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Determinants of private commercial banks profitability in Ethiopia: Empirical evidence

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Abstract - The major objective of the study was to examine factors that determined private commercial bank profitability in Ethiopia by using panel data of thirteen private commercial banks from year 2010 to 2021. The study used random effect multiple linear regressions models to investigate factors that determine the profitability of private commercial banks. To obtain information relevant to the study, secondary data especially annual audited financial statement of banks was used. Besides, in the study only thirteen private commercial banks purposively selected sample from this population due to the availability of 12 years' data. The findings of the study reveal that management efficiency and loan to deposit ratio have statistically significant and positive relationship with banks' profitability. On the other hand, variables like liquidity have a negative and statistically significant relationship with banks' profitability. Conversely, the relationship for funding cost, gross domestic product and inflation rate is found to be positive and statistically insignificant. Therefore, it is recommended that private commercial banks should increase the statutory minimum reserves of capital which a bank or other financial institution must have available (capital adequacy), diversify their types of deposits, increase their size by increasing the number of branches and network.

Keywords: determinants; bank of Ethiopia; private commercial banks; capital adequacy

Introduction

If there is one item that trade and commerce cannot exist without, it would be finance (Tariq et al, 2014). Finance is crucial to the flow of money in any given nation's economic structure (Ongore, 2013). Through making money available for investors to borrow and through deepening the country's financial system, financial institutions help the economy of their respective countries grow (Otuori, 2013). Commercial banks constitute the foundation of Ethiopia's financial system, claims Samuel (2015).

Arora (2014) claims that banks' significance stems from their function as an economy's primary conduits for saving and credit distribution. Arora also pointed out that for emerging economies to expand quickly, the banking system must be effective. Similar to this, banks are important for "improving economic efficiency by chanelling funds from resource surplus unit to those with better productive investment opportunities," according to Leykun and Sharma (2017). The Determinants of Banks' Profitability, their most recent essay, makes it abundantly evident that banks also play a crucial role in the commerce and payment system by lowering transaction costs and enhancing convenience.

Profitability factors (return on capital employed, return on asset, and return on equity) in banks and their impact on economic growth are highlighted by the fluctuating profitability of the banking industry through time (Adekola, 2016). While the banking industry dominates the financial sector in less monetized nations like Ethiopia, the effective and efficient operation of the banks has a vital influence in driving economic growth (Berhanu, 2015).

Banks carry out a variety of duties as part of the aforementioned jobs in the course of daily operations. The Banking Business Proclamation No 592/2000 highlighted that, the principal function of the bank is collecting deposits, buying and selling of foreign exchange, providing loan and money transfer service. This is a clear statement of the functions of commercial banks in Ethiopia. Banks also offer agency and overdraft services.

It goes without saying that the banking industry must make a profit in order to be profitable and competitive for a long time. Bank profitability was defined by Lartey et al (2013) as "the ability of a bank to generate revenue in excess of cost, in relation to the bank's capital base."

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Where there is an effective financial system, there will always be an increase in bank profitability due to the increased amount of funds available for investment, while enhancing the quality of services provided for the customers, according to Saona (2011), cited in Rahman et al (2015). Abel and Roux (2016, p. 885) note that without sufficient profitability, the banking industry does nothing except use up its own capital and endanger its own survival. This jeopardizes the banks' capacity to play a significant role in fostering national growth.

Bank earnings, however, are not the outcome of a single factor. The factors are typically split into two broad categories, according to a variety of literature. The first group included bank-specific issues that the management of a particular bank can influence. The second category, on the other hand, examines variables that are outside of the management's control and are frequently referred to as external or macro-economic variables (Isayas, 2022).

In light of this, Samuel (2015) asserted that profitability is a reflection of how banks are managed in light of their operating environment. More particular, bank profitability need to be an accurate reflection of a bank's management, shareholder behavior, competitive strategies, operational effectiveness, and risk management capabilities (Aburime, 2008).

In Ethiopia, there are now 29 private banks and 2 public banks active. Public banks in general, and the Commercial Bank of Ethiopia (CBE) in particular, are said to be the dominant players in Ethiopia's financial sector, according to Aderaw and Singh (2016).

The researcher will go over a number of studies that look at the factors that affect private commercial banks' profitability in Ethiopia. For instance, a study by Amdemichael (2012), Gemechu (2016), Berhanu (2012), Samuel and (2015) attempted to investigate the factors that influence the profitability of Ethiopian commercial banks by using variables such as capital sufficiency, bank size, liquidity, management efficiency, loan and advances, market concentration, employs efficiency funding cost, operating efficiency, GDP, inflation, and exchange rate as bank specific, industry specific, and macroeconomic variables.

Method

2.1 Research Design

This study employed explanatory type of research design to establish causal relationship between variables. The researcher uses panel data (both time series and cross sectional data) of eight private commercial banks operating in Ethiopia. To examine the impact of independent variables (size, loan

to deposit ratio, liquidity, capital adequacy, funding cost, inflation, GDP) over the dependent variable (Return on Asset) for the period 2010-2021

2.2 Population and Sampling Techniques

The target population of this study includes all the twenty seven commercial banks registered by NBE and operating in Ethiopia. Of the 31 banks, 29 were private and two is public, which is commercial Bank of Ethiopia (CBE) & development Bank of Ethiopia. However, because of lack of 12 years' data that is required for the analysis purpose, banks that started their operation after 2010 are excluded from the study. As a result, the numbers of sample banks are reduced to thirteen. The study is employed non-probability purposive sampling technique based on the age and accessibility of complete audited financial statements. The rationale behind selecting purposive sampling techniques than others is, it considered more appropriate when the universe happens to be small and a known characteristic of it is to be studied intensively.

2.3 Data Source

In order to achieve the research objectives mentioned in section 1.3, the study used audited financial statements. The data set used cover a period of 12 years starting from 2010 to 2021. The study employed secondary data. The secondary data collected from annual reports and audited financial statements of the selected sample private banks. Regarding macroeconomic data mainly gathered from the records held by NBE through structured document review. The website of each of the banks also visited to collect necessary data for the study. Accordingly, the following table shows the list of selected banks with the year of establishment in parenthesis.

Table 1 Lists of selected private commercial banks

Abay Bank (2010)	Cooper Bank Of Oromia (2005)	United Bank (1998)
Awash Bank (1994)	Dashen Bank (1995)	Wegagen Bank (1997)
Abyssinia Bank (1996)	Lion Bank (2006)	Zemen Bank (2009)
Berhan Bank (2010)	NIB Bank (1999)	
Bunna Bank (2010)	Oromia Int. Bank (2008	

2.4 Methods of Data Analysis

The collected panel data were analyzed by using descriptive statistics, correlations, and multiple linear regression analysis. The secondary data analyzed by using STATA 15 for windows software package. Descriptive statistical tools also used to analyze the mean, standard deviation, minimum and maximum values of the study

2.5 Model Specification

From the research method, the model was containing return on asset (ROA) indictors of commercial banks profitability as the dependent variables; the explanatory variables include gross domestic product (GDP), inflation rate (INR), exchange rate (FER), bank size (LBS), capital adequacy (CA), loan to deposit Ratio (LTDR), liquidity risk (LIQ), funding cost (FDC), and management efficiency (MGE)were the independent variables. Hence, based on the relationship among the above stated bank profitability indictors and bank-specific as well as macroeconomic determinants, the following functional forms serve as the basis for the investigation:

ROA= f (LBS, CA, LIQ, LTDR, MGE, GDP, FDC, FER, INR) ---------- (1)

Equation 1 can be transformed into an econometric model as follows: Where:

$ROA_{i,t} = \beta_0 + \beta_1 (LBS)_{i,t} + \beta_2 (CA)_{i,t} + \beta_3(LIQ)_{i,t} + \beta_4(LTDR)_{i,t} + \beta_5(MGE)_{i,t} + \beta_6(GDP)_{i,t} + \beta_7(FDC)_{i,t} + \beta_8(FER)_{i,t} + \beta_9(INR)_{i,t} + \epsilon_0$ ----------(2)

$ROA_{i,t}$ is the dependent variable as a proxy for bank's profitability, for bank i at time t.

β_0 – constant

β_{1-9} – coefficients of the regression model

ε – Error

Table 2 Definition, Notation and Expected Effects of the Explanatory Variables

	Variable	Measure	Notation	Exp Significance
Dependent Variable	Return on Asset	The ratio of net profit to average total assets of the bank	ROA	N/A
Independent Variable	Size	Natural logarithm of total asset of the bank	LBS	+
	Capital Adequacy	The ration of equity to total asset	CA	+
	Liquidity Risk	The ratio of current asset to total asset	LIQ	-
	Loan to Deposit Ratio	The ratio of loan to deposit	LTDR	+
	Management Efficiency	The ratio of operating expense to operating income	MGE	+
	Real Gross Domestic Product	The annual change in the GDP (in %)	GDP	+
	Funding Cost	The ratio of interest expense to total deposit	FDC	-
	Inflation Rate	The Annual Inflation Rate	INR	+

2.6 Assumption of Classical Linear Regression Model

As discussed in detail under the methodology part of chapter three, multiple linear regression model is the most reliable model that is widely used by different scholars in the literature world, as a result, this study was also employed multiple linear regression data analysis technique to achieve the stated objective and to test hypothesis of the study. However, before using multiple linear regression or ordinary least square (OLS) estimator to analyse the results, tests should be made on the assumptions of classical linear regression model (CLRM). To ensure whether the data suits the basic assumptions of the classical linear regression model the following test have been conducted, those are heteroskedasticity test, multicollinearity test, autocorrelation test, normality test, model specification or Ramsey test, the Hausman specification test and Breusch - Pagan Lagrangian multiplier. Each of them is discussed below in detail

Assumption One: The Error have Zero Mean (E (Ɛ) =0)

Brooks (2008) documented that if the constant term is included in the regression equation, this assumption will be not be violated. In this study the constant term was included in the regression equation or model. Since the constant term (i.e. β0) was included as a part of the regression equation this assumption was not violated, that means the error term have zero mean. Overall, the average value of the error term is zero in this study.

Assumption Two: Homoscedasticity (Variance of the Errors Term is Constant)

According to this assumption of the classical linear regression model (CLRM) the variance of error term among all levels of the independent variables should constant, this is also known as the assumption of homoscedasticity. If the errors do not have a constant variance, this assumption will be violated and we can say that there is heteroscedasticity problem in the model (Gujarati, 2004). Overall, the violation of this assumption can lead to the heteroscedasticity problem. In general, the heteroscedasticity test is used to identify either the error terms are Homoscedastic or Heteroskedastic (Brooks, 2008).

If P value of the test statistic is insignificant (in excess of 5%) it's possible to conclude that there is no evidence for the existence of hetroscedasticity problem in the model. In this study the problem of heteroscedasticity was checked by Breusch-Pagan / Cook-Weisberg test. It tests the null hypothesis that stated variance of error term is constant among all independent variables. According to this test if p- value shows insignificant ($p > 0.05$), the null hypothesis would be accepted and concluded that the variances of error terms are constant. Contrary to this, if the p value is significant ($p < 0.05$), the null hypothesis would be rejected and we can conclude that there is heteroskedasticity concern in the model. For this study the following test shows the nonexistence heteroskedasticity problem in the model since p value is highly insignificant.

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Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of Inf

         chi2(1)      =      .15
         Prob > chi2  =    0.6235
```

Therefore, the researcher is failed to reject the null hypothesis, because the p value of test statistic is highly insignificant. Overall, the test suggests, an absence of heteroscedasticity problem in the model.

Assumption Three: Multicollinearity

The other assumption of classical linear regression model that was checked in this study is multicollinearity test. The problem of multicollinearity occurs when the explanatory variables are serially correlated with each other (Brooks, 2008).In any practical world, the correlation between explanatory variables will not expected to be zero, in a sense that a small degree of association between explanatory variables will always be exist. However, the serious collinearity among explanatory variables is not advisable and it shows the existence of serious problem. In this study the degree of multicollinearity among independent variables was measured by variance inflation factors (VIF) recommended in the rule-of - thumb. As par rule, if the values of variance inflation factor (VIF) on each variable is less than 10 and if the values 1 / VIF is greater than 0.1 or 10%, multicollinearity is not a serious problem in the model. As shown below, the individual value of VIF for each explanatory variable are very lower than 10, again the value of 1/VIF are highly greater than 0.10 or 10%. Lastly, cut-off or the mean value of variance inflation factor (VIF) is also significantly lower than 10. So, there is no evidence for the existence of Multicollinearity problem in this data set. Therefore, the researcher is concluded that multicollinearity is not a serious problem in this model.

Table 1 Multicollinearity Test

Variable	VIF	1/VIF
BankSize	4.40	0.227121
LiquidityR~k	4.29	0.232878
FundingCost	2.47	0.405095
CapitalAde~y	2.15	0.464078
MgmtEffeci~y	1.95	0.513720
LoantoDeps~o	1.80	0.555359
GDP	1.39	0.721155
Inflation	1.36	0.737619
Mean VIF	2.48	

Source STATA 15 output, 2023

Assumption Four: Autocorrelation Test

According to this assumption the covariance between the error terms over time and cross section could be zero. In other words, it is assumed that the errors are uncorrelated with one another's. This is because the serial correlation of the errors terms causes the standard errors of the coefficients to be smaller than they actually are and higher R-squared (Gujarati, 2004). In this study Wooldridge test for autocorrelation in panel data was employed for checking the existence of autocorrelation problem in the model. As we can see below, the p value of test static is highly insignificant. Hence, there is no evidence for the existence of autocorrelation problem in the model.

```
Wooldridge test for autocorrelation in panel Data
H0: no fist-order autocorrelation

       F(1,     10) =      2.305
            Prob > F =      0.1244
```

The null hypothesis states no serial correlation among error term. Therefore, the researcher is failed to reject the null hypotheses and conclude that the data does not have autocorrelation problem.

Assumption Five: Normality Test (Residuals are Normally Distributed)

In this study the assumption for the normality of residuals was tested by using the Shapiro-Wilk test, which is recommended for panel data. It tests the null hypothesis that stated the residuals are normally distributed. As shown below the p- values of the residual is highly insignificant, therefore the researcher is failed to reject the null hypothesis which states that residuals or the errors are normally distributed.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
residual	156	0.54532	2.067	.599	0.15262

Overall, the researcher is concluded that the residuals has normal distribution pattern in this model.

Assumption six: Model Specification Test

The last but not least, another assumption of classical linear regression model that was tested in this study is model a specification test. It is also called Ramsey test. A model specification error is a type of error that may result when one or more relevant variables are omitted from the model and when one or more irrelevant variables are included or added to the model. It can be checked by STATA command called ovtest. The existence of this error is decided by p value of test static, if p value of Ramsey test is insignificant ($p > 0.05$) it's possible to conclude that there is no model specification error or no evidence for the absence of most relevant variables from the model and inclusion of irrelevant variables into the model as well. The reverse is true if p value is highly significant ($p < 0.05$). As we can see below, P-value which is highly greater than 0.8370. This shows that the null hypothesis of the model, which says no omitted variable, cannot be rejected.

```
Ramsey RESET test using powers of the fitted values of ROA
      Ho:  model has no omitted variables
               F(3, 144) =        .23
                 Prob > F =      0.837
```

Therefore, the researcher is decided that there is no omitted variables in this model.

Hausman Specification Test

The Hausman specification test is the classical test of whether the fixed or random effects parameter estimation technique is suitable for the panel data. The basic differences between fixed and random effect model is the assumption whether the unobserved individual heterogeneity is correlated with the rest of the independent variables or not. If the specific effects are correlated with the regressors' fixed effect estimates are consistent but the random effect estimates are not consistent. If the regressors are uncorrelated with the ui, both fixed and random effect estimators are consistent, with all the random effect estimators are efficient (Wooldridge, 2013). In this study the researcher is employed houseman specification test to select parameter estimation technique among fixed and random effect model. To do so first, the fixed effect regression was run and stored. Second, the random effect regression was run and stored. Third, the Hausman test was run and the outcome of p-values shows 0.2443. Since the p- values is highly insignificant (> 0.05) the researcher is decided that the random effect model is suitable for this data set.

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	Coefficients (b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
LR	-.8754653	-1.28139	.4059242	.2090962
LTDR	1.727104	1.59544	.1316646	.286465
ME	1.594284	1.567096	.0271879	.0861398
FC	3.514255	8.236636	-4.72238	6.241034
BS	.0321995	-.0514162	.0836157	.0864117
CA	-3.192078	-.9093135	-2.282764	.9292429
GDP	.1660423	.2817694	-.1157271	.
Inf	-.0142949	.0666406	-.0809355	.1149926

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(8) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 10.30
Prob>chi2 = 0.2443
(V_b-V_B is not positive definite)

(STATA 15 Output, 2023)

Results and Discussion

The empirical evidence on the determinants of Ethiopian private commercial banks profitability is studied based on balanced panel data, where all the variables are observed for each cross-section and each time period. The study has a time series segment spanning from the period 2010 up to 2021 and a cross section segment which considered 13 private commercial banks. To test the relationship between these private commercial banks profitability and identified profitability.

$$ROA_{it} = \beta_0 + \beta_1(CA) + \beta_2(LR) + \beta_3(FC) + \beta_4(ME) + \beta_5(LTDR) + \beta_6(BS) + \beta_7(GDP) + \beta_8(INFR) + \varepsilon_0$$

Source	SS	df	MS	Number of obs	=	156
				F(8, 147)	=	25.70
Model	61.5870904	8	7.6983863	Prob > F	=	0.0000
Residual	44.0315369	147	.299534265	R-squared	=	0.5831
				Adj R-squared	=	0.5604
Total	105.618627	155	.681410499	Root MSE	=	.5473

ROA	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Inf	.0666406	.6157039	0.11	0.914	-1.150134	1.283415
GDP	.2817694	.2813822	1.00	0.318	-.2743075	.8378463
CA	-.9093135	1.397137	-0.65	0.516	-3.670381	1.851754
BS	-.0514162	.0778924	-0.66	0.510	-.2053497	.1025174
FC	8.236636	7.015274	1.17	0.242	-5.627182	22.10045
ME	1.567096	.1228892	12.75	0.000	1.324239	1.809954
LTDR	1.59544	.5286721	3.02	0.003	.5506603	2.640219
LR	-1.28139	.7019566	-1.83	0.070	-2.66862	.1058405
_cons	1.035796	.8987422	1.15	0.251	-.740328	2.81192

STATA 15 Output Data from sample financial statement of sampled private commercial banks, 2023
NB level of significance is decided at 1%, 5% and 10%

The developed model by Ordinary Least Square (OLS) model:

$$ROA_{it} = 1.035796 - 0.9093(CA) - 1.28139(LR) + .8.2366(FC) + 1.567096(ME) + .1.59544(LTDR) - 0.0514162(BS) + 0.2817694(GDP) + .0666(INFR) + \varepsilon_0$$

The estimation results of the operational panel regression model used in this study are presented in table 4. From the above table 4 the R-squared statistics and the Adjusted-R squared statistics of the model was 58.31% and 56.04 % respectively. The result of the R-squared indicates that the changes in the independent variables explain 58.31 % of the changes in the dependent variable. That is capital adequacy, Liquidity, funding cost; management efficiency, loan to deposit, bank size, gross domestic product and inflation rate collectively, while the result of the Adjusted-R squared indicates that the changes in the independent variables explain 56.04 % of the changes in the

dependent variable. That is capital adequacy, Liquidity, funding cost; management efficiency, loan to deposit, bank size, gross domestic product and inflation rate collectively explain 58.31 % of the changes in ROA. Although, the remaining 41.89 % and 43.96% of the change is explained by other factors which are not included in this study model, both the R-squared and the Adjusted R-squared values in this study are found to be sufficient enough to infer that the fitted regression line is very close to all of the data points taken together (has more explanatory power) For panel data, R-Squared greater than 20% is still large enough for reliable conclusions (Trivedi, 2009; Hsiao, 2007, cited in Nyamsogoro, 2010).

Based on the results shown in table 4, from all eight independent variables three of them are statistically significant at 1% and 5 % level namely liquidity ratio, Management Efficiency, & loan to deposit. But the other five variables including funding cost, gross domestic product and inflation rate and Bank Size are not statistically significant

Furthermore, table 4 also shows that the coefficient of capital adequacy, bank size & liquidity risk against ROA were negative since the coefficients for this variable is -.9093135, -.0514162 & -1.28139 respectively. This indicates that there was an inverse relationship between the aforementioned independent variables and ROA. Thus, the increase of capital adequacy, bank size & liquidity will lead to a decrease in ROA.

On the other hand, variables like management efficiency, funding cost, loan to deposit ratio, gross domestic product, inflation rate had a positive relationship with profitability since their respective coefficients were 1.567096, 8.236636, 1.59544, 0.2817694 & 0.0666406. This revealed that there was a direct relationship between the above five independent variables and ROA.

In general, so far, the results of the documentary analysis which includes tests for the classical linear regression model, descriptive statistics & regression analysis have been presented. The results of the tests for the classical linear regression model showed that the data fit the basic assumptions of CLRMs. On the other hand, the remaining results of the documentary analysis was used to assess the link that exists between bank-specific, industry-specific and macro-economic determinants of bank profitability. The following section demonstrates the impact of each explanatory variable on Ethiopian private commercial banks profitability.

3.1 Capital Adequacy

The explanatory variable bank capitalization is measured by the ratio of capital over total asset of a bank. The impact of this variable on private bank profitability is negative and statistically insignificant at 1 % level. This is true for the reason that in our country commercial banks with higher level of capital have the legal right to lend a higher amount of money to a single borrower and they can increase their interest income and can reduce their transaction costs which finally enable them to increase their profit. Therefore, an increase in the ratio of capital to loan leads to and decrease the profit of the banks. This finding also has a consistent with the study conducted by Aburime (2008). Accordingly, the hypothesis which is formulated capital adequacy has positive and significant effect on bank profitability is accepted.

3.2 Liquidity Risk

Liquidity risk refers to how a bank's inability to meet its obligations (whether real or perceived) threatens its financial position or existence. Institutions manage their liquidity risk through effective asset liability management. Liquidity risk is measured by the ratio of current asset and total assets. The explanatory variable liquidity risk (LIQ), indicated statistically significant at 10% significance level and it has a strong negative relationship with the profitability of private commercial banks.

3.3 Loan to Deposit

Loan to deposit ratio of private commercial banks shows positive and significant impact on ROA of sampled banks. This is consistent to previous researches from Rengasamy (2014), Gelos (2006) which found loan to deposit ratio had positive and significant impact on ROA. Accordingly, Loan to deposit ratio has positive and significant effect on bank profitability, this hypothesis is accepted

3.4 Management Efficiency

Even though different researchers used different ratios to measure it, the most important method of ratio used as a proxy of management efficiency is expense to asset ratio. The ratio of operating expenses to total asset has negative effect on performance of banks (Athanasoglou et al (2005) as cited

by Mohammed (2015)). The regression output reveals and did not support (reject)the already formulated hypothesis which says Management efficiency has positive and significant effect on banks profitability.

2.5 Funding Cost

Funding cost used as one of a key proxy variable in this study. It is a ratio between interest's expenses to deposit. Funding Cost defined as the interest expense on customer deposits expressed as a percentage of average customer deposits. This rate reflects the ability of a bank to attract deposits at a low cost. Thus, a low level of this indicator has a positive effect upon the profitability of the bank. The regression result indicated the funding cost has positive and insignificant effect on banks profitability , this in turn forced us to reject the stated hypothesis which is inconsistent with Samuel (2015), found that funding cost had a negative and significant impact on commercial banks profitability in Ethiopia.

3.6 Bank Size

The study found that bank size (BS) negatively influences profitability statically significant at 5% significance level. This indicates smaller the bank the lower the profitability and vice versa.

According to Alkhazaleh and Almsafir, (2014) large banks are assumed to have more advantages as compared to their smaller rivals and have a stronger bargaining capability and making it easier for them to get benefits from specialization and from economies of scale and scope. Hence the hypothesis which states bank size has positive and significant effect on bank profitability is rejected.

3.7 Gross Domestic Product

One would expect that the impact of GDP on profitability is positive and significant. However, it was not statistically significant even at 10% significance level (p-value = 0.318), implying that its influence is insignificant. Moreover, the insignificant parameter indicates that the GDP does not affect Ethiopian private commercial banks profitability. Thus, the hypothesis that states there is a significant relationship between GDP and profitability may be rejected or data did not support the hypothesis but has a positive relation. Referring to previous studies, the results defies logic and does not conform with earlier findings by Obamuyi (2013) and Athanasoglou et al (2006) who agrees on the positive association between economic growth and the performance of the financial sector but it is consistent with the finding of Krakah et.al, (2010) and Frederick (2014) who found that there was no significant relationship between GDP and banks profitability.

3.8 Inflation

High inflation rate is associated with higher costs as well as higher income. If a bank's income rises more promptly than its costs, inflation is expected to exert a positive effect on profitability as inflation was anticipated which gave banks the opportunity to adjust the interest rates accordingly. On the other hand, a negative coefficient is expected when its cost increases faster than its income (Eden, 2014). Theories suggest that, inflation has a negative impact on commercial banks profitability

The regression result of this study provides us a positive insignificant value, with a coefficient of 0.0666406 and probability value of 0.914. As a result, the hypothesis is rejected partially due to there are no a significant relation but a positive relation among them. This is due to the fact that, commercial banks are given discretion to set their lending interest rate freely, and accordingly when they anticipate a high inflation, they adjust their lending interest rate freely and compensate their profitability. The finding of this study is in line with, the findings of Demirguc-Kunt & Huizinga, (1999), Samuel (2015) and Eden (2104).

Conclusion and Suggestion

The report uses a quantitative research approach to meet the goal of the study. In order to pinpoint and quantify the factors that affect banks' profitability, quantitative data were mostly gathered from the private commercial banks themselves, from NBE, and from MoFEC through document analysis. To be more precise, multiple regression analysis is used to quantify the impact of factors on bank profitability. The following conclusions are suggested by the empirical results on the effect of private bank profitability in Ethiopia for the sample.

First, among the bank-specific factors, as anticipated, the results demonstrated a substantial statistically significant positive association between capital adequacy and profitability. The positive

coefficient for the capital adequacy ratio indicates that higher capital strength will boost profitability. This is expected because a bank with a strong capital position is better able to seize commercial opportunities and has more time and flexibility to handle issues brought on by unforeseen losses, leading to improved profitability. Profitability and management effectiveness have a strong statistically significant negative association.

This demonstrates that reducing operating expenses in Ethiopia will undoubtedly enhance the performance of private commercial banks, but the findings regarding funding costs revealed a favourable correlation between profitability and funding costs, as anticipated, with a significant statistical insignificance. Liquidity, which demonstrated a favourable correlation but negligible relationship between liquidity and profitability, is the other unimportant variable among the bank-specific factors.

Finally, among macroeconomic factors, the GDP and inflation rate positively affect profitability as projected and have played a little role in the performance of private commercial banks in Ethiopia. This study was tried to fill the gap in existing literature that was identified in the statement of problem and listed under objective of the study. But this research is not without limitation and this limitation shall be addressed by future studies. Therefore, it is better if further studies are conducted on the following major areas in order to get full knowledge on this interesting topic. First, further research should be conducted by including other firm specific factors that determines & will affect financial performance of private commercial banks. Again, it is better if future studies investigate the factors that determines the successfulness of not only private banks but also including state owned banks like commercial banks of Ethiopia and newly formed private banks.

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