

Non-Interest Income Determining Factors: Private Commercial Banks in Ethiopian

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Abstract

Unlike foreign banks operating in exposure to foreign competition, private commercial banks in Ethiopia have adapted diversified income sources business approaches since the establishment and commencement of service delivery. This paper is the first paper to identify the main determining factors of diversified areas of income source commonly called Non-Interest Income (NonII), other than traditional interest income in Ethiopian private commercial banks. NonII (dependent variable) is a combination of different sub-components among which this paper lists out nine independent variables (Deposit, Liquidity, Loan, Foreign Currency, Net-Interest Income, Provision for loan loss, Capital, Asset and Inflation). The data/variables are seven years (2007/8 – 2013/14), collected from nine (9) private commercial banks' financial statements. The banks selected in simple cluster sampling technique. The method of analysis conducted at two stages; the first stage of trend/time series analysis done by calculating the yearly mean and coefficient of variation of the selected banks and have pointed out the interdependency of NonII and Net-Interest Income and the income stabilization role of NonII by offsetting risks of decline in interest income. Though, accompanied by high volatility, smaller banks generate higher NonII than larger banks. On the other hand larger banks are more stable and efficient in asset utilization than smaller banks. The second stage of multiple regression analysis conducted on the ten variables and helps to pinpoint two main determining factors of NonII for Ethiopian private commercial banks. Foreign currency holdings and Asset sizes are great contributors for NonII. The study output compared against priori studies conducted in Africa and European Union, and basic similarity and differences observed. The study is the first of its kind (keeps originality) and the results of the analysis can be informative for the banking industry, when reconsidering its business model in the light of current as well as future financial market developments. The study result as well shades some light for further investigation.

Keywords: *Non-Interest Income, Private Commercial Banks, Foreign Currency Holding, Income Diversification/Alternative Source of Income*

1. Introduction

In a highly liberalized and integrated financial sector the banking business for more than two decades and half have diversified their source of income besides to the traditional banking businesses. The effort of diversification for generating income from Off-Balance-Sheet (OBS) activities often in banking business called Non-Interest Income (NonII) activities. In USA and Europe the share of Non-Interest Income (NonII) in total income has increased over the last 15 years (Robert & et al, 2014). While NonII which is a non-traditional activities, get momentum and increased proportion in total income, it also became the centre of attention for many authors like De Young, Tara, Rise, Calmès C, Liu Y (2009) & Calmès C, Théoret R (2010), etc. and have assessed the impact of off-balance-sheet (OBS) activities on banks' re-

turns, risk-return trade-off.

The assessment and analytical results made by Authors like (De Young & Rice, 2004) and institutions and international Banks, Deutsche Bundesbank (2014), European Central Bank (2000), etc. shows that Banks enticed to resort to NonII bearing activities with primary objective of looking for alternative or additional source of income to compensate for or avoid the risk of decline in total income caused by the weakening in profit income (Interest Income). The behavior of banks towards the activities of NonII governed by different internal and external factors and among which technological advancement, demand for new services, bank size, inflation and high loan risk are among the details (Aykut & Bunyamin, 2012), (Basil Senyo & et al, 2014). Economic growth, high competition for resource and regulatory measures are among the external determining factors. Business orientation that whether banks are retail, security or investments oriented are also among the major determining factors (Matthias, 2014).

All the investigation and analysis made on the issue by many Authors are done in financially liberalized economic environment, i.e. in the environment in which ownership and free or active participation of foreign banks allowed. The economies on which the empirical review conducted in general and the banking sector in particular, relatively have well developed and strong stock or capital market.

1.1 Ethiopian Banking and Payment System

The Banking system in Ethiopia is a two-tier system in which the National Bank of Ethiopia (NBE) is the apex of the system regulating and supervising financial system in general and all commercial and development banks and Insurance companies in particular. NBE has the authority to design and implement monetary policy as well as to supervise and regulate the financial systems a whole (FDRE HPR, 591/2008). The National Bank of Ethiopia has registered and granted licenses for 19 commercial banks; of which 16 are privately owned and three (3) state owned banks (NBE, 2002).

The banking proclamation (FDRE HPR, 592/2008) issued by the House of people's Representative allows the private commercial banks to provide full-fledged banking services involving both local currency and service provision to handling of foreign exchange transactions. On the basis of their customers' request banks currently are using various modes of payment instruments, paper based and electronic. Transmitting payments using telegraphs, SWIFT, mobile, internet, ATM, as well as letters of credit, guarantee issuance, promissory notes (Wegagen Bank et al, 2013/14), as governed by the different conventions and rules of the International Chamber of Commerce to which Ethiopia is a signatory, is permitted.

Operation in foreign exchange, bank account maintenance (local and foreign), opening of accounts in foreign banks, all activities involving external trade services and other payments or handling incoming payments like export receipts are carried out by all banks without limit and restrictions. However, export of currency or consignments are highly restricted and under close control of NBE.

The banking and payment system of Ethiopia, discussed briefly above, indicates that unlike foreign large banks which have many decades of experience, the private commercial banks in Ethiopia since their establishment have directly started operation or

provision of OBS activities and earn NonII.

The financial system in Ethiopia is in a highly protected environment from external competition. Commercial presence of foreign banks is prohibited, which is an opportunity or challenge for domestic banks. In addition compared to foreign banking system the financial system in Ethiopia is not developed one that the security, capital and or stock market is almost is not there.

This paper has focused more on the Off-Balance-Sheet (OBS) activities of the private commercial banks by taking clustered sample of nine (9) from the total 16 banks operating in Ethiopia with special focus on the major inducing cause to resort to diversification. The income statements of these Ethiopian commercial private banks (Private Commercial Banks, 2014) shows that the proportion of OBS income to total income is increasing from year to year and holding about 30 to 50 percent of the total income, which is 40 percent on average in USA commercial banking industry (De Young Robert, 2003).

2. Statement of Problems

The revenue/income generated from interest on loan for long was the only means of existence for Banks. However, that trend was failed to keep persistently due to varies external and internal developments and impeding factors on traditional bank business. Banks, for more than two decades and half, resorted towards seeking for some kind of risk free additional alternative source of income (Robert & et al, 2014). One way of diversity of banking operation towards Off-Balance-Sheet activities (OBS), which commonly bankers call it Non-Interest Income (NonII), have identified to have different effect on total income depending on the overall business model or characteristics of the bank (Matthias, 2013).

Different Authors like (Calmès & Théoret, 2012), (Joon-Ho, 2008) have conducted studies to identify the determining factors for NonII decision variables that capture both quantitative and qualitative parameters/characteristics. The variables identified by (Calmès & Théoret, 2012) to look into the hidden benefits of diversification were the share of NonII and Return on Asset (RoA). Similarly (Joon-Ho H. , 2008) takes variables of larger banks size, lower net interest income, high impaired loan ratio and high cost-income ratio, of commercial Banks in OECD countries; and found out that higher Non-Interest Income has been exhibited. Joon also has taken macro-economic factors like countries with slow economic growth, stable inflation and well developed stock market, facilitates for higher NonII.

The empirical analysis made by the forgoing and many more researcher like (Iftekhhar & et al, 2009), (Matthias, 2014), etc. are conducted in a highly liberalized economic environment in which the banking sector exposed to external competition, have resulted in similar outcome that diversification into NonII activities can support banks' income stabilities.

Linking the case with the Ethiopian financial or banking system, some divergence is observed that the Ethiopian financial sector works in relatively closed environment in which the participation of foreign banks is prohibited. The financial or stock/capital market is not there or not developed to create much better opportunities for banks' diversification effort

However, banking business and Off-Balance-Sheet activities in Ethiopia are the day

to day practices for all the 16 (sixteen) private retail commercial banks, granted to do so by the regulation of NBE (NBE, 2002). The information on the annual reports of the selected 9 (nine) retail commercial banks shows that the share of NonII has recorded in an increasing trend and holds about 30 percent to 50 percent proportion in total income (Wegagen Bank et al, 2013/14).

On the subject matter the researcher of this paper didn't find a study done on the Ethiopian financial or banking sector. Therefore, this paper is eager to identify what unique variable/factor differentiates Ethiopian private commercial banks from foreign banks in generating Non-Interest Income by exhaustively listing out all appropriate endogenous and exogenous parameters that induce Ethiopian private commercial banks to determine to diversify into NonII generating activities and see the interdependency between the variables. Second what the most contextual unique variable to Ethiopian banking business that differentiates from the results of other prior study results done in foreign countries.

3. Theoretical and Empirical Literature Review

The features and determining factors of NonII were reviewed from experimental as well as theoretical perspectives. The definitions, components, features or characteristics, degree of substitutability and regulatory measures and possible impacts on NonII were reviewed under the two broad categories. Most of the reviewed literatures are experimental type on different countries' and regions. Few theoretical literatures were found on the subject matter written by some writers.

3.1 Theoretical Review

Starting by the definition of Non-Interest Income (NonII), by (Robert & et al, 2014) NonII is in total operating income and is composed of fee, trading unclassified (non-fee & non-trading) income. In an effort of determining theoretical set up by analyzing bank concentration (in terms of size) against NonII, (Fariborz & et al, 2011) has defined NonII in a ratio which is defined as Net Non-Interest Income divided by gross Interest Income.

The components or sub-components of NonII to specific activities of banks' were presented as ATM facilities, money transfer, demand draft/pay orders, signature verification, demand account, online bill/tax payments, online ticket booking, third party product, sale of insurance, sale of mutual funds, sale of gold coins etc. (Eknath Kundlik, 2012).

De Young and Toran 2012 have separated the sources for Non-Interest Income in to three broad categories. The condition that requires banks to hold risky assets like investment banking, venture capital, proprietary trading or other activities which is non-traditional Stakeholder activities. The second category composed of securities brokerage, insurance sales or other activities that do not require banks to hold risky assets, which is from non-traditional Fee-for-Service activities. The last category of NonII sources includes traditional banking activities permitted prior to deregulation e.g., depositor services, fiduciary services.

Related to the intensity of contribution of the two revenue components (De Young & Tara, 2003) referring back the case to economic crisis have observed that expan-

sion in to NonII have improved the risk return trade-off during the first part of the period of economic crisis but worsened the risk return trade-off immediately after the recovery from the crisis.

3.2 Empirical Literature Review

Experimental findings by different Authors on country as well as regional level analysis have set definitions, composition, overall characteristics and merits and demerits of NonII.

While identifying and defining the determinants and consequences of banks' income diversification of Organization for Economic Cooperation and Development (OECD) countries, (Joon-Ho, 2008), has simply defined Non-Interest Income as a share of total operating income. Similarly, (You , 2014) have defined Non-Interest Income as divided by the sum of Net Interest Income and Non-Interest Income. (Basil Senyo & et al, 2014), when analyzing Non-Interest Income of commercial banks in Ghana, has defined it as fee, commission and other income and is the ratio of total Non-Interest Income to Total Asset. On the other hand (Eknath Kundlik, 2012), has broadly defined Non-Interest Income as fee-earning activities such as insurance, investment banking, mortgage financing, securitization and other non-banking activities.

Many writers have forwarded the concept of NonII activities linking it with several bank-level characteristics, such as bank size, credit risk, and interest rate risk. Bank-level characteristics as explained by Matthias Kohler (Matthias , 2013) doing on German Banks; are banks with business orientation like Savings banks, Co-operative banks and other forms of retail oriented banks; and Investment oriented banking. Retail oriented banks often earn their income from account administration, insurance or consumer credit fees. On the other hand for investment oriented banks most of their fee and commission income comes from underwriting, brokerage, treasury management, securitization and clearing and other transaction-related services. Non-Interest Income by (Sherene & Bailey-Tapper, 2010) generally be divided into commission and fee activities and trading activities. For instance the components of NonII has been explained with the following elements of service charges, transaction fees and commissions, dividends and trading profits on securities, foreign exchange gains and losses and other income.

For Li-Wei Huang 2006, Non-Interest Income components were trading revenue, fee incomes & non-fee incomes, various non-interest income activities including fiduciary activities, life insurance, other insurance services, loan servicing, annuity sales, securities brokerage and investment banking. Fiduciary activities are broader in range and are called a person or entity (firm, bank, credit union), that have legal personality to hold asset (cash property, securities) or information as an agent-in-trust for a principal (stockholder, customer, member).

At regional level the (European Central Bank (ECB), 2000) has identified different components of Non-Interest Income, which called it mixture of heterogeneous components that differs in relative importance in contributing to Non-Interest Income. It is calculated as the sum of Net fee and commission income (fee & commission receivable less fee & commission payable), income from securities including shares,

variable yield securities and other participating interest accounts.

The heterogeneous components of NonII, designated by European Central Bank, 2000, measured in quantitative terms. Fees and commissions are the main component and (in 1998) represented, on average, around 54 per cent of total non-interest income for EU banks (50 per cent for the euro area) with national figures ranging from 35 percent to 72 percent. However, a declining trend was observed in the relative importance of fees and commissions as a source of non-interest income for the EU banks in years (1994-98). Fees and commissions can in turn be divided into various sub-components, such as net commissions on payment transactions, on securities transactions, for guarantees, for safe custody and for foreign exchange transactions.

Compared to total asset, in European Union, the average Non-Interest Income to total asset has increased from 0.88 per cent in 1994 to 1.09 per cent in 1998 (Rosie & et al, 2003). As competition increases from year to year, the share of NonII in total income in the European banking Income increased from 26 percent in 1989 to 41 per cent in 1998 (Iftekhhar & et al, 2009) and (European Central Bank (ECB), 2000). In India the share of Non-Interest Income to total income has increased from about 20 per cent in 2010 to 25 per cent in 2012 (Eknath Kundlik, 2012).

In USA banks the proportion of noninterest from total operating income has peaked at 44 percent in 2003, up from 35 percent in 1993 and 24 percent in 1983 (De Young & Torna, 2012). This indicates that the proportion of income from the non-traditional activities shows increments from year to year. However, almost all banks generate the largest part of their income from traditional banking activities (interest income). Bank size as measured by asset size has to do with the amount of NonII to be generated, i.e. the proportion of NonII varies when the size of the bank varies. Feldman and Schmidt (1999) have found out that the ratio of NonII to Operating Income is 27 percent in large banks and 15 per cent in smaller banks in 1984. Through time the ratio has increased to 46 per cent and 28 percent for larger and smaller banks respectively in 1999. In USA in the aggregate commercial banking industry asset, NonII has increased from 0.77 percent in 1980 to 2.39 percent in 2001 (De Young & Tara, 2003). For De Young Large banks measured by larger asset size, generate more Non-Interest Income than smaller banks. Irrespective of size, on the other hand, well-managed banks rely less heavily on NonII.

Banks to meet unexpected withdrawals and request for loan or working capital may hold larger amount of money/liquid asset. Banks with higher liquidity are considered as one with adequate cash to meet all legal obligations and customers demand. However, the larger the amount of liquid asset held by a bank the larger the idle money which incurs cost. Often higher liquidity has a positive relationship with NonII (Basil Senyo & et al, 2014) as banks resort to looking for alternative income to keep their commitment for their customers/depositors.

The two income components NonII & NII have different degree or magnitude of contribution. The effect of NonII on profitability has mixed results. Some explicitly explains that NonII has positive impact in increasing profitability, while other link it that the offsetting strength of NonII to declining interest margin is weak. Although the growth of NonII did not fully offset the reduction in net interest margin, this

growth nevertheless helped to consolidate the banks' overall profitability (Rosie & et al, 2003). However, this result may conceal market differences among countries or among banks.

While measuring the instability/volatility of NonII using statistical coefficient of variation, Rosie, et al 2003, have found out that the volatility of NonII is higher than the volatility of Interest income for banks in all EU countries. Volatility in financial operation and in incomes from securities are higher and have risks, therefore, NonII in general is instable or does have higher volatility than NII.

Induced by regulatory measures, taken by supervisors, including liquidity coverage ratio, reserve requirements etc. all are restrictive for free movement of resources, banks intensify competitions for collection of deposits at higher rate and extend loans at lower rate, which ultimately narrows interest income margin of banks. The processes likely continue to depress the net interest income margin further to induce banks resort to NonII generation activities to offset the decline in interest margin (Matthias, 2013).

Different macro-economic factors including Gross National Income (GNI) per capita, real GDP growth, real interest rate, inflation rate & stock market capitalization relative to nominal GDP (Joon-Ho H. , 2008) could have effect on bank performance in general and on NonII in particular. Joon-Ho, 2008 forwarded the idea that rate of inflation is significantly negative and stock market capitalization to GDP significantly positive. That suggests that it facilitates for NonII expansion of commercial banks. On the other hand, Basil Senyo identified positive but insignificant relationship between inflation and NonII, therefore, banks resort to NonII to escape inflation penalty.

4. Research Method

The empirical investigations made are based on seven years (June 2008 to June 2014) data obtained from annual reports of the nine private commercial banks operating in Ethiopia, and on a single macro-economic variable obtained from Central Statistics Agency of Ethiopia. The data, including a dependent variable, have a total of ten (10) variables. Each variable expressed in ratio terms divided by respective direct relationship. The identified dependent and independent parameters/variables included in the estimations are; Non-Interest Income (NonII), Net-Interest Income (NII), Customers Money Deposit (MD), Loan, Liquidity (Liq), Provision for Loan Loss (Ris), Foreign Currency Holdings (FrX), Capital (CA), Bank size or Asset (BS) and inflation (Inf). Profit before Tax (PbT) as well is taken as a variable to conduct time series analysis together with Non-Interest Income (NonII) and Net-Interest Income (NII). The relationship and effect of the latter two on Profit before Tax (PbT) observed in the time series analysis.

4.1 Explaining and Justifying Selected Independent Variables

4.1.1 Mobilized Deposit (MD)

As a bank is able to mobilize more deposits under higher interest rate and lower risk of nonperforming loan, there is a higher propensity of it making more loans, hence a higher level of involvement in traditional activities. The contrary becomes the case where the bank's core deposits are limited, lower interest rate and high risk of

nonperforming loan; hence its attraction to other revenue sources of NonII becomes higher. (Paul Rotich; et al, 2011),(Matthias, 2013)and (Basil Senyo, et al, 2014). ; The foregoing arguments can make clear that NonII has something to do with the level of customer deposits and this relationship could be either positive or negative depending on the peculiar situation of each of the banks in question.

This paper used Mobilized deposit expressed as the Ratio of Total Deposit to Total Asset (MD/TA) of each Bank.

4.1.2 Bank Liquidity (Liq)

Unexpected deposit withdrawals and loan demand have direct relationship with the liquidity strength of each bank (Rogers and Sinkey 1999). A highly liquid bank could be described as one with adequate cash to meet ensuing demands for withdrawals, loans and against losses arising from the “fire-sale” of assets. A bank’s exposure to risk could be lower by holding a relatively high proportion of liquid assets and equally unlikely to earn high profits (Goddard & et al, 2004). Higher amount of liquidity which is idle, however, can cause shareholders to lose proportional amount of income to be generated from return on loan. Therefore, banks look for alternative source of Income (NonII).

Bank Liquidity variable is represented by the ratio of Cash and Short-term Investments to total Money Deposit (BS/MD).

4.1.3 Bank Size (BS)

Participation in non-traditional activities varies greatly across banks due to differences in size, and other characteristics (Basil Senyo; et al 2014). The factor related to the level of non-traditional activities is firm size, and require some degree of specialization to successfully and effectively achieve the set target by exploiting opportunities. Under this assumption as larger banks better equipped to use new technologies can have a positive relationship with the level of non-traditional activities than smaller banks. To make analysis on Non interest (nonprofit) income and bank performance, AykutKarakaya&Bunyamin 2012, used banks size as independent variable in the form of three components; natural logarithm of number of employees, shares of each bank in the industry and natural logarithm of total asset. The Natural Logarithms of Total Asset (LogAsset) of each bank is used in this paper to represent bank size (BS) as independent variable.

4.1.4 Net-Interest Income (NII)

Common agreement exists between all Authors that Interest Income or Net-Interest Income (NII) is the main and largest sources of total income for all banks (Aykut & Bunyamin, 2012), (Basil Senyo & et al, 2014), (Calmès & Théoret, 2012). Net-Interest income is the difference between total Interest Income minus Interest Expense. If a bank is making relatively higher profits from its interest earnings, its involvement in other non-profit (NonII) earning activities could be reduced. This is because in most cases, NonII is meant to boost possible shortfalls in interest income. By this premise, a negative relationship between Interest and Non-Interest Income is expected.

In this paper, Net-Interest Income (NII) (Interest Income minus Interest expense) used as one of the independent variables and represented as the ratio of Net-Interest Income to Net Operating Income (NII/NOI).

4.1.5 Exposure to Risk (Ris)

Risk is a very important consideration of most banks in the conduct of their business in both traditional and non-traditional activities, hence the relevance of its inclusion in estimation process. In principle, a bank's capacity to absorb unforeseen losses determines its level of risk (Goddard & et al, 2004). Loan-loss provisions are the traditional way that banks manage their credit risks or non-performing loans (NPLs). The Provisions for Loan is used as a measure of bank's exposure to risk. The higher the amount of provision for loan the discouraging for banks to involve in interest bearing activities, therefore, resort to NonII.

The variable represented as the ratio of Provisions for Loan Loss to Total Loan (Ris/Loan)

4.1.6 Capital (CA)

Capital or capital adequacy (CA), which is Core Capital (shareholders equity) and supplemental capital (loan loss reserves) (R Michael & W. Dennis, 2002) is required to obtain license and continue operation and stay competitive in the market. It answers the question as to how adequate the owners' investment in a bank is to cover its liabilities. In theory an excessively high Capital could indicate that a bank is operating over cautiously and can absorb potential losses and more likely to survive (Madura, 2003) but by ignoring potentially profitable investment opportunities and sacrificing better earning per share. In that case banks resort to alternative source of income, to compensate for the loss of opportunities. Then a positive relationship expected between NonII and Capital (CA) is expected.

Capturing the basic concepts CA is measured in the form of the ratio of Equity Capital to Total Asset and included in this paper as an independent variable.

4.1.7 Foreign Currency Holdings (FrX)

Banks by establishing correspondent relationship with foreign banks in foreign countries facilitate import and export trade by receiving and giving guarantee and settling payments (Wegagen Bank et al, 2013/14). The amount of foreign currency holdings in correspondent banks can determine the amount of income to be generated from by facilitating trade. The larger the amount of foreign currency holdings would be the larger foreign trade financing and proportional gain of NonII.

Therefore, the Birr equivalent of foreign currency deposit in foreign banks of each bank represented as an independent variable and explained as the Ratio of the Birr equivalent Total Foreign Currency holdings in foreign banks to Money Deposit (FrX/MD).

4.1.8 Loan

Banks in their traditional banking activities provides Loans and advances to customers with objective of generating Net-Interest Income (NII) for intermediation role they played. When banks grant higher amount of loan their expectation for return for interest income is higher, then their interest towards NonII may decline. As banks with higher levels of noninterest income have fewer loans on their books (Robert & et al, 2014) . Increased competition among banks for loan and deposit markets has initiated banks to increase their NonII activities. The ratio of outstanding Loan and

advances to total deposit (Lon/MD) represents independent variable.

4.1.9 National Inflation (Inf)

Inflation is the continual increase in price levels which affects individual businesses; including banks (Mishkin, 2011) by lowering revenue or profits. There is a significant and economically important negative relationship between inflation and banking sector development. Inflation can affect interest rate because of the direct and indirect effect on the supply of savings and the demand for loanable funds (Madura, 2003). This makes inflation a likely contributor to bank's financial performance and involvement in both interest and non-interest earning activities. Inflation may discourage borrowers as it could increase the real value of debt, reducing payment rate, asset quality and capital ratio of banks (Robert & et al, 2014). By implication the lower repayment capacity of borrowers means lower demand for loan therefore banks encouragement to look for alternative source of income deviating from the traditional activities.

The year-over-year change in the Consumer Price Index (CPI) as an Inflation variable represents Inflation (Inf) in this paper.

4.2 Data Analysis

Two approaches were adapted to analyze the sample data collected. The first approach is simple Time Series analysis to see the trend and relationship between NonII and Net Interest Income (NII) and their impact over Profit before Tax (PbT). The second main approach is Multiple Regression Analysis, tests and analyzes the data collected and point out the main determining factors for Non-Interest Income.

4.2.1 Time Series Analysis

The time series analysis has taken three statistics ratios of NonII, NII and Profit before Tax (PbT) to total asset to see the trends of the collected data. The analysis carried out in three forms; by taking all nine banks together aggregate level, dividing the banks in to large, with asset size of Birr 10 billion to 22 billion and small banks with asset size of Birr three to seven billion. Annual statistical trend analysis adapted by finding the Mean and Standard Deviation and to feel the magnitude of the standard deviation relative to the magnitude of the mean, the Coefficient of Variation (CofVar) calculated by dividing the standard deviation as a percentage of the mean across the seven years.

4.2.2 The Multiple Regression analysis

The collected that include one dependent variable (Non-Interest Income) for which the paper stands for and nine independent variables, considered have role to determine Non-Interest Income changed into ratio terms as follow;

Non-Interest Income (NonII) and Net-InterestIncome (NII) divided by Net Operating Income (NOI) as NonII/NOI and NII/NOI . Foreign Currency (Fr_x/MD), Liquidity (Liq/MD), and Loan (Loan/MD) divided by Total Money Deposit (MD). Provision for Loan (Ris/Loan) divided by total loan. Customers' Deposit and Equity Capital each divided by total asset as (MD/TA) and (CA/TA) respectively. Total Asset of each banks standardized as Natural Logarithms of total Asset (LogAsset). The macro-economic variable National yearly Inflation (Inf) adopted as it is.

Before regressing on, test of reliability of data are done using linearity, two step multicollinearity and independence of residuals. The regression on the variables resulted in least square or Beta coefficients and showed the relative strength of two independent variables to determine the dependent variable (NonII).

5. Study Findings

5.1 Main findings of Time Series Analysis

The findings centers on the statistical indicators of Mean, Standard Deviation and Coefficient of Variations (CofVar). The Standard Deviation more explained by the value of the CoVar

5.1.1 Aggregate Trend Analysis

The Aggregate trend analysis has resulted in four main findings

- Non-Interest income and Net-Interest Income have relationship in that Non-Interest Income plays complementarity role for Net-Interest Income and keep the total income unaffected. As Net-Interest Income declines, Non-Interest Income increases and vice versa.
- The trend of Profit before Tax to total Asset ratio (and the raw data) clearly indicates that the growth of profit tuned into or highly influenced by the trend of Non-Interest Income,
- In aggregate Non-Interest Income has significant contribution in increasing and keeping the profit before tax at higher level for the consecutive five years and keeping or offsetting the loss or the decline in Net-Interest Income,
- The Coefficient of Variation (CofVar), which indicates volatility, has shown that Non-Interest Income has higher CofVar value than Net-Interest Income. Non-Interest Income lacks stability than Net-Interest Income.

5.1.2 Larger Banks' Trend Analysis

Those banks with asset value of between Birr 10 to 22 billion categorized under large banks.

- The trend of Non-Interest Income and Net-Interest Income has shown perfect complementarity in that while Net-Interest Income declines Non-Interest Income increases and vice versa;
- The trend of NonII has helped to keep the total revenue increase for five consecutive year and kept the initial year's balance at the end of observation period.
- Non-Interest Income has exerted observable influence on the trend of profit before tax (PbT/TA), as the expected return (mean) of PbT/TA pursued the trend of the mean value of Non-Interest Income;
- The higher value of Coefficient of Variation shows that Non-Interest Income is volatile or lacks stability than Net-Interest Income;
- The CofVar for profit before tax however, declined overtime, reflecting relative stability, and has lower CofVar relative to aggregate analysis
- Larger banks have lesser CofVar than aggregate and smaller banks, which an indicator of better or efficient asset utilization capacity.

5.1.3 Smaller Banks Trend Analysis

Those banks with asset value between Birr 3 to 10 billion categorized under smaller banks

- Unlike the big banks the expected return or mean value of NonII and NII for smaller banks has increased over the review period. Mean for NonII reached a high of 4.74 per cent at the end of 2013/14 from where it was at 0.76 per cent at the beginning 2007/08. The Net-Interest Income as well increased steadily to reach 3.65 in 2013/14 from 0.94 in 2007/08;
- Profit Before Tax (PbT/TA) as well has increased from 0.03 in 2007/08 to 4.22 in 2013/14;
- The influence of Non-Interest Income on PbT is much higher than that of Net-Interest Income, that PbT pursue the trend of NonII;
- The magnitudes of stability measured by the CofVar indicate that smaller banks have larger value of CofVar for both NonII and NII. However, the CofVar for NonII is much larger than NII indicating high volatility or instability of NonII generation process.
- Moreover, compared to larger banks smaller banks have higher CofVar indicating poor or inefficient utilization of asset.

Over viewing the banks' categorical trend analysis, NonII has higher yield than Net-Interest Income (NII) over the observation periods for smaller banks. However, NonII is highly volatile for smaller banks, by having higher value of CofVar throughout the review period.

Overall the smaller banks have higher volatility of the process of generating revenue, than larger banks explained by the higher coefficient of variation.

5.2 Testing Variables & Main Findings of Multiple Regression Analysis

The ratios of Non-Interest Income (NonII/NOI) and the independent variables Net-Interest Income (NIII/NOI), Foreign Currency (FrX/MD), Liquidity (Liq/MD), and Loan (Loan/MD), provision for Loan (Ris/Loan), Customers' Deposit (MD/TA) and Equity Capital (CA/TA), Total Asset (LogAsset) and the macro-economic variable National yearly Inflation (Inf) all used in the regression process and passed though different testing steps.

Linearity test identified that with the exception of Net-Interest Income, Capital and Inflation, which the three have negative and weaker value, the rest six independent variables have positive correlation with NonII. Foreign Currency, Liquidity and Asset have stronger positive correlation with NonII.

Independence of Residual The value of Durbin-Watson statistic, which measures errors or independence of residual resulted in having 1.918, which is within the acceptable range of 1.50 – 2.50, proving the residuals have autocorrelation.

Multicollinearity test conducted in two steps of; simple linear correlation and Tolerance and Variance Inflation Factor (VIF) tests. The simple correlation test has resulted in absence of correlation values between independent variables that reaches and exceeds above 0.90. However, the second tests of multicollinearity using Tolerance and VIF have proved the existence of multicollinearity between three

independent variables of Foreign Currency, Loan and Money Deposit. Therefore, after making successive testing by controlling variables, I dropped Loan and Money Deposit out of the analysis and the regression result on the rest of the variables presented in here.

ANOVA

Examining the significance of the multiple regressions in the ANOVA table the existence of relationship between the independent variables and the dependent variable were determined. Usually if the F statistic is significant i.e. greater than alpha (0.05), we can assume the independent variables taken together; have relationship with the dependent variable.

The probability of the calculated F statistic for the regression analysis ANOVA is 0.001, which is less than the level of significance alpha of 0.05. In that case the assumption disproved. The assumption is ‘There is no special or unique independent variable(s) that have significant impact on the dependent variable’ has been infringed (rejected).

R Square Statistic

The R Square statistic (R^2 and the adjusted R^2) tell us the proportion of variance in the dependent variable that is accounted for by the independent variables or the overall impact of the independent variables on the dependent variables.

Table: - 1 Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.768 ^a	0.590	0.538	11.64412
a. Predictors: (Constant), Inf, LiqMD, CATA, NIINOI, RisLoan, LogAsset, FrxMD				
b. Dependent Variable: NonIINOI				

The analysis result shows that variation with the magnitude of 59 percent of the dependent variable accounted for the variation caused by the seven identified independent variables. The adjusted R square is a little bit lower indicating a 54 percent variation on dependent variable caused by the independent variables.

Independent Variables (Beta Coefficients); Analyzing the regressions results on Beta Coefficient (B) tells the level of significance of calculated alpha for each independent variable that determines the level of relationship with the dependent variable. The result of the analysis has clearly pointed out that two independent variables have less than alpha (0.05) value.

Accordingly the level of significances for two independent variables; Foreign Currency holdings (Frx/MD) and Bank Asset (Size) (LogAsset) have less value than alpha 0.05.

The beta coefficients for the two independent coefficients have positive value so behave in similar direction to NonII affect positively. The straight forward interpretation of the beta coefficients (B) is that a unit (e.g. one Birr) increment in the value of asset has more than three-fold or a 3.471 unit (e.g. Birr 3.49) return on Non-Interest Income. Similarly a unit increment in the Foreign Currency holdings of a

bank would call for a significant return of 1.211 unit increment on the Non-Interest Income.

Capital adequacy and inflation affect the dependent variable negatively and at lower rate. The rest of the variables Liquidity, Net-Interest Income and Provision for loan loss have significant t-score, reflecting non-significant relationship or impact on the dependent variable.

Overall, **Foreign currency holdings and Assets of banks** have strong linkage with NonII by being the main determining factors for Ethiopian private commercial banks to generate larger non-profit income.

5.3 Similarities and Differences of Result with Prior Studies

The study findings compared with the findings of other prior studies from Ghana and European Union. The study conducted by (Basil Senyo & et al, 2014) from Ghana on Analysis of Non-Interest Income of Banks in Ghana 2014; (Rosie & et al, 2003) from Bank of England on Non-Interest Income and Total Income Stability and (Joon-Ho H. , 2008) Determinants and Consequences of Non-Interest Income: Diversification of Commercial Banks in OECD countries.

The three main findings (Interest Income, Exposure to Risk and Liquidity) by Basil Senyo 2014 are entirely different from my findings of Foreign Currency Holdings and Asset size. Among the main three findings by Joon-Ho 2008, Large Asset Size, Net Interest Margin and Inflation, Asset Size is similar with the findings of this paper; but with more strength.

Similarity of results observed with Rosie Smith on the increased in importance and high volatility of NonII than NII. However, unlike Rosie Smith, the evolution or trend of NonII has power of fully offsetting the reduction in interest margin.

6. Conclusion

The empirical and theoretical analysis done by De Young & Rice Tara 2003 and Basil Senyo; et al, 2014, have pointed out that bank size and business characteristics greatly determine banks decision for engagement in non-traditional activities. The trend analysis result has explained that profit before tax to total asset, is clearly in line with the theory that those sample banks with larger asset are more efficient and stable in generating NonII in particular and all types of income in general. Therefore, those larger banks with advanced technology and man power have the capacity and efficiency to generate more and stable NonII than smaller banks with poor technology.

Over and done with multiple regression analysis the two most important independent variables identified that relatively have stronger determining power on Non-Interest Income, are **Foreign Currency holdings and Asset or bank size**.

The comparisons made against prior studies have shown that the three main determining factors for NonII for Basil Saneyo are completely different from this study; but Joon-Ho's Large Asset size is in conformity with. The trend or time series analysis made has shown that the evolution of NonII does fully offset the reduction in the interest margin, which is against the findings of Rosie Smith.

Overall the different findings by different researchers have shown that no unique

variable(s) exists that fit for all Non-Interest Incomes for all regions and countries around the world.

7. Recommendations

The findings of this paper suggests that to sustainably increase the profitability of their business and increase their market share banks are advised to increase Non-Interest Income activities by holding large amount of foreign currency. They need to increase and keep stable the number of foreign correspondent banks and facilitate foreign trade. Trade facilitation would have dual (business and policy) impact. First financing foreign trade generates higher return for the bank and second, trade financing and earning higher foreign currency indirectly is in line with the national policy of supporting foreign trade.

Second, banks are advised to build their asset of modern type. Non-Interest income, mainly attracted by technological advancement and creation of new demand for new type of services parallel progression need be the prerequisite of the day. The assets of banks need to be equipped by technologically sophisticated and skillful manpower. Banks currently are operating in a closed environment i.e. free from foreign banks competition. However, the policy of the government can never be eternal, may get liberalized in near future. To face external competition the only way out is increasing technological values of their asset. They need to craft their business strategies considering the inevitable exposure to foreign competition.

Foreign banks often operate with and holding larger amount of foreign currency and their supply/balance is continuously renewable. The domestic banks are often short of badly needed foreign currency to finance the trade of their customers' trade. If foreign banks allowed joining domestic market they can easily attract the incumbents' customers and divert resources to their benefit and will be big loss for domestic banks. Therefore, it is imperative that government strengthen the export trade for adequate supply of foreign currency and remove discriminatory treatment between public and private commercial banks.

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