

Determinants of Banks' Profitability: Review and Assessment

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Abstract

In today's global and complex banking environment, there is a great need to examine the linkage between macroeconomic factors and commercial banks' profitability. The present paper takes stock of a number of theoretical and empirical studies and highlights that how different factors affect the profitability of banks. The existing literature on banks' profitability is quite large and provides a comprehensive examination of the effects of bank specific, industry-specific, and macroeconomic determinants of bank's profitability. Most of these studies, however, have focused on developed and emerging countries. The main objective of this paper is to investigate the macroeconomic determinants of commercial banking profitability by reviewing extensively the existing studies.

Keywords

Cyclical Output; Determinants; GMM; Inflation

I. Introduction

Banks play a key role in improving economic efficiency by channelling funds from resource surplus unit to those with better productive investment opportunities. Banks also play key role in trade and payment system by significantly reducing transaction costs and increasing convenience. In less monetized countries, like Ethiopia, whilst financial sector is dominated by banking industry, effective and efficient functioning of the Banks has significant role in accelerating economic growth. That is why the role of commercial banks and its development has always attracted the interest of academic research. Commercial banks play an important role in the economic development of the country; represent one of the important tools for implementing the government monetary policies, which continues to focus on ensuring price and exchange-rate stability while maintaining a macroeconomic environment conducive to economic growth.

II. Literature Review

Examining the link between macroeconomic factors and commercial banks profitability is essentially required in today's global and complex banking environment. In order to evaluate the stability and soundness of the financial and banking sector the knowledge of the link between business cycle and inflation rate fluctuations with banking sector profitability is paramount important (Albertazzi & Gambacorta, 2009). The existing literature on bank profitability is quite large and provides a comprehensive examination of the effects of bank specific, industry-specific, and macroeconomic determinants on bank profitability. Most of these papers, however, focused on developed and emerging countries. Even the studies conducted in SSA counties lack a thorough investigation of the effect of macroeconomic factors affecting commercial banks' performance. As Francis (2013) point out that studies focusing on Sub-Saharan Africa's commercial banking sector are still scanty and limited. Even the few studies which have been undertaken point to a need for further investigation

of the factors that have continued to cause poor performance of commercial banks in the sub-region. They claimed that most of the evidence in regard to commercial bank performance is largely focused on the developed economies and the conclusions may not be useful for African commercial banking improvements. Much of the empirical work on developed countries and a few on Africa and other developing countries on financial systems' performance, have suggested a need to undertake further research on SSA banking system, where Ethiopia belongs, using sufficient data and robust methods to be able to provide sufficient information for effective policy implementation of commercial banking.

Many studies have empirically examined the determinants of commercial banks' profitability in Ethiopia and arrive at divergent results (e.g. Kapur & Gualu, 2011; Lelissa, 2014; Eshete et al. 2013; Abera, 2012; Rao & Lakew, 2012). Variables considered to capture the bank-specific factors as well as the industry specific factors affecting profitability, concurring with the literature, were not found sufficient in prior studies in the country. Besides, lack of thorough investigation of macroeconomic factors that determine profitability of commercial banks is also been observed. In addition, most of these studies have examined the potential determinants of commercial banks' profitability via adopting the panel rudimentary models such as the pooled OLS, fixed and random effect models. The main purpose of this paper is to investigate the macroeconomic determinants of commercial banking profitability by reviewing extensively the existing studies.

The nature of the business cycle (cyclical output) affects banks' profitability, Lelissa, 2014; Vong and Chan (2006); Simiyu & Ngile (2015); Athanasoglou et al., (2005;2008); Dietrich & Wanzenried, (2011;2014); Growe et al., (2014) Albertazzi et al (2009); Saeed, (2014); Umar et al, (2014); Scottl & Ovufeyen, (2014); Friedman (1977); Ongore & Kusa, (2013), & Messai et al, (2015) among others. According to these authors, in a growing economy as expressed by positive GDP growth, the demand for credit is high due to the nature of business cycle. During boom the demand for credit is high compared to recession (Athanasoglou et al., 2005). In other words, If GDP growth is high, the loan request increases and thus the banks can obtain bigger profits. On the contrary during the declining GDP growth the demand for credit falls which in turn negatively affect the profitability of banks. If the GDP growth slows, the banks are confronted with an increased credit risk, increasing provisions and subsequently the profitability is reduced. Bad economic conditions can worsen the quality of the loan portfolio, generating credit losses, which eventually reduce banks' profits. Thus, As GDP growth slows down and in particular during recessions, credit quality tends to deteriorate and default rate increase, thus reducing bank profitability.

Bad economic conditions can worsen the quality of the loan portfolio; generating credit losses and increasing the provisions banks need to hold, thus reducing bank profitability. In contrast, an improvement in economic conditions, in addition to improving

the solvency of borrowers, increases demand for credit by households and firms, with positive effects on the profitability of banks (Athanasoglou et al., 2008). GDP is also considered as a macro determinant of bank profitability and allows for controlling business cycle fluctuations (Bernanke and Gertler, 1989; cited in Naceur & Omran 2011). An increase in economic activities of the country signals that customer's demand for loans will increase, and with improved lending activities, banks are able to generate more profits (Obamuyi 2013). GDP growth, which varies over time, is expected to have a positive effect on bank profitability according to the literature on the association between economic growth and financial sector profitability (Dietrich & Wanzenried 2011). Empirical results of the prior studies suggested controversial results on the effect of real GDP growth on banks profitability (i.e. Kiganda (2014); Haron (2004); Athanasoglou et al. (2006); and (Constantinos & Sofoklis 2009; cited in Kiganda 2014) have shown a positive and insignificant relationship between GDP and banks profitability. On the other hand, Dietrich & Wanzenried (2009) analyzed the profitability of commercial banks in Switzerland over the time period from 1999 to 2006. Their sample included 1,919 observations from 453 banks. Besides bank specific characteristics, they included a set of macroeconomic and industry-specific variables into their regression analyses. Their results showed that the GDP growth rate affects bank profitability in Switzerland positively, with the coefficients being significant at the 5% level. On the contrary Ongore (2013) and (Saeed 2014), showed that GDP had an insignificant negative correlation coefficient with ROA of commercial banks in Kenya. In sum, the upward or downward impact of national GDP has a positive or negative impact on bank profitability (Saeed 2014).

Economic theory can predict either positive, negative or zero effect of the trend of inflation on performance depending on the specific assumptions of the model. Given the absence of a theoretical consensus, the anticipated relationship between inflation and bank performance remains an empirical issue largely (Umar, Maijama and Adamu 2014).

The effect of inflation on commercial bank profitability is an issue on which conclusion cannot be drawn hastily. Empirical investigations into the relationship between the variables have been inconclusive as the findings have been mixed. While some investigations observe positive relationship between the variables, others observe negative relationship, and yet others observe no significant relationship (Scottl & Ovufeyen, 2014). Similarly the previous studies have also arrived at divergent results on the relationship between inflation rate and banks profitability. The inflation rate means the rate of changes in the price of any commodity. Inflation has an inverse relationship to profitability because an increase in inflation means lowering the profitability of banks due to higher prices (Saeed 2014), and also performed the regression and correlation analyses on 73 UK commercial banks and found that GDP and inflation rate have negative impact on the profitability of banks in the united kingdom. Ongore and Kusa (2013) and Athanasoglou et al (2005) stated that the relationship between inflation level and bank profitability is remained to be debatable. The relationship between the inflation and the bank profitability depends on whether the inflation is anticipated or unanticipated. Even though there were studies supporting the positive relationship between inflation and bank, for this study, it is expected to be uncertain and depends on the analysed empirical results. The extent to which inflation affects bank profitability depends on whether future movements in inflation are fully

anticipated, which, in turn, depends on the ability of firms to accurately forecast future movements in the relevant control variables. An inflation rate that is fully anticipated raises profits as banks can appropriately adjust interest rates in order to increase revenues, while an unexpected change could raise costs due to imperfect interest rate adjustment (Flamini et al, 2009). A widely used proxy for the effect of the macroeconomic environment on bank profitability is inflation (Athanasoglou, Delis, & Staikouras, 2008). Revell (1979); cited in Athanasoglou, Delis, & Staikouras, (2008), introduces the issue, noting that the effect of inflation depends on whether banks' wages and other operating expenses increase at a faster rate than inflation. The question is how mature an economy is so that future inflation can be accurately forecast and thus banks can accordingly manage their operating costs. As such, the relationship between the inflation rate and profitability is ambiguous and depends on whether or not inflation is anticipated.

III. Determinants of Profitability of Banks

A. Dependent Variable

Concerning the dependent variable to proxy profitability of commercial banks, it is better to look at both ROA and ROE, even though they differ from each other and express different things, they both remain two main indicators of management efficiency towards generating income from the money invested by the shareholders and the total investments made in assets, as well. However, of the two, most literature favours of ROA. This is due to the reason that ROE does not signal for the bank's financing through borrowing, whereas ROA does, hence ROE gives limited insight about the bank profitability and performance. The problem of ROA is that it excludes off-balance sheet (OBS) items of the bank creating a positive bias in evaluating bank performance. Thus, return on average asset (ROAA) can be termed as a main measure of profitability and return on average equity (ROAE) as supportive in line with the existing literature.

B. Independent Variable

Literature suggested that GDP is an inflation-adjusted measure that reflects the value of all goods and services produced in a given year, expressed in base-year prices, often referred to as "constant-price", see for example Athanasoglou et al, (2005; 2008), Dietrich & Wanzenried, (2011;2014) and Growe et al, (2014). Logic suggests that a major factor affecting company failure rate would be the overall economic circumstances within which companies are operating. In other words, an effective and efficient functioning of the financial sector requires sound and favourable macroeconomic environment in the country.

However, in their argument, Simiyu & Ngile (2015) emphasized that in this time of globalization it is essential for the financial sector to be strongly integrated with the global economy, and increased integration and growing macroeconomic fluctuations require more attention to be paid to the link between the noise that these fluctuations represent and the company's own development. One of these macro-economic factors that determine the profitability of commercial banks is gross domestic product (GDP). During the declining GDP growth the demand for credit falls which in turn negatively affect the profitability of banks. On the contrary, in a growing economy as expressed by positive GDP growth, the demand for credit is high due to the nature of business cycle. During boom the demand for credit is high compared to recession (Athanasoglou et al., 2005; Ongore and Kusa (2013),).

In other words, if GDP growth is high, the loan request increases and thus the banks can obtain bigger profits. On the contrary, if the GDP growth slows, the banks are confronted with an increased credit risk, increasing provisions and subsequently the profitability is reduced. Bad economic conditions can worsen the quality of the loan portfolio, generating credit losses, which eventually reduce banks' profits, and empirically, Demirgüç, Kunt and Detragiache, 1999; cited in Albertazzi et al (2009) found that bank profitability is an important predictor of financial crises.

Inflation is a sustained increase in the general price level of goods and services in an economy over a period of time due to the devaluation of the fiat currency being used. Inflation rate is the rate of changes in the price of any commodity, and has an inverse to profitability because an increase in inflation means lowering the profitability of banks due to higher prices (Saeed, 2014). Inflation is said to be the persistent rise in the general level of prices or a decline in the value of money over a period. Some economists often see inflation as an increase in the amount of money in circulation. Inflation is obviously determined in the short run if the demand for a commodity exceeds its supply while in the long run money supply seems to influence price changes (Abdulgafoor, 2000; cited in Umar et al, 2014). The effect of inflation on commercial bank profitability is an issue on which conclusion cannot be drawn hastily. Empirical investigations into the relationship between the variables have been inconclusive as the findings have been mixed. While some investigations observe positive relationship between the variables, others observe negative relationship, and yet others observe no significant relationship (Scottl & Ovufeyen, 2014).

Economic theory can predict either positive, negative or zero effect of the trend of inflation on performance depending on the specific assumptions of the model. Given the absence of a theoretical consensus, the anticipated relationship between inflation and bank performance remains an empirical issue largely (Umar, Maijama and Adamu 2014). According to Friedman (1977) informal argument regarding the real effects of inflation, his point comes in two parts: In the first part of his hypothesis, an increase in inflation may induce an inconsistent policy response by the monetary authority and therefore lead to more uncertainty about the future rate of inflation. In the second aspect of his hypothesis, the increasing uncertainty about inflation distorts the effectiveness of the price mechanism in allocating resources efficiently, thus leading to negative output effects.

Building on the work of Arellano and Bover (1995), Blundell and Bond (1998) has developed a system estimator that uses additional moment conditions in which lagged differences are used as instruments for the level equation in addition to the moment conditions of lagged levels as instruments for the differenced equation. Lelissa (2014) suggested that real GDP growth is found insignificant driver of commercial banks profitability. According to this author, this might not be a surprise as the share of financial intermediation in the GDP is still at very low level. Recent (2012) statistics from ministry of finance and economic development (MOFED) shows that the financial intermediation share in the GDP is only 2.7% by large indicates the detachment and limited contribution of the financial sector to the economy of the country (Rao & Lakew, 2012). However, note that the present researcher could argue that the insignificant effect of real GDP growth could not indicate the detachment that exists between the banks' financial intermediation role and economic growth, rather the contribution of the banks' intermediation role on GDP may, perhaps, be limited as compared to the percentage contributions of major

service sub-sectors. According to NBE annual report, 2014/15, the percentage contribution of the financial intermediation role has generally been treated as others sections category together with education, health and social work, private households with employed persons and other community, social and personal services as 16.4%, with growth rate of 5.1% all these together. The central bank of the country, NBE 2014/15, revealed that the total resources mobilized by the banking system in the form of deposit, loan collection and borrowing increased by 24.5% and reached Birr 138.7 billion at the end of 2014/15. With the help of remarkable branch expansion, deposit liabilities of the banking system reached Birr 367.4 billion reflecting annual growth rate of 25.5 percent over last year, 2013/14. Concerning the new lending activities, Commercial Banks and the Development Bank of Ethiopia (DBE) disbursed Birr 75.5 billion in new loans to various economic sectors during the review fiscal year, 2014/15, witnessing a 25.9% annual increase in line with higher deposit mobilization and collection of loans. Of the total new loans, about 44.5% was by private banks, and the rest, 55.5%, by public banks. All in all, the contribution of the financial intermediation role of banks to the country's GDP could not be denied both empirically and theoretically.

Geda & Tafere, (2008) claimed that the combination of the closed characteristics of Ethiopia's banking sector and its non-competitive market structure serves to weaken the link between financial intermediation and economic growth. Empirical studies by Beck et al. (2004); cited in Kiyota et al, (2007), concluded that increases in bank concentration were an obstacle to obtaining finance. They found that the constraining effects of bank concentration were exacerbated by more restrictions on bank activities, more government interference in the banking sector, and a larger share of government-owned banks. It would appear therefore that the highly closed nature of the Ethiopian financial sector would serve to negate the positive effects that would otherwise come from greater financial intermediation. A sound well-functioning banking sector can positively contribute to promote performance and leads to provide sustained economic growth (Rachdi, 2013). There is a strong positive link between the level of development, efficiency of a financial system and its contribution to economic growth (Greenwood & Jovanovic, 1990; Levine, 2005).

Inflation is a sustained increase in the general price level of goods and services in an economy over a period of time due to the devaluation of the fiat currency being used, (see for instance Athanasoglou et al, 2005; 2008; Dietrich & Wanzenried, 2011; 2014 and Growe et al, 2014). The inflation rate could have both direct effect, an increase in prices banks pay for inputs, such as labour, equipment, and facilities, and indirect effect, may perhaps come through changes in interest rates and asset values, on banks' profitability Staikouras & wood, (2004). Perry, (1992); Bordeleau & Graham, (2010) suggest that it is the extent to which inflation is successfully foreseen by bank management may determine its effect upon bank profitability, by doing so, banks can adjust their rates to offset it. If banks fail to anticipate it, costs may get increase faster than revenues and as a result bank profits will decline. Bordeleau & Graham, (2010) suggested that, because banks, in their maturity transformation role, lend money for longer periods than they borrow it for, inflation tend to decrease their margins and profits.

There are studies that found a positive and significant effect of inflation on commercial banks profitability, such as the finding

by Lelissa, 2014; Athanasoglou et al., 2005, 2008; Guru et al., 2002; Demirgüç-Kunt & Huizinga, 1999, 2001; Flamini et al., 2009; Garcia-Herrero et al., 2009; Gul et al., 2011; Sufian, 2011; Trujillo Ponce, 2013; Vong & Chan, 2006; Frederick, 2015, among others.

IV. Results and Analysis

Most of the prior empirical studies reviewed in this paper, such as Guru et al., 2002; Demirgüç-Kunt & Huizinga, 1999; Flamini et al., 2009; Garcia-Herero et al., 2009; Gul et al., 2011; Sufian, 2011; Trujillo once, 2013; Vong & Chan, 2006, found the positive and significant effect of inflation on banks' profitability. In their argument, they stated that inflation leads to an increase in bank performance as long as the banks can be able to anticipate future inflation and adjust interest rate to generate higher revenue than cost which leads to higher profit and performance as a result of adjusting the rate of interest. If inflation is fully anticipated and interest rates are consequently adjusted, the impact of inflation on profitability will be positive, resulting in increasing revenues more quickly than the costs, bank income increases more than bank costs, which may be viewed as the result of the failure of bank customers (comparative to bank managers) to forecast future inflation (Athanasoglou et al, 2008). Therefore, above normal profits can be extracted from the asymmetric information. According to Demirgüç-Kunt and Huizinga, (1999), the positive relationship between inflation and bank profitability implies that bank income increases more with inflation than do bank costs, and high real interest rates are associated with higher interest margins and profitability, especially in developing countries (i.e. like Ethiopia), may reflect the fact that demand deposits in developing countries frequently pay zero or below-market interest rate. Lelissa, (2014), has examined the Determinants of Ethiopian Commercial Banks Performance covering the period 1990-2012 and find the positive and significant effect of annual rate of inflation on commercial banks' profitability in Ethiopia. It was a surprising result for him as banks in Ethiopia does not seem to be affected by the change in real interest rate as the variation in interest rate in both the asset and liability side is constant and usually has fixed nature. According to him, even it varies; they have the discretion to adjust their rate in a way to maintain the spread. The author argued that the effect of inflation on the debt repayment capacity of the borrowers as well as on banks' ability to mobilize resources from the market which both increases expenses can be a convincing argument for the result. Though, some prior studies on the effect of inflation on the profitability of commercial banks claims that it is unclear and debatable (for example, Athanasoglou et al, (2005); Vong & chan, (2009), most studies argue that the positive or negative effect of this variable on commercial banks profitability is the result of the banks' ability to satisfactorily or fully anticipate the level of future inflation (see, Ongore & Kusa, (2013); Albertazzi & Gambacorta, 2009; Sufian & Habibullah 2009; Alper & Anbar, 2011; Ameer & Mhiri, 2013; Ayadi & Boujelbene, 2012; Demirguc-Kunt & Huizinga, 1999). Dietrich & Wanzenried, (2011) suggests that, these macroeconomic determinants, GDP growth and inflation, play an important role for banks in low- and middle-income countries. Therefore, macroeconomic policies in low- and middle-income countries are important. Above all, policies aiming to control inflation are an important priority in fostering financial intermediation. In particular, as high inflation rates lead to higher net interest margins, inflation also negatively affects credit demand.

Literature suggests that apart from bad economic conditions that can worsen the quality of the banks' loan portfolio via generating credit losses, which ultimately diminish banks' profits (Albertazzi & Gambacorta, 2009), capitalization also matters. In other words, basing their capitalization, the capacity of banks in sustaining the activity of the private sector may also be jeopardized, and the fluctuations of the business cycle may be aggravated (Gambacorta and Mistrulli, 2004).

The banks' profitability matters also due to "bank capital channel" (Van den Heuvel, 2003). This imperfect market for banks equity has been explained in the literature, most notably, in terms of the presence of agency costs and tax disadvantages (see Myers and Majluf, (1984); Cornett and Tehranian, (1994); Calomiris and Hubbard, (1995) and Stein, (1998), *enter alia*. These authors suggested that banks cannot easily issue new equity because of the presence of agency costs and tax disadvantages. That is if equity is adequately low and the issuance of new shares is too costly, both after a drop in banks' profitability, banks would reduce lending to meet and maintain regulatory capital requirements and this in turn would really affect consumption and investment, which is the case in Ethiopian banking industry that the contribution of their intermediation roll to the country's GDP is found too minimum as discussed so far. In this regard, for instance, the relative growth of the banks intermediation has fed into increasing paid up capital, although most are yet to meet the 500 million Birr requirement by the central bank (Addis fortun, 2015, feb. 07). In addition, the promising growth in the profit of the private banks is being shadowed by a growing expense, especially in the staff and general and administrative realm. All this brings the challenge of meeting the central bank's decree of a minimum paid up capital of 500 million Birr by 2016. Dehub Global Bank, for instance, has recapitalized its first profit gained in the last fiscal year, 2014, which was 18.5 million Birr, forgoing dividends that had to be paid to shareholders. On top of that, literature suggests, for the "bank capital channel" to be at work, that it is not necessary that capital requirement be currently binding. Van den Heuvel (2003), for example, shows that low capitalized banks may optimally forgo lending opportunities now in order to lower the risk of capital inadequacy in the future, even if capital is greater than regulatory capital requirements. In other words, one of the different factors affecting banks lending capacity is GDP shocks, this is due to the reason that demand for loans is pro-cyclical, which in turn affects banks profits from equities capital. Authors such as Stein, 1998; Calomiris and Hubbard, 1995; Myers and Majluf, 1984; Cornett and Tehran an, 1994, suggested that given the regulatory capital requirements, a link between bank capital and lending is established with an additional assumption that banks face an imperfect market for their equities. As a result, following a drop in banks' profitability, banks would reduce lending to meet regulatory capital requirements and this, in turn, would really affect consumption and investment, which substantially would affect the contribution of the financial intermediation to the economy, GDP. Besides, Gambacorta & Mistrulli, (2004), claims that capital also influences the way banks react to GDP shocks in such a way that well-capitalized banks can better absorb temporary financial difficulties on the part of their borrowers and preserve long-term lending relationships. As evident from the above mentioned discussion, finally, we can say that banks' profitability is a function of a large number of macroeconomic factors, each factor affecting profitability in one or the other way.

V. Conclusions

The macroeconomic factors are recently getting focus both theoretically and empirically as the most relevant factors affecting the performance of commercial banks operating in a given economic environment. Enormous amount of empirical studies have been conducted in developed nations, few in developing countries especially the SSA, very scanty in Ethiopia. Most of cross-country and nation-wise studies have arrived at divergent results due to differences in economic settings, the data, and the econometric models adapted, inter alia. In common, virtually all, these empirical studies suggests that macroeconomic factors, such as real GDP growth rate and inflation rate measured by the percentage change in consumer price index (CPI %), are found paramount important factors affecting directly or indirectly the profitability of commercial banks operating in countries irrespective of their level of economic growth. As to SSA countries, especially east Africa and more typically Ethiopian, case empirical findings in this regard are found very limited as suggested by various studies, and the present review and assessment as well, further empirical investigation is required via adopting a comprehensive, efficient and consistent model so as to capture some nature of financial data such as profit persistency, among others, through controlling for other bank-specific and industry specific factors which have the potential influence on commercial banks performances.

References and Bibliography

- [1] Afzal, A., Mirza, N., "Interest rate spreads in an emerging economy: the case of Pakistan's commercial banking sector", *Ekonomika Istrazivanja*, 25(4), 987, 2012.
- [2] Albertazzi, U., Gambacorta, L., "Bank profitability and the business cycle", *Journal of financial stability*, 5, pp. 393–409, 2009.
- [3] Alexiou, C., Sofoklis, V., "Determinants of Bank Profitability: Evidence From The Greek Ba Friedman, M. 1977.
- [4] Alper, D., Anbar, A., "Bank Specific and Macroeconomic Determinants of Commercial Bank Profitability: Empirical Evidence from Turkey", *Business and Economics Research Journal*, Vol. 2, No. 2, pp. 139-152, 2011.
- [5] Ameer, I.G.B, Mhiri, S.M., "Explanatory Factors of Bank Performance Evidence from Tunisia", *International Journal of Economics, Finance and Management*, Vol. 2, No. 1, 2013.
- [6] Arellano, M., Bover, O., "Another look at the instrumental variable estimation of error-components models", *Journal of Econometrics* 68: pp. 29–51, 1995.
- [7] Aremu, Ayanda, M, Ekpo, Christopher, I. Mudashiru, "Determinants of Banks' Profitability in a Developing Economy: Evidence from Nigerian Banking Industry", *Interdisciplinary Journal of Contemporary Research in Business*, Vol. 4, No. 9, 2013.
- [8] Athanasoglou, P. M, Delis, Staikouras, "Determinants in the bank profitability in the South Eastern European Region", *Journal of Financial Decision Making*, 2, pp. 1-17, 2006.
- [9] Athanasoglou, P.P., Brissimis, S.N., Delis, M.C., "Bank-specific, industry-specific and macroeconomic determinants of bank profitability", *Journal of International financial markets, institutions and money*, 18, pp. 121–136, 2008.
- [10] Athanasoglou, PP, Sophocles, NB, Matthaios, DD, "Bank-specific, industry-specific and macroeconomic determinants of bank profitability: Working paper", *Bank of Greece*, 1(1), pp. 3-4, 2005.
- [11] Ayadi, Boujelbene, "The ratio of the bank assets to the GDP (ASSGDP) has a negative and statistically significant impact on bank profitability, reflecting a more intense inter-bank competition in the financial systems", 2012.
- [12] Beck, T., Levine, R., "Stock markets, banks, and growth", *Journal of Banking & Finance* 28, pp. 423–442, 2004.
- [13] Bernanke, B.S., Gertler, M., "Agency costs, net worth, and business fluctuations", *The American Economic Review* 79, 14–31, 1989.
- [14] Bordeleau, E., Christopher, G. (2010). *The Impact of Liquidity on Bank Profitability: Working Paper/Document de travail* 2010-38.
- [15] Calomiris, C. W., Hubbard, G.R., "Internal Finance and Investment: Evidence from the Undistributed Profit Tax of 1936-37", *Journal of Business*, Vol. 68. No. 4, 1995.
- [16] Chewaka, J.E., "Legal Aspects of Stock Market Development in Ethiopia: Comments on Challenges and Prospects", *MIZAN LAW REVIEW*, Vol. 8, No. 2, 2014.
- [17] Cornett, M. M., Tehranian, H., "An Examination of Voluntary versus Involuntary Security Issuances by Commercial Banks: The Impact of Capital Regulations on Common Stock Returns", *Journal of Financial Economics*, Vol. 35, pp. 99-122, 1994.
- [18] Demirgüç-Kunt, A., Detragiache, E., "Financial Liberalization and Financial Fragility; Policy research working paper: Development Research Group, the World Bank and Research Department", *International Monetary Fund*, 1999.
- [19] Demirgüç-Kunt, A., Huizinga, H., "Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence", *The World Bank Economic Review*, Vol. 13, No. 2, pp. 379-408, 1999.
- [20] Demirgüç-Kunt, A., Huizinga, H., "Financial Structure and Bank Profitability, Development Research Group, The World Bank, and Department of Economics, Tilburg University, and CEPR, respectively", 2001.
- [21] Dietrich, A., Wanzenried, G., "Determinants of Bank Profitability before and During the Crisis: Evidence from Switzerland", *Journal of International Financial Markets, Institutions and Money*, 21 (3), pp. 307-327, 2009.
- [22] Dietrich, A., Wanzenried, G., "Determinants of bank profitability before and during the crisis: Evidence from Switzerland", *Journal of International Financial Markets, Institutions & Money* 21, pp. 307–327, 2011.
- [23] Dietrich, A., Wanzenried, G., "The determinants of commercial banking profitability in low, middle and high-income countries", *The Quarterly Review of Economics and Finance* 54, pp. 337–354, 2014.
- [24] Eshete, Z.S., Tesome, K.W., Abebe, T.K., "Competition in Ethiopian Banking Industry", *African Journal of Economics* Vol. 1 (5), pp. 176-190, 2013.
- [25] Firms Have Information those Investors do not have. *Journal of Financial Economics*, Vol. 13, pp. 187-221.
- [26] Flamini, V., McDonald, C., Liliana Schumacher, L., "The Determinants of Commercial Bank Profitability in Sub-Saharan Africa", *IMF Working Paper*, 2009.
- [27] Francis, M.E., "Determinants of Commercial Bank Profitability in Sub-Saharan Africa", *International Journal of Economics and Finance*; Vol. 5, No. 9, 2013.
- [28] Frederick, N.K., "Factors Affecting Performance of Commercial Banks in Uganda -A Case for Domestic Commercial Banks", *International Review of Business Research Papers* Vol. 11, No. 1. pp. 95 – 113, 2015.

- [29] Gambacorta, L., Mistrulli, P.E., "Does Bank Capital Affect Lending Behaviour?", *Journal of Financial Intermediation*, Vol. 13, pp. 436-457, 2004.
- [30] Garcia-Herrero, A., Gavila, S., Santaba, D., "What explains the low profitability of Chinese banks?", *Journal of Banking & Finance*, 33(11), pp. 2080-2092, 2009.
- [31] Geda, A., Tafere, K., "The Galloping Inflation in Ethiopia: A Cautionary Tale for Aspiring 'Developmental States' in Africa", Department of Economics, Addis Ababa University, 2008.
- [32] Greenwood, J., Jovanovich, B., "Financial Development, Growth, and the Distribution of Income", *The Journal of Political Economy*, Vol. 98, No. 5, Part 1. pp. 1076-1107, 1990.
- [33] Growe, G., DeBruine, M., Lee, J.Y., Maldonado, J.F.T., "The Profitability and Performance Measurement of U.S. Regional Banks Using the Predictive Focus of the Fundamental Analysis Research", In *Advances in Management Accounting*, pp. 189-237, 2014.
- [34] Gul, S., Irshad, F., Zaman, K., "Factors affecting bank profitability in Pakistan", *The Romanian Economic Journal*, 14, 6187, 2011.
- [35] Guru, B. K., Staunton, J., Shanmugam, B., "Determinants of commercial bank profitability in Malaysia", *Journal of Money, Credit, & Banking*, 17, 6982, 2002.
- [36] Haron, S., "Determinants of Islamic Bank Profitability: *Global Journal of Finance and Economics*", USA, Vol. 1, No. 1, 2004.
- [37] Kapur, D., Gualu, A.K., "What drives the performance of commercial banks in Ethiopia?", *International journal of research in commerce & management*, Vol. 2, No. 7, 2011.
- [38] Kiganda, E.O., "Effect of Macroeconomic Factors on Commercial Banks Profitability in Kenya: Case of Equity Bank Limited", *Journal of Economics and Sustainable Development*, Vol. 5, No. 2, 2014.
- [39] Kiyota, K., B Peitsch, B., Stern, R.M., "Research Seminar in International Economics: The Case for Financial Sector Liberalization in Ethiopia", Gerald R. Ford School of Public Policy the University of Michigan Ann Arbor, Michigan 48109-091 Discussion Paper No. 565, 2007.
- [40] Lelissa, T.B., "The Determinants of Ethiopian Commercial Banks Performance", *European Journal of Business and Management* Vol. 6, No.14, 2014.
- [41] Levine, R., "Finance and Growth: Theory and Evidence", *Handbook of Economic Growth*, Vol. 1A, 2005.
- [42] Lipunga, A.M., "Determinants of Profitability of Listed Commercial Banks in Developing Countries: Evidence from Malawi", *Research Journal of Finance and Accounting*, Vol. 5, No. 6, 2014.
- [43] Messai, A.S, Gallali, M.I, Jouini, F., "Determinants of Bank Profitability in Western European Countries Evidence from System GMM Estimates", *International Business Research*; Vol. 8, No. 7, 2015.
- [44] Mirzaei, A., "Bank-specific and Macroeconomic Determinants of Profitability in Middle Eastern Banking", *Iranian Economic Review*, Vol. 15, No. 29, 2011.
- [45] Myers, S.C., Majluf, N. S., "Corporate Finance and Investment Decisions", 1984.
- [46] Naceur, S.B., Omran, M., "The effects of bank regulations, competition and financial reforms on banks' performance", *Emerging Markets Review* 12, pp. 1-20, 2011.
- [47] Obamuyi, T. M., "An analysis of the deposits and lending behaviours of banks in Nigeria", *International Journal of Engineering and Management Sciences*, pp. 46-54, 2013.
- [48] Ommeren, S. V., "An Examination of the Determinants of Banks' Profitability in the European Banking Sector", An Unpublished M. Sc. thesis, Department of Accounting and Finance, Erasmus School of Economics Erasmus University, Rotterdam, 2011.
- [49] Perry, P., "Do banks gain or lose from inflation", *Journal of Retail Banking*, 14(2), 2530, 1992.
- [50] Poghosyan, T., Hesse, H., "Oil Prices and Bank Profitability: Evidence from Major Oil-Exporting Countries in the Middle East and North Africa", *Imf working paper*, 2009.
- [51] Rachdi, H., "What determines the Profitability of Banks During and before the International Financial Crisis?", *Evidence from Tunisia: International Journal of Economics, Finance and Management* Vol. 2, No. 4, 2013.
- [52] Rao, K.R.M., Lakew, T.B., "Determinants of Profitability of Commercial Banks in a Developing Country: Evidence from Ethiopia", *International Journal of Accounting and Financial Management Research (IJAFMR)* Vol. 2 Issue 3, pp. 1-20, 2012.
- [53] Saeed, M.S., "Bank related, industry related and macroeconomic factors affecting bank profitability: A case of the United Kingdom", *Research Journal of Finance and Accounting*, Vol. 5, No. 2, 2014.
- [54] Scott, A.O.S, Ovuefeyen, E.J., "Effects of Economic Openness and Inflation on Commercial Banks' Profitability: Panel Data Evidence from Nigeria, Post Banking Sector Consolidation (2005-2012)", *European Journal of Business and Vol. 6, No. 30, 2014.*
- [55] Simiyu, C.N, Ngile, L., "Effect of macroeconomic variables on profitability of commercial banks listed in the Nairobi securities exchange", *International Journal of Economics, Commerce and Management United Kingdom*, Vol. 3, Issue 4, 2015.
- [56] Staikouras, C. K., Wood, G. E., "The determinants of European bank profitability", *International Business and Economics Research Journal*, 3, 5768, 2004.
- [57] Stein, J. C., "An adverse-Selection Model of Bank Asset and Liability Management with Implications for the Transmission of Monetary Policy", *RAND Journal of Economics*, Vol. 29, No. 3, pp. 466-86, 1998.
- [58] Sufian, F., Chong, R. R., (2008), "Determinants of Bank Profitability in a Developing Economy: Empirical Evidence from Philippines", *Asian Academy of Management Journal of Accounting and Finance*. [Online] 4(2) pp. 91-112. [Online] Available: <http://www.usm.my/journal/aamjaf/vol%204-2-2008/4-2-5.pdf>.
- [59] Sufian, F., Habibullah, M.S., "Bank Specific and Macroeconomic Determinants of Bank Profitability: Empirical Evidence From The China Banking Sector, Front", *Econ. China*, 4(2): pp. 274-291, 2009.
- [60] Trujillo-Ponce, A., "What Determines the Profitability of Banks?", *Evidence from Spain*, 2013.
- [61] Umar, M., Majjama, D., Adamu, M., "Conceptual exposition of the effect of inflation on bank performance", *Journal of World Economic Research* 3(5), 2014.
- [62] Van den Heuvel, S.J., "Does Bank Capital Matter for Monetary Transmission?", *Federal Reserve Bank of New York, Economic Policy Review*, May, pp. 258-65, 2003.

- [63] Vong, A.P.I, Chan, H.S., (2006), "Determinants of Bank Profitability in Macao", Research Gate. [Online] Available: <https://www.researchgate.net/publication/252081427>
- [64] Keatinge, T., "The Role of public and Private Sector Banking in Ethiopia's Future Economic growth", Global Center, a policy brief, 2014.
- [65] Revell, J., "Inflation and financial institutions", Financial Times, London, 1979.



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