Journal of Business and Administrative Studies (JBAS)

Volume 7 ISSN-2077-3420 December 2015

Articles:

Bi-annual Journal Published by
St. Mary's University
Faculty of Business
Addis Ababa, Ethiopia

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Price Birr 20.00

Printed by SMU Printing Press

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Volume 7 **Number 2** **December 2015**

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EDITORIAL COMMITTEE

St. Mary's University (SMU) is one of the leading private higher education institutions spearheading the dissemination of knowledge in the country. Over the past ten years, **SMU** has achieved remarkable progresses as well as successes in the transmission of knowledge.

Journal of Business and Administrative Studies (JBAS) is a peer-reviewed bi-annual journal published by St. Mary's University and dedicated to the promotion and production of knowledge through the scientific methods of enquiry to achieve independent analysis as well as collection, processing and interpretation of data.

Cognizant of the complementary functions of transmission of knowledge (through teaching) and the conduct of scholarly inquiry (through research), SMU has aggressively been promoting publications of journals and conducting conferences for well over a decade. On one hand, while SMU recognizes that its faculty staff, academics and practitioners in the country possess a wealth of untapped scholarly and research potential. On the other hand, we believe that this immense potential has not been realized due partly to lack of resources and partly to the absence of a reliable outlet (i.e. journals). This concern has prompted the academic leadership at SMU to launch JBAS.

JBAS shall hopefully fill the vacuum created by the absence of outlets in the realm of business, economics and administrative studies in the country. The purpose of this Journal is to provide practitioners and scholars with a forum through which they would get opportunities to publish their research based debate as well as discourse in the fields intimated. Equally important, it shall offer insight into developments in the fields bringing Ethiopian realities under purview.

Contributors shall thus come from a broad range of fields and disciplines seeking to reflect on the theoretical and practical developments in the areas of accounting and finance, economics, management, marketing, public management as well as governance and related fields.

Determinants of the Financial Performance of a Private Commercial Bank in Ethiopia

Rahel Tesfaye[1] and Maru Shete (PhD)[2]

Abstract

This study examines the determinants of financial performance of a private commercial bank by using the monthly financial statement of Bank "X"[3] from 2011 to 2016. A quantitative research approach was adopted, and the data were estimated using the Ordinary Least Square approach of multiple linear regression model. The study examined only internal factors such as capital adequacy, loan to deposit ratio, income diversification, operating efficiency, export, liquidity, loan performance and deposit mobilization as explanatory variables. Return on Asset, Return on Equity and Net Interest Margin were used as dependant variables to measure the financial performance of the Bank. The finding of the study revealed that income diversification, deposit amount, export level and loan performance have a significant influence on the financial performance of Bank "X". Therefore, it is recommended that commercial banks should increase export proceed, capital and loan production, and should diversify the sources of non-interest incomes in order to improve financial performances, and stay competitive enough in the banking industry.

Keywords: Financial performance, Net Interest Margin, Return on Asset, Return on Equity, Private Commercial Bank, Ethiopia

1. Introduction

The role of banks in any economic development cannot be overemphasized. Banks serve as an important channel for economic growth through mobilizing financial savings from within and outside a country, allocating the financial resources to the most productive use by transforming different risks. Needless to say, banks play key roles in expanding and enhancing trade, commerce and industry. Efficient and profitable banks maximize shareholders' value and encourage the shareholders to make additional investments. As a result of

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[3] Due to the confidentiality of the information collected from the bank, the name of the bank is kept anonymous.

which, more employment opportunities will be created and more goods and service will be produced and ultimately bring about economic growth. Banks are crucial for any country's economy particularly that of the economy of the developing countries such as Ethiopia, because no growth can be achieved if savings are not efficiently channeled into productive investment opportunities (Tekeste, 2013).

Determinants of bank performance are categorized into two main groups: external and internal factors. The internal determinants are sometimes called microeconomic determinants or inherent performance which are specific to each bank and that, in many cases, are the direct result of managerial decisions, so such management effects will definitely affect the operating result of banks. External determinants, on the other hands, are variables that reflect economic and legal environment which are out of the control of the management of the banks. They are again grouped in to two parts as factors relating to the industry structure and to the macroeconomic environment within which the banking system operates (Tekeste, 2013). Achieving sound financial performance is the ultimate goal of commercial banks. All the strategies designed and activities performed thereof are meant to realize this grand objective. However, this does not mean that commercial banks have no other goals. Commercial banks could also have additional social and economic goals. However, the intention of this study is related to the first objective, performance. Performance is derived from the word 'peourmen" which means ' to do' to carry out or to render. It refers the act of performing: execution, accomplishment of a given task measured against preset standards of accuracy, completeness, cost and speed. In other words, it refers to the degree to which an achievement is being of has been accomplished in words of Frich Kohlar. The performance is a general term applied to a part or to all the conducts of activities of an organization over a period of time often with reference to past of projected cost efficiency management responsibility or accountability of the like. Thus, not just the presentation, but the quality of results achieved refers to the performance is used to indicate firms success, condition and compliance.

Financial performance refers to the act of the performing financial activity. In broader sense, financial performance refers to the degree to which financial objectives being or has been accomplished. It is the process of measuring the

result of a firm's policies and operations in monetary terms. It is used to measure firms overall financial health over a given period of time and can also be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. And the most common measurement of financial performance is Return on Asset (ROA) shows how well a company controls its costs and utilizes its resources, Return on Equity (ROE) also known as Return on Investment (ROI) is the best measure of the return, since it is the product of the operating performance of asset turnover, and debt-equity management of the firm and NIM is a measure of the difference between the interest income generated by banks and the amount of interest paid out to their lenders (for example, deposits), relative to the amount of their interest earning assets (Loans and Advances). Studies made on the financial performance of commercial Banks largely used Return on Asset (ROA), Return on Equity(ROE) and Net Interest Margin (NIM) as a common measure (see for example, Murthy & Sree, 2003; Alexandru, 2008; Ezra, 2013). As concluded by extensive prior academic research there are different accounting based measures for banks' profitability analysis. For instance, Athanasoglou *et al.* (2006) and Goddard *et al.* (2004) used Return on Equity (ROE) as indicator of bank's performance; Flamini *et al.* (2009) used Return on Assets (ROA) as measure of bank's financial performance; Hadad (2013) used Profit Earning Ratio (PER) as an indicator of bank's performance.

1.2. The Research Gap

As the banking industry is an important sector in an economy and contributes a lot for the growth of a country, it is important to identify the factors that have impact on its development and successful growth. So, its wellbeing and successful operation attracts the interest of policymakers, researchers and practitioners. A number of studies have examined the determinants of commercial banks financial performance in different countries around the world. For instance, Nassreddine *et al.* (2013) in Tunisia, Okoth & Gemechu (2013) in Kenya, Ezra (2013) in SSA, Tan & Floros (2012) in China, Sarita et al (2012) in Indonesia, Dietrich & Wanzenried (2009) in Switzerland, Sufian (2011) in Korea, and Sufian & Shah (2009) in Bangladesh have examined the factors that determine the financial performances of the banks in the respective countries. Despite the availability of plenty of studies across different parts of the world, the determinants of financial performance have

been debated for many years in the corporate finance literature. Indeed what makes the debate exciting is the determinants are dynamic from time to time and differ with the nature of the firm from place to place (Flamini *et al.*, 2009).

In Ethiopia there are studies conducted on the determinants of profitability of commercial banks. However, the studies failed to include some important determinant factors in their studies. For instance, Dawit (2016), Belayeneh (2011) and Habetamu (2012) examined the determinants of the profitability of commercial banks in Ethiopia by considering variables such as capital adequacy, bank size, loan production, income diversification, asset quality and administration cost. However, these studies missed variables such as deposit mobilization and export which are argued to be important in determining the performance of commercial banks. Therefore, due to omission of important variables that may have significant influence on the performance of the banks, it is important to do this research. Considering the current situation of the banking industry in relation to foreign currency demands of importers, it is essential to study the impact of export on the performance of commercial banks in Ethiopia. Hence, this study seeks to fill in the existing knowledge gap by including variables that were not included in the previous studies. More specifically, the study

1 investigates the influence of liquidity status, operational efficiency, and loan production of Bank "X" on its financial performance;
2 identifies the causal linkage between Loan to Deposit ratio, deposit amount, and capital adequacy of Bank "X" and its financial performance;
3 examines the causal linkage between export proceed and income diversification of Bank "X" and its financial performance;

In trying to address these objectives, this study is restricted only to identify the impact of eight internal factors (such as capital adequacy, liquidity, loan deposit ratio, export proceed, operational efficiency, loan production, deposit mobilization and income diversification) that are hypothesized to determine the financial performance of Bank "X" by analyzing the monthly financial statements of the Bank from 2011 to 2016.

2. Literature Review

2.1 The Concept of Performance in the Context of Commercial Banks

Bank performance measurement indicators are different in various literatures (see for example, Rao & Tekeste, 2012; Ongore & Gemechu, 2013; Alper and Anbar, 2011; Athanasoglou *et al.*, 2005; Alexiou & Sofoklis, 2009; Sufian (2011). The various literatures suggest to use either or a combination of Return on Asset, Return on Equity, and/or Net Profit Margins. Detail descriptions of each of these indicators are presented below.

Return on Asset (ROA): It is also another major ratio that indicates the profitability of a bank. It is a ratio of Income to its total asset. It measures the ability of the bank management to generate income by utilizing company assets at their disposal. In other words, it shows how efficiently the resources of the company are used to generate the income. It further indicates the efficiency of the management of a company in generating net income from all the resources of the institution (Khrawish, 2011). Wen (2010) stated that a higher ROA shows that the company is more efficient in using its resources.

Return on Equity (ROE): It is a financial ratio that refers to how much profit a company earned compared to the total amount of shareholder equity invested or found on the balance sheet. ROE is what the shareholders look in return for their investment. A business that has a higher ROE is considered to have better position in terms of profit generation. It is further explained by Khrawish (2011) that ROE is the ratio of Net Income after Taxes divided by Total Equity Capital. It represents the rate of return earned on the funds invested in the bank by its stockholder. ROE reflect how effectively a bank management is using shareholders fund. Thus it can be deduced from the above statement that the better the ROE the more effective the management is utilizing the shareholders capital.

Net Interest Margin (NIM): This indicator focuses on the profit earned on lending, investing and funding activities. It reflects the cost of bank intermediation services and the efficiency of the bank. The higher the net interest margin, the higher t he bank's profit and the more stable the bank is.

However, a higher net interest margin could reflect riskier lending practices associated with substantial loan loss provisions.

Net interest margin measures the gap between the interest income the bank receives on loans and advances and interest cost of its borrowed funds. It reflects the cost of bank intermediation services and the efficiency of the bank. The higher the net interest margin, the higher the bank's profit and the more stable the bank is. Thus, it is one of the key measures of bank profitability. However, a higher net interest margin could reflect riskier lending practices associated with substantial loan loss provisions (Khrawish, 2011).

2.2 Variables that affect Performance of Banks

In the banking literature there various bank specific factors that determine the performance of commercial banks. The following discussion reviews some of the most important bank specific factors. And this study attempted to examine the impact of a number of these internal determinants on the performance of Bank "X". The selection criteria of these variables are based on the results of existing empirically studies that shows significant influence of performance and the availability of each variable data.

Capital Adequacy: Capital is one of the bank specific factors that influence the level of bank profitability. Capital is the amount of own fund available to support the bank's business and act as a buffer in case of adverse situation (Athanasoglou *et al.*, 2005). Banks capital creates liquidity for the bank due to the fact that deposits are most fragile and prone to bank runs. Moreover, greater bank capital reduces the chance of distress (Dang & Uyen, 2011). However, it is not without drawbacks that it induces weak demand for liability, which is the cheapest sources of fund. Capital adequacy is the level of capital required by the banks to enable them withstand the risks such as credit, market and operational risks they are exposed to in order to absorb the potential loses and protect the bank's debtors. According to Dang & Uyen (2011), the adequacy of capital is judged on the basis of Capital Adequacy Ratio (CAR). Capital adequacy ratio shows the internal strength of the bank to withstand losses during crisis. Capital adequacy ratio is directly proportional to the resilience of the bank to crisis situations. It has also a direct effect on

the profitability of banks by determining its expansion to risky but profitable ventures or areas (Sangmi & Tabassum, 2010).

Capital adequacy is a reflection of the internal strength of a bank, which would stand it in good stead during the times of crisis. Capital adequacy may have a bearing on the overall performance of a bank, like opening of new branches, fresh lending in high risk but profitable areas, manpower recruitment and diversification of business through subsidiaries or through specially designated branches, as the Commercial banks could think these operational dimensions to the bank's capital adequacy achievement (Shankar, 1997). The NBE has set specific measure of the capital adequacy position of Banks, which is the ratio the Capital adequacy Ratio (CAR) (NBE, 1995). The NBE Directives No. SBB/9/95 clearly set out the computation mechanism and the conversion factors for both on and off-balance sheet items and strictly set for all banks not to maintain their capital level below 8% of their risk weighted assets.

Capital adequacy is measuring by the ratio of equity capital to total risk weighted assets. It is sometimes mention as capital structured by great deal of literatures. Bank equity capital can be seen in two dimensions as stated by Brooks (2008) that is the amount contributed by the owners of a bank (paid-up share capital) that gives them the right to enjoy all the future earnings and the amount of owners‟ funds available to support a bank's business which includes reserves, and is also termed as total shareholders‟ funds. Bank's capital is widely used as one of the determinants of bank performance since it indicates the financial strength of the bank (Athanasoglou *et al.*, 2005). Aburime (2008) suggested that the bank level of safety will be achieved through the high capital requirement which generate positive net benefit. The degree of security exceeded the level maximizing net benefits. Capital adequacy requirements generally aim to increase the stability of a national banking system by decreasing the likelihood of a bank failure and a number of negative externalities exist in banking that cause risk to systematically under price.

Operational Efficiency: Cost Income Ratio (CIR) reflect bank's operational efficiency and it is defined as non interest costs (operating cost, such as administrative costs, staff salaries and property costs excluding bad debts and

doubtful expenses) divided by total of interest income and non-interest income (Dietricha & Wanzenriedb, 2009). CIR used as an indicator of management's ability to control costs and is expected to have a negative relation with profits, since improved management of these expenses will increase efficiency and therefore raise profits (Guru *et al.*, 2002).

Liquidity: Financial institution has to be liquid to meet payment obligations to depositors and creditors. This calls for a sound Asset Liability Management by the bank. Liquidity analysis considers the bank's ability to meet its obligations and is very critical for a bank to remain a going concern. The absence of liquidity can lead to failure of a bank. It also considers the proportion of liquid assets to total assets along with their deposit renewal rate and Rasiah (2010). used loan to deposit ratio to calculate the level of liquidity in their study. The liquidity condition of the commercial banks was also reliable in all cases, thought some measures should be made by the individual banks respective to their matter as per (Habtamu, 2004). A bank shall be always liquid to meet depositors' and creditors' demand to maintain public confidence. There needs to be an effective asset and liability management system to minimize maturity mismatches between assets and liabilities and to optimize returns. As liquidity has inverse relationship with profitability, and banks must strike a balance between liquidity and profitability (Financial Management and Analysis of Projects, 2006). There is a negative and significant relationship between the level of liquidity and profitability. In contrast, Bourke (1989) reports an opposite result, while the effect of credit risk on profitability of banks appears clearly negative.

Current and quick ratios are inappropriate for measuring banks liquidity as per Rasiah (2010). A loan-to-deposit ratio is more relevant. However, a bank's liquidity and solvency are directly affected by portfolio quality. Consequently, financial analysts (investment officers) are carefully analyzing the bank's portfolio quality based on collectability and loan-loss provisioning. The trade-offs that generally exist between return and liquidity risk are demonstrated by observing that a shift from short term securities to long term securities or loans raises a bank's return but also increases its liquidity risks and the inverse in is true. Thus management of liquidity level for the banks because it affect the bank's profitability (Tobias & Themba, 2011). The new NBE directive

were issued in 2012 related to the liquidity states that private commercial banks are obligated to allocate 27 percent of their gross loan disbursement to finance government bonds. Thus, this new directive will increase liquidity and loanable funds in the banking sector. As a result private banks could get temporary relief from the strain of illiquidity. They will also be able to disburse additional loans, since the additional liquid resources are beyond their operational needs (Addis Fortune, 2012).

Income diversification: Non-interest income is other alternative means of income other than earning from loans. Banks generate income from off -balance sheet such as from letters of credit and this non -interest income would represent a key source of bank revenue (Rasiah, 2010). Thus, the ratio of non -interest income over average assets is entered in the regression analysis as a proxy measure of income diversification onto non -traditional activities. Non-interest income consists of service charges, commission, guarantee fees, net profit from sale of investment securities, and foreign exchange profit.

Loan to Deposit Ratio: Loans are the most important indicators of banks performance in the bank financial statements because they reflect the bank's primary activity. Assumed, other variables constant, the higher the rate of transforming deposits into loans, the higher the profitability will be. For that, a positive relationship between loan deposit ratio and banks profitability is expected. On the other hand, if increasing loans leads to higher funding requirements, a negative impact of the loan ratio on the banks profitability may accrue (Alexiou & Sofoklis, 2009; Ana *et al.*, 2011).

Loan performance: Loan is a type of debt. Like all debt instruments, a loan entails the redistribution of financial assets over time between lender and the borrower. According to Access Capital (2011) lending by Ethiopia's private banks is coming to a virtual standstill. They found that the average private bank has recently been giving out just 30 million birr in loans per month, or almost half the peak lending volume seen in recent years. Lending patterns continue to vary widely among banks reflecting their strategic preferences as well as varying degrees of success in entering particular business segments. One of the major functions of any commercial bank is providing loan to the

business society. Lending is the provision of resources (granting loan) by one party to another. The second party doesn't reimburse the first party immediately there by generating a debt, and instead arranges either to repay or return those resources at a later date. Banks function as financial intermediaries, collecting funds from savers in the form of deposit and then supplying to borrowers as loans. Those functions benefit both the banks and the borrowers.

Habtamu (2012) argued that the principal profit- making activity of commercial banks is making loans to its customers. Lending represents the heart of the industry. Loan is a major asset, income source for banks, and risky area of the industry. Moreover, its contribution to the growth of any country is very clear. Therefore, managing loan in a proper way not only has positive effect on the banks profitability, but also on the borrower firms and a country as a whole. The heart of any successful commercial lending function is credit discipline written in loan policy, structured loan approval process and strong loan administration function.

Deposit Mobilization: Deposits are not only a crucial funding instrument for banks they are one of the most important forms of investment for private individuals Alkhatib (2012). For commercial banks, they are the oldest, most stable and, by volume, most significant source of funding. In the traditional model of banks as an intermediary between savers and borrowers, a very popular model in Ethiopia, deposits are the counterparts of the loans. Determinant variables commonly explained as a factor affecting deposit are, Inflation Rate, Interest rate, Exchange rate, demographic change and Branch Expansion. Yirgalem (2015) found that branch expansion had positive and significant effect on total deposit whereas deposit interest rate and inflation rate had positive and insignificant effect on total deposit while Birhanu (2012) indicated that real interest rate have little or no impact on deposit mobilization when the spread between deposit rates and inflation is narrow.

3. Research Methods

To investigate the factors that affect the performance of private commercial banks in Ethiopia, Bank "X" was randomly chosen, and the researcher adopted an explanatory research design. The study adopted a quantitative research approach based on secondary data gathered from the monthly financial statements of Bank "X". The research examined the causal relationship between the dependent variable such as ROA, ROE and NIM and the independent variables such as capital adequacy, export, loan to deposit ratio, income diversification, deposit mobilization, operational efficiency, loan production and liquidity. The study use secondary data gathered from the monthly financial statement of Bank "X" from the year 2011to 2016. For the data acquisition, different publications of the Bank were used.

In the literature, there are three major alternative measures of profitability, namely ROA , ROE. and NIM. The return on assets (the ratio of profit to total assets) measures the capability of bank's management to make profits from its assets. It is a good indicator of how well a bank's management is managing the assets of the bank. According to Rivard and Thomas (2006), bank profitability is best measured by ROA for two primary reasons. According to them, one of the primary reasons is that ROA is not distorted by high equity multipliers and the second is that ROA reflects a better measure of a bank's ability to generate returns on its assets. Moreover, ROA takes account of the disparity in the absolute magnitude of the profits that may be related to size (Guru et al, 2009). In contrast, the return on equity (ROE), the ratio of net profit to equity, measures the extent to which the bank's management is generating returns using the equity of the bank's shareholders. Other papers utilized ROE for checking the consistency with ROA (see for example Sufian, 2011). Other studies also employed ROA as performance measure (see for example, Pasiouras & Kosmidou, 2007; Athanasoglou *et al.*, 2006; Olweny & Shipho, 2011). NIM is a measure of the difference between the interest income generated by banks and the amount of interest paid out to their lenders (for example, deposits), relative to the amount of their interest earning assets (Loans and Advances). It is usually expressed as a percentage of what the financial institution earns on loans in a specific time period and other assets minus the interest paid on borrowed funds divided by the average amount of the loan.. The NIM variable is defined as the net interest income divided by total earnings assets (Loans and Advances) (Gul *et al.*, 2011). In this study,

the performance of Bank "X" was measured by using a combination of Return on Asset (ROA), Return on Equity (ROE) and Net Interest Margin (NIM). Following prior researches towards the determinants of bank performance and by considering the banking environment of Ethiopia, the following variables are taken in too account as independent variable which were hypothesized to have impact on the performance of Bank "X".

Capital Adequacy (CA): Capital adequacy reflects the capital strength or capital structure of a bank. In the banking literature equity to asset ratio is often used as a proxy for capital adequacy. As this ratio is a measure of capital strength, commercial banks with high equity to asset ratio are relatively assumed to be safe in the event of loss or liquidity.

Bank Liquidity (LIQ): The liquidity of a bank is measured by the ratio of current asset to current liability. This ratio shows the capacity of a bank to meet payments when its depositors and other suppliers of funds require. The lower ratio of this reveals that the bank will face difficulty in meeting payments in the right time and hence its liquidity low.

Income Diversification (IND): It is measured by non-interest income to total income is used as a proxy for income diversification. This ratio is computed as the percentage of the bank's income other than interest income to its total income.

Operating efficiency (OE): The expense management variable, which is defined as the ratio of operating expenses to total income, provides information on variations in operating costs and it used as a proxy to measure the management quality of the bank. The total cost of a bank, excluding interest expense, includes operating cost and other expenses such as depreciation and taxes. From these only operating expenses can be viewed as the outcome of the bank management decision. Therefore, expense management is captured by the ratio of these operating expenses to total assets

Loan production (LP): As it is well explained in the background and literature loan is the backbone of bank which have an impact on the performance of a specific bank which is defined as the ratio of loans and advance to total asset it explain the proportion of loan to the banks total asset .

Deposit Mobilization (DM): It is measure by total deposit to total asset for a given period used as a proxy for deposit mobilized from depositors.

Export (EXP): As export proceed is one of the major source of foreign currency it directly affect the current asset of a bank and measure the increment of foreign currency account of a bank.

Loan to Deposit Ratio (LDR): The loan to deposit ratio of a bank is measured by the ratio of loan and advance to deposit. This ratio shows the capacity of a banks deposit in proportion to loans and advance which will given to customer for a specific period of time.

As the research aimed at establishing the causal relationship between the bank's performance indicators (ROA, ROE and NIM) and the independent variables described earlier, multiple linear regressions was used. Different tests were carried out to ensure the goodness of the regression model. These include: (1) Normality test, which was tested using the technique of a normal P-P plot, the bell-shaped histogram and the Bera-Jarque statistic, (2) Test for Heteroscedasticity, which was tested through the visual inspection of residuals plotted against fitted value, and (3) Multicolinearity test, which was examined using the Variance Inflation Factor (VIF).

4. Results and Discussion

4.1 Results of Descriptive Statistics

This section discusses the results from descriptive statistics analysis. Table 1 presents the results of descriptive analysis for the dependent and independent variables based on the monthly financial report of Bank "X" over the year 2011 to 2016. The ROA has a mean value of 0.38%. This indicates that the bank, on average, earned a profit of 0.38% of its total asset. Since ROA indicates the efficiency of the management of a company in generating profit from all the resources of the institutions, the higher ROA shows that the company's efficiency in using its resources. The maximum value of ROA was 0.54 and minimum value was 0.21, which means that during the most profitable month the bank earned 0.54 cents of net income for a single birr invested in the assets of the firm.

The ROE which is measured by the profit divided by total equity has a mean value of 3.5%. This implies that, the bank on average, earned 3.5% of each

birr invested. Accordingly, during the study period Dashen bank had relatively good performance when compared with the ROA and NIM. The NIM which is measured by the net interest income divided by the total loan and advances has a mean value of 0.64%. This implies that, the bank on average, earned 0.64% income of the total loan and advances. Since NIM reflects the cost of the Bank intermediation services and the efficiency of the Bank, high NIM indicates high profit and more stable income.

Table 1: Summary of Descriptive statistics

	N	**Mean**	**Min**	**Max**	**Std. Deviation**
ROA	72	0.0038	0.0021	0.0054	0.0007
ROE	72	0.0350	0.0172	0.0531	0.0082
NIM	72	0.0064	0.0035	0.0148	0.0018
LTD	72	0.5712	0.5232	0.6614	0.0273
IND	72	0.4032	0.2340	0.6070	0.0780
LIQ	72	0.8733	0.7320	0.9970	0.0571
CA	72	0.1414	0.0080	0.9500	0.1094
OE	72	0.3063	0.1965	0.4625	0.0708
EXP	72	0.0263	0.0010	0.0783	0.0169
LP	72	0.4129	0.2150	0.5900	0.0791
DM	72	0.7734	0.5690	0.8990	0.0574

Source: Authors' survey result

As a follow up of the descriptive analysis, trends of the performance indicators of the bank were examined. The trends of ROA and NIM showed small fluctuation over the twelve months period of the years examined (see Figure 1 below). However, ROE showed fluctuations due to the fact that capital of the bank is changing from year to year.

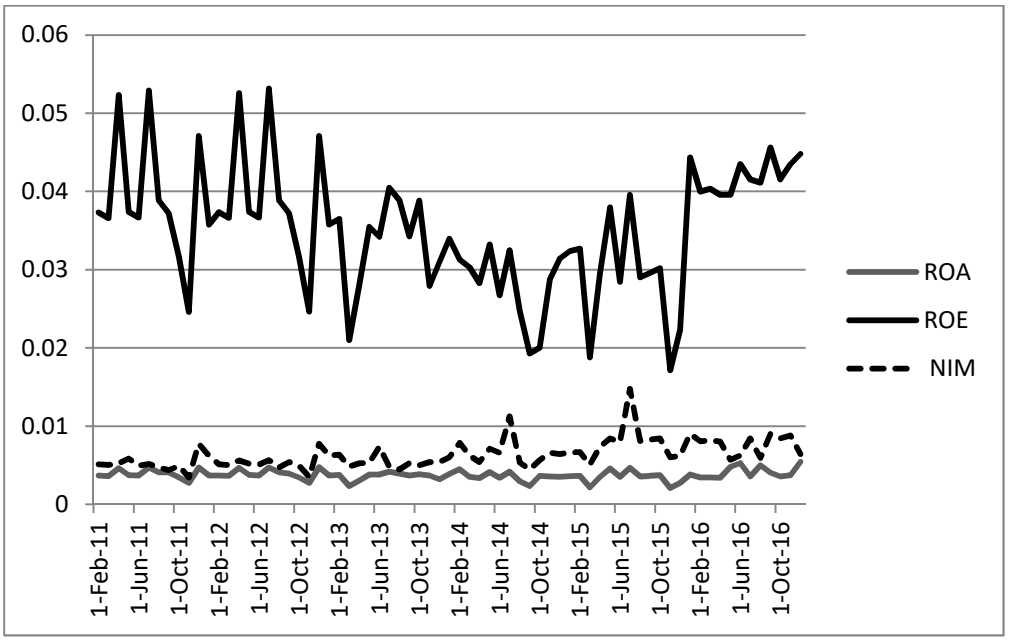

Figure 1 Trends of ROA, ROE and NIM

Source: Authors analysis based on the Bank's data base (2011-2016)

4.1. Results of Regression Analysis

Before presenting the estimation results of the regression analysis, the model was diagnosed for problems of normal distribution, hetroscedasticity, and multicollinearity by applying the relevant techniques discussed in the preceding section. The results of the tests proved that there was no major problems of normality distribution, hetroscedasticity and multicollinerity. The estimation results from the multiple linear regression model are discussed in the subsequent sections.

4.2.1 Factors Affecting the Performance of Dashen Bank

This section presents the overall results of the regression analysis on the determinants of bank's financial performance. In this study ROA, ROE and NIM were used as proxy indicators for performance. The regression analysis results are presented in separate tables for each model (Table 2 shows the regression analysis result using ROA as indicator of performance, Table 3 shows the result of the regression analysis for ROE, and Table 4 presents the regression analysis result using NIM as an indicator of performance).

i. Return on Asset as Indicator of Bank's Performance

The regression model result presented in Table 2 shows the causal relationship between that Return on Asset and the independent variables defined in chapter three. The R-squared and Adjusted R-squared values of the model was found to be 59% and 54.3% respectively indicating that the independent variables explained 54% of the variability in Return on Asset of Bank "X" between the year 2011 and 2016. The overall model fit as explained by the adjusted R^2 value and the F-test result (11.545 and $p<0.01$) show that the model has a good fit. Furthermore, the ANOVA result shows that all the independent variables jointly explained the variation in return on asset. The mathematical presentation of the regression model is presented as follows:

Table 2: Regression analysis between ROA and Explanatory variables

Variable	Unstandardized Coefficients		T	Sig.	Collinearity Statistics	
	B	Std. Err			Tolerance	VIF
Constant	-0.001	0.002	-0.80	0.42		
LTD	0.001	0.002	0.52	0.60	0.75	1.33
IND	0.002***	0.001	2.64	0.01	0.61	1.65
LIQ	0.000	0.001	-0.09	0.93	0.63	1.60
CA	0.001*	0.001	1.93	0.06	0.94	1.07
OE	-0.001	0.001	-0.93	0.36	0.82	1.23
EXP	0.011***	0.004	2.97	0.004	0.81	1.23
LP	0.003***	0.001	3.54	0.001	0.76	1.32
DM	0.003**	0.001	2.52	0.014	0.72	1.39

*** Significant at $p<0.01$; ** Significant at $p<0.05$; and * Significant at $p<0.1$

Source: Authors' estimation based on Bank's Record (2011−2016)

Loan to deposit ratio on ROA: Loan is a type of debt. Like all debt instruments, a loan entails the redistribution of financial assets over time between lender and the borrower. Lending is the provision of resources (granting loan) by one party to another. The second party doesn't reimburse the first party immediately there by generating a debt, and instead arranges either to repay or return those resources at a later date. Banks function as financial intermediaries, collecting funds from savers in the form of deposit and then supplying to borrowers as loans. Those functions benefit both the

banks and the borrowers. But, the proportion of loan to deposit must be proportional as to the requirement of the regulatory directives. Even if the relationship between this variable on ROA is positive but it is not statistically significant even at 10 percent.

Income Diversification: The ratio of non-interest income to total income which is a measure of diversification and business mix have a positive effect on performance of the bank, with p value of 0.01 which is in agreement with a prior expectation. In addition, this variable was also statistically significant at 5% significance level in explaining the variability in ROA of Bank "X" with the coefficient of 0.002 which means 1% increase in income diversification result a 20% increment on ROA. This could be attributable to the fact that the bank is undergoing a gradual transform away from the traditional business of deposit and lending to financial intermediation and towards provision of other financial services including foreign currency exchange, guarantee service, modern money transfer system e-banking etc. Besides, the result of this study was also in agreement with what is existed in reality in the Ethiopian context which shows the shifting of banks from interest based income to non-interest one as a result of relatively growing competition this days. This result was also consistent with the previous findings of Olweny & Shipo (2011) and (Habtamu, 2012).

Liquidity: Bank liquidity is measured by the ratio of current asset and current liability. It is known that a bank has to be liquid to meet payment obligation and financial commitments in a timely manner to depositors and creditors and it is a very critical for a bank to remain a going concern. When banks hold a lower amount of liquid assets they are more vulnerable to large deposit withdrawals. The finding of the study attest that bank liquidity and financial performance in terms of ROA has positive relationship but it was not statistically significant even at 10 percent significance level and hence bank liquidity influence on ROA is negligible and has no a significant impact. Thus, the hypothesis that states there is a significant relationship between bank liquidity and financial performance may be rejected or data did not support the hypothesis. The finding of the study also consistent with the study (Yirgalem 2015) which state that there is a no significant positive relationship between liquidity and ROA

Capital Adequacy and (CA) and Return on asset: As presented in Table 2 the coefficient of capital adequacy (CA) is 0.001 and its p value is 0.058. Holding other independent variables constant at their mean values, when capital adequacy (CA) increase by 1%, return on asset of Bank "X" increases by 1%, and the result was statistically significant at 5%. The relationship is positive as expected and this positive relationship between CA and ROA could be attributed to the fact that a bank with high capital adequacy ratio has high finical performance (ROA). This finding is consistent with previous studies with (Athanasoglou *et al.*, 2005; Flamini *et al.*, 2009; Naceur & Goaied, 2001; Dawit, 2016; Belayneh, 2011). According to the studies, a bank with a sound capital position is able to pursue business opportunities more effectively and has more time and flexibility to deal with problems arising from unexpected losses. The possible reason for the significant positive relationship could be that, increase in capital level brings higher financial performance for banks.

Operating Efficiency (OE) and ROA: It is measured by the ratio of operating expense to Total income and it is a proxy o to management quality for minimizing expenditure the finding of the study revealed that managerial efficiency has negative relationship with bank performance. Expense management or operational efficiency of the bank, measured by expense to income ratio (OE), is statistically significant in the first model (ROA) and is negatively correlated with performance. The sign for OE in the equations of the ROA was negative, and the researcher accepted the null hypothesis in that there is no relationship between operational efficiency (expense to income ratio) and performance of Bank "X". Even though OE is not significant for the model of ROA, its negative sign has an implication of expense to income ratio is inversely related to performance of the bank.

Export and ROA (EXP) and ROA: Table 2 presented that, the coefficient of export measured by export proceed to current asset is 0.11 and its p value is 0.004. Holding other independent variables constant at their average values, when export increases by 1%, ROA of the bank increases by 11%, which is found to be statistically significant at 1% level. The relationship is positive as expected and this positive relationship between export proceeds and ROA could be attributed to the fact the Bank's high export proceed brought foreign

currency to allocate it to customers who have import request and from the foreign currency allocated to customers the bank will collect commission which will have positive impact on ROA.

Loan Performance and ROA: It is explained by the ratio of loan to total asset. As hypothesized, it has positive and significant effect on ROA at 1% significance level. The coefficient for the variable is 0.003, which mean an increase in 1% on loans and advance will result in a 0.03% increment in ROA of Bank "X". This is due to the fact that loan is one of the major s for banks from the interest generated from the loan. Traditionally, banks are intermediaries between lenders and borrowers and the more the deposits that are transformed into loans the higher the level of profit will be, therefore, it is expected to have a positive relationship with bank performance. This finding also consistent with the study conducted by Vong & Chan (2008) and Rasiah (2010), Yirgalem (2015) indicated a significant positive relationship between the amount of loan granted and bank performance.

Deposit Mobilization and ROA: the finding of the study revealed that deposit fund, which is the ratio of deposit of the bank to total asset, is found to have positive relationship with performance of Bank "X". The result is significant at 5% level of significance. It is known that the primary function of the commercial banks are collecting deposits and giving loan to the public and finally they earn more interest income from their lending which in turn increase their performance, Commercial banks, accepts cash and hold on to as much of it as possible because the more it has and can retain the more funds it can lend to the public. That is, the more cash a commercial bank has the greater is its capacity to make profits. Moreover, the bank always utilizes its funds to the full in lending funds; the greater is the financial performance. Hence, the competition for deposits is really a competition for profits. Banks compete for deposits in order to become larger and thus to be able to supply more funds to the public and finally to generate more profit. Therefore, the competitiveness and the performance of the bank is depend on the degree of well performing of this activity. This finding is consistent with the study of Rasiah (2010) and Dawit (2016). Moreover, empirical evidence from Goaied and Naceur (2001) indicated that the best performing banks are those who have maintained a high level of deposit accounts relative to their assets.

Increasing the ratio of total deposits to total assets means increasing the funds available to use by the bank in different profitable ways such as investments and lending activities. In turn, this should increase the bank's returns on assets.

ii. Return on Equity as Indicator of Bank's Performance

The estimation results reported in Table 3 depicted that, the R-square and Adjusted R-square values of 0.58 and 0.52 respectively is an indication that the model is a good fit. This means that 58% of variations in return on equity of Bank "X" was explained by the independent variables included in the model. However, the remaining 42% of the changes in return on equity of the bank are caused by other factors that were not included in the model. Furthermore, the F-statistic was 10.67 and the overall model is highly significant at 1%. This means that all the independent variables jointly explained the variation in the dependent variable, which is return on equity. The results of the regression model is presented below:

Table 3: Regression analysis between ROE and Explanatory Variables

Variable	Unstandardized Coefficients		t	Sig.	Collinearity Statistics	
	B	Std. Err			Tolerance	VIF
Constant	-0.05***	0.019	-2.67	0.01		
LTD	0.02	0.028	0.70	0.48	0.75	1.33
IND	0.02*	0.011	1.886	0.06	0.61	1.65
LIQ	0.04**	0.015	2.514	0.015	0.63	1.60
CA	0.02***	0.006	3.555	0.001	0.94	1.07
OE	0.01	0.011	0.623	0.536	0.82	1.23
Export	0.10**	0.044	2.356	0.022	0.81	1.23
LP	0.01	0.010	1.275	0.207	0.76	1.32
DM	0.03*	0.014	1.967	0.054	0.72	1.39

*** Significant at p<0.01; ** Significant at p<0.05; and * Significant at p<0.1

Source: Authors' estimation based on Bank's Record (2011−2016)

Capital Adequacy (CA) and ROE: Table 3 depicts the coefficient of capital adequacy which is measured by the equity to total asset ratio was positive and statistically significant at 1% significance level (p value=0.01) and the coefficient is 0.023. Thus, a 1% increase in capital will have a 2.3% increase

in ROE of the bank. This is in line with the expectation as a bank with a sound capital position is able to pursue business opportunities more effectively and has more time and flexibility to deal with problems arising from unexpected losses, thus achieving increased all rounded performance. So from the findings we can conclude as capital was one of the main determinants of bank performance. Further, the finding was also consistent with previous studies of Pasiouras & Kosmidou (2007), Athanasoglou *et al.* (2006), and Amdemichale (2012) and it also indicates that well capitalized banks face lower costs of going bankrupt, which reduces their cost of funding or that they have lower needs for external funding which results in higher profitability. Moreover, the result was also consistent with the existed reality in the Ethiopian banking industry, which shows the existence of a direct relationship between capital strength and bank profitability.

Liquidity (LIQ) and (ROE): Table 3 depicted that, the coefficient of liquidity management (LIQ) measured by liquid current assets to current liability is 0.037 and its p value is 0.015. Holding other independent variables constant at their average values, when liquidity management (LIQ) increases by 1%, return on equity (ROE) of Bank "X" increases by 3.7%. The result is statistically significant at 5% level. The result is not consistent with the findings of Yuqi (2006) and Guru et al (2002). The possible reason for the positive relationship association between LIQ and ROE could be attributed to the fact that, Bank "X" has more liquid asset which bring additional competitive advantage by maintaining different potential customer who has consistence financing need and granting loan to them the bank earn substantial amount of interest income that create favorable condition to maximize the profit and shareholder equity.

Income diversification and ROE: The ratio of non-interest income to total income which is a measure of diversification and business mix have a positive effect on the performance of Bank "X" with a coefficient of 0.021. Meaning that a 1% increase in income diversification will result on a 2.1% increment in ROE. The variable was statistically significant at 10% level (p value = 0.064) in explaining the variability in ROA of Bank "X" . Thus, income diversification is considered as a vital driver of the performance of commercial banks. This result was also consistent with the findings of

Olweny & Shipo (2011) and Amdemichel (2012). Besides, the result of this study was also in agreement with what existed in reality in the Ethiopian context which shows the shifting of banks from interest based income to non-interest incomes as a result of relatively growing competition this days.

Deposit Mobilization (DM) and ROE: Deposit fund which is the ratio of deposit of the bank to total asset has a positive and significant effect on ROE of Bank "X" at 5% significance level with coefficient of 0.027 and its p value is 0.054. This means that a 1% increase in deposit will bring a 2.7% increment in the ROE of Bank "X". Due to the fact that he primary function of the commercial banks is collecting deposits and giving loans to the public, they earn more interest income from their lending which in turn increase their profitability.

Export and ROE: The coefficient for export is 0.104 and its p value is 0.022. Holding other independent variables constant at their average values, when export is increased by one birr, return on equity of Bank "X" would increase by ETB 10.4. The result is statistically significant at 1% level.

Operational efficiency and ROE: contrary to the expectation, the result of the study suggest that operating expense has no significant relationship with the performance indicator ROA, which implies that banks that operate at low administration cost increase their profit but the profit obtained by reducing administration cost is insignificant. Since the major cost of the bank is interest expense rather administration cost. Therefore, in Bank "X" the impact of operational efficiency is not significant on the bank performance. Loan production and loan to deposit ratio are not statistically significant for the performance indictor ROE even though loan related activities are the major source of income to a bank there is no statistical evidence to prove the variable has a strong relationship with ROE.

iii. Net Interest Margin as Indicator of Bank's Performance

The estimation results reported in Table 4 shows that 48% of the variations in net interest margin of Bank "X" were explained by independent variables included in the model. However, the remaining 52% changes in net interest margin of the bank is caused by other factors that were not included in the model. Furthermore, the F-statistic (F value= 7.39), was significant at $p<0.01$,

which indicates that all the independent variables jointly explained the variation in net interest margin. The detail interpretation of the coefficients is presented below.

Table 4: Regression analysis between NIM and Explanatory variables

Variables	Unstandardized Coefficients				Collinearity Statistics	
	B	Std. Err	t	Sig.	Tolerance	VIF
Constant	0.001	0.005	0.31	0.760		
LTD	0.004	0.007	0.58	0.562	0.75	1.33
IND	-0.009***	0.003	-3.3	0.002	0.61	1.65
LIQ	-0.009**	0.004	-2.5	0.015	0.63	1.60
CA	0.001	0.002	0.39	0.700	0.94	1.07
OE	0.009***	0.003	3.63	0.001	0.82	1.23
Export	0.008	0.011	0.73	0.469	0.81	1.23
LNP	0.012***	0.002	4.88	0.000	0.76	1.32
DEP	0.008***	0.003	2.39	0.020	0.72	1.39

*** Significant at p<0.01; ** Significant at p<0.05; and ** Significant at p<0.1

Source: Authors' estimation based on Bank's Record (2011−2016)

Income Diversification and NIM: The coefficient of income diversification measured by non-interest income to total income is negative and it is significant at p<0.01. Holding other independent variables constant at their mean values, when income diversification increases by 1%, net interest margin of the bank would decrease by 9%. The possible reason for the negative association between income diversification and NIM could be attributed to the fact that, if more funds are invested to other investment ventures than providing loans, advance interest income will decrease.

Liquidity and NIM: The coefficient of liquidity management (LIQ) measured by current assets to current liability is negative and it is statistically significant at p<0.05. Holding other independent variables constant at their mean values, when liquidity management increases by 1%, net interest margin of the bank would decrease by 0.9%. As expected, liquidity management has a positive relationship with net interest margin of the bank. The negative relationship between LM and NIM could be attributed to the fact that bank

"X" hold more liquid asset, and implied to have the possibility to disburse the cash as loan to customers and earn more interest incomes.

Operating Efficiency and NIM: The coefficient for the ratio of cost to income, which provides information on the efficiency of the management regarding expenses relative to income, was positive and statistically significant at $p<0.01$, which is in line with our prior expectation. This shows that minimizing the Bank's operating costs certainly improves its performance in general and profitability in particular. The ratio of cost to income exhibits positive and significant impact on the NIM.

Loan Production and NIM: The coefficient of loan performance measured by amount of loan to total assets is significant at $p<0.01$. Holding other independent variables constant at their average values, when loan granted to customers increases by one birr, net interest margin (NIM) of the bank would increase by 1.2%. The relationship is positive as expected and this positive relationship could be attributed to the fact that the amount of loan granted to customers will bring interest incomes to the bank. Previous studies also argued that banks may benefit from money granted to customers (see for example, Gul, Faiza & Khalid, 2011; Athanasoglou *et al.*, 2006; Sufian & Shah, 2009; Weersainghe & Ravinda, 2013; Ali *et al.*, 2015; Sarita *et al.*, 2012; Yirgalem, 2015).

Deposit Mobilization: The coefficient of deposit mobilization measured by deposit to total assets is significant at $p<0.05$. Holding other independent variables constant at their average values, when deposit increases by one birr, net interest margin (NIM) of the bank increases by 8%. The relationship is positive as expected and this positive relationship.

5. Conclusion

Based on the findings, it can be concluded that capital adequacy, income diversification, export, loan production and deposit mobilization have significant impact on ROA with a positive relationship; which means any increase/decrease on the value of these variables will lead to an increase/decrease on the financial performance of commercial banks. Liquidity and operating efficiency were found to have no significant impact

on ROA, which means any increase/decrease on the value of these variables will not have significant impact on financial performance of commercial banks. However, income diversification, deposit mobilization, loan performance and export are found to have positive and significant relationship with all the performance indicators.

Capital adequacy, export, deposit and liquidity were found to have positive and significant impact on ROE, which means any increase/decrease on the value of these variables will lead to a decrease/increase on the financial performance of commercial banks. Loan production, operating efficiency and loan to deposit ratio were found to have no significant impact on ROE. Operating efficiency, loan production and deposit mobilization were found to have positive and significant impact on NIM, which means any increase/decrease on the values of these variables will lead to an increase/decrease in financial performance commercial banks.

The negative sign between liquidity and bank performance reveals that the lower ratio of liquidity means the bank will face difficulty in meeting payments in the right time and it may be forced to borrow with extremely high rate of interest and eventually decrease it performance. On the contrary, if the bank is excessively liquid (liquidity trap), it means that the bank is keeping its productive assets idle and hence losing interest income. The relationship between NIM and liquidity is negative due to the fact that if Bank "X" has more liquid asset, interest income will fall due to less loan disbursement.

Based on the study finding, the management of private commercial banks should strive to improve the performance of the banks by giving more attention to the variables identified to have significant impact on the financial performance of the bank.

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