

# Impact of Banking and Non-Banking Investments on Performance of Nepalese Commercial Banks

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**Abstract:** *This study examines the impact of banking and non-banking investments on the performance of Nepalese commercial banks during the period from 2006/07 to 2015/16. Applying the correlation and panel data regression, the study finds that among the multiple independent banking and non-banking investments variables taken for analysis like: investments, loan and advances, cash balance and provision for possible losses. For the study, descriptive and causal analysis along with correlation analysis and panel data analysis is used. Also, step-wise regression is used in the study. All the independent variables had a negative relationship with the dependent variables' performance of banks: Tobin's q.*

**Keywords:** Banking Investments, Non-Banking Investments, Performance of Nepalese Commercial Banks, Tobin's Q

## 1. Introduction

In the Nepalese economy, commercial banks have enlarged and opened many branches over the previous few years. This has resulted in extremely tremendous increase in deposit liabilities and in turn, a rise in volumes of investment portfolios. Correct investment portfolio management ensures effectiveness, liquidity and safety within the use of resources among different objectives. At every decision purpose, the portfolio manager has a list of investment opportunities at hand and may decide wherever to require a foothold supported market conditions and additionally the assessment of determinants (Morris & Hough, 2010). Diversification made it cheaper for establishments to win quality in their role as screeners or monitors of borrowers (Diamonds & Wortmann, 1986). On the other hand, corporate finance theory suggests that corporation sought to focus so as to get the best attainable pleasure from management's experience and to scale back the agency issues activities for investors to diversify on their own. Therefore, there was lack of empirical proof on the effects of diversification on banks financial performance. Many banks mostly still focus on constant common portfolios inside the markets.

In Nepal, the profitability rate, operating expenses and dividend distribution rate among the shareholders has been found different in the financial performance of various banks in different period of time. None of the banks can earn smoothly without well-managed portfolio of investment. The problem of the study will ultimately find out the relation between investment portfolio and financial performance of various banks. An analysis of financial performance of the banks would be highly beneficial for pointing out their strength and weakness. At present we have twenty-eight commercial banks (Class A). In spite of rapid growth, some indicators show performance is not much encouraging towards the service coverage. In such a situation, the study tries to analyze the present performance of commercial banks. Establishment of Joint Venture banks concentrate only in urban area, like Kathmandu, Pokhara, Birgung, Hetauda, Biratnagar, etc. has raised certain questions. This application is not able to contribute the socio-economic development of the country where around 80% people live in rural and 79% of the population depends upon agriculture. These banks should expand their operation in rural areas. NRB, as the central bank has ruled that joint venture banks

should invest 10% of their total investment in the rural areas. These banks are inclined to pay fines rather than investing their resources to such less profitable sector.

A number of studies based on developed market financial systems have investigated the effect of investment on performance of commercial banks. Ongore & Kusa (2013) investigated the effect of capital adequacy, asset quality, management efficiency, liquidity GDP and inflation on financial performance of commercial banks. On the other hand, Onuinga (2014) considered the effect of bank assets, losses, capital, deposits and assets quality on banks profitability. Muthee (2010) focused on the relationship between credit risk management and profitability. The aforementioned studies are not found in context of Nepal. Specifically, there is no study conducted to check the impact of investments on performance of commercial banks of Nepal. It is this gap in knowledge that this study was seeking to fill by evaluating the impact of investment (Banking and Non-Banking) of Nepalese commercial banks on financial performance.

Rob, Bokongo, & Yusufkibet, (2016) analyzed the factors that has impact on the performance of commercial banks which revealed that 1% change in government securities leads to 87.1% change in the growth of financial performance, 1% change in real estate investment leads to 85.4% change in the growth of financial performance and 1% change in buying shares led to 90.3 % change in the growth of financial performances. So, this study clearly shows that there is positive significant between the independent variables and dependent variables. Orabi (2012) studied about the performance of Jordanian Banks in their alternative investments in general and the portfolio investments in particular. Study results revealed that banks of Jordan adhere to theories of formation of investment portfolios, in terms of diversification, trade-off between return and risk, and policy in the composition of the portfolios. The principle of convenience is applied to ensure the stability of the investor and the capital return. Study also pointed out that Banks of Jordan adhere to the principle of diversification and are committed to the principle of trade-off between return and risk and comply with the principles of the policy in the composition of the portfolio, and the principle of ensuring the stability of the investor and the capital return.

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Khan (2014) analyzed the impact of interest rates changes on the profitability of commercial banks being operated in Pakistan by examining the financial statements of four major banks during 2008 to 2012. Variations in the interest rate depress the savings and investment and on the other hand it increases the efficiency of banks' lending. In this paper interest rate is an independent variable and bank profitability is a dependent variable. To examine the impact of interest rate changes on the profitability of commercial banks in Pakistan, Pearson correlation method is used in this study. As a result, it is found that there is strong and positive correlation between interest rate and commercial banks' profitability. It means if the value of interest rate is increases/decreases then as result value of banks' profitability will also increases/decreases. Enyioko (2012) examines the performances of banks and macro-economic performance in Nigeria based on the interest rate policies of the banks. The study analyzed the published audited accounts of twenty out of twenty-five banks that emerged from the consolidation exercise and data from the Central Banks of Nigeria. The year 2004 was denoted as the pre-consolidation and 2005 and 2006 as post-consolidation periods for the analysis. The interest rate policies had not improved the overall performances of banks significantly and also have contributed marginally to the growth of the economy for sustainable development. The study concluded that banking sector was becoming competitive and market forces were creating an atmosphere where many banks simply couldn't afford to have weak balance sheets and inadequate corporate governance. The study posits further that consolidation of banks may not necessarily be a sufficient tool for financial stability for sustainable development and this confirms Megginson (2005) and Somoye (2006) postulations. The study posits further that researchers should begin to develop a new framework for financial market stability as opposed to banking interest rate policy.

Duncan, Njeru, Member and Tirimba (2015) explored the effect of cash management on financial performance of deposit taking SACCOs in Mount Kenya Region. The target population was all the thirty-licensed deposit taking SACCOs in Mount Kenya Region, the sampling technique employed was simple random sampling and the sample size was 92 respondents. This study adopted a descriptive survey in soliciting information on effects of liquidity management on financial performance of deposit taking SACCOs in Mount Kenya region. Primary quantitative data was collected by use of self-administered structured questionnaires. The researcher also used secondary data derived from the audited financial statement of the SACCOs and the regulator (SASRA). The data collected was analyzed, with respect to the study objectives, using both descriptive and inferential statistics. The researcher concluded that there is need to introduce cash management controls in the SACCOs, there is need to better strengthen the role of SASRA and increase its awareness, there is need to introduce credit management policy and finally increase the monitoring role of the government through its regulator in the sector since the sector plays a critical role on the achievement of vision 2030 and improved economic development of the members.

Alhadab and Alshahwneh (2016) The purpose of this study is to examine the impact of loan loss provision on the profitability of Jordanian commercial banks. While the impact of loan loss provision on the profitability of banks has been examined by prior research, this study is the first to examine this relationship using Jordanian data. By examining a Jordanian sample of 13 banks that listed on Amman Stock Exchange (ASE) over the period 2004-2014, this study provides the first evidence that loan loss provision has a negative impact on the profitability of Jordanian commercial banks. This evidence suggests that Jordan banks adjust their loan loss provision due to several motives and, this in turn, leads to negative consequences for their profitability. Return on assets (ROA) and return on equity (ROE) are employed as a proxy of the profitability in this study.

Chung and Pruitt (1994) have developed in their study on a simple approximating of Tobin's  $q$ . They proved the approximate  $q$  value with those obtained via Lindenberg and Ross (1981) more theoretically correct model indicate that at least 96.6% of the variability of Tobin's  $q$  is explained by the approximate  $q$ . Catapan (2012) have conducted a study on "The relationship between profitability indicators and Tobin's  $Q$ : A focus on Brazilian electric sector." On that article they developed a research that compares the relations between the indicators of profitability and  $Q$  de Tobin to know if there are any significant statistical differences between EBITDA/ Assets, EBITDA/PL, ROA, ROE and Tobin's  $q$  in Brazilian Electric Companies. They found that the profitability indicators have a strong influence on the value of Tobin's  $q$ , in the context of the Brazilian electric sector.

## 2. Research Methodology

The study is based on secondary data which were gathered from 14 commercial banks in Nepal. The main sources of data are Annual report of banks and Banking and Financial statistics published by Nepal Rastra Bank. The data were collected on Tobin's  $Q$ , investment, loan and advances, cash balance and provision for possible losses.

The panel data analysis has been undertaken in the study. The research design adopted in this study is casual comparative type as it deals with relationship of banking and non-banking investment variables with banks performance. More specifically, the study examines the impact of banking and non-banking investment on performance of Nepalese commercial banks. These data were collected for the period 2006/07 to 2015/16. Table 1 shows the number of commercial descriptive and banks selected for the study along with the study period and number of observations.

**Table 3.1:** Sample banks with study period and observation

S. No.	List of Banks	Study Period	No. of observation
1	Everest Bank Limited	2006/07 – 2015/16	10
2	Himalayan Bank Limited	2006/07 – 2015/16	10
3	Kumari Bank Limited	2006/07 – 2015/16	10
4	Laxmi Bank Limited	2006/07 – 2015/16	10
5	Machhapuchchhre Bank Limited	2006/07 – 2015/16	10

6	Nabil Bank Limited	2006/07 – 2015/16	10
7	Nepal SBI Bank Limited	2006/07 – 2015/16	10
8	Nepal Investment Bank Limited	2006/07 – 2015/16	10
9	Nepal Bangladesh Bank Limited	2006/07 – 2015/16	10
10	NMB Bank Nepal Limited	2006/07 – 2015/16	10
11	Nepal Credit and Commerce Bank Limited	2006/07 – 2015/16	10
12	Sanima Bank Limited	2006/07 – 2015/16	10
13	Siddhartha Bank Limited	2006/07 – 2015/16	10
14	Standard Chartered Bank Nepal Limited	2006/07 – 2015/16	10
Total number of observations			140

Variables	Minimum	Maximum	Mean	Std. Deviation
TQ	0.095	1.553	0.485	0.29
INV	0.466	36.099	7.653	7.085
LA	1.396	85.461	24.2	16.736
CB	0.003	2.661	0.836	0.596
PPL	0.005	1.503	0.194	0.243

### 3. The Research Model

As a first approximation, the model estimated in the study assumes that the performance of Nepalese commercial banks depends on several banking and non-banking investment variables. The banking and non-banking investment variables are investments, loan and advances, cash balance and provision for possible losses. Therefore, the model takes the following form:

$$TQ = \alpha_{it} + \beta_1 \ln INV_{it} + \beta_2 \ln LA_{it} + \beta_3 \ln CB_{it} + \beta_4 \ln PPL_{it} + \varepsilon_{it}$$

Where,

TQ = Tobin's Q

lnINV = log(INV) Natural logarithm form of the variable Investment

lnLA = log(LA) Natural logarithm form of the variable Loan and Advances

lnCB = log(CB) Natural logarithm form of the variable Cash Balance

lnPPL = log(PPL); Natural logarithm form of the variable Provision for Possible Losses

$\varepsilon$  = error terms

$\beta$  = Coefficient of Individual variables

There are various measures of bank performance. Literature uses a number of different accounting measures for calculating banks performance, which include ROE, ROA and GM. Tobin's Q has also been used for performance measurement (Abor, 2007). In this study, banks performance has been measured in terms of Tobin's Q.

### 4. Findings

Descriptive statistics enables to present the data in a more meaningful way, which allows simpler interpretation of the data. The descriptive statistics of dependent variables (TQ) and independent variables (Inv, LA, CB and PPL) is presented in Table 4.1 for 14 sampled banking institutions of Nepal from 2006/07 to 2015/16.

**Table 4.1:** Descriptive statistics

*(This table shows the descriptive statistics of dependent and independent variables of banking institution for the period of 2006/07 to 2015/16. Dependent variable is TQ (Tobin's Q defined as total market value of institute by total asset value) and independent variables are investments (INV, in billions), loan and advances (LA, in billions), cash balance (CB, in billions) and provision for possible losses (PPL, in billions))*

The result shows the descriptive statistics of dependent and independent variables for the selected banking institutions. The table clearly shows that Tobin's Q has a minimum of 0.095 and a maximum of 1.553 with average of 0.485. The investment of selected banking institutions ranges from a Rs.0.466 billion to Rs.36.099 billion with an average of 7.653 billion. The loan and advances vary from a minimum of Rs.1.396 billion to a maximum of Rs.85.461 billion, leading to an average Rs.24.201 billion. Similarly, cash balance varies from a minimum of Rs.0.003 billion to a maximum of Rs.2.661 billion, leading to an average of Rs.0.836 billion. Similarly, average provision for possible losses is observed to be Rs.0.194 billion with a minimum of 0.005 billion and maximum of Rs.1.503 billion.

Having indicated the descriptive statistics, in order to understand the relation between independent variables (investment, loan and advances, cash balance and provision for possible losses) and dependent variable (Tobin's Q), Pearson correlation coefficients are computed which states whether there is positive relation or negative relation among the two variables.

**Table 4.2:** Pearson's correlation coefficients matrix for dependent and independent variables

(This table shows the correlation analysis of dependent and independent variables of banking institutions for the period of 2006/07 to 2015/16. Dependent variable is TQ (Tobin's Q defined as total market value of institute by total asset value) and independent variables are investments (INV), loan and advances (LA), cash balance (CB) and provision for possible losses (PPL))

	TQ	INV	LA	CB
TQ	1			
INV	.268**	1		
LA	-0.028	.721**	1	
CB	-0.136	.519**	.846**	1
PPL	-0.151	.193*	.360**	.314**

*Notes: The asterisk signs (\*\*) and (\*) indicate that the results are significant at 1 percent and 5 percent level respectively.*

Table 4.2 shows the Pearson correlation coefficients of dependent and independent variables for Nepalese commercial banks. The result shows that investment is positively correlated to Tobin's Q. This means that with the increase in investment leads to increase in Tobin's Q and with the decrease in investment, performance of commercial banks will decrease. However, loan and advances, cash balance and provision for possible losses are negatively correlated to Tobin's Q. It indicates that with the increase in loan and advances, cash balance and provision for possible losses leads to decrease in Tobin's Q. Also, with the decrease in loan and advances, cash balance and provision for possible losses leads to increase in performance of commercial banks.

In order to decide between Fixed-effect model and random-effect model, hausman test is used. In Hausman test, null hypothesis is: Random effect model is appropriate whereas alternate hypothesis is: Fixed effect model is appropriate.

$H_0$  = Random effect model is appropriate.

$H_1$  = Fixed effect model is appropriate.

**Table 4.3:** Hausman Test Result

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	22.330661	4	0.0002

Since p-value is less than 0.005, alternate hypothesis is selected. It means that fixed-effect model is appropriate for the study.

Having indicated the Pearson correlation coefficients, the step-wise regression analysis has been carried out and the results are presented in Table 4.4. More specifically, it shows the regression results of investment, loan and advances, cash balance and provision for possible losses on Tobin's Q.

**Table 4.4:** Regression of investment, loan and advances, cash balance and provision for possible losses on Tobin's Q

Model	Intercept	Regression coefficients of				Adj R <sup>2</sup>	SEE	F
		INV	LA	CB	PPL			
1	3.5943	-0.1394				0.4370	0.2172	8.7069
	(0.0000)	(0.0000)			(0.0000)			
2	3.6132		-0.1323			0.4311	0.2184	8.5234
	(0.0000)		(0.0000)		(0.0000)			
3	2.5024			-0.0998		0.4174	0.2210	8.1130
	(0.0000)			(0.0001)				(0.0000)
4	1.3905				-0.0489	0.3700	0.2298	6.8316
	(0.0005)				(0.0220)			(0.0000)
5	3.5506	-0.1089		-0.0315		0.4354	0.2175	8.1464
	(0.0000)	(0.0273)		(0.4234)				(0.0000)
6	3.6916	-0.1295			-0.0171	0.4353	0.2175	8.1443
	(0.0000)	(0.0001)			(0.4292)			(0.0000)
7	3.6468		-0.1242		-0.0121	0.4279	0.2190	7.9297
	(0.0000)		(0.0003)		(0.5896)			(0.0000)
8	2.5831			-0.0923	-0.0125	0.4141	0.2216	7.5485
	(0.0000)			(0.0016)	(0.5911)			(0.0000)
9	3.6339	-0.1090		-0.0238	-0.0128	0.4323	0.2181	7.6142
	(0.0000)	(0.0276)		(0.5690)	(0.5784)			(0.0000)

Notes:

1) Figures in parenthesis are p-values

2) Tobin's Q is dependent variable.

The regression results show that the beta coefficients for investments are negative in all of the four models where the investment appears as an independent variable. This means that investment has negative effect on TQ that is larger the investment amount, the lesser would be the performance of the Nepalese commercial banks.

Similarly, the beta coefficients for loan and advances are in two of the models where loan and advances appear as an independent variable. It indicates that LA has negative effect on TQ that is larger the loan and advances amount, the lesser would be the performance of the Nepalese commercial banks.

Moreover, the beta coefficients for cash balance is negative in all of the four models where cash balance appears to be independent variable. This indicates that CB has negative effect on TQ that is larger the cash balance amount, the lesser would be the performance of the Nepalese commercial banks.

Also, the beta coefficients for provision for possible losses are negative in all of the five models where provision for possible losses appears to be independent variable. This means that PPL has negative effect on TQ that is larger the provision for possible losses amount, the lesser would be the performance of the Nepalese commercial banks. Also, the

result shows that PPL does not hold significant relationship with TQ which indicates that PPL does not impact significantly on the performance of commercial banks.

### 5. Conclusion and Recommendation

The study shows that cash balance has negative relationship with performance of Nepalese commercial banks. Commercial banks providing greater loan has found to have poor performance in banking industry. The study shows that investment is good but excess of investment has negative effect on the performance of commercial banks. Lastly, greater the provision created for possible losses, the performance of commercial banks is weak. Thus, the study concludes that the most influencing factor for determining the performance of Nepalese commercial banks is the investments followed by loan and advances and cash balance. Provision for possible losses does have significant influence on performance of Nepalese commercial banks.

The trend analysis has shown that when the graph of cash balance was in increasing stage, the performance of the commercial banks has been decreasing. Similarly, when the graph of loan and advances was increasing, the performance of commercial banks was in poor state. The trend analysis showed that the investment was in increasing trend while the performance of the commercial banks was in decreasing

trend. Also, the trend analysis proved that greater the provision for losses created, lower is the performance of commercial banks.

The study concludes that the most influencing factor for determining the performance of Nepalese commercial banks is the investments followed by loan and advances and cash balance. Provision for possible losses does have significant influence on performance of Nepalese commercial banks.

Based on the results and findings obtained from this study, the commercial banks willing to increase their performance level should decrease the proportion of investments to achieve better performance. The commercial banks willing to increase their performance level should decrease the proportion of loan and advances to achieve better performance. Also, the commercial banks willing to increase their performance level should decrease the proportion of cash balance to achieve better performance as well as decrease the provision for possible losses. The study suggests that commercial banks should focus on increasing their market value to increase its their performance level.

## References

- [1] Alhadab, M., & Alsahawneh, S. (2016). Loan Loss Provision and the Profitability of Commercial Banks: Evidence from Jordan. *International Journal of Business and Management*, 11(12).
- [2] Catapan, A. (2012). The relationship between profitability indicators and tobin's Q: A focus on Brazilian electric sector. *Univarsal Journal of Marketing and Business Research*, 1(4), 104-111.
- [3] Chung, K. H., & Pruitt, S. W. (1994). A simple approximation of Tobin's q. *Venture Capital Special Issue*, 23(3), 70-74.
- [4] Diamonds, B., & Wortmann, H. (1986). Does risk management contribute to IT project success? A meta-analysis of. *International Journal of Project Management*, 28(5), 493-503.
- [5] Duncan, N. M., Njeru, D. A., Member, D. F., & Tirimba, O. I. (2015). Effect of Cash Management on Financial Performance of Deposit Taking SACCOs in Mount Kenya Region. *International Journal of Scientific and Research Publications*, 5(2).
- [6] Enyioko, N. (2012). Impact of Interest Rate Policy and Performance of Deposit Money Banks in Nigerian. *Global Journal of Management and Business Research*, 12(21).
- [7] Khan, W. A. (2014). Impact of Interest Rate Changes on the Profitability of four Major Commercial Banks in Pakistan. *International Journal of Accounting and Financial Reporting*, 4(1).
- [8] Lindenberg, E. B., & Ross, S. (1981). Tobin's q ratio and industrial organization. *The Journal of Business*, 54(1), 1-32.
- [9] Megginson, W. L. (2005). The economic of bank privatization. *Journal of Banking & Finance*, 29(8-9), 1931-1980.
- [10] Muthee, J. (2010). *The relationship between credit risk management and profitability: A study of commercial banks in Kenya*. Kenya.
- [11] Morris, P., & Hough, G. (2010). *The anatomy of major projects: A study of the reality of project management* (Vol. 1).
- [12] Ongore, V. O., & Kusa, G. B. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues*, 3(1), 237-252.
- [13] Orabi, M. M. (2012). Assessment of Investment Portfolios of Jordian Banks. *European Scientific Journal*, 8(12).
- [14] Rop, M. K., yusufkibet, D., & Bokongo, D. (2016). Effect of Investment Diversification on the Financial Performance of Commercial Banks in Kenya. *Journal of Business and Management*, 18(11).
- [15] Somoye, R. C. (2008). The performances of commercial banks in post consolidation period in Nigeria: An empirical review. *European Journal of Economics, Finance and Administrative Sciences*.(14), 1450-2275.