

# INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE & MANAGEMENT

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## ASSESSMENT OF LOAN OPERATION AND FINANCIAL PERFORMANCE OF DEVELOPMENT BANK OF ETHIOPIA

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### ABSTRACT

*The objective of this study was to assess the loan operation and financial performance of Development Bank of Ethiopia. To achieve its objective the study was used panel data extracted from annual reports of the Bank. Trend analysis was used to analyze changes in loan operation from year to year and paired T-test was used to test the significance of the change. The study found that there was high fluctuation in the growth of loan approval and disbursement during before liberalization periods, but there was improvement after liberalization except its occasional decline and the statistical paired T-test output showed significant mean difference in amount between pre and post liberalization except loan approval, but in terms of growth no significant mean difference between pre and post liberalization both in loan approval, loan disbursement and loan collection. Secondly, the study assessed the financial performance of the Bank from two perspectives: i.e., from accounting perspective & from financial self sustainability perspective. From accounting perspective, performance was measured based on ratio analysis. The financial performance indicators both in terms of profitability, efficiency and solvency showed high variability. The comparison of performance ratios with standards of Association of African Development Financial Institutions showed Satisfactory. From financial self sustainability perspective performance was measured by using subsidy dependent index approach, and the finding showed that the Bank was financially self sustainable without subsidy only during 2008 from the periods included in the study.*

### KEYWORDS

Development Bank, Ethiopia, Financial Performance, Loan Operation, Subsidy Dependent Index

### INTRODUCTION

In the recent periods financial institutions are one of the researchable areas in the worlds of research as they are backbones of the economy of a country. This study done on the Development Bank of Ethiopia and the study was designed to assess the loan operation and financial performance of Bank. Collister (2007) stated development banking begin in Continental Europe, were formed first in France, with the credit mobilize in 1852, and then more successfully in Germany and Italy, clearly to hold up industrialization through providing large amounts of financing to growing industries. After World War II, the lack of long - term funding for investment projects encouraged many countries to establish DFIs by using public funds to fill what was identified as a financing gap.

In Kane (1975), cited by Collister (2007), defined the Development Bank as “ a financial intermediary providing long term funds to bankable economic development projects and providing related services”, while Panizza (2004), cited by Collister (2007), outlines considerations of externalities: DBs are “financial institutions primarily concerned with offering long-term capital finance to projects generating constructive impact on the development of the economy and hence under financed by private creditors.” The two remote definitions are about in the same essence of development bank meanings, on the importance of development banks in providing long-term loan.

This study was focused on the assessment of loan operation performance of the Bank, as the primary objective of the Bank is the promotion of the country's economy by providing both medium and long term loans to the viable projects identified by the government. Scott (2007) stated that in contrast to state owned commercial banks(SCB), the main objective of which is to maximize profit, state owned development banks or development financial institutions(SDB/DFI) are expected to pursue public policy mandates by financing the priority sectors of the economy as well meet financial performance objectives.

Apart from loan operation this study again considers the financial performance of the Bank in order to assess its financial performance. Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and make revenues. This expression is also used as a universal measure of a firm's overall financial health over a specified period of time, and can be used to compare comparable firms across the same industry or to compare industries or sectors in aggregation (www.financialdictionary.com). Jain (1989) found out that the performance of a Development Bank can assess on the basis of ‘financial function’ and ‘development function’ criteria. Whereas, the financial function measures its operational efficiency in terms of profitability of its investment operations, the developmental function evaluates its allocation efficiency as reflected by its investment activities for the economic development of the country and the stimulation of the capital market.

The study used subsidy dependent index (SDI) to assess the Banks self sustainability performance. Schreiner and Yaron (1999) stated that the SDI is a summary measure of sustainability. It is the ratio of subsidy received by a DFI to revenue from loans to the target group.

Yaron (2005) stated a SDI of zero means that a SDFI has achieved full self-sustainability. A SDI of 100% that a doubling of the yield obtained on the outstanding loan portfolio (OLP) is required if subsidies are to be eliminated. A negative SDI indicates a SDFI has not only fully-achieved self-sustainability, but its annual profits minus its capital charged at the approximate market interest rate exceed the entire annual value of subsidies (if subsidies were received at all).

### REVIEW OF LITERATURE

Jain (1989) assessed the performance of Development Banks on the case of Industrial Development Bank of India in terms of profitability. In his study he analyzed profitability of the Bank with reference to operating earnings, cost of operations, gross and net profit margins on loan portfolio and rate of return and capital appreciation on the securities portfolio. His study concludes with suggested measures to improve its profitability in future.

Murinde and Joramkarisa (1997) conducted study on the financial performance of East African Development Bank based on retrospective analysis with the use of standard financial ratios, arithmetical moments which are the mean, range and standard deviation of balance sheet accounts; and the subsidy dependent index. They revealed that the Banks historical performance is disappointing. They suggested that the Bank should engage proactively in the classification, encouragement and post evaluation of projects.

Tetsuji and Kazuo (2002) conducted study on the performance of Development Banks and they analyzed the performance of reconstruction finance bank in Japan in order to look on the role of Development Banks in fostering economic growth; the study found that the Bank played a significant role in Japan's transition from war-time command economy to a market economy in the early post-war period.

Alexandru and Laurentiu (2008) stated that Bank performance can be assessed based on the indicators that arise from the accounting data expressed on balance sheet and the profit and loss account. They indicated return on equity, return on asset, leverage multiplier, the profit rate, the margin of asset utilization and margin profit can be computed as performance indicators for Banks. They conclude that in order to determine one Bank's activity efficiency these performance indicators must be compared with similar indicators to determine the real Bank's position from the profitability aspect either of using the following three comparison types:

- Comparisons with the same Bank indicators during years following.
  - Comparison with the average indicators of other Banks inside same period frame.
  - Comparison with the intended indicators, when the Bank elaborates strategies on various structural terms in plans which aim to obtain certain profit level.
- Sheehama (2009) evaluated the financial performance of Development Bank of Namibia based on financial criterion with a focus of accounting ratios and in his study he revealed that the Bank shows satisfactory operation in terms of profitability and overall growth of the financial statement items such as asset, income, capital, costs, and liabilities from year to year. And he conclude that profits of the Bank have increased in greater proportion than operating income which indicates that the Bank has been able to reduce operating costs.

## SIGNIFICANCE OF THE STUDY

It is important for the management of the Bank by indicating the weak side of the Banks operation and the management team may use it as a base to take corrective actions.

It is useful to the society in providing information about the performance of the Bank.

It is useful for creditors of DBE to analyze its financial position in terms of indebtedness.

The researchers can use the findings of this study as a base for further study on the Bank and may use it as a reference for similar study.

## STATEMENT OF THE PROBLEM

In Ethiopia banking business had long history which was started during the period of Minilik II. Even though it is the older business still it is in infant stage. Development Bank of Ethiopia is one of the older Banks started in the early period and played an important role in the economy of the country.

In the financial sector of Ethiopia there were studies done especially on the credit and saving institutions about their financial performance. But no such studies in Development Bank of Ethiopia.

However there were studies which are done in other countries, such as;

Collister (2007) assessed Development Bank of Jamaica's role in the economy of Jamaica by investigate the loans made to each economic sector and he found that the tourism sector is the highest beneficiary of the loan as compared to other sectors;

Sathaye and Gadgil (1999) found that the Industrial Development Bank of India plays a significant role in promoting the growth of the industry by assessing the loans made in the industry and investigate its contribution to the overall GDP of the country's economy;

Jain (1989) assessed financial performance of Development Banks in case of Development Bank of India in terms of profitability. In his study he was analyzed the profitability of the Bank with reference to operating earnings, cost of operations, gross and net profit margins on loan portfolio and rate of return and capital appreciation on the securities portfolio;

Sheehama (2009) evaluated financial performance of Development Bank of Namibia based on financial criterion with a focus of accounting ratios and in his study he reveals that Development Bank of Namibia shows satisfactory operation in terms of profitability.

But in case of Development Bank of Ethiopia as per the best knowledge of the researcher there was no study carried out previously in the same issue of this research. Then this study identifies this gap and motivated to do a study in this area, and the researcher proposed to assess the loan operation and financial performance of Development Bank of Ethiopia at national level.

## OBJECTIVES OF THE STUDY

The overall objective of the study was to assess the loan operation and financial performance of the Bank.

The specific objectives were the following:

1. To examine the growth in the loan approvals, loan disbursements and loan collections of the Bank in each economic sector from year to year and to examine changes between before and after liberalization in total loan approvals, total loan disbursements and total loan collections;
2. To analyze the financial performance of the Bank and identify the progresses of the Banks financial performance based on the ratio analysis;
3. To compare the Banks financial performance with Association of African Development Financial Institutions prudential financial standards;
4. To investigate financial self-sustainability of the Bank.

## RESEARCH HYPOTHESES

The study was done based on the following research hypotheses:

H<sub>10</sub>: There is no significant mean difference in DBE's loan approval, loan disbursement, and loan collection amounts and growth rates between before and after liberalization of the economy.

H<sub>20</sub>: There is no good progress in the financial performance of DBE in terms of profitability, efficiency, solvency and asset quality (2005-2009).

H<sub>30</sub>: There is no compliance between the financial ratios of DBE and AADFI's standards in terms of financial performance (2005-2009).

H<sub>40</sub>: There is no financial self-sustainability in DBE's operation (2005-2009).

## RESEARCH METHODOLOGY

### RESEARCH DESIGN

Research's can be done through different types of researches' design such as explanatory, exploratory, descriptive and casual. This research was descriptive research which done on the Development Bank of Ethiopia; in order to describe the loan operation and financial performance of the Bank both quantitatively and qualitatively and investigate the critical changes in the Bank's loan operation and financial performance from year to year and finally measure its performance by comparing it against AADFI's prudential standards.

### DATA COLLECTION AND INSTRUMENTS

Secondary data was used to attain the objectives of the research discussed. The data was collected from the annual reports of the Bank (such as Balance Sheet, Income Statement, Loan Approval Statement, Loan Disbursement Statement and Loan Collection Statement).

### DATA ANALYSIS METHODS

The study used trends analysis to analyze the annual change in terms of loan approval, loan disbursement and loan collection and used a statistical tool of paired T-test to check whether there is significant change in loan operation after liberalization of the economy. This study used conventional accounting ratios to assess the financial performance of the Bank in terms of profitability and efficiency, solvency, asset quality and capital adequacy. The analysis of Development Bank profitability and the overall rates is often based on the standard financial ratios (Murinde *et al.*, 1997), cited by Sheehama (2009). Finally the study compared the financial performance of Bank with AADFI's prudential standards set by the Association to measure the performance of member Development Banks.

The study assessed the financial self sustainability of the Bank without subsidy. Yaron (2005) stated that the performance of state owned development financial institutions can be assess based on the two principal criteria which are outreach to a well defined target clients and the subsidy dependence of SDFI concerned. Subsidy dependence index can be calculated through the following mathematical approach;

$$S = A (m - c) + [(E * m) - p] + K \text{ ----- Eq (1)}$$

Where:

S Annual subsidy received by the SDFI

A SDFI concessionary borrowed funds outstanding (annual average)

M Interest rate; the SDFI would be assumed to pay for borrowed funds if access to borrowed concessionary funds were eliminated



|   |   |
|---|---|
| C | Weighted average annual concessionary rate of interest actually paid by the SDFI on its average annual concessionary borrowed funds outstanding |
| E | Average annual equity   |
| P | Reported annual profit before tax (adjusted, when needed, for loan loss provisions, and so on)  |
| K | The sum of all other annual subsidies received by SDFI (such as partial or complete coverage of the SDFI operational costs by the state)        |

$$SDI = \frac{S}{LP \cdot i} \quad \text{Eq (2)}$$

Where:

|     |  |
|-----|--|
| SDI | Subsidy dependence Index of SDFI   |
| S   | Annual subsidy received by SDFI  |
| LP  | Average annual outstanding loan portfolio of SDFI                          |
| i   | Weighted average yield earned on the loan portfolio of SDFI (Yaron, 2005). |

## RESULTS, DISCUSSION AND FINDINGS

### ANNUAL GROWTH ANALYSIS OF LOAN APPROVAL, DISBURSEMENT, AND COLLECTION BEFORE LIBERALIZATION

Agriculture & Industry sector loan approval performance of the Bank shows deterioration. Approval to Other sectors (other than Agriculture and Industry) demonstrates increment 1975-1978 but after this it fluctuated. Loan Disbursement demonstrates better improvement than Approval in all sectors except others. The collection growth in the Agriculture sector shows increment except four years declines. Collection from Industry shows decline 1977-1983, except 1978. The collections from other sectors illustrate high fluctuation (insert table 1 here).

### ANNUAL GROWTH ANALYSIS OF LOAN APPROVAL, DISBURSEMENT, AND COLLECTION AFTER LIBERALIZATION

Approval in agriculture sector illustrates increment 1992-1998 and then demonstrates decline 1999-2009. In the Industry and Other sector, it illustrates high fluctuations. Disbursement to Agriculture sector shows increment 1992-1998, except 1994 decline. Disbursement to the Industry sector shows unstable trend. Disbursements to other sectors showed increment 1992-1997 and then it proves fluctuation. Collection from all sectors demonstrates unstable growth (insert table 2 here).

### HYPOTHESES TESTING

This section tests the loan operation both in amount and in growth for the study period (i.e., 1974-2009). The test is done by using the paired t-test statistical tool.

H<sub>1.0</sub>: There is no significant mean difference in DBE's loan approval, loan disbursement, and loan collection amounts and growth rates between before and after liberalization of the economy.

### TEST OF THE HYPOTHESES IN TERMS OF AMOUNT

H<sub>1.1.0</sub>: There is no significant mean difference in DBE's Loan Approval, Loan Disbursement, and Loan Collection amount between before and after liberalization of the economy.

H<sub>0</sub>:  $\mu_d = 0$ ; H<sub>a</sub>:  $\mu_d > 0$ ;  $\mu_d$ : mean difference between before and after liberalization.

Level of significance, Critical Value(s) and Rejection Region(s)

Level of significance: 95% confidence interval; 5% level of significance ( $\alpha$ )

Critical Values:  $\pm t_{\alpha/2, (df = N - 1)} = \pm t_{0.025, df = 15} = \pm 2.731$

Reject the null hypothesis if  $t \leq -2.731$  or if  $t \geq 2.731$  (Kothari, 2004)

From this statistical output that is possible to infer that at the  $\alpha > 0.05$  level of significance there is no significant difference in the mean loan approval amount between before and after liberalization of the economy and the null hypothesis is accepted. And it is possible to infer that at  $\alpha < 0.05$  level of significance there is significant difference in the mean loan disbursement and loan collection amount before and after liberalization. Thus, the null hypothesis is rejected (insert table 3&4 here).

### TEST OF THE HYPOTHESES IN TERMS OF GROWTH RATE

H<sub>1.2.0</sub>: There is no significant mean difference in DBE's Loan Approval, Loan Disbursement, and Loan Collection growth rate between before and after liberalization of the economy.

H<sub>0</sub>:  $\mu_d = 0$ ; H<sub>a</sub>:  $\mu_d > 0$ ;  $\mu_d$ : mean difference between before and after liberalization.

Level of significance, Critical Value(s) and Rejection Region(s)

Level of significance:

95% confidence interval; 5% level of significance ( $\alpha$ )

Critical Values:  $\pm t_{\alpha/2, (df = N - 1)} = \pm t_{0.025, df = 13} = \pm 2.16$

Reject the null hypothesis if  $t \leq -2.16$  or if  $t \geq 2.16$  (Kothari, 2004)

From this statistical output that is possible to infer that at the  $\alpha > 0.05$  level of significance, there is no significant difference in the mean of loan approval growth, loan disbursement growth and loan collection growth between before and after liberalization of the economy. Thus, the null hypothesis is accepted (insert table 5&6 here).

### DBE FINANCIAL PERFORMANCE RATIOS FOR THE PERIOD 2005-2009

The Calculated ratios are summarized as follows (insert table 7 here)

### HYPOTHESES TESTING

H<sub>2.0</sub>: There is no good progress in the financial performance of DBE in terms of Profitability, Efficiency, Solvency and Asset Quality (2005-2009)

From ratio analysis of the Bank, most of performance indicators such as such as profitability (ROA, ROE, RAEEA, IM, and ROIAA), efficiency (AU), solvency (TIE & CR), and asset quality (RNPLTLP) indicators demonstrate fluctuation from year to year during the periods included in the study. Therefore from this perspective there is an evidence to infer that there is no good progress in the financial performance of the Bank in terms of profitability, efficiency, and solvency during 2005-2009; so the null hypothesis is accepted.

### COMPARISON OF DEVELOPMENT BANK OF ETHIOPIA'S PERFORMANCE RATIO WITH ASSOCIATION OF AFRICAN DEVELOPMENT FINANCIAL INSTITUTIONS STANDARDS

Assessing the performance of DBE in comparative with AADFI's standards is reasonable as DBE is the member of this association.

### HYPOTHESES TESTING

H<sub>3.0</sub>: There is no compliance with the financial ratios of DBE and AADFI's standards in terms of financial performance (2005-2009).

Except ROIAA, CR, RNPLTLP and ROA the Bank has compliance operation with the Association standards in most of its ratios, which means it has compliance operation in RAEEA, IM, TIE, RLPNPL, and DE and it can be substantial evidence to infer that there is compliance operation in the Bank with AADFI's standards in financial perspectives and the null hypothesis is rejected in case of these ratios. But it is possible to infer that there is no compliance in the Banks operation with Association's standard in ROIAA, CR and RNPLTLP and ROA; so the null hypothesis is accepted (insert table 8).

### DBE PERFORMANCE ASSESSMENT IN TERMS OF FINANCIAL SELF SUSTAINABILITY

DBE has two main sources of fund, debt and equity; all of the equity is coming from the government which is considered as public fund and the debt is mainly from two sources domestic and abroad; again those domestic debts are from financial institutions mainly from Commercial Bank of Ethiopia (CBE) and those abroad source of debts are from foreign government and international organizations. Most of those debts from international organizations are concessionary which are offered to the Bank at minimum interest rate, on average 2% per annum. In contrary, the Bank paid the maximum interest rate on its debt which is to domestic sources (i.e., 4% per annum).

Therefore, in this study to compute the Banks subsidy dependent index taking 4% interest rate as a market interest rate (i.e., 4% per annum) the Bank paid when the access of concessionary debt eliminated is realistic because of the following two reasons:

- The Banks main source of domestic debt to fill its liquidity problem is loan from CBE and it requires the DBE at least to cover the cost of deposit interest rate plus some margin as its main source of fund is deposit mobilization from the public.
- DBE can't mobilize deposit from the public to fill its liquidity problem since this service is not open to the public and forced to borrow from other sources such as, Commercial Bank of Ethiopia.

The general formula used to calculate subsidy dependence index is subsidy received divided by income from loan.

$$SDI = S / (L \times i)$$

Where

SDI= subsidy dependence Index

Subsidy (S) = A (m-c) + [(E x m)-p] + K,

The analysis reveals that DBE was subsidy dependent with the percentage of 14.42%, 11.3% and 1.9% during the years 2006, 2007 and 2009, respectively. But, the Bank gets subsidy independent in 2008 and even produce profit after covering its subsidy. However, it also becomes subsidy dependent in 2009 but the percentage declined significantly as compared with the 2006 and 2007 indices (insert table 9 here).

#### HYPOTHESES TESTING

H<sub>0</sub>: There is no financial self sustainability in DBE's operation (2005-2009).

The Bank is subsidy dependent in most of the years included in the study except 2008, which indicates there is no financial self sustainability in the Bank without subsidy, from this output that is possible to infer that there is no financial self sustainability in DBE and the null hypothesis is accepted.

#### RECOMMENDATION

To keep the profitability in increasing progress, the Bank is recommended to look on its operating cost and on its source of income. By reducing the default rate the Bank can keep its income source growth and it can be done by made systematic risk assessment on the financed projects. Higher portion of the operation costs of the Bank are the loan loss provision expense and loss on loan risk fund so if the Bank control these costs it can keep its profitability in good progress, and also the Bank is recommended to focus on its interest expense since this cost shown an increment during the periods of the study.

The Bank is recommended to look on its policy in selecting its source of funds in compliance with its investment maturity date and to take consistent supervision of the projects financed and take corrective actions on the projects in problem in order to overcome its liquidity problem, which means if financed projects are in a good position the Bank can recovered its loans in due time.

#### CONCLUSION

From the assessment of loan operation of the Bank this study found that there is high fluctuation in the growth of loan approval and disbursement before liberalization, but there is an improvement after liberalization except its occasional decline and the statistical paired t-test output indicates that there is significant difference in amount between pre and post liberalization except loan approval, but in terms of growth there is no significant mean difference between pre and post liberalization both in loan approval, loan disbursement and loan collection.

The financial performance indicators both in terms of profitability, efficiency and solvency show high variability during the study periods.

The comparison of the Banks financial performance indicators with the AADFI's standard showed poor performance except RAEAA, RLPNPL, DE, TIE and ROA (except 2005 and 2008).

From financial self sustainability perspective the study conclude that, the Bank was financially self sustainable without subsidy only during 2008 from the periods included in the study.

#### FARTHER RESEARCH SUGGESTION

This study focused on the assessment of the Bank performance based on the financial criterion of development financial institutions, but in addition to this the performance of developmental financial institution can be assessed based on developmental and technological criteria. This study was used accounting ratios, further researchers are suggested to assess the performance of the Bank by applying additional instruments such as, subsidy adjusted accounting ratios, and multivariate statistical analysis.

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## APPENDICES

### TABLES

**TABLE 1: THE ANNUAL GROWTH OF DBE LOAN APPROVAL, LOAN DISBURSEMENT AND LOAN COLLECTION BEFORE LIBERALIZATION**

| SECTORS<br>YEAR | LOAN APPROVAL |         |        |        | LOAN DISBURSEMENT |        |        |        | LOAN COLLECTION |        |        |        |
|-----------------|---------------|---------|--------|--------|-------------------|--------|--------|--------|-----------------|--------|--------|--------|
|                 | AGRI.         | INDU.   | OTH.   | TOTAL  | AGRI.             | INDU.  | OTH.   | TOTAL  | AGRI.           | INDU.  | OTH.   | TOTAL  |
| 1974            | -             | -       | -      | -      | -                 | -      | -      | -      | -               | -      | -      | -      |
| 1975            | 147.5         | (81)    | 241.8  | 58.5   | 145.3             | 54.8   | -      | 103.3  | 26.1            | 17.5   | (43)   | 24.8   |
| 1976            | 178.3         | (62.1)  | 67.4   | 155.8  | 120.4             | (74.6) | -      | 97     | 123             | 80.3   | 1143.2 | 12.5   |
| 1977            | (13.2)        | 151     | 70.5   | 3.1    | (5.5)             | (64.3) | (4.9)  | (7.2)  | 27.6            | (16)   | 102.7  | 27.1   |
| 1978            | (4)           | 38      | 190    | 21.2   | (9.8)             | 176.1  | 196    | 32.1   | (47)            | 114.7  | 389.5  | (23.4) |
| 1981            | (74)          | (92)    | (79)   | (76.3) | (89.1)            | 9.5    | (73.1) | (5.7)  | 64.8            | (4.5)  | (55.3) | 36.6   |
| 1982            | 168           | (74.4)  | -      | 145.6  | 3.1               | (12)   | (83.5) | (4.3)  | 89.6            | (2)    | (5)    | 74     |
| 1983            | (8.8)         | 879.2   | -      | (2)    | (29.4)            | (51.3) | 573.7  | (24.1) | 96.1            | (9.6)  | 289.2  | 97.3   |
| 1984            | 16.1          | 291.2   | (33.1) | 23.1   | 6.6               | 3.5    | (50.9) | (7.8)  | (69.4)          | 81.3   | (82.8) | (67.4) |
| 1985            | 1.4           | (76.7)  | (96.8) | (8.8)  | 8.8               | 85.9   | (14.8) | 11.3   | 34.4            | 5.9    | 344.9  | 40.5   |
| 1986            | (72.6)        | 233.8   | 217    | (62.7) | 26                | 43.8   | (3.1)  | 22.1   | 2.2             | 27.5   | (4.1)  | 3.6    |
| 1987            | (182.4)       | (46.4)  | 701.7  | 152.3  | (26.4)            | (38.3) | 275.8  | (22.6) | (39)            | 32     | (46.2) | (32.9) |
| 1988            | (34.5)        | 413.2   | (94.6) | (21)   | 30                | 101.6  | (9.3)  | 32.1   | 5.4             | 30.8   | (59.9) | 5.7    |
| 1989            | (15.6)        | (7)     | 49.7   | (12.1) | (40.4)            | 109.1  | 27.6   | (9)    | (6.8)           | (64.1) | 60.6   | (18.4) |
| 1990            | (7.60)        | (52.20) | (15.3) | (23.2) | 15.4              | (26.2) | (13.7) | 0.6    | 17.9            | 23.3   | 133.4  | 24.4   |

Source: Authors own computation

Note: - indicates missing value and ( ) indicates negative figures.

**TABLE 2: THE ANNUAL GROWTH OF DBE LOAN APPROVAL, LOAN DISBURSEMENT AND LOAN COLLECTION AFTER LIBERALIZATION**

| SECTORS<br>YEAR | LOAN APPROVAL |        |        |        | LOAN DISBURSEMENT |        |        |        | LOAN COLLECTION |        |        |        |
|-----------------|---------------|--------|--------|--------|-------------------|--------|--------|--------|-----------------|--------|--------|--------|
|                 | AGRI          | INDU   | OTH    | TOTAL  | AGRI              | INDU   | OTH    | TOTAL  | AGRI            | INDU   | OTH    | TOTAL  |
| 1991            | -             | -      | -      | -      | -                 | -      | -      | -      | -               | -      | -      | -      |
| 1992            | 73.5          | (53.7) | 25.5   | 30.2   | 80.8              | (50)   | 7.7    | 7.1    | (39.2)          | (71.4) | (3.49) | (41.2) |
| 1993            | (73.6)        | 37.6   | (14.5) | (55.5) | 7.3               | (5.8)  | 50.3   | 6.7    | (6.6)           | 233.6  | 90.8   | 27     |
| 1994            | 196           | 1176   | 22.3   | 481.3  | (73.8)            | 223    | 42.8   | 1.2    | (55.4)          | 134.4  | 59.2   | 9.7    |
| 1995            | 98.4          | (62)   | 116.1  | (17)   | 466.3             | 15.9   | 25     | 98     | 589.5           | 33     | (65.6) | 129.2  |
| 1996            | 51.4          | 155.7  | 63.5   | 87     | 48.3              | 50.2   | 65.6   | 50.4   | 23              | 59.8   | 126.1  | 37.5   |
| 1997            | 23.2          | (46)   | 168.8  | 4.3    | 21.2              | (4.6)  | 112.1  | 18.5   | 69.2            | (4.3)  | (1)    | 41.6   |
| 1998            | 8.8           | 75.7   | (47.5) | 12.1   | 27.1              | 1      | (25)   | 10.5   | 23.3            | 66.3   | 124    | 37.7   |
| 1999            | (3.5)         | (49)   | (26.8) | (22.6) | (96.9)            | 24.3   | 9.5    | 21.5   | (38)            | 20.5   | 0.1    | (20.2) |
| 2000            | (48.5)        | (53.4) | 40.5   | (41)   | (25.8)            | (8)    | (4)    | 17.5   | 4.5             | 5.4    | (7)    | 3.5    |
| 2001            | (39.4)        | (107)  | (67.7) | (40.3) | (53.5)            | (41.2) | (57.2) | (50.2) | (25.2)          | (15.2) | 40.5   | (14.7) |
| 2002            | (40.8)        | (47)   | (22.6) | (40.2) | (4.6)             | (56.7) | (54.8) | (51.1) | (37.6)          | (31.6) | (11.3) | (30.8) |
| 2003            | (17.2)        | 64     | (68.6) | (5.1)  | (3.1)             | (50)   | (32.3) | (37.8) | 4.3             | (29.1) | (12.3) | 9.8    |
| 2004            | 209.6         | 184    | 13.2   | 259.3  | 174.6             | 490.3  | 629.3  | 326.3  | (21.8)          | (20.8) | 23     | (13.5) |
| 2005            | 77.3          | 130.1  | 0.61   | 79.1   | 172.4             | 88.4   | (11.2) | 95.2   | 59.7            | 60.6   | (19.4) | 40.4   |
| 2006            | (19.3)        | 268.2  | 25     | 144.4  | 0.3               | 1.9    | 108.2  | 12.8   | 25.5            | 130    | 77.5   | 80.3   |
| 2007            | 847.3         | (17)   | 103.5  | 99.4   | 63.6              | (63.1) | 60.6   | 22.1   | 48.8            | 27.5   | 11.4   | 31.2   |
| 2008            | (82.4)        | 19.4   | (2.2)  | (44.2) | (3.9)             | 190    | (11.4) | 14.1   | 23.3            | (56.7) | 31.7   | (20.7) |
| 2009            | (26.6)        | 66.4   | 77     | 50     | (43.3)            | 205.6  | 63.1   | 44.2   | 10.3            | 11     | (2)    | 8      |

Source: Authors own Computation

TABLE 3: PAIRED SAMPLES STATISTICS AMOUNT IN BIRR

| Pair |       | Mean         | N  | Std. Deviation | Std. Error Mean | Correlation |
|------|-------|--------------|----|----------------|-----------------|-------------|
| 1    | TLAAL | 780742187.50 | 16 | 846710673.995  | 211677668.499   | .011        |
|      | TLABL | 347484625.00 | 16 | 208196495.600  | 52049123.900    |             |
| 2    | TLDAL | 406193875.00 | 16 | 235048553.300  | 58762138.325    | .446        |
|      | TLDL  | 257329125.00 | 16 | 111730712.011  | 27932678.003    |             |
| 3    | TLCAL | 351945000.00 | 16 | 189443727.464  | 47360931.866    | .212        |
|      | TLCBL | 118521875.00 | 16 | 83747621.216   | 20936905.304    |             |

Source: Authors own Computation

TABLE 4: PAIRED SAMPLES TEST FOR AMOUNT IN BIRR

|                      | Paired Differences |                |                 |   |               | t     | df | Sig. (2-tailed) |
|----------------------|--------------------|----------------|-----------------|---|---------------|-------|----|-----------------|
|                      | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |               |       |    |                 |
|                      |                    |                |                 | Lower                                     | Upper         |       |    |                 |
| Pair 1 TLAAL – TLABL | 433257562.500      | 869771606.556  | 217442901.639   | -30211011.384                             | 896726136.384 | 1.993 | 15 | .065            |
| Pair 2 TLDAL – TLDL  | 148864750.000      | 210473015.861  | 52618253.965    | 36711596.498                              | 261017903.502 | 2.829 | 15 | .013            |
| Pair 3 TLCAL – TLCBL | 233423125.000      | 190183872.181  | 47545968.045    | 132081293.017                             | 334764956.983 | 4.909 | 15 | .000            |

Source: Authors own Computation

Note: - indicates missing value and ( ) indicates negative figure.

TABLE 5: PAIRED SAMPLES STATISTICS FOR GROWTH RATE

| Pair |        | Mean    | N  | Std. Deviation | Std. Error Mean | Correlation |
|------|--------|---------|----|----------------|-----------------|-------------|
| 1    | TLGAL  | 52.2571 | 14 | 147.90453      | 39.52915        | -.162       |
|      | TLGBL  | 47.9286 | 14 | 89.54541       | 23.93202        |             |
| 2    | TLDGAL | 36.7000 | 14 | 94.74673       | 25.32213        | -.165       |
|      | TLDGBL | 15.5571 | 14 | 39.90860       | 10.66602        |             |
| 3    | TLCGAL | 15.4286 | 14 | 42.90792       | 11.46762        | .222        |
|      | TLCGBL | 14.6000 | 14 | 42.60432       | 11.38648        |             |

Source: Authors own Computation

TABLE 6: PAIRED SAMPLE TEST FOR GROWTH RATE

|                        | Paired Differences |                |                 |   |           | T    | df | Sig. (2-tailed) |
|------------------------|--------------------|----------------|-----------------|---|-----------|------|----|-----------------|
|                        | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |           |      |    |                 |
|                        |                    |                |                 | Lower                                     | Upper     |      |    |                 |
| Pair 1 TLGAL – TLGBL   | 4.32857            | 184.87465      | 49.40983        | -102.41488                                | 111.07202 | .088 | 13 | .932            |
| Pair 2 TLDGAL – TLDGBL | 21.14286           | 108.70764      | 29.05334        | -41.62306                                 | 83.90878  | .728 | 13 | .480            |
| Pair 3 TLCGAL – TLCGBL | .82857             | 53.33627       | 14.25472        | -29.96687                                 | 31.62402  | .058 | 13 | .955            |

Source: Authors own Computation

TABLE 7: FINANCIAL PERFORMANCE RATIOS OF DBE(2005-2009)

| Items   | 2005       | 2006      | 2007      | 2008      | 2009      |
|---|------------|-----------|-----------|-----------|-----------|
| Profitability ratio:                                      |            |           |           |           |           |
| Return on equity  | 2.5%       | 1.32%     | 1.75%     | 3.4%      | 2.8%      |
| Return on asset   | 1.02%      | 0.5%      | 0.6%      | 1.2%      | 0.9%      |
| Interest margin   | 6.13%      | 6.44%     | 5.46%     | 6.42%     | 5.36%     |
| Ratio of other income to average asset                    | 1.54%      | 0.46%     | 0.58%     | 0.68%     | 1.17%     |
| Liquidity ratio:  |            |           |           |           |           |
| Times interest earned                                     | 1.77 times | 1.39times | 1.48times | 1.94times | 1.76times |
| Current ratio   | 0.6:1      | 0.71:1    | 0.75:1    | 0.7.1     | 0.56:1    |
| Efficiency ratio:   |            |           |           |           |           |
| Margin of asset utilization                               | 6.17%      | 6.12%     | 5.71%     | 7%        | 6.2%      |
| Ratio of operating cost to operating income               | 78%        | 75%       | 67%       | 57%       | 72%       |
| Asset quality ratio:                                      |            |           |           |           |           |
| Ratio of non performing loan to total loan portfolio      | 37.2%      | 42.4%     | 41.5%     | 33.2%     | 37.7%     |
| Ratio of loan loss provision to total non performing loan | 48.14%     | 46.81%    | 49.89%    | 64.49%    | 53.52%    |
| Capital adequacy ratio:                                   |            |           |           |           |           |
| Debt to equity ratio                                      | 1.46:1     | 1.64:1    | 1.96:1    | 1.97:1    | 2.43:1    |

Source: Authors own Computation

**TABLE 8: COMPARISON OF THE FINANCIAL PERFORMANCE OF DBE WITH THE STANDARDS OF AADFI'S**

| Item    | 2005       | 2006       | 2007       | 2008       | 2009       | AADFI's standards |
|---------|------------|------------|------------|------------|------------|-------------------|
| ROA     | 1.02%      | 0.5%       | 0.6%       | 1.2%       | 0.9%       | >1%               |
| RAEAA   | 0.91%      | 0.87%      | 0.94%      | 1.14%      | 1.07%      | <4%               |
| IM      | 6.13%      | 6.44%      | 5.46%      | 6.42%      | 5.36%      | >4%               |
| ROIAA   | 1.54%      | 0.46%      | 0.58%      | 0.68%      | 1.17%      | >5%               |
| TIE     | 1.77 times | 1.39 times | 1.48 times | 1.94 times | 1.76 times | >1.3 times        |
| CR      | 0.6:1      | 0.71:1     | 0.75:1     | 0.7:1      | 0.56:1     | 2:1               |
| RNPLTLP | 37.2%      | 42.4%      | 41.5%      | 33.2%      | 37.7%      | <15%              |
| RLPNPL  | 48.14%     | 46.81%     | 49.89%     | 64.49%     | 53.52%     | >40%              |
| DE      | 1.46:1     | 1.64:1     | 1.96:1     | 1.97:1     | 2.43:1     | <4:1              |

Source: Authors own computation

**TABLE 9:- SDI COMPUTATION OF DBE**

| Year | A           | m  | C  | E             | P             | K | S             | L               | I    | SDI     |
|------|-------------|----|----|---------------|---------------|---|---------------|-----------------|------|---------|
| 2006 | 162,871,028 | 4% | 2% | 1,862,510,932 | 31,211,572.44 | - | 46,546,285.4  | 4,303,722,311.5 | 7.5% | 14.42%  |
| 2007 | 223,909,706 | 4% | 2% | 1,872,587,147 | 39,853,690.88 | - | 39,527,989.12 | 4,666,012,088   | 7.5% | 11.3%   |
| 2008 | 308,115,698 | 4% | 2% | 1,896,825,937 | 82,545,394.04 | - | (510,042.6)   | 5,130,144,434   | 7.5% | (0.13%) |
| 2009 | 194,381,933 | 4% | 2% | 1,942,597,360 | 72,983,240.34 | - | 8,608,292.72  | 6,036,082,326   | 7.5% | 1.9%    |

Source: Authors own computation

**TABLE 10: ACRONYMS**

|         |   |
|---------|---|
| AADFI's | Association of African Development Financial Institutions |
| ADB     | African Development Bank                                  |
| ADF     | African Development Fund                                  |
| AGRI.   | Agriculture   |
| AU      | Asset Utilization   |
| CR      | Current Ratio   |
| DB      | Development Bank  |
| DBE     | Development Bank of Ethiopia                              |
| DE      | Debt to Equity Ratio                                      |
| df      | Degree of Freedom   |
| DFI     | Development Financial Institution                         |
| EM      | Equity Multiplier   |
| INDU.   | Industry  |
| IM      | Interest Margin   |
| NDB     | National Development Bank                                 |
| NPL     | Nonperforming Loan  |
| OLP     | Outstanding Loan Portfolio                                |
| OTH.    | Others (Other than Agriculture and Industry Sectors)      |
| RAEAA   | Ratio of Administrative Expense to Average Asset          |
| RCCETA  | Ratio of Cash and Cash equivalent to Total Asset          |
| RFB     | Reconstruction and Finance Bank                           |
| RLATA   | Ratio of Liquid Asset to Total Asset                      |
| RLPNPL  | Ratio of Loan Provision to Nonperforming Loan             |
| RNPLTLP | Ratio of Nonperforming Loan to Total Loan Portfolio       |
| ROA     | Return on Asset   |
| ROE     | Return on Equity  |
| ROIAA   | Ratio of Other Income to Average Asset                    |
| SCB     | State Owned Commercial Bank                               |
| SDB     | State Owned Development Bank                              |
| SDFI    | State Owned Development Financial Institution             |
| SDI     | Subsidy Dependent Index                                   |
| TIE     | Time Interest Earned                                      |
| TLA     | Total Loan Approval                                       |
| TLAAL   | Total Loan Approval after Liberalization                  |
| TLABL   | Total Loan Approval before Liberalization                 |
| TLAGAL  | Total Loan Approval growth after Liberalization           |
| TLAGBL  | Total Loan Approval growth before Liberalization          |
| TLC     | Total Loan Collection                                     |
| TLCAL   | Total Loan Collection after Liberalization                |
| TLCBL   | Total Loan Collection before liberalization               |
| TLCGAL  | Total Loan Collection growth after Liberalization         |
| TLCGBL  | Total Loan Collection growth before Liberalization        |
| TLD     | Total Loan Disbursement                                   |
| TLDAL   | Total Loan Disbursement after Liberalization              |
| TLDBL   | Total Loan Disbursement before Liberalization             |
| TLDGA L | Total Loan Disbursement growth after Liberalization       |
| TLDGBL  | Total Loan Disbursement growth before Liberalization      |



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