
Financing Pattern of the Development Bank of Ethiopia (DBE)

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Abstract: This study model over view the financing pattern of the Development Bank of Ethiopia ((DBE), Documentary evidence, annual reports, and accounts form the data basis of this paper. A Simple Multiple Regression Model was developed incorporating two independent variables (liquidity and shareholders fund) and one major dependent factor (loans and advances), representing the bank's financing pattern. The model was used to examine the extent to which these predictor variables explain the bank's loan and advances during the period 2006-2013. The regression results reveal that liquidity is an important factor in explaining the financing pattern of DBE in Ethiopia. However, a contrary impact has been documented concerning shareholders' funds. Based on the evident result from hypothesis one which says Liquidity does not have significant predictive power over DBE loans and advances can be conceived that the amount of loan and advances to be dished out in form of equity or credit financing by BOI is dependent solely on the availability of liquidity. The paper recommends the need for BOI and other DBE to maintain constant liquidity planning to keep abreast of societal credit needs in the form of loans and advances. In addition, the study further recommends the need for the bank to continually reduce the allocated amounts to shareholder's funds in the form of reserves to enable it to improve on developmental activities.

Keywords: Finance, Development Bank, Capital Structure, Liquidity, DBE of Ethiopia

1. Introduction

As the global financial crisis continues to brew and hit hard the world economy, the need for development financial assistance and programs (especially for countries worst hit) becomes paramount and cannot be overemphasized. Ethiopia, as a developing economy, comes up with a lot of these developmental programs. This is out of concern with the slow pace of economic growth and development of the nation, and the recognition of the need to mobilize exceptional resources for investment in the critical sectors of the economy [28].

One of these programs is the establishment of development banks. Development banks, otherwise known as Specialized Financial Institutions, or Development Finance Institutions (DFIs), are institutions that, according to Charitonenko [6] are established to contribute to the development of specific sectors of the economy. Development banks form part of the financial system of any economy. Financial systems have,

over the years, been recognized as vital role players in economic developments. In the same vein, Nnanna et al [20] see the financial sector as a catalyst for economic growth if it is healthy and well developed. However, the benefits accrual from a healthy and well-developed financial system cannot be achieved until it is related to savings mobilization and efficient inter-mediation role - hence the essence of development banking.

Development banks are established to support enterprises with term loans which commercial banks are indisposed to. Development banks are tailored to provide long-term funds in the form of equity and credit financing to facilitate growth and expansion for industrial development. As Hombay A. [12] contends, industrial development can only be achieved in a situation where there are sufficient funds. Such are sourced from long-term funds to finance long-gestating projects. Essien [8] similarly views that long-gestating projects need long-term loans to be viable.

It is noteworthy that the availability of investment capital for industrial enterprises stems mainly from the interlock of

an economy's financial structure and the financial intermediaries that function within that structure. Within this context, Akintola [1] views a company's financial structure as exhibiting three facets: government financing in the form of subvention or grant, self-financing from enterprise's profits, and voluntary savings. None of these facets is a stimulating source to enterprises because of their nature and commercial banks are generally indisposed to lending long-term capital investment. Researchers in previous studies of Essein [8], Capital et al [5], Myers [19], Ofek [21], Rajan [23] have contended the same. It is against this backdrop that governments and other interests, to facilitate long-term investment funding, found if necessary to create the special financial credit institution popularly known as development banks. Because the banks are expected to act as a vehicle through which term finance could be provided for development projects, they are therefore the major operators at the long-term end of the financial market.

In the light of the foregoing, this paper examines the financing activities of development banks in Ethiopia with particular reference to the Bank of Industry financing pattern. Studies such as Gibsan H. and Tsakaloto [11], Esien [8], Long [17], Myers [19], Shaw [24], and World Bank [27], dwelt peripherally on development banks' activities and their development impact with no extension to their financing pattern. This paper contributes to the existing literature in further painstakingly examining and determining the financing pattern of development banks in Ethiopia.

The objective of this paper is to evolve a simple empirical model that incorporates two independent variables (liquidity and shareholders fund) to predict one major dependent variable (loans and advances) to determine and explain the financing pattern of development banks in Ethiopia.

For this purpose, two hypotheses, postulated for the paper, are addressed as follows:

H01: Liquidity does not have significant explanatory or predictive power over DBE loans and advances.

H02: Shareholders' fund does not have significant explanatory or predictive power over DBE loans and advances.

2. Conceptual Issues on Development Banking

There is a sizeable literature on the conceptual framework of development banking. According to Akintola [1], the concept of development banking revolves around the provision of an adequate supply of capital for capital formation in the desired sector at the appropriate time. This concept seems to be the guiding principle of investment in finance where funds are transferred from surplus to deficit areas of the economy. Ovwielefuoma [22] lends credence to these assertions. Garson, et al. [9], however, see the underlying concept of development banking as government intervention in the economy to promote optimal conditions for development. Hence, Shekhar K. [25] concludes,

ownership of development banks is still a preserve or monopoly of governments of many countries. The opinion of Garson et al on the concept of development banking is the standard view of this paper.

The concept of development banking emerged after the Second World War. Hence, Jhingan [14] sees it as a Post World War II financial innovation. This is because the need for reconstruction funds for the affected countries, consequent upon the Great Depression in the 1930s, resulted in the establishment in 1945, of the International Bank for Reconstruction and Development (IBRD). The IBRD, Jhingan [14] asserts, became recognized as a worldwide institution for development and reconstruction. This concept precipitated further the setting up of quite a large number of banks around the world to coordinate the development activities of different nations.

Development Bank (DB) has been defined variously by different authors in previous studies. Diamond [7] conceives DB as "an institution designed to promote and finance enterprises in the private sector. However, Keynes [16] and Akintola [1] provide a wider definition (with no restriction to the private sector) by viewing a DB as a financial intermediary supplying medium and long-term funds to bankable economic development projects for financing. World Bank [27] defines development banks as financial institutions that derive their funds mainly from the government, other financial institutions, and supranational organizations. This definition of the World Bank is consistent with the description of Jhingan M. [15], the conceptual view of Garson et al. [9], and the concluding remark of Maiyaki (2009). It is, however, not consistent with Development Finance Forum [4], which views DB, in a snappy perspective, as financial intermediaries that are also positioned to play critical economic development roles. Economic development, according to the forum, refers to a substantive and sustained change in the condition of poor people.

Finally, Charitonnenko [6] sees DBs as specialized banks established to contribute to the development of specific sectors of the economy. The latest definition typically depicts DBs' areas of coverage to be restricted to particular sectors which may have been earmarked as requiring special attention. In Ethiopia, Akintola [1] asserts, industries such as mining, education, housing, as well as agriculture, being common among such sectors for which DBs are established (either by individuals, firms, or governments) to provide medium and long term credit to enterprises in the form of equity or loan financing.

3. Development Banks and Their Activities in Ethiopia

According to Nnanna et al [20], the Federal Government, to complement the role of the stock exchange, established some key development banks to provide specialized long-term capital for sectoral growth and development. Thus, Musa [18] opines, these DBs made varying contributions,

within the mandate, to their various sectors of responsibility. Each institution was given the responsibility of promoting the development of a specific sector or sub-sector Central Bank of Ethiopia [4]. Between 1959 and 2000, DBs at various levels (national and state) were established to provide funds for the different development projects across the country. As Anyanwu [2] notes, they funded various projects and enterprises, many of which are in operation today. There are five (5) DBs in Ethiopia currently providing development finance activities: Bank of Industry (BOI); Federal Mortgage Bank of Ethiopia (FMBN); Ethiopia Agricultural Cooperative and Rural Development Bank (NACRB); Ethiopia Export-Import Bank (NEXIM); Urban Development Bank (UDBN) Plc [4].

According to the CBN (2006), the various development banking financing activities carried out by the DBs in Ethiopia are Agricultural Credit Guarantee Scheme (ACGSF); Common Surveillance; Micro Finance; Small and Medium Scale Enterprises Equity Investment Scheme (SMEEIS); Refinancing and Rediscounting Scheme; Agricultural Credit Support Scheme (ACSS). Each of these activities is an initiative of the Federal Government and the CBN with the active support and participation of the Bankers Committee [4]. However, some of these activities are re branded by the DBs to suit the given mandates and their sectors of responsibility. Of the re branded financing options for enterprises, the following opportunities are available at BOI in the form of products and services: Short, Medium, and Long-term Financing; Equity Financing; Lease Financing; Co-Financing Syndication; Business Development Support Services; International Trade Services such as Documentary Credit (BOI, 2005).

4. Methodology

This paper investigates the potentialities of two key financial indicators (as independent variables) - liquidity and shareholders fund, in explaining the financing pattern (using loan and advances as a surrogate) of the Bank of Industry. Thus, the methodology adopted is an integration of the erudite approaches employed in three different areas of study: Aspachs et al [3], Musa [18], and Thorsten et al. [26]. First, the paper uses liquidity as an independent variable, like Aspachs et al [3], who uses a similar variable in predicting bank liquidity holdings (lending policy) over some time and from a panel of UK-resident banks. Second, the paper takes a leaf out of Musa [18] and likewise Thorsten et al [26], by modeling (via a simple regression model) certain key aspects of the BOI's financing program over a period using similar variables (as in Aspatch et al) above.

By and large, the paper utilizes a quantitative, descriptive, and case study research approach. In addition, the paper relies on parametric statistical data and the use of such data in testing hypotheses.

The research is targeted at establishing the empirical relationship existing among certain key financial indicators of BOI over the period 2006 to 2013.

The paper draws extensively from the secondary data source. This is because the estimated regression model requires the use of pooled time series data in the form of financial information. The sources of data include the annual reports and accounts of the company for the years covered. It also includes such documentation as journals, conference papers, newspaper reports, textbooks, CBN statistical bulletin and billions, BOI corporate briefs, newsletters, magazines, and pamphlets.

The simple regression equation developed for the paper uses one major criterion variable—loans and advances, and two predictor variables—liquidity and shareholders fund, and is thus stated below:

$$\text{LOADV} = \alpha_1 + \beta_1 \text{Liq} + \beta_2 \text{SHF} + \epsilon_i$$

Where:

LOADV=Loans and Advances, representing the money value advanced to various client establishments within the study period after deducting provision for doubtful accounts and interest in suspense [1]. It is the proxy for the bank's financing pattern in this paper.

Liq=Liquidity, representing the difference between current assets and current liabilities during the period [13].

SHF=Shareholders fund, representing the share capital and reserves as classified and accumulated in the balance sheet of the bank for the various years [4].

However, the regression model is run using SPSS 13 computer package.

5. Results and Discussions

The simple descriptive statistics is first presented in table 1; the correlation matrix is presented in table 2, while the analyses of tolerance and variance inflation factor are presented in table 3.

Table 1. Sample Descriptive Statistics (2006-2013 data).

Variables	Mean	Minimum	Maximum
LOADV	3493943	56,046	6283384
LIQ	4288162	67,140	12376038
SHF	2872696	554830	7690319

Source: SPSS Regression Results.

LOADV=Loans & Advance; Liq=Liquidity; SHF=Shareholders Fund.

Table 1 (above) shows the mean, standard deviation, minimum and maximum values of the variables used. The full results are contained in the Appendix.

The table indicates that, on average, the rate of loan and advances and liquidity are both at exactly 10 percent, while shareholder's funds have a mean of about 9.1 percent. The level of loan disbursement (loan and advances) during the period lies between 0.16 percent (B56,046, in million) and 17.98 percent (B6,283384, in billion). In the same vein, the level of liquidity lies between 0.16 percent (B67,140, in million) and 28.86 percent (B12,376038, in billion.) While shareholders fund

lies between 1.93 percent (B554830, in million) and 26.77 percent (B7, 690,319, in billion).

Table 2. Correlation Matrix for the Sample Observation.

Variables	LOADV	LIQ	SHF
LOADV	1.000	0.724	0.365
LIQ	0.724	1.000	0.828
SHF	0.365	0.828	1.000

Source: SPSS Regression Results.

For an explanation of the variables, see table 1.

Table 2 indicates that there is a positive relationship between loans and advances and liquidity as well as shareholder's funds. Also, the correlation between the independent variables is not highly significant. It is about 83 percent which is still below the standard ceiling rate. A correlation level above 90 percent is unacceptable [10, 18].

Table 4. Determinants of BOI Financing Pattern from Regression Results.

Variable: Intercept	SHF	LIQ	R2	AdjR2	F-Stat	Durbin Watson
1610666 (2.354)	-0.570 (-2.016)	0.821 (3.624)	0.699	0.613	8.113	2.386

Source: SPSS Regression Results.

T- values are in parenthesis. All values are significant at 5%.

In table 4, the regression equation relates loans and advances to liquidity (Liq) as well as the Shareholders Fund (SHF). The estimated regression relationship for the model is: $LOADV = 1610666 + 0.821(Liq) - 0.570(SHF)$.

There is an indication that of the two independent variables from the equation, one has a significant positive effect on loans and advances, the other has a significant negative effect. The variable with a significant positive effect is liquidity. An increase in the variable is expected to increase loans and advances. The variable that hurts loans and advances in the equation is shareholder's funds. This signifies that an increase in this variable will lead to a decrease in loans and advances. The Durbin Watson Statistic, in the regression, indicates no serial correlation.

The result, therefore, provides evidence for the rejection of null hypothesis (1) and the acceptance of null hypothesis (2) of the paper. Hypothesis (1), in retrospect, states that liquidity does not have explanatory or predictive power over loans and advances, while hypothesis (2) states that shareholders fund does not have explanatory or predictive power over loans and advances.

6. Conclusion and Recommendations

Based on the evident result from hypothesis (1), it can be conceived that the amount of loan and advances to be dished out in form of equity or credit financing by BOI is dependent solely on the availability of liquidity. By extension, the development impact of development banks in Ethiopia is the function of their liquidity levels. In other words, the higher the quantum of liquidity available in these banks, the more

Table 3. Tolerance Value and Variance Inflation Factor (VIF).

Variables	Tolerance	VIF
LIQ	0.314	3.183
SHF	0.314	3.183

Source: SPSS Regression Results.

For an explanation of the variable, see table 1.

Table 3 above contains the two advanced measures of assessing multicollinearity despite the indication of non-multicollinearity in the correlation matrix (in table 2). The tolerance values (as indicated in the table) were consistently less than 0.7, indicating a complete absence of multicollinearity [18]. In the same vein, the variance inflation factors were consistently less (smaller) than ten. This further substantiates the fact that there is the complete absence of multicollinearity e.g. [18]. By and large, there is a clear indication of the appropriateness of fitting the model with the two independent variables.

opportunities for lending for valuable projects. The evident result is in line with the assertions in the early literature on corporate liquidity in which Keynes [16], pointed out that a liquid balance sheet may enable the firm to undertake valuable projects when they arise. The result from hypothesis (2) tested is conceivably indicating that banks (DBs inclusive) hoard liquidity (probably to strengthen their capital base) during the period of economic downturn, when lending opportunities may not relatively be rosy.

The paper, having revealed that liquidity is a strong determinant of BOI loans and advances, recommends, according to the above, the need for DBS generally, to maintain constant liquidity planning to keep abreast of the societal credit needs in the form of loans and advances. The DBS should maintain a relatively large investment in current assets to avoid the difficulty of paying a claim of creditors and meeting the development needs. Also, DBS should avoid the cost associated with maintaining liquidity position because high liquidity means investment in either low or zero earning assets. Finally, the paper, having established a significant negative connecting link between shareholders fund and loan and advances, recommends the need for the bank to continually reduce the allocated amounts to shareholders fund in the form of reserves to enable it to improve on development financing activities.

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