact on bank's profitability. On the other hand loans, fixed assets, and liabilities have negative relationship with profitability.

Future Research Recommendations

This sample of this research study was only 26 banks, while the future research may be conducted with a large sample size to obtain more precise results. In addition to this, more internal factors may be included to exaggerate the existing study as well as the effect of external financial factors may also be checked on the banks' profitability.

REFERENCES

Abreu, M., & Mendes, V. (2001, May). Commercial bank interest margins and profitability: evidence for some EU countries. In *Pan-European Conference Jointly Organised by the IEFS-UK & University of Macedonia Economic & Social Sciences, Thessaloniki, Greece, May* (pp. 17-20).

Akhtar, M. F., Ali, K., & Sadaqat, S. (2011). Factor Influencing the Profitability of Conventional Banks of Pakistan. *International Research Journal of Finance and Economics*, (66), 117-124.

Ali, K., Akhtar, M. F., & Ahmed, H. Z. (2011). Bank-Specific and Macroeconomic Indicators of Profitability-Empirical Evidence from the Commercial Banks of Pakistan. *International Journal of Business and Social Science*, 2(6), 235-242.

Alkassim, F. A. (2005). The profitability of Islamic and conventional banking in the GCC countries: a comparative study. *Journal of Review of Islamic Economics*, 13, 5-30.

Alper, D., & Anbar, A. (2011). Bank Specific and Macroeconomic Determinants of Commercial Bank Profitability: Empirical Evidence from Turkey. *Business & Economics Research Journal*, 2(2).

Aminu, A. B. (2013). The Determinants of Bank's Profitability in Nigeria. *Eastern Mediterranean University* (EMU).

Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. *Journal of international financial Markets, Institutions and Money*, 18(2), 121-136.

Barnes, P. (1987). The analysis and use of financial ratios: a review article. *Journal of Business Finance & Accounting*, 14(4), 449-461.

Ben Naceur, S., & Kandil, M. (2009). The impact of capital requirements on banks' cost of intermediation and performance: The case of Egypt. *Journal of Economics and Business*, 61(1), 70-89.

Bennaceur, S., & Goaied, M. (2008). The Determinants of Commercial Bank Interest Margin and Profitability: Evidence from Tunisia. *Frontiers in Finance & Economics*, 5(1).

Bourke, P. (1989). Concentration and other determinants of bank profitability in Europe, North America and Australia. *Journal of Banking & Finance*, 13(1), 65-79.

Burki, A. A., & Niazi, G. S. K. (2006). Impact of financial reforms on efficiency of state-owned, private and foreign banks in Pakistan (No. 22248).

Demirgüc, A., & Levine, R. (2004). Financial structure and economic growth: A cross-country comparison of banks, markets, and development: MIT press.

Dietrich, A., & Wanzenried, G. (2009). What determines the profitability of commercial banks? New evidence from Switzerland. Paper presented at the 12th Conference of the Swiss Society for Financial Market Researches, Geneva. Discussion Paper.

Gul, S., Irshad, F., & Zaman, K. (2011). Factors affecting bank profitability in Pakistan. *The Romanian Economic Journal*, 39, 61-87.

Haron, S. (1996). Competition and other external determinants of the profitability of Islamic banks. *Islamic Economic Studies*, 4(1), 49-64.

Haron, S. (2004). Determinants of Islamic bank profitability. *The Global Journal of Finance and Economics*, 1(1), 11-33.

Hassan, M. K., & Bashir, A. H. M. (2003). Determinants of Islamic banking profitability. In *10th ERF Annual Conference, Morocco* (pp. 16-18).

Javaid, S., Anwar, J., Zaman, K., & Ghafoor, A. (2011). Determinants of Bank profitability in pakistan: internal factor analysis. *Journal of Yasar University*, 6(23).

Khan, F., Anuar, M. A., Choo, L. G., & Khan, H. (2011). Determinants of Bank Profitability in Pakistan: A Case Study of Pakistani Banking Sector. *World Applied Sciences Journal*, 15(10), 1484-1493.

Kosmidou, K. (2008). The determinants of banks' profits in Greece during the period of EU financial integration. *Managerial Finance*, 34(3), 146-159.

Kosmidou, K., Tanna, S., & Pasiouras, F. (2005). Determinants of profitability of domestic UK commercial banks: panel evidence from the period 1995-2002. In *Money Macro and Finance (MMF) Research Group Conference* (Vol. 45).

Liu, H., & Wilson, J. O. (2010). The profitability of banks in Japan. *Applied Financial Economics*, 20(24), 1851-1866.

Naceur, S. B. (2003). The determinants of the Tunisian banking industry profitability: panel evidence. *Universite Libre de Tunis working papers*.

Obamuyi, T. M. (2013). Determinants of Banks'profitability in a developing economy: evidence from nigeria. *Organizations & Markets in Emerging Economies*, 4(2).

Pilloff, S. J., & Rhoades, S. A. (2002). Structure and profitability in banking markets. *Review of Industrial Organization*, 20(1), 81-98.

Rasiah, D. (2010). Review of Literature and Theories on Determinants of Commercial Bank Profitability. *Journal of Performance management*, *23*(1).

Riaz, S. (2013). Profitability Determinants of Commercial banks in Pakistan. In *Proceedings of 6th international Business and Social Sciences research Conference. Dubai, UAE*.

Samuelson, P. A. (1945). The effect of interest rate increases on the banking system. *The American Economic Review*, 16-27.

Shahchera, M. (2012). The Impact of Liquidity Asset on Iranian Bank Profitability. Paper presented at the International Conference on Management, *Behavioral Sciences and Economics Issues* (ICMBSE'2012).

Short, B. K. (1979). The relation between commercial bank profit rates and banking concentration in Canada, Western Europe, and Japan. *Journal of Banking & Finance*, 3(3), 209-219.

Sufian, F. (2011). Profitability of the Korean banking sector: Panel evidence on bank-specific and macroeconomic determinants. *Journal of Economics and Management,* 7(1), 43-72.

Sufian, F., & Habibullah, M. S. (2009a). Bank specific and macroeconomic determinants of bank profitability: empirical evidence from the China banking sector. *Frontiers of Economics in China,* 4(2), 274-291.

Sufian, F., & Habibullah, M. S. (2009b). Determinants of bank profitability in a developing economy: Empirical evidence from Bangladesh. *Journal of business economics and management,* 10(3), 207-217.

Vong, P., & Chan, H. S. (2009). Determinants of bank profitability in Macao. *Macau Monetary Research Bulletin,* 12(6), 93-113.