# MEKELLE UNIVERSITY

## DEPARTMENT OF ACCOUNTING AND FINANCE

## COLLEGE OF BUSINESS AND ECONOMICS


# PERFORMANCE EVALUATION OF SELECTED ETHIOIPIAN COMMERCIAL BANKS USING BALANCED SCORECARD

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE**

**IN**

**FINANCE AND INVESTMENT**


**BY**

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**IDNO FBE/PR0028/01**

**UNDER THE SUPERVISION OF**

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**June, 2010**
**MEKELLE, ETHIOPIA**

# DECLARATION

I, **SYUM ABAY**, here by declare that the thesis entitled “Applying Balanced Scorecard in Assessing performance of Ethiopian Commercial Banks” submitted by me to the award of the Degree of **Msc**. in **Finance and Investment** of Mekelle University at Mekelle, is original work and it hasn’t been presented for the award of any other Degree, Diploma, Fellowship or other similar titles of any other university or institution.

Name…………………………………… Signature…………………

Place……Mekelle……………………… Date………………………

# CERTIFICATION

This is to certify that this thesis entitled "Applying Balanced Scorecard in Assessing Performance of Ethiopian Commercial Banks" submitted in partial fulfillment of the requirements for the award of the degree of **Msc**. in **Finance and Investment** to the College of Business and Economics, Mekelle University, through the Department of Accounting and Finance, done by Mr. Syum Abay, Id. No.**FBE/PR0028/01** is an authentic work carried out by him under my guidance. The matter embodied in this thesis has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief.

**Sirnivasa Rao (Asst. Professor)** Signature…………

Date………..

# ABSTRACT

The financial measures were sufficient enough to indicate the performance of the machine like nature of the corporate entities during the industrial age. This was because the competition during this age was ruled by scope and economies of scale i.e. management of intangibles assets to create long term capabilities and customer relationship were not critical to succeed. These measures have been also considered as effective and objective measures to evaluate the effectiveness and efficiency of business operations or divisions in utilization both financial and physical assets of the business organizations.

Despite their apparent effectiveness and objectivity, financial indicators are frought with a number of limitations which exposed them to increasing critics by a number of researchers and authors by 1990s (Neely et al., 1995; Marr and Schiuma, 2002). Kaplan and Norton (1996) for instance, argue that in order to compete and survive in the information age, in which information forms fundamental part within the trade and industry, it is not longer enough to relay solely on financial measures because they could conduce to an incorrect picture of the effectiveness and profitability of a business.

Acknowledgement of these limitations has led the theorists as well as practitioners to recommend strongly a move from the traditional accounting in to a form of control where the business results are measured in several perspectives.

Furthermore, recent literature studies related to commercial banks performance measurement point to the increasing relevance of financial as well as non financial measures in the evaluation of commercial banks. These all clearly show that the need for the balanced performance measurement such as balanced scorecard, which appears to have all the answers for choosing the most appropriate measures of company performance, to assess the performance and competitiveness of organizations in general and commercial banks in particular in today's and tomorrow's changing and competitive business environment.

Almost all of the commercial banks in Ethiopia, however, solely depend on purely financial indicators to measure their performance and competitiveness in the banking industry. Even national bank of Ethiopia, which is the ruling body, uses financial metrics to assess performance and competitiveness of the commercial banks in the country.

All these attempts to measure performance and competitiveness of banks do not take into account the effect of the leading, forward-looking, and critical performance measures( non-financial perspectives) and therefore creates a huge vacuum in the performance and competitiveness evaluation of banks in the country , which this study seeks to fill in by providing information on performance of banks in Ethiopia via applying balanced scorecard model which balances financial and non-financial perspectives very well.

This study, therefore, aimed at assessing performance of the selected Ethiopian commercial banks using balanced scorecard as frame work. The study used both quantitative and qualitative research methods to gather data from primary sources (structured questionnaires) and secondary sources (annual reports). The researcher used quota and convince sampling methods to select customers, employees and managers as respondents. Finally the researcher used structured questionnaires and unstructured interviews as survey instruments and data analysis tools such as descriptive statistics, correlation and regression analysis with the help of SPSS for Windows Version 17.0.

In conclusion therefore, the balanced scorecard framework can be implemented to assess performance of commercial banks in Ethiopia. The BSC framework can also assist by providing additional information using measures in several dimensions such as customer perspective, internal business processes perspective and learning and growth perspective to managers, shareholders and other interested stakeholders regarding the performance of the commercial banks in Ethiopia. This will enable commercial banks focus on the core strategies in order to create and deliver superior value and returns to their stakeholders. This puts the shareholders in an informed position regarding the value the banks are delivering to them in the short-run versus the long-run. From the data gathered and the analysis done so far, additional information on customer dissatisfaction on internal processing functions of the selected commercial banks, poor customer service and inefficient internal processes coupled with low employee motivation indicate that these commercial banks need to do a lot to satisfy their customers and motivate their employees. This information can be very useful to both shareholders and management of the banks which can help them fine tune the execution of their strategies. The result of the analysis revealed that there is a clear and strong relation between the financial performance and the non-financial performance measures (customer satisfaction, internal process/operational and employee satisfaction). In addition, empirical findings suggested that the non-financial measures are significant explanatory factors of financial performance. More importantly, the findings of the study proved the cause-and-effect relationship between the financial and non-financial performance in these commercial banks.

Based on the results of the study important policy recommendations are outlined.Ethiopian commercial banks should implement the balanced scorecard and multi-dimensional measures as a performance measurement and strategic implementation tool to improve their operational performance and profitability. National Bank of Ethiopia should include other non-financial perspectives as elaborated in this paper in its annual or quarterly report on the performance of banks so that the investors, academics and the general public are better informed on the holistic performance of banks in Ethiopia. Lessons about the role and importance of the multi-dimensional performance measures for banks should be given for finance and banking students in reasonable depth.

There is the need to place emphasis on the fact that, when implementing this framework, banks must follow a well planned methodology and the advice that was given in different academicians and practitioners in order for them to reap the full benefit of their investment.

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*Syum Abay*

*May, 2010*

*Mekelle, Ethiopia*

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# Acronyms

| | |
|---|---|
| ***BSC*** | ***Balanced Scorecard*** |
| **CBE** | Commercial bank of Ethiopia |
| **CBs** | Selected commercial banks |
| **CPI** | Customer Measures Index |
| **DB** | Dashen Bank |
| **IPPI** | Internal Process measures index |
| **KPIs** | Key performance indicators |
| **LGPI** | Employee measures Index (learning and growth perspective) |
| **M** | Mean/Average |
| **NPATG/NPG** | Net profit after tax growth |
| **ROA** | Return on Assets |
| **ROE** | Return on Equity |
| **UB** | United Bank |

# CHAPTER I: INTRODUCTION

## 1.1 Background of the study

Financial sector plays a formidable role in the economic development. A very close relationship exists between financial sector growth and economic growth. Financial sector includes banking system, microfinance, insurances and other financial institutions. Out of which banking system forms the central part in the financial sector.

Banking system plays a very important role in the economic life of the nation. The health of the economy is closely related to the soundness of its banking system. In a developing country like Ethiopia the banking system as a whole play a vital role in the progress of economic development. Hence banking system, as far as it is the heart of a country's economy, should be wisely, systematically, and competently operated and controlled so as to enable it to compete and survive in the fierce and dynamic competitive business environment of the information age both in the short run as well as in the long run. An effective and efficient operation and controlling system needs comprehensive, flexible and multi-criteria performance measurement.

A combination of the increasing competitions within the trade and industry, and the fact that information is getting easier to access by means of IT tools, has led to an increased interest for new methods of running and controlling a business. The traditional accounting, i.e. to control the business by means of financial metrics, has been criticized for only focusing on historical facts and not on how the business is finding at the present. Critics like Kaplan and Norton (1996) mean that this could conduce to an incorrect picture of the effectiveness and profitability of a business.

During the industrial age, however, the financial measures were sufficient due to the fact that long term capabilities and customer relationships were not critical in order to succeed. The industrial age now has turned over to the information age, where information forms a fundamental part within the trade and industry. In order to compete it is not longer enough to rely solely on financial aspects (Kaplan and Norton, 1996).A move from traditional accounting, into a form of control where the business results are measured in several perspectives is recommended by theorists as well as practitioners.

Additionally, the method of monitoring performance should be dynamic in order to adapt to internal and external changes. In response to these recommendations, a number of frameworks that adopt a multidimensional view of performance measurement have been developed, most notable of which has been the Balance scorecard (BSC) developed by Kaplan and Norton (1992, 1996).

The Balanced scorecard addresses the need for multiple measures of performance and provides a strategic framework, which specifically encourages the use of both financial and non-financial measures along four perspectives – financial, customers, internal business process, and learning and growth – to measure firm performance (Kaplan & Norton, 1996b).

In both a research and practice, the BSC has received much attention, particularly as tool for driving unit level strategy within many industries, including hospitality, health, manufacturing and banking (Ashton, 1998; Kaplan et al., 2001).

On the outset therefore, the BSC appears to have all the answers for choosing the most appropriate measures of company performance, which are governed by the organization's strategic orientation and external competitive environment.

The above arguments hold true for all African commercial banks including Ethiopia's commercial banks as a case study. They need to adopt the multi-dimensional performance measures, particularly BSC so as to compete and survive in the today's competitive banking business which has undergone massive technological changes. The need and roles of these banking institutions are the rationale for this study, in which balanced Scorecard framework will be used as a reference to assess their present performance.

The researcher did not come across with relevant and well documented data concerning multi-dimensional based performance of the Ethiopian commercial banks. This implied that literature regarding performance measurement (both financial and non-financial) of commercial banks in Ethiopia is scant. Thus, the research undertaken in this study will contribute to document the situation more comprehensively. With respect to practical purposes, the findings may be utilized by decision makers in Ethiopian commercial banks for the formulation of new strategies as well as strategy reforms.

## 1.2 Background of the Selected Ethiopian Commercial Banks

### 4.2.1.1 Commercial Bank of Ethiopia

The state Bank of Ethiopia was founded in 1942 with twin objectives: performing the duties 0f both commercial and central banking. In 1963, the Commercial Bank of Ethiopia (CBE) was legally established as share Company to take over the commercial banking activities of the state bank of Ethiopia. In 1974 revolution, CBE got its strength by merging with the privately owned Addis Ababa Bank. Since then, it has been playing significant role in the development endeavor of the country.

The CBE, which is striving to embark into a world-class commercial bank, is rendering state-of-art and reliable services to its millions of customers both locally and abroad. The business strategies of the banks focus on the stakeholders it serves.

As at the end of fiscal year2008/09, the number of branches reached 209(42.9%) and stretched across the length and breadth of the country with 8033 employees and 5041 million capital.

The state owned CBE still dominates the market in terms of assets, deposits, capital, customer base, and branch network, despite the growing competition from private banks over the last 15 years.

### 4.2.2.1.1 Vision and Values at CBE

The strategic vision of Barclays CBE is “To become a world-class commercial bank”. This vision therefore emphasizes on striving to embark into a world-class commercial bank. Aligned with its vision, the bank has already opened a branch in Sudan.

The financial controller stated the main strategic areas for the bank:

a. Improve shareholder funds
b. Penetration of client wallet
c. Customer acquisition
d. Asset quality

The financial controller alluded to the fact that the relationship between the four measures above boils down to service quality.

CBE has a set of values and principles that define how its staffs must behave and conduct themselves in the performance of their duties. CBE communicates clearly its vision, mission and values through this expected behaviors and guiding principles.

CBE's core values are embodied in the "CBE Behaviors" and the "CBE Guiding Principles" which are listed below. The significance of these core values is to properly align corporate objectives with that of individual employees in order to create strategic congruence. This is to ensure that employees are properly directed and focused on key business or strategic areas that are part of the broad corporate strategy of the bank. This also forms the non-financial measures that assess the quality of each individual's contributions towards the achievement of overall corporate goal, profitability.

The CBE values include the following points:

a) It stands for quality;

b) It is a learning organization;

c) It is committed to unparalleled customer satisfaction;

d) Its employees are its valuable assets;

e) It is committed to maximizing shareholder value Execute at top speed; and;

f) Upholds transparency, accountability and professionalism;

g) "We are an equal-opportunity employer", and

h) "We are corporate citizens"

### i) 4.2.2.2 Dashen Bank

j) The Bank is a privately owned company established in 1995 in accordance with the "Licensing and Supervision of Banking Business Proclamation No. 84/1994" of Ethiopia to undertake commercial banking activities.

k) The Bank obtained its license from the National Bank of Ethiopia on 20 September 1995 and started normal business activities on the first of January 1996. It operates through its Head Office in Addis Ababa and fifty two area banks established within and outside Addis Ababa, five Foreign Exchange Bureau, five hundred and fifty seven

Point of Sale (PoS) terminals and forty Automatic Teller Machines (ATMs) installed at different places within and outside Addis Ababa.

### l) 4.2.2.2.1 Vision and Values of Dashen Bank

m) The vision of Dashen Babk is "*Inasmuch as Mount Dashen excels all other mountains in Ethiopia, Dashen continues to prove unparalleled in banking service*".

*n)* The Mission of Dashen Bank is *"provide efficient and customer focused domestic and international banking services, overcoming the continuous challenges for excellence through the application of appropriate technology."*

o) Dashen Bank operates on the following core values culled from its website:

*p) " ... Its rapid growth is attributed to the vision and values it was built on. These values include: Develop banking habit in the community; Assist continuous growth of customers; Sustainable growth and stability; High Integrity and accountability; Esteemed Customers satisfaction; Non-stop openness for community access; Brightened and trained employees; Attend customers' constructive outlook; Normative Confidentiality; Keen to consciously build professionalism & service quality. We are also committed to exploring the potential offered by the Internet as an efficient distribution and communications channel for delivering the services provided by our network of branches and offices."*

### 4.2.2.3 United Bank

United Bank was incorporated as a Share Company on 10 September 1998 in accordance with the Commercial Code of Ethiopia of 1960 and the Licensing and Supervision of Banking Business Proclamation No. 84/1994. The Bank obtained a banking services license from the National Bank of Ethiopia and is registered with the Trade, Industry and Tourism Bureau of the Addis Ababa City Administration.

Over the years, United Bank built itself into a progressive and modern banking institution, endowed with a strong financial structure and strong management, as well as a large and ever-increasing customers and correspondent base. Today, United Bank is a full service Bank that offers its customers a full range of commercial banking services with a network that includes 40 branches.

United Bank's priority in the coming years is to strengthen its capital base, maximizing return on equity and benefit from the latest technology in order to keep abreast with the latest developments in the local and international financial services industry.

#### 4.2.2.3.1 Vision, Mission and Values at United Bank

The vision of United Bank is to be "The Preferred Bank" in the banking industry of Ethiopia.

UB's mission is to render Quality Commercial Banking Services to the best satisfaction of its Customers; to enhance Shareholder value; to be one of, if not the best, employers in the industry; and, to discharge its corporate responsibilities to both the community in which it operates and the environment which it shares with the world.

The above vision drives the entire corporate strategy of United Bank. The bank has 41 branches, 26 in Addis Ababa and 15 in different regions and 449 million capitals as of the end of 2009. The core values of the United Bank are the following:

a) The customer is United Bank's lifeline
b) United Bank invests in its employees and dignifies them
c) United Bank is committed to quality
d) United Bank is a responsible corporate citizen
e) United Bank works towards profitability and growth.
f) United Bank values honesty, integrity and loyalty
g) United Bank lives its values

According to human resource officer it is a key requirement for every staff within the United Bank to internalize its vision, mission and core values. Staffs are also held to very high standards of accountability, integrity and customer service delivery, and there are no exceptions. This is to ensure, the actions and behavior of staffs are aligned with the strategic goals of the bank.

## 1.3 Statement of the problem

Traditionally, financial measures have been serving as the performance measurement of all organizations all over the world starting from the invention of double entry system. Bookkeeping records that are being used to facilitate financial transactions can be traced back thousands of years. At the turn of the twentieth century, financial measurement innovations were critical to the success of the early industrial giants like General Motors. The financial measures created at that time were the perfect complement to the machinelike nature of the corporate entities and management philosophy of the day

The financial measures were sufficient enough to indicate the performance of the machine like nature of the corporate entities during the industrial age. This was because the competition during this age was ruled by scope and economies of scale i.e. management of intangibles assets to create long term capabilities and customer relationship were not critical to succeed. These measures have been also considered as effective and objective measures to evaluate the effectiveness and efficiency of business operations or divisions in utilization both financial and physical assets of the business organizations.

Despite their apparent effectiveness and objectivity, financial indicators are frought with a number of limitations which exposed them to increasing critics by a number of researchers and authors by 1990s (Neely et al., 1995; Marr and Schiuma, 2002). Kaplan and Norton (1996) for instance, argue that in order to compete and survive in the information age, in which information forms fundamental part within the trade and industry, it is not longer enough to relay solely on financial measures because they could conduce to an incorrect picture of the effectiveness and profitability of a business.

Beechey and Garlick (1999) ,Clarke (1997) point out that financial measures are backward looking and do not reflect the long-term and future consequences of managerial action. In a changing world it may well be wrong to assume that past results will be repeated as conditions change (Brazley, Hancock, Berry, & Jarvis, 1999). Finally, Olve, Roy & Wetter (2001) argued that financial measurements are failed to provide adequate guidance for long-term strategic development and competitive strategies.

Acknowledgement of these limitations has led the theorists as well as practitioners to recommend strongly a move from the traditional accounting in to a form of control where the business results are measured in several perspectives.

In other words, the acknowledgement of these limitations has led to views that financial accounting model should be expanded to incorporate the valuation of the company's intangible and intellectual assets, such as high-quality product and services, motivated and skilled employees (via the measurement of human capital), responsive and predictable internal processes, and satisfied and loyal customers in order to reflect the assets and capabilities that are critical for success in today's and tomorrow's competitive environment (Burr &Girardi, 2002; Kaplan & Atkinson, 1998; Lev & Zarowin, 1998).

Furthermore, recent literature studies related to commercial banks performance measurement point to the increasing relevance of financial as well as non financial measures in the evaluation of commercial banks. The conference board of the Canadian Institute of Chartered Accountants (CICA as cited in Sim & Koh, 2001) for instance, recommended that strategically oriented performance measurement systems should measure non-financial as well as financial outcomes. Similarly, a report by the American Institute of Certified Public Accountants (AICPA) revealed that companies should disclose non-financial measures on key business processes such as product quality, cycle time, innovation, and employee satisfaction, customer satisfaction (AICPA Report, 1994). These all clearly show that the need for the balanced performance measurement such as balanced scorecard, which appears to have all the answers for choosing the most appropriate measures of company performance, to assess the performance and competitiveness of organizations in general and commercial banks in particular in today's and tomorrow's changing and competitive business environment.

Almost all of the commercial banks in Ethiopia, however, solely depend on purely financial indicators to measure their performance and competitiveness in the banking industry. Even national bank of Ethiopia, which is the ruling body, uses financial metrics to assess performance and competitiveness of the commercial banks in the country.

All these attempts to measure performance and competitiveness of banks do not take into account the effect of the leading, forward-looking, and critical performance measures( non-financial perspectives) and therefore creates a huge vacuum in the performance and competitiveness evaluation of banks in the country , which this study seeks to fill in by providing information on performance of banks in Ethiopia via applying balanced scorecard model which balances financial and non-financial perspectives very well.

The researcher also observed that there is no reliable data and information on the extent to which non-financial perspectives affect the performance and profitability of banks in Ethiopia. This also makes it very imperative to provide a new framework (BSC) that will give a complete and balanced overview of the performance and profitability of commercial banks in the country.

On top of this, the researcher believes that it is now the right time to introduce and apply balanced scorecard in to the banking industry due to the following reasons:

1. Both public and private banks are re-engineering their operation and control system to introduce new systems such as BPR, branch networking, smart banking and other technologies which have close relationship with BSC.
2. The number of banks in country is almost double in spate of few years and banks such as Enat Bank, Awasa Bank, Debub global Bank, Abay Bank and others are on the eve to join the industry, which make the number of the banks almost two fold more than that was before 2005.And this leads to intensive completion which makes managing performance using financial perspectives is an unreliable.
3. As per the agreement between Ethiopia and WTO, the country is the way to join WTO as of 2015 which demands to open the banking industry to foreign bankers who have massive capital, well advanced technology and aggressive marketing strategies. These all altogether lead to the creation of intensive competition among existing, establishing and coming banks. To cope with and survive in such challenging and competitive environment, the duty of running and controlling operation needs integrated and balanced performance measurement such BSC otherwise solely reliance on financial indicators will lead to incorrect picture of the performance and competitiveness of banks in the country which further broadens the vacuum identified above.

These reasons and the gap identified above are the driving forces for conducting this research. The study, hence, conducted to introduce BSC in evaluation of performance and competitiveness of the banking sector and thereby fills the identified vacuum in the performance and competitiveness evaluation of banks in the country through the application of the balanced scorecard frame work.

### 1.4 Research questions

The research questions below are put in the context and perspective of the balanced scorecard as an information tool in relation to the argument stated above:

1) How can a BSC framework be used for assessing performance of commercial banks in Ethiopia?
2) Does BSC provide more information with respect to performance of commercial banks in Ethiopia than financial metrics alone?
3) According Kaplan & Norton (1992) there is a cause-and-effect relationship among the elements of BSC. Does this relationship hold true in commercial banks in Ethiopia?

## 1.5 Objectives of the study

### 1.5.1 General objectives

The study aims at applying balanced scorecard framework in assessing the performance of selected Ethiopian commercial banks.

### 1.5.2 Specific objectives of the study

The study has the following specific objectives:

- **i.** To apply BSC framework in assessing performance of the selected commercial banks in Ethiopia.
- **ii.** To examine whether BSC can provide more information in performance of the selected commercial banks in Ethiopia than financial metrics alone.
- **iii.** To assess the relationship between the financial and non-financial performance of the selected commercial banks in Ethiopia.

### 1.6 Relevance of the study

Managers can use the result of this study to apply integrated performance measurement tools to obtain the best financial and non-financial information for effective decision making as well as to suit their managerial needs. Stockholders, potential investors, and business partners will be assisted in their understanding of performance measurements and the way in which to determine the progress of the companies.

The concerned government bodies will be assisted in determining how well the companies operate, how efficiently domestic resources are utilized, and how tax and other similar issues should be handled.

Finally, it would be helpful for academic studies on performance evaluation of banking sector in the country.

### 1.7 Scope of the study

The study focuses only to selected Ethiopian commercial banks and their performance assessment using balanced scorecard framework (financial measures, customers' measures, internal/operational process measures and learning and growth (employees') measures).

### 1.8 Outline of the study

This study is divided into five chapters:

**Chapter 1** summarizes the introduction of the study, the problem statement, the objectives of the study, and the relevance.

**Chapter 2**.This chapter reviews the literature on the need for balanced performance measurement, the development of balanced scorecard performance measurement frameworks, which provide a balanced picture of the business and the balanced scorecard perspectives along with the common pitfalls of organizations in implementing BSC.

**Chapter 3:** Overviews the methodology to be used, focuses on the overview of research area, and methods used as a guideline for the empirical study.

**Chapter 4:** Discuses the results of the study. The first part of this chapter presents how BSC to measure performance the selected commercial banks, the second part is the analysis of BSC if it can provide additional information for stakeholders, and the third is the descriptive, correlation and regression analysis of the BSC. The final part presents the management approaches to strategic performance measurement.

**Chapter 5:** Presents the conclusion of the research as well as recommendations for the betterment of performance measurement practices presented.

# CHAPTER II: LITERATURE REVIEW

## 2.1 Introduction

Information about performance management is critical to effective functioning of any business (Kaplan et al., 1992). However, what constitutes good performance and what constitutes good measures of performance are continuously being debated (Corrigan, 1998; Kaplan & Norton, 1998; Kimball, 1997, Landy & Farr, 1983; Maisel, 1992). For instance, do financial performance indicators provide the necessary information for the operating with in environment that are classified as turbulent, given that they are backward- looking? (Armstrong, 2002; Barker, 1995; Kaplan, 1983). Is it important to utilize non-financial, this all information for organizations that are facing changes in demand? (Chang, 1999; Kaplan, 1983)

In order to answer these questions and more, this chapter reviews literature on performance management and describes the factors that influence performance measures. In addition, why there is a need for organizations to focus on both traditional financial and non-financial indicators of in order to meet organizational objectives, irrespective of competitive environment, is reviewed. Specific frame works, which can be utilized by organizations to measure performance in this way, are also reviewed, with a particular focus on the Balanced Scorecard (BSC) as a measurement tool which meets the demands of contemporary organizations (Duursema, 1999; Itter &Larker, 1998a; Kaplan et at., 1992).

## 2.2 Role of Performance Measures in an Organization

To function successfully in a business environment, an organization depends upon the decision-making ability of its managers, who in turn, depend upon the availability of usable information (Banker et al., 1997). Information about performance is important in different ways to the various stakeholders within a business. For example, owners and investors are interested in company's performance to insure that their investment decisions are correct, and if not to look for alternative investment opportunities. Managers look at the performance of a company's subunits as away of prioritizing the allocation of resources (Duusema, 1999; Euske et al., 1993; Lockamy & Cox, 1994).

In a more strategic sense, performance measurement is seen as an important way of keeping a company on track in achieving the company's objectives and as a monitoring mechanism employed by the owners of a company where ownership and management are separated (Baker & Wruk, 1989; Bushman et al., 1995; Delaney & Husekid, 1996; Huselid, 1995).

If measures of performance are to be effective, the measures need to be based on a company's strategic objectives in order for employees to understand and be committed to the achievement of those objectives (Becker et al., 1996; Hronec, 1993; Kaplan, 1983).

Specifically, D'Souza and Williams (2000), Euske et al. (1993), and Kimball (1997) argue that within the contemporary work environment, a good performance measurement system should be:

a) Supportive and consistent with an organization's goals, actions, people/culture, and key success factors;

b) Driven by the customer;

c) Appropriate to the internal and external environment;

d) Developed by a combined top-down and bottom-up effort;

e) Communicated and integrated through the organization;

f) Focused more on managing resources and inputs, not just simply costs;

g) Committed to providing action-oriented feedback; and

h) Supportive of individual and organizational learning.

Although there is agreement that these types of characteristics will make for better performance measures (Devenport, 2000), how performance is actually measured is still a 'black box' for many organizations (Cross &Lynch, 1992; Frigo et al., 2000;), particularly as performance measures used in one company may not be appropriate for another company facing a different situation or different set of circumstances (Otley, 1980).

Defining performance for an individual company is highly dependent upon the company's business objective and strategy and is therefore quite unique (Fitzergerald et al., 1993, Hoffectker et al., 1994; Kaplan et al., 1992). For many firms however, the main performance indicators would typically include some combination of indicators across two broad categories: financial indicators and non-financial indicators (D'Souza et al., 2000 Eccles, 1991; Hoffectker et al., 1994).

### 2.2.1 Traditional Financial Measures

The economic foundation of financial measures is reflected in the very definition of accounting as a"…process of identifying, measuring communicating economic information to permit informed judgment and decisions by users of information" (The American Accounting In A Statement of Basic Accounting Theory (ASOBAT), 1966). Various financial performance measures are intended toe. They also provide expanded financial information to present and potential investors, and other interested users through the various components of quarterly and annual reports, including balance sheets, profits and loss statements and cash flow statement evaluate the effectiveness and efficiency by which operating divisions use financial and physical capital to create value for shareholders.

A variety of financial accounting measures of performance are used in order to provide such information. Some of the more popular measures include: earnings, cash flow, return on investment(ROI), return on assts (ROA), return on equity(ROE), return capital employed per share, price/earning ratio. Return on sales. Asset turn over, overhead/sales ratio, etc. (Gumbus &Lyons, 2002; Ittner & Larker, 2003).

Return on investment (ROI) is calculated when an accounting measure of income is divided by an accounting measure of investment, with a positive ROI indicating that the return on a particular investment exceeds the firm's cost financing. Return on asset (ROA) is profitability ratio calculated by dividing earnings before interest and taxes in to assets and is an indicator of a form's overall financial health. A firm with a higher ROA is able to raise money more easily and cheaply in securities markets because it offers prospects for better return on investment (Copland, Koller, &Murrin, 2000; Morin & Jarrel, 2001).

Asset turn over (ATO) is measure of annual sales generated by each dollar of assets (sales/assets). Return on Equity (ROE) is a profitability ratio of net profits divided by equity and provides shareholders with a comparative indicator of the return on their investment in the firm. Return on capital employed (ROCE) is based on pre-tax profits (net income for the US and Canada) plus interest, divided by capital employed at the beginning of the financial year (Copeland et al., 2000; Morin et al., 2001).

Other measures focus more on company sales, including return on sales and overall overhead/sales ratio. Measures relating to earnings per share and the price/earnings ratio (PE) relate directly to the firm's share price. The price-earning ratio for a firm stock is the market share price divided by the firm's earning per share (most recently reported). It will vary with the market's assessment of the risk involved (Copeland et al., 2000; Morin et al., 2001).despite their apparent objectivity, financial indicators are, fraught with a number of limitations, which need to be acknowledged. Perhaps most notable, as Beechey and Garlick(1999), Clarke(1997), and Hemmer(1996) point out, is that financial measures are backward looking and do not the reflect the long-term and future consequences of managerial action. In a changing world it may well be wrong to assume that past results will be repeated as conditions change (Bazley et al., 1999). Ideally, financial accounting information is intended to report objectivity the economic events of the firm. In reality, however, financial statements are management assertions within information required by law, institutional best practice and any additional information which the company wishes to supply, thereby introducing considerable potential for subjectivity (Brailsford et al., 2004).

In fact, the actual selection of accounting policies may reflect the objectives of company's management in ways that may or may not be aligned with the interest of other stakeholders. Compensation plans and bonus schemes are a case in point (Eccles, 1991). Although intended to align the interests of management more closely to the shareholders, the actual result may be to merely favor one method of accounting over another (i.e., those methods which are most likely to demonstrate results that maximize payouts to the managers overseeing the accounting).

Using operating profit or other financial indicators as the sole measures for incentive purposes, for example, may encourage managerial focus on short-term and may distort the decision-making process(Ittner et al., 2003). For instance, research and development spending reduces current-period accounting earning yet generates substantial, albeit uncertain, returns in the future (Duuresema, 1999; Ennew et al., 1993). As a result managers may be tempted to cut research and development to improve their accounting-based performance even through it will sacrifice the long-term (Cowen & Hoffer 1982).

Acknowledgement of these limitations has led to views that financial accounting model should be expanded to incorporate the valuation of the company's intangible and intellectual assets, such as high-quality products and services, motivated and skilled employees (via the measurement of the human capital), responsive and predictable internal processes, and satisfied and loyal customers in order to reflect the assets and capabilities that are critical for success in today's and tomorrow's competitive environment (Bur & Girardi, 2002; Kaplan &

Atkinson, 1998; Lev & Zarowin, 1998). These types of performance measures can be categorized as non-financial.

### 2.2.2 No-financial performance measures

Financial or accounting measures are only sources of information available to decision-makers. In this information age, many companies are beginning to place greater emphasis on non-financial measures such as customer satisfaction, innovation measures, on-time delivery, market share product/service quality, and productivity (Hoffectker et al., 1994; Maisel, 1992).

the emergence of non-financial indicators as important to monitoring company performance reflects the realization that customer satisfaction or quality, that are best captured by non-financial performance measures(Barua, Kriebel, & Mukhopadhyy, 1995); Johnson and Kaplan, (1987). Others suggest that non-financial measures are superior to short-term financial measures as indicators of progress towards achieving long-term goals (Banker, potter & Srinivasan, 1998; Beechey et al., 1999; Buckmaster, 2000).

In both practice and research, the use of non-financial measures to track performance is becoming more evident (Kaplan et al., 2001). Ittner et al. (1997) in their study of the use of non-financial measures in executive compensation at 317 companies found that most companies used both n0n- financial measures and financial measures in determining bonuses for senior executives. Keating (1995) also reported widespread use of operational non-financial indicators in evaluating the performance of division managers at 78 medium-sized US Public firms.

Similarly, a study by Hiromoto (1988) found increasing use of non-financial indicators for performance measurement at companies in Japan, while the American Quality Foundation and Emst & Young cited a dramatic increase in the use of quality measures in setting compensation for senior managers in the U.S., Japan, Germany, and Canada (Hauser, Simester, &Wernerfelt, 1994).

A number of factors account for the increasing emphasis on non-financial indicators. Non-financial measures are believed to be better indicators of managerial effort and therefore valuable in evaluating managerial performance (Johnson, Anderson, & Fornell., 1995; Kaplan & Norton, 2001). Non-financial measures of performance are also believed to be better predictors of long term performance, and therefore are used to help refocus managers on long term aspects of their actions (Johnson et al., 1987).

To some, the appeal of non-financial measures is further attributed to the fact that they deal with cause and not effect (Ittner et al., 1998; Johnson et al., 1987; Keating, 1995). Profit and other financial measures show the effects of nonfinancial activities and achievements, whereas, operational measures of customers satisfaction, internal processes, and the organization's innovation and improvement activities are believed to be the drivers of futures financial performance (Cross et al., 1992; Eccles, 1991); Euskel et al., 1993). Non-financial indicators such as orders received unfilled orders and on-time shipments may anticipate subsequent financial performance results (Rees et al., 1994).

As result, non-financial measures may also be an important source of information on firm failure (Kaplan et al., 1996) and less susceptible to manipulation (Singlton-Green, 1993). Non-financial indicators are generally not dependent on managerial judgment as in allocations and valuations and therefore, are more likely to be timely, reflect true process, and be understood (Rees et al., 1994)

However, perhaps the most compelling reason for an increase in reliance on non-financial measures to track performance rests on the nature of the current, fast changing technological environment and the need for the organizations to leverage key capabilities in order to achieve competitive advantages (Eccles, 1992; Porter, 1992).

### 2.2.3 Multiple Measures of Performance

It is increasingly recommended that managers (and researchers) expand performance measurement systems to include non-financial information, such as productivity and quality data whilst retaining the traditional financial rations (Kaplan, 1983; Kaplan & Norton, 1992) as no one single measure provides consistent evidence of the correlation between all stakeholders' satisfaction and firm performance (Brossy & Balkcom, 1994; Otley, 1980, 1994).

In particular, companies operating within the service industry cannot rely solely on financial performance or non-financial performance indicators (Ittner et al., 1998a,; Kaplan et al., 1996a; Lambert, 1998; Maisel, 1992; McKensize et al., 2000; Nagar, 1999; Rolph, 1999; Single-Green, 1993Sinkey, 1992).

This new emphasis on utilizing both financial and non-financial indicators has led to the development of approaches using multiple measures of performance, such as Benchmarking, Total Quality Management (TQM) and The European Foundation for Quality Management department, process, or practice within the organization (EFQM), the Balanced Scorecard (BSC), to name a few.

Benchmarking can be seen as the systematic comparison of elements of the performance of the company against that of other companies (Peters, 1994; Thor, 1994). Benchmarking can be internal or external. Internal benchmarking compares the internal workings of one department, process, or practice within the organization to another, while external benchmarking compares a firm to its peers, chief competitors, or other organizations (Peters, 1994; Thor, 1994). According to the Thor (1994) and Peters (1994), benchmarking can fall into three broad and, at least partly, looks at the methods, procedures and business processes of the organization. Statistical benchmarking is about performance overlapping categories: strategic, process and statistical. Strategic benchmarking seeks to compare and contrast the strategic mission and direction of the company. Process benchmarking, by contrast, looks at the methods, procedures and business process of the organization. Statistical benchmarking is about performance measures and used to differentiate, compare and/or monitor performance generally on a strategic, as opposed to operational, level (peters, 1994).

But, benchmarking is generally based on comparisons of quantitative data that may cover a wide range of financial and non-financial measures, such as return in investment, customer satisfaction and quality performance. Quantitative analysis alone, however, often leads to incomplete analysis alone, however, often leads to incomplete analysis (Jenson, 1995) in the absence of qualitative analysis that explains the importance or relevance of the measures used.

Total Quality management (TQM), as stated by Crosby (1979), Deming (1986), Juran (1981), and many other TQM specialists, involves four important elements, which revolutionized quality in market place. First, the upper management had to make a comment to quantify and ensure that quality was emphasized throughout the organization, second, all levels and all functions were to receive quality training at some specified level of expertise. Third, quality improvement was to be a process as later defined by the Deming wheel. Finally, the customer was to be the most important concern in the quality loop. This emphasis on quality at all levels meant a change in focus from only financially driven measures to examining factors that influence these measures.

In both the TQM and benchmarking management techniques, there are references to: continuous systematic improvement, meeting customer needs, performance standards, understanding industries' best practices, concurrent engineering, and measure of targets

(Swift, Gallwey, & Swift, 1995). For companies that used the TQM program, benchmarking criteria have become a key element of that program.

The European Foundation for Quality Management (EFQM) was launched in 1991 (Li & Yang, 2003). The philosophy, underlying the EFQM model is that customer satisfaction, employee satisfaction and the benefit impact on the on society are achieved through leadership. The EFQM model seeks to drive policy and strategy, employee management, resources and processes, leading to excellence in business results.

Organization using the EFQM model accept its underlying premise that performance measurement is important and multidimensional performance measures must be continuously refined and improved (Thomas, 1995).

However, one of the most popular approaches which assert the need for multiple performance indicators is the Balanced Scorecard (Kaplan et al., 1992).

## 2.3 The Balanced Scorecard (BSC) Framework

The BSC provides a framework, which encourages the use of both financial and non-financial measures of performance, allowing the organization to point its strategic objectives via balancing four perspectives – financial, customers, internal business processes, and learning and growth- to measure firm performance (Kaplan et al., 1992; Kaplan et al., 1996b). The effectiveness of the balanced scorecard is based on its ability to translate a firm's mission and strategy in to a comprehensive of performance measures (Kaplan et al., 2001).

Introduced by Robert Kaplan of Harvard Business School, and David Norton, of Renaissance Worldwide in 1992, the balanced scorecard (BSC) framework is system that measures both current performance of the firm and drivers of future performance. Specifically, the BSC framework seeks to identify the critical economic activities of the company that generate current and future cash flows and to build a causal model of the company by which the company generates profits by focusing both financial and non-financial indicators of firm performance.

The balanced scorecard approach involves identifying the key components of operations, setting goals for them, and then finding ways to measure progress toward achieving those goals. Taken together, the measures provide a holistic view of what is happening both inside and outside the organization or operational level, thus allowing each constituent of the organization to see how their activities contribute to attainment of the organization's overall mission.

Such a system of measures is therefore driven by a strategy where success is defined and a method of achieving it is established. Management works out how to monitor progress and establishes the investment to make this self-sustaining (Kaplan et al., 2001; Maisel, 1992). As Richard Quinn, vice president of quality at Sears, has observed, "You simply can't manage anything you can't measure" Lingle and Schiemann (1996).

According to Kaplan and Norton (1996) the BSC can help the organization to clarify its corporate vision and strategy; communicate and link strategic objectives and measures to plan; set targets and align strategic initiatives; and to enhance strategic feedback and learning.

The framework is based on the premise that those properties of the financial accounting system such as conservatism, transaction emphasis, and dollar unit of measurement, prevent it from measuring the key activities of the company adequately. Rather, Kaplan and Norton (1992) suggest supplementing the traditional financial measurement system with non-financial measures of customer relations, internal business processes, and organization learning and growth in order to specify what the organization expects to receive from and give to the various stakeholders groups on exchange for those groups' continued contribution toward the organization's pursuit of objectives. Figure 3.1 indentifies relationship and premises of the BSC.

The BSC explicitly based on the growing acceptance of two related premises. The first is that future success involves providing superior value to customers, employees, and shareholders. The second is that attracting shareholder funds, employee talent, and customers are the three fundamentals of sustainable competitive advantage and superior returns to investors (Hoffectker et al., 1994; Ittner et al., 1998a; Johnson, 1998; Kaplan et al, 1996; Maisel, 1992) within the BSC framework, four perspectives- financial, customer, processes and learning and growth- respect the views of four essential stakeholders in any business.

All stakeholders have choices-shareholders can sell; customers can buy from another provider; and employees can work for another company. If value is created for each of these essential stakeholders groups, the company will be more likely to produce superior return for investors for a longer period (Lockamy et al., 1994).

A company can ignore the expectation of one of its stakeholders and still succeed in the short run. But in the long run, the business cannot ignore any of these stakeholders (Atkinstone et al., 1997; Beechy et al., 1999; Chow et al., 1998). This is because all three stakeholders are interrelated. Employees' attitudes and behaviors impact upon the level of customer satisfaction and retention, while customer attitudes and behaviors influence shareholder satisfaction and retention. Finally, shareholder satisfaction affects employee satisfaction through bonuses, stock options, or further investment in employee growth and development (Bettencourt & Brown, 1997; Johnson; 1998; Kaplan et al., 1998).

Although the selection of relevant performance measures will depend upon the specific situation facing each company, the BSC is perhaps most groundbreaking in stressing the necessity of both financial and non-financial indicators and putting them on more or less equal footing (Hoffectker et al., 1994; Kaplan et al., 1992; Kaplan et al., 1996).

### 2.3.1 The Four BSC Pillars

With the BSC framework, four categories of measures are identified in order to achieve balance between the financial and non-financial, between internal and external and between current performance and future performance (Kaplan et al., 1992). The four perspective: financial, customer, processes, and learning and growth (as represented in figure 2.1), - represent the views of four essential; stakeholders in any business.

**The financial perspective**, as reflected in financial measures, is the most traditional and still most commonly used measurement tool. Financial measures are valuable in conveying the readily measurable economic consequences of action already taken. Financial measures are typically focused on profitability-related measures (the basis on which shareholders, in turn, typically gauge the success of their investments), such as return on capital, return on equity, return on sales, etc., (Kaplan et al., 1992; Lipe et al., 2000).

These measures are necessary for any organization trying to measure performance for a number of reasons. First, reporting of financial measures is expected and governed under law. Second, reporting of certain types of financial measures of firm p performance is required by institutional bodies. For instance, in the case of Ethiopia, the national bank of Ethiopia needs each commercial to prepare financial statements and annual reports. Third, reporting of financial measures is expected from all stakeholders and is ingrained in history as way of framing and comparing organizational performance.

**The customer perspective** typically includes several core or general measures derived from the desired successful outcomes of a well-formed and implemented strategy. These core measures may include lost/won, sales from new products, and on-time delivery (Kaplan, 1997, 1998; Light, 1998). Measures related to customers include results from customer surveys, sale from repeat customers, and customer profitability.

The customer perspective is a core any business strategy which describes the unique mix of product, price, service, relationship, and image that a company offers (Kaplan et al., 2001). The customer perspective defines how the organization differentiates itself from competitors to attract, retain, and deepen relationships with targeted customers. The value of the customer perspective is crucial because it helps an organization connect its internal processes to improved outcomes with its customers (Kaplan & Norton, 2001).

Of the four BSC perspectives, the customer is at the core of any business and is crucial to long term improvement of the company performance (Kaplan et al., 1992). Heskett et al., (1994) point out the customer-based virtuous circle, whereby investment in employee training leads to improved service quality; which in turn results in higher customer satisfaction leading to increased customer loyalty, which boosts revenues and margins.

Internal business process measures relate specifically to the operational processes of the business unit. Internal business processes measures represent the perspective is based on the notion that to satisfy customers and earn a financial return, the business must be efficient and effective at what it does. The internal process measures are typically based on the objective of the most efficiently and effectively producing products or services that meet customers' needs. For example, such measures may include order conversion rate, on-time delivery from suppliers, cost of non-conformance, and lead-time reduction (Kaplan et al., 1996)

**Learning and growth measures** represent the employees as part of the four pillars used to measures performance with the BSC framework. The innovation and learning perspective is all about developing the capabilities and processes needed for the future. In the banking industry, for example, for a business to succeed not only must it effective carry out daily transactions but it must also continually improve in terms of the value and cost of its offerings. This innovation process can be measured in a variety of ways. These may include the speed of transactions, or the number of people involved in a particular transaction, etc. Again, the choice depends on what is critical for the success of each particular business (Kaplan et al., 1996). Acknowledging that performance measures relating to learning and growth are the most difficult to select, Kaplan and Norton (1996). Suggest measures of employees' capabilities, information systems capabilities, and employee motivation and empowerment as examples.

An example is presented below (Figure2.1) of the type measures associated with each of these pillars used by Chemical Bank when it adopted the BSC to communicate and implement a new retail strategy in the face declining margins and increasing competition (Kaplan &Klein, 1996).

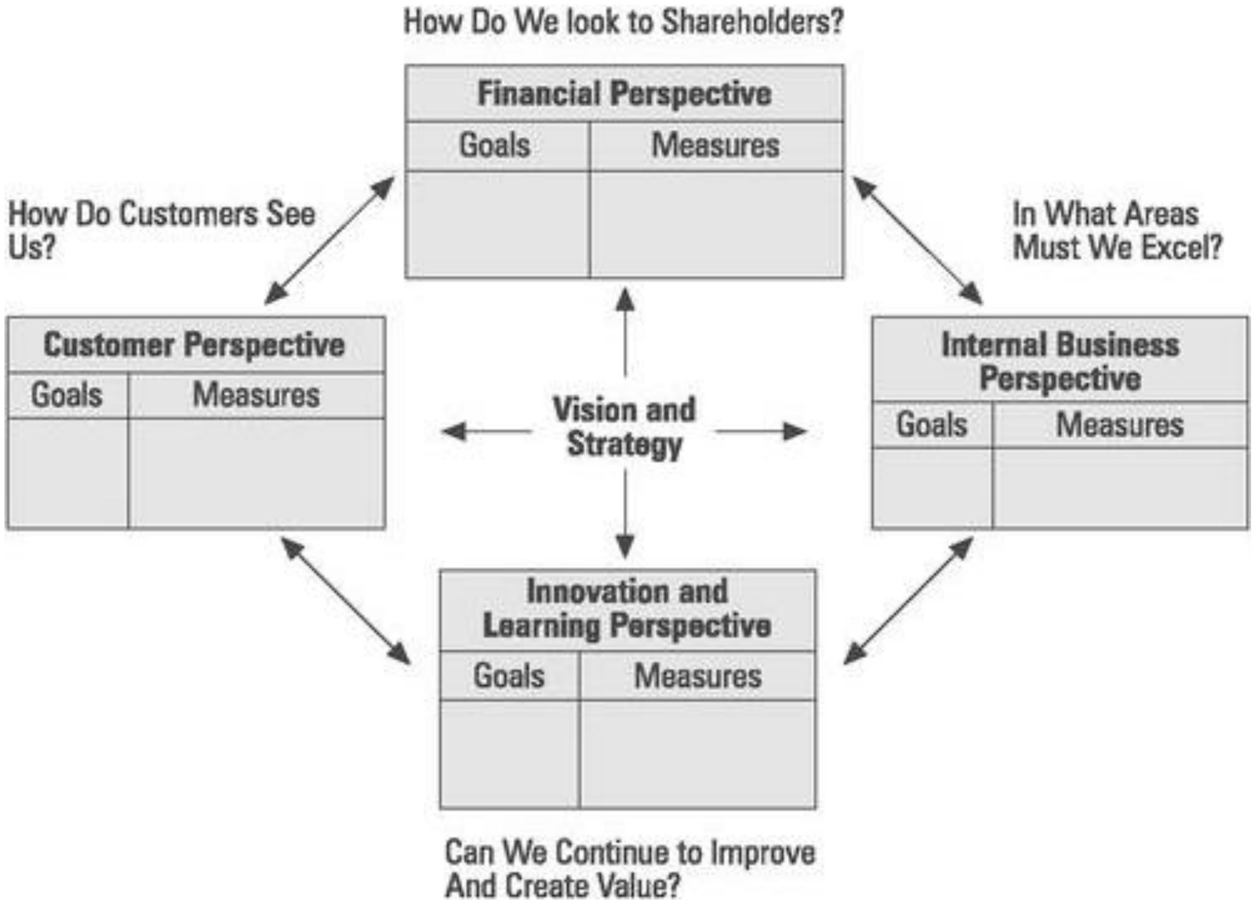


**Figure 2.1 the balanced scorecard (Kaplan & Norton, 1996:9)**

## 2.3.2 Application of the BSC

Research evidence generally supports the BSC's potential applicability to company performance in a wide range of business sectors (e.g. FHC Corporation, Rockwater Engineering, Apple Computer Company, Advanced Micro Devices, DHC Chemical Division, NatWest Bank, Mobil's US Marketing and Refining Division (Chang, 1999; Corrigan, 1996; Dinesh &Palmer, 1998; Kaplan et al., 1996b; Newing, 1994). About 50% of Fortune 1,000 companies in North America and about 40% of these in Europe use the Balanced Scorecard tool (Fortune as cited by Gumbus and Lyons, 2002) while thirty percent of Australia's top 1000 companies are reported to use BSC (McCunn, 1998).

A survey undertaken by Blundell et al., (2003) in New Zealand indicates that more than 60%of the New Zealand Stock Exchange's top 40 companies use a balanced scorecard at the organizational or division levels. Interestingly, the survey reveals that non-financial performance measures to lag financial measures in perceived importance among survey companies. KPMG's 1998 model annual report recommended using the BSC to disclose non-financial performance and is believed to have been the first significant reference to BSC in New Zealand (Kane, 1998).

The scorecard can be used at different levels: throughout the total organization, in a subunit, or even at the individual employee level as a "personal scorecard". A wide range of empirical research supports the effectiveness of the BSC in translating strategic objectives into relevant performance measures that drive performance toward those objectives.

There is broad consensus that the BSC is most effective when used to drive organizational change and in focusing and sustaining revitalization and continuous improvement efforts (Chang, 1994; Hofferctker et al., 1994; Kaplan et al., 1998, 2001a; Maisel, 1992 Newing, 1994).

Kaplan and Norton (1996) found that the Chemical Bank's use of the BSC in the aftermath of its merger with Manufacture Hanver Corporation to interestingly focus its retail efforts on target customers allowed it to achieve the expected merger cost savings while suffering little attrition among target customers and, in fact, growing revenue from those target customers. As result, by 1996, the bank's retail profits had increased 19-fold over the base year of 1993.

The experience of Brown & Root Energy Services' Rockwater Division, an undersea construction company, demonstrates how the BSC can contribute to a successful strategic reorientation (Kaplan et al., 2001a). To stem losses, a new division president, used the BSC to build management consensus for a change in strategy from being the low-cost provider to adding value to customer relationships. By 1996, three years after introduction of the BSC, Rockwater had improved to first place in its market segment in terms of both growth and profitability. Norm Chambers, the Rockwater president who introduced BSC noted. "The BSC helped us improve our communication and increase our profitability".

Kaplan and Norton (2001a) found similar result at AT&T Canada, Inc. (then known as United Communication. Inc.), where a new CEO was able to bring the company back from the brink of bankruptcy through a concerted focus on process improvement and a new strategic direction, underpinned by a BSC strategic management system. In the mid-90s, prior to introduction of the BSC, the company had suffered huge losses, was on the verge of defaulting on its debt obligations and ranked near the bottom in survey of employee satisfaction. By 1998, the company was generating positive cash flow even as long-distance phone charges continued to drop rapidly the customer base more than doubled revenue per employee had jumped more than 35% in three years, and the company ranked in the top 10% in a 1998 survey of employee satisfaction at 500 North American companies' employee satisfaction. The turnaround set the stage for AT&T Canada's 1997 $7 billion merger with MetroNet Communications Corporation.

Gumbus (2002) showcases Philips Electronics Ltd., as an organization utilizing the BSC to improve its overall performance and become a $1 billion US company. Philips Electronics used the BSC as a tool to align its strategies and to gain the commitment and participation of management and employees in achieving the firm's objective. Former vice president of quality and regulatory affairs at Philips Medical System North America (PMSNA) Chris Farr says "Employees have helped to create measures that are meaningful to customers and to business" (Gumbus and Lyons, 2002). By creating a common knowledge base, the BSC also helped the company to create a worldwide communication system and supported the firm's cultural change to learning organization (Gumbus et al., 2002).

Ashton (1998) examined National Westminster Bank (NatWest Bank) and its use of BSC to, among other things, improves quality, service and speed and help change the corporate culture from its traditional command and control structure to culture based upon "empowerment and coaching". NatWest deemed the effort successful in aligning performance measurement to the bank's long-term strategic goals, enhancing the bank's ability to better manage the business and its resources, and in establishing a performance measurement system that was consistent and understood by employees at all levels. BSC helps to overcome the traditional bias in banking toward financial reporting by introducing a system that can take a long-term view and takes account of factors such as learning and innovation, which, according to Martin Gray, NatWest UK chief executive, … gives a richer picture than driving the business based on financial alone".

A study by Gumbus et al., (2003) 0f Bridgeport Hospital, a member of Yale New Haven Health System Hospital, highlights the role BSC can play in helping organizations cope with external systemic change. Secular changes to America's health care system brought on by financial pressures from the federal government, the move toward managed care and a general shift toward more outpatient care forced many hospitals to close or downsize. Though fully unitized, Bridgeport Hospital was still suffering losses and introduced the BSC as a strategic tool to link performance appraisal to the capital budgeting processes and to better engage the hospital's sometimes-difficult medical staff. After just one year, the was able to demonstrate improvement in Organization Health Quality and Processes Improvement, Volume and Market Share Growth and Financial Health, translating into healthy operating margins and restored profitability for fiscal year 2001 Bridgeport CEO. Robert Trefry attributed the turnaround to Bridgeport's success in "monitoring and measuring key metrics that drive the business".

Syfert et al., (1998) demonstrate the applicability of BSC to the public sector through a study examining the experience of Charltte, North Carlina, the first US city to utilize the BSC in areas such as transportation, economic development, neighborhoods and government restructuring. The BSC proved a useful tool in helping the city to focus its efforts, improve motivation of employees, and enhance government accountability while also highlighting specific processes needing improvement to enable the city council to achieve its strategic objectives.

The BSC has also been successfully applied to non-profit and educational institutions. Kaplan et al., (2001a) cite the experience of the University of California, San Diego, which introduced the BSC to 27 service and administrative units in 1994 as a means to increase productivity and raise customer satisfaction. The results were broad and significant, indicating, for example, an 80% reduction in errors by the payroll department and a reduction in processing time for expense reimbursement checks from six weeks to as little as three days. The university's BSC-driven program has gained widespread accolades and was the recipient of the 1999 Rochester Institute of Technology/USA Today Quality Cup for Education.

Malina and Selto (2001) examined data from a variety of divisions at a large multinational manufacturing company to assess the effectiveness of the balanced scorecard. The study results found support for Kaplan and Norton's contention that the BSC can be an effective tool in developing, communicating and implementing strategy, at least at the company studied. The study found that the BSC had the intended effect of eliciting desired changes in the behavior of managers in terms of taking actions and utilizing resources in ways that improved performance in the measures contained in the in the scorecard. Perhaps most importantly, managers recognized that improving their BSC performance translated into enhanced efficiency and profitability. The study conclude that was most likely to gamer support and positive action by managers when it is comprehensive, closely tied to strategy, includes effective measures with appropriate benchmarks, provides meaningful rewards and includes mechanism for effective measures with appropriate benchmarks, provides meaningful rewards and includes mechanisms for effective modifications or improvements.

A number of researchers have found that the BSC can be worthwhile simply for its ability to better communicate strategy and objective to employees. In a study of logistics companies in Singapore, Chia and Hoon (2000) found the BSC introduced at two companies to be effective in helping senior managers to focus and better understand their companies' vision and strategy and in providing them with a measurement system to track implementation of that strategy. Most senior managers recognized the value of the BSC tool.

Similarly, McCunn (1998b) reported strong support among managers at leading UK retail bank using the balanced scorecard to improve management of its branch network. Managers applauded the effectiveness of the scorecard in communicating the bank's business model despite their admission that they have yet to find the most appropriate precise mix of measures to include in the scorecard. The scorecard's focused on staff attitudes and capability, adherence to processes and policies clear and easy to understand for branch staff. However, despite this evidence suggesting that the BSC provides for an effective way for organizations to develop a multidimensional view of performance measurement, the Balanced Scorecard approach is not without its shortcomings.

### 2.3.3 Limitations of BSC

As discussed above, financial measures alone are seen as having serious limitations, foremost among them being that they are backward-looking. But, many non-financial measures, including elements such as customer satisfaction and employee attitudes, can have similar drawbacks, particularly those non-financial measures, like service error rates, which are lagging indicators (Clarke, 1997).

Similarly, the effectiveness of the BSC will suffer if the included non-financial measures are not linked to or aligned with the firm's strategic objectives (Kaplan &Norton., 1996). Kaplan and Norton (1996) concede these potential limitations and argue that "Scorecards built upon lagging, non-strategic indicators represent only a limited application of full power of the BSC".

The BSC is also weakened if too many performance indicators are included, and some researchers have noted a tendency for the number of performance measures to increase over time with the result risk of weakening the critical link between performance measures and organizational strategy (Gering &Rosmarin, 2000b; Gering &Rosmarin, 2002).

The research presented earlier is made up primarily of anecdotal evidence relating to the success of the BSC application. As Chow et al., (1998), Gering and Mhtambo (2000), Lingle and Schieman (1996), Lipe and Salterio (2000), Roussean and Roussean (2000) and others point out, the BSC theory may be a victim of its own success. It has become compulsory reading for middle management and widespread acceptance of its benefit may make the BSC appear deceptively simple, thereby leading to half-hearted or poorly thought out applications it to real-life situations (Gering et al., 2002; Gering &Venkatramen, 2000c).

Gering and Venkatramen (2000) conclude that the BSC can be ineffective or even potentially damaging if it becomes a “scorecards”, pitting different and sometimes conflicting indicators against each other and on an equal footing.

According to Lewy (1998), 70% of attempts to implement BSC fail. Management behavior, which the BSC is intended to influence, is often also its undoing as managers may feel threatened by the increased spotlight and greater transparency provided by the BSC framework (Epstein & Manzoni, 1997; Kaplan et al., 1996c; Matheson, 2000).

Sceptics also note that the BSC often fails to achieve its goal when it focuses on trying to balance conflicting stakeholder interests or when it acts as a management scorecard (Gering et al., 2002). In this case, the BSC ceases to become a focused operationalisation of a coherent strategy. Instead, it has a tendency to become a list of indicators reflecting the preferences of each stakeholder. This may sometimes have the effect of pitting the interest of stakeholders against each other. In such cases, the BSC becomes four, essentially independent lists of measures, and may exacerbate the problem of the now largely discredited “Management By Objective (MBO)” tool popular in the 1970s (Gering et al., 2000c; Kaplan et al., 2001a).

In extensive criticism of the BSC, Norreklit (2000) also argues that the BSC’s four pillars do not take account of competitor actions, development in technology or, for that matter, any unexpected of event, which makes it static rather than dynamic and thus fails to establish a basis for continuous improvement. This would be especially and hazardous in environments classified as uncertain where there is a clear need for organization to be flexible in meeting unexpected demand (Norreklit, 200, 2003).

This lack of flexibility is further impacted by the fact that the research presented thus far has focused on the application of the BSC to developed markets with little regard to its applicability to organizations operating in developing economies. Kotler and Kartajaya (2000) ascribe industry growth in most developing Asian economies to one of five elements-authoritarian government; state-led development; institutionalization; Asian values (quanxi); and networks, such as that of overseas Chinese-and little research has been done on the applicability of BSC to such environments.

Although the BSC assumes a “cause-effect” relationship between the measures of its four pillars with learning and growth driving the internal business processes, which in turn drives the customer perspective leading to the financial indicators (Kaplan et al., 1996b), this cause-effect relationship is not a given argues Norrekit (2000). For instance, the relationship between high customer satisfaction and good financial result is tenuous (Geringet al., 2002; Kueng, 2000; Norreklit, 2000). In fact, the causal links between all the four pillars is questioned given the lack of empirical findings (Norreklit, 2000).

Companies seeking to increase their competitive advantage have to consider both business strategy and business processes, but as Keung (2000)`notes, the BSC theory’s units, not on business processes: “it looks at business processes only as far as they have a great impact on customer satisfaction and achieve an organization’s financial objectives” (Keung, 2000).

Gering and Rosmanrin (2002) in their review of how to correctly use the BSC note that the BSC empowers an organization by operationalsing the strategy discussion and assigning accountability for well-defined results. With targets based on clear financial and non-financial indicators, the BSC helps to identify a transparent strategy that reduces the risks of delegation. But, they caution, if implemented wrongly, it can become a centralist trap. To avoid these pitfalls, they make a number of recommendations. Firstly, use BSC as a centralized control. Secondly, don’t try and balance the scorecard as the core of the theory is to use financial measures and to supplement the lag measures with non-financial lead measures and long-term measures consistent with the corporate strategy. The company should its goals clear and once the strategy has been operationalised, the company should not add new measures that affect the framework. Thirdly, do not use the BSC as a direct incentive system. Finally, allow middle management to participate and contribute in selecting appropriate technology with appropriate cost.

## 2.4 Summary

In this chapter the literature on the balanced scorecard performance measurement has been explored. An attempt was made to discuss on the need to develop an integrated performance measurement system so that managers might obtain information from all parts of their organization. The balanced scorecard performance measurement frameworks developed by the mentioned authors is a multi-faceted framework, which provide a balanced picture of the business.

As it has been already discussed, the BSC system is based on the concept that financial measures alone may not be sufficient to measure corporate performance. It is believed that the BSC may provide an integrated framework to help managers to obtain information from all parts of their organization for better strategic decisions.

Since the goal of making measurements is to permit managers to see their company more clearly -- from many perspectives -- and hence to make wiser long-term decisions. The BSC allows managers to look at the business from four perspectives to best represent the factors that lead to improved financial, customer, operational, and employee performance. A comprehensive set of measures or indicators tied to company performance requirements represents a clear basis for aligning all activities with the company's goals.

Over the last few years, several companies have been involved in addressing the challenge of both measuring the performance of their operating systems and using performance results to improve their processes and practices to better meet the expectations of their customers for higher quality, lower cost, and improved service. It was the enormous growth and interest in performance measurement that brought wide spread acceptance of the need for organization to implement the BSC system. Despite some disappointments with organizations to be successful, various surveys estimate that organizations have begun implementing this concept.

Having argued the literature of BSC performance measurement, it becomes pertinent to turn to the Ethiopian commercial banks' performance and investigate by means of survey.

# CHAPTER III: RESEACHER METHODLGY

## 3.1 **Introduction**

In the Previous chapters the researcher tried to review different literatures and studies related to balanced and integrated performance measurement, relevance of performance measurement, financial and non-financial performance measures, balanced scorecard and its application in reasonable depth. The review of the literature helped the researcher to better understand that balanced scorecard is the most notable multidimensional performance measurement model and to develop a conceptualized frame of reference which was used as a guide in collection of necessary data to answer research questions. The research questions were answered through relevant and related literature references, theories and mainly through empirical data that was collected using the research methodology which the researcher, as will be discussed in this chapter, believed as the most appropriate for the study on focus. This chapter, therefore, starts with a brief overview of the various research methods and then narrows down on the specific methods that were used for this research.

## 3.2 Research Methods Overview

A researcher can use different research methods depending on their appropriateness to the research he plans to conduct. These different research methods can be quantitative methods, qualitative methods, both or together with others methods such as personal reflection methods.

### 3.2.1. Quantitative Research Methods

Quantitative research is described by the terms 'empiricism' and 'positivism' (Bryman and Bell, 2003). It derives from the scientific method used in the physical sciences (Cormack, 1991). It describes, tests, and examines cause and effect relationships (Yin, 1994), using a deductive process of knowledge attainment (Bryman and Bell, 2003).

Quantitative methods involve the use of survey, observation and questionnaire (Board of Studies New South Wales [NSW], 1999) which enable data (concrete or conceptual) to be collected, measured and compared with a standard.

A survey is a method which uses different techniques such as observation, interview or a written list of questions called a questionnaire. Surveying is the process of conducting a study from representative samples of specific populations. If a questionnaire is used, it may be comprised entirely of closed questions, multiple-response questions, Lickett scale questions (differential sliding scale or rating scale questions) or open-ended questions, or may be a combination of all question styles.

A questionnaire is a technique for collecting data beyond the physical reach of the researcher, that is, from a large or diverse sample of people. It is an impersonal instrument for collecting information and must, therefore, contain clear questions, worded as simply as possible to avoid any confusion or ambiguity since the researcher probably will not be present to explain what was meant by any one particular question. The questionnaire should be designed to fulfill a specific research objective; it should be brief and the sequence of the questions logical. (Board of Studies NSW, 1999)

## 3.2.2. Qualitative Research Methods

Qualitative methodologies involve a phenomenological perspective whereby researchers aim to understand, report, and evaluate the meaning of events for people in particular situations, that is, how their social world is structured by the participants in it. The focus of qualitative methodologies is the way in which participants (rather than the researcher) interpret their experiences and construct reality. Some examples are an unstructured interview, focus group, open-ended questionnaire and participant observation. Qualitative methodologies include interview, participant observation, ethnographic studies, and focus group. (Board of Studies NSW, 1999)

### 3.2.3. Personal Reflection Research Method

Finally there is the personal reflection research methodology which requires the researcher to reflect upon, and evaluate, his own experiences, memories, values and opinions in relation to a specific issue or topic. (Board of Studies NSW, 1999)

## 3.3 Data Collection

The methodology adopted for this research was a combination of quantitative, qualitative and personally reflective research methods. For the quantitative method, questionnaires were designed to collect data on the non-financial performance of the selected banks using BSC as frame work.  The officers of the banks that were selected for unstructured interview on general of their banks were the Chief Operating Officer (COO), the Chief Finance Officer (CFO) and the Head of Human Resources. The reason for selecting these three categories of staff is because they are directly responsible for formulating and implementing strategies, policies and guidelines in connection with the bank’s financial performance, training and human resource development, and operational procedures and guidelines. This was then followed with a customer and employee survey of the selected banks to collect data on the non-financial performance based on the customer, internal process, and learning and growth perspectives in order to calculate them for the purpose of analysis. This was most specifically targeted at collecting data on metrics under customer perspective, the internal business processes and, learning and growth perspectives.

As it has already been stated in the background of the study and statement of the problem, the researcher did not come across with a well documented study in the areas of the usage of BSC and the extent to which BSC could/will assist commercial banks in Ethiopia in assessing their performance. In such situations, making conclusions and analysis through empirical evidence using personal reflective research methodology and interviewing of professionals within the banking sector in Ethiopia is inevitable.

When some wants to collect data on balanced scorecard for an organization, he must consider the four perspectives of BSC (financial perspective, customer perspective, internal business processes and learning & growth perspectives) in addition to the main strategic objectives, target and goals of the organization for other various perspectives.

Under each KPI, the organization must select metrics that will align business performance to its strategic objectives and vision. The authors of the model suggested that companies must keep these metrics very simple and that a reasonable number will be about 5-6 metrics under each KPI. The standard KPI are not exhaustive and companies can therefore add or vary this KPI to reflect their unique situation or circumstance. Therefore throughout this study a small number of metrics will be considered in data gathering and the analysis.

## 3.4 Formulae for Calculating Metrics

Customer satisfaction index (CSI), customer intention (CII), internal process performance indices, employees satisfaction index, system result and organization result indices were calculated from a given sample of customers, employees and managers by computing the average of those customers' and employees perception ratings based on a five-point scale ranging from "very dissatisfied" to "very satisfied", or "very probable to very improbable".

Customer retention can be deduced from the formula, Customer Life (N), (Given rate of customer retention): $N = 1 / (1 - CR)$; Where, CR stands for customer retention. From the above formula, Customer retention (CR), (Given average customer life): $CR = 1 - 1/N$.

## 3.5 The Size and Characteristics of Selected Sample

A population is the whole group that the research focuses on (Jacobsen, 2002). Sample is the segment of the population that is selected for investigation (Bryman and Bell, 2003). In quantitative research, the need to sample is one that is almost invariably encountered. And sampling constitutes a key step in the research process in social survey research.

Due to the research is studied mainly from customers' and employees point of view, the population was expected to involve the people who are consuming the banking services from Ethiopian commercial banks and their employees. However, it is not possible for researchers to get in touch with a big number of samples, as the sample size is a critical question in practice. The decision about the size of the sample needs to consider about time and cost, the need of precision, and a variety of further considerations (Bryman and Bell, 2003). Due to the limit of time and costs, the sample was limited to the customers, employees and managers of commercial banks who were voluntary to give the necessary data to the study on hand. The study used quota sampling and convenience sampling techniques to select customers, employees and managers due to the constraint of time and cost, hard to reach nature of population (that is the number of the customers is very large hence it is very difficult to take probability sampling due time and cost constraint, very large and scattered population, most customers and employees were not as such voluntary to fill the questionnaire due to pretext of time shortage and the shop-mailing nature of the banking service.

The population size was all commercial banks that have already started their banking operation in Ethiopia and four voluntary commercial banks, which allowed the researcher to get the necessary information for the study at hand, were used as sample size, given the timeframe for the completion of the thesis. The four selected commercial banks were Commercial bank of Ethiopia, Wegagen Bank, United Bank, and Dashen Bank. A total of 12 senior management staffs of the selected banks were interviewed. These are officers in the category of executive management that are responsible for the bank's strategy formulation and execution. A total of 120 employees(30 employees from each bank) were also made to rate their satisfaction level on payment policy and working condition of the selected banks as well as participation and social relationship of the employees of the selected banks via the questionnaires distributed to the them.

Data was collected both from primary and secondary sources. The data from the primary sources was collected from the selected banks through the filling of the questionnaires that concentrated on the internal processes, learning and growth perspectives and customer satisfaction. The secondary sources were the banks' published annual reports. The customers of these selected commercial banks were made to fill the questionnaires by taking a sample size of 240 with 60 customers from each commercial bank.

With learning and growth perspective, the metrics of employee satisfaction in terms of pay policy, working condition, social relationship, and participation were considered.

## 3.6 Coding

For ease of presentation and data analysis, the various questions on the questionnaire were coded. The customer satisfaction survey had Q1…Q12 representing questions 1 to 12 on the questionnaire. The respondents had C1…C60 where C1 represents the first respondent and so on. The employee survey was coded as q1…q20 and E1...E30; where E1 represent the first employee who responded to the questionnaire and q1 represent the first question on the questionnaire.

## 3.7 Questionnaire Design and Data Collection

Yin (1994) has recognized five popular ways of collecting and analyzing empirical data in business research. It includes experiments, survey, and analysis of archival information, histories and case studies. The research used survey as the main method strategy to research.

In surveys, data are standardized, and comparison is easy, however it costs much time to do it.

In this survey, a self-completion questionnaire with closed questions is developed. The self-completion questionnaire is very similar method of business research, and the research instrument has to be especially easy to follow and its questions have to be particularly easy to answer (Bryman and Bell, 2003). Meanwhile, whether to ask a question in an open or closed format is one of the most significant considerations for many researchers. According to Bryman and Bell (2003), closed questions have some advantages: it is easy to process answers; it enhances the comparability of answers, and makes them easier to show the relationship between variables. It is better than open question for this research.

In this research two different questionnaires were developed and used to gather the relevant data related to non-financial performance of the selected commercial banks. The first questionnaire is about customer satisfaction, intention, retention and perception in the internal process (transaction speed, responsiveness and service quality). The second questionnaire contains almost all constructs that show the employee satisfaction, perceptions and attitudes towards the organization's motivation factors, organization system and technology. Several items on each construct are developed and adopted from relevant literatures. All of the items were measured by using a five-point Likert-type response scales, anchored at 5 very satisfied /probable and 1 very dissatisfied/improbable.

Questionnaires are administrated in different ways: face to face, telephone, postal, e-mail and Web. In this study: face to face questionnaires method has been chosen because customers were made to fill the questionnaires before they were being served via the tellers and employees were made to fill the questionnaires while working via the messengers.

### 3.7.1 Reliability

Reliability is defined as be fundamentally concerned with issues of consistency of measures. (Bryman and Bell, 2003) There are three prominent factors related to considering whether a measure is reliability: stability, internal reliability and inter-observer consistency. In this study, internal reliability will be considered. Bryman and Bell (2003) suggested that a multiple-item measure in which each answers to each questions are aggregated to form an overall score, we need to be sure that all our indicators are related to each other. It can be test use Cronbach's alpha method. The result of 0.7 and above implies an acceptable level of internal reliability.

Cronbach's alpha can be written as a function of the number of test items and the average inter-correlation among the items. Below, for conceptual purposes, we show the formula for the standardized Cronbach's alpha:

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}}$$

Here N is equal to the number of items, c-bar is the average inter-item covariance among the items and v-bar equals the average variance.

### 3.7.2 Validity

Validity is defined as how much any measuring instrument measures what it is intended to measure. Bryman and Bell (2003) also suggested that the important issue of measurement validity relates to whether measures of concepts really measure the concept. "Validity refers to the issue of whether an indicator (or set of indicators) that is devised to gauge a concept really measures that concept. Several ways of establishing validity are: face validity; concurrent validity; predictive validity; construct validity; and convergent validity." (Bryman and Bell, 2003). In this thesis, construct validity has been used. Correlation analysis is used as a tool to test construct validity.

## 3.8 Statistical Analysis

The results of the survey were analyzed using descriptive statistics, regression and correlations. The researcher chose SPSS for Windows software version 17.0 to analyze the exploratory factors because it is probably the most widely used and easy computer software for analysis of quantitative data for social scientists. Given the scales of items for a construct, the Cronbach's alphas were calculated to assess the reliability of those items. After reliability and validity confirmed, the summated averages of the items in each construct were studied further. Regression and correlations analysis were also used to answer the research questions.

# CHAPTER IV

# EMPIRICAL DATA AND DATA ANALYSIS

This chapter will present the empirical data collected from the survey, the data will be presented on table with SPSS data processing results, followed by the data analysis which are combined with theories and empirical data.

## 4.1 Empirical Data

Prior to testing the research questions, the survey measures used examined for the reliability and validity (Collis et al., 20030). In view of the characteristics of the instrument used in this study, the inter-item reliability consistency (alpha) was used to measure its reliability. Construct validity is determined by how well certain constructs explain the variance of responses to a set of survey items (Page& Meyer, 2000; Sekaran, 1992, 2003). For determining differences/similarity between the selected commercial banks on customer and employee measures across the entire sample, one-way between groups ANOVA with post-hoc comparisons (Green et al., 2000) was used.

### 4.1.1 Empirical Data: Reliability Testing

The alpha Reliability for each of four measures of customers and employees is presented in table 4.1 and 4.2 respectively. As Hair et al., (1995) states the value of 0.70 is a "commonly used threshold for acceptable reliability", and thus, is considered acceptable for research (Page et al., 2000; Sekaran, 2003). As table 4.1 shows, all alpha scores for customer measures were in the acceptable range from .729 to 0.889, well above the 0.70 cut-off. Similarly the Cronbach's Alpha scores for four of the employee measures, as it is shown in table 4.2, were larger than 0.70(a level considered "acceptable" in most social science research).

Table 4.1 Cronbach's alpha for constructs of customer measures

| Constructs | Cronbach's Alpha | Number of Items |
|---|---|---|
| Customer satisfaction | 0.899 | **3** |
| Transaction speed | 0.748 | **3** |
| Responsiveness | 0.729 | **2** |
| Intention | 0.814 | **3** |

*Source: author's computation based on the data collected from the survey.*

Table 4.2 Cronbach's alpha for constructs of Employee measures

| Constructs | Cronbach's Alpha | Number of Items |
|---|---|---|
| Payment satisfaction | 0.856 | **4** |
| Social relationship | 0.981 | **3** |
| Working condition | 0.777 | **4** |
| Participation | 0.97 | **7** |

*Source: author's computation based on the data collected from the survey.*

### 4.1.2 Empirical Data: Validity Testing

Table 4.3 & table 4.4 show the correlations between the instruments for measuring the constructs. The results indicate that all the instruments for measuring the constructs in this study were related to each other. Table 4.3 shows the correlation between the customer measures and table 4.4 shows the correlation between employees' measures.

In terms of correlation between the customer measures, the results Indicate that most of the instruments for measuring the construct in this study were significantly related to each other (see table 4.3), with the exception of the speed of transaction measure, which was not significantly correlated with any of the other constructs ($P>0.05$)

Overall customer satisfaction was positively correlated with the responsiveness of service ($r=.995$, $p= 0.00$), speed of transaction ($r=.562$, $p=.324$), customer intention ($r=.927$, $p=.023$). Responsiveness of service was positively correlated with speed of transaction($r=0.564$, $p=0.322$), overall satisfaction ($r=0.995$, $p=0.000$) and intention ($r=.914$, $p=0.030$)

Customer intention was highly positively correlated with overall customer satisfaction ($r=0.927$, $p=0.023$) and responsiveness of service ($r= 0.914$, $p=0.030$). Finally, speed of transaction was positively correlated with responsiveness of service ($r=0.564$, $p=0.322$), overall customer satisfaction ($r=.562$, $p=.324$), and customer intention($r=.224$, $p=.718$).

**Table 4.3 Correlation between Instruments for the Constructs of Customer Measures in this study**

| | | CS | TS | SR | CI |
|---|---|---|---|---|---|
| CS | Pearson Correlation | 1 | .562 | .995** | .927* |
| | Sig. (2-tailed) | | .324 | .000 | .023 |
| TS | Pearson Correlation | .562 | 1 | .564 | .224 |
| | Sig. (2-tailed) | .324 | | .322 | .718 |
| SR | Pearson Correlation | .995** | .564 | 1 | .914* |
| | Sig. (2-tailed) | .000 | .322 | | .030 |
| CI | Pearson Correlation | .927* | .224 | .914* | 1 |
| | Sig. (2-tailed) | .023 | .718 | .030 | |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

a. Listwise N=240. CI=customer satisfaction, TS= transaction sped, SR=service responsiveness, CI= customer intention.

*Source: author's computation based on the data collected from the survey.*

The correlation results between the constructs of the employees' perception toward payment, working condition, employees' social relationship and employees' participation in the selected commercial banks indicate that most of the instruments for measuring the construct in this study were significantly related to each other (see table 4.4), with the exception of the social relationship of employees measure, which was not significantly correlated with two of the other constructs (P>0.05)

Payment satisfaction was highly positively correlated with working condition satisfaction(r=.887, p=.045), participation satisfaction (r=0.919, p=.027). Participation satisfaction was also highly positively correlated with payment satisfaction(r=0.919, p=0.027), social relationship satisfaction (r=0.903, p=0.036) and working condition (r=.835, p=0.038).

Working condition satisfaction was positively correlated with payment satisfaction (r=.887, p=.045) and participation satisfaction (r=.835, p=0.038). Finally, social relationship satisfaction was positively correlated with responsiveness of service (r=0.564, p=0.322), overall customer satisfaction (r=.562, p=.324), and customer intention(r=.224, p=.718).

Table 4.4: Correlation between Instruments for the Constructs of Employee Measures in this study

| | | PPS | SR | WC | PRS |
|---|---|---|---|---|---|
| PPS | Pearson Correlation | 1 | .714 | .887* | .919* |
| | Sig. (2-tailed) | | .175 | .045 | .027 |
| SR | Pearson Correlation | .714 | 1 | .668 | .903* |
| | Sig. (2-tailed) | .175 | | .218 | .036 |
| WC | Pearson Correlation | .887* | .668 | 1 | .835 |
| | Sig. (2-tailed) | .045 | .218 | | .078 |
| PRS | Pearson Correlation | .919* | .903* | .835 | 1 |
| | Sig. (2-tailed) | .027 | .036 | .078 | |

*. Correlation is significant at the 0.05 level (2-tailed).

a. Listwise N=120; PPS= Payment satisfaction SR= Social relationship, WC =Working condition, PRS = Participation satisfaction .

### 4.1.3 Empirical Data: Differences between the banks across the entire sample

The customer respondents from each of the selected banks were asked to rate perceived responsiveness of service, speed of transaction, overall satisfaction with service quality of the banks and their intention toward the banks by which they are being served. On similar fashion the employee respondent were asked to rate perceived payment satisfaction, working condition, social relationship, employees' participation and the feed back system of the selected commercial banks in which they are working. Overall, the results, as shown in table 4.5, indicate a greater than an average (M>3) level of customer perception across all selected banks on most customer measures. Costumers were more positive than negative (M>3) on any of the customer measures. The descriptive summary for the employees constructs, as it is shown in table 4.6, indicate that most of the employees were positive for social relationship and working condition but negative for payment satisfaction in most selected Commercial banks. Many of the constructs are either negatively or positively skewed in both customer and employee constructs of measures. The non-normality could be a sign of inter-correlations among the constructs. This implies that there is no such difference among the selected commercial banks.

Table 4.5: Summary of descriptive statistics of customer constructs

| Constructs | Selected Commercial Banks | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Wegagen Bank | | | Dashen Bank | | | CBE | | | United Bank | | |
| | M | SD | SK | M | SD | SK | M | SD | SK | M | SD | SK |
| overall satisfaction | 4.07 | .301 | -.49 | 4.3 | .72 | -1.25 | 4.08 | .16 | -1.5 | 4 | .33 | -1.5 |
| Transaction speed | 3.45 | .346 | .031 | 3.4 | .12 | -1.7 | 3.22 | .43 | 1.1 | 3.6 | .28 | -1.0 |
| Responsiveness | 3.94 | .22 | | 4.4 | .03 | - | 3.9 | 0 | - | 3.8 | .26 | |
| Intention | 3.89 | .29 | -1.5 | 4.2 | .16 | .42 | 3.98 | .13 | -.58 | 3.8 | .07 | -1.7 |

*Source: author's computation based on the data collected from the survey.*

Table 4.6: Summary of descriptive statistics of Employee constructs

| Constructs | Selected Commercial Banks | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Wegagen Bank | | | Dashen Bank | | | CBE | | | United Bank | | |
| | M | SD | SK | M | SD | SK | M | SD | SK | M | SD | SK |
| Payment satisfaction | 2.92 | .72 | -1.3 | 3 | .72 | 1.25 | 2.97 | .66 | -1.8 | 2.9 | .1.3 | -1.9 |
| Social relationship | 3.73 | .07 | .00 | 3.6 | .10 | -1.7 | 3.54 | .07 | 1.7 | 3.3 | .31 | .94 |
| Working condition | 3.39 | .52 | -.28 | 3.6 | .18 | -.124 | 3.5 | .22 | - | 3.2 | .74 | .76 |
| Participation satisfaction | 3.10 | .62 | -1.5 | 2.9 | .36 | 1.6 | 3.42 | .32 | -.58 | 2.5 | .89 | .88 |

*Source: author's computation based collected data from the survey.*

## 4.2 Data Analysis

In this section, the results of the survey are tabulated and further analysis of the data gathered is performed to answer the research questions in Chapter One under section 1.5

### 4.2.1 BSC Measures for Assessing Performance

This section will examine the measures to be used in investigating how the BSC framework can be used – internally and externally - in assessing performance of banks. The key areas of analysis which will form the basis of establishing how the balanced scorecard can be used to assess the performance of commercial banks in Ethiopia are:

i) internal operational efficiencies (internal business processes perspective);

ii) financial performance indicators (financial perspective);

iii) employee satisfaction ratings in terms of payment, social relationship, working condition and participation(innovation, climate for change, empowerment, leadership) - (learning and growth perspective); and

iv) Customer satisfaction intention (loyalty) and customer retention through efficient service delivery and value added services (customer perspective).

The four perspectives of the balanced scorecard are the financial perspective, customer perspective, internal business processes perspective, and learning and growth perspective. The financial perspective deals with how the organization appears to its shareholders. The customer perspective focuses on how the customer sees the organization; internal business processes perspective has to do with the kind of processes the business must excel at; and the learning and growth perspective deals with how the business can continue to improve and create value for all its stakeholders.

The reason for analyzing the banks along these lines is because these areas are very core to the strategies of most banks. The key function of banks is financial intermediation where they take from the surplus and give to the deficit. To effectively execute this function, they need to perform very well in these areas. It is generally known that, to get low cost and cheaper funds to lend, banks must grow their current account deposits from individuals. In order to achieve this, they must have the right internal processes and controls that will deliver high quality and efficient services to its valued customers in order to attract and retain them. For efficient execution of the internal processes, the banks must have well motivated, experienced and skilled staffs. This will ensure they have satisfied customers and are therefore able to retain them. This will ultimately impact their financial performance.

The following sections will present the five selected commercial banks along these areas. The first section will present Commercial Bank of Ethiopia (CBE), followed by Dashen Bank, United bank, and Wegagen Bank.

### 4.2.1.1 Measuring Performance at CBE

Through these values and strategies, the bank is able to assess its performance and determine whether it is on track in relation to achieving its strategic goals. Through the appraisal system, managers are able to identify their high flyers and reward them appropriately. It also helps managers to focus their energies on their best people in order to drive results and manage non-performance by identifying gaps in staff skills and taking appropriate actions to address them.

CBE has currently not implemented the balanced scorecard yet, even though it has plans to do so in the near future as stated by the financial controller. The bank has already introduced BPR so as to better meet its customers' expectations.

Nonetheless, the financial controller, as per unstructured interview, still attests to the fact that the various perspectives under the balanced scorecard plays significant role in assessing organizational strategic performance.  This is because considering both financial and non-financial perspectives will give a balanced view and a true organizational performance and long term sustainability.

According to the head of human resources, developing skills of staffs is one of the key objectives of his department. Every staff that is assigned a new role is also given adequate training to prepare the staff for the job. There are annual training programs designed for each member of staff to equip the staff with the various customer service culture, sanction policies, and operational framework for the bank.

In examining CBE bank in the context of each of the four dimensions the following strategic grid or strategy map can be used:

Figure 4.1: Strategy grid for CBE

| | | | |
|---|---|---|---|
| **Financial perspective** | **Shareholder Value** | | |
| | **Grow Revenues** | | |
| **Customer** | Acquire more customers in local and abroad | | |
| **Internal process** | Operations management *-Improve operational Efficiency* | Customer Management *–Enhance, customervalue* | Innovation- *Create new products and services* |
| **Learning and growth** | Human Capital | Information Capital | Organizational Capital |
| | *-Skill, Training, Knowledge* | *-Databases, System, Networking* | *-Culture, Leadership, Alignment, Teamwork* |

*Source: Author's development based the vision and strategies objectives of CBE*

This therefore creates the linkages between the four dimensions and how they support each other in order to create value for the customer and improve profitability.

The overall strategy of the bank is to increase shareholder's value through customer acquisition and penetration of client wallets and improve asset quality to reduce losses due to the booking of bad loans.

Under the learning and growing perspective, three areas emerged which are human capital, information capital and organizational capital. The framework is aimed at creating the right strategic alignment between employee goals and that of the bank so as to create the right synergies to enable the employee deliver superior service to the customer. The key measures here that are relevant to the bank are employee satisfaction in terms of payment, social relationship, working conditions and participation where all learning and growth measurement metrics are included in.

The various activities under the learning and growth perspective assist to achieve an efficient internal processes that deliver services to the customer in a timely fashion and that adequately meets the customer's needs and allows the bank to comply with its social responsibilities while meeting all regulatory requirements. The relevant measures under this perspective are the transaction speed, responsiveness and service quality or new product which can be termed as on delivery, post- delivery and pre-delivery result measures on its core services bearing in mind that customer acquisition is one of its key strategic objectives. The metrics will enable the bank determine how well it is serving its customers and whether it is meeting objective of zero-defect service excellence. The customer's perception of the bank's service delivery culture on its core services and products is also very important in determining the extent to which the bank is able to penetrate the client's wallets. If a customer is not happy with the bank customer service delivery, that customer may definitely turn to other competitors for better services and same/similar products. Therefore customer satisfaction and retention and intention are relevant measures under this perspective.

All the above should, therefore, feed into the financial performance of the bank in order to create value for the shareholder and other stakeholders. The relevant measures that determine if the bank is creating value for its shareholders are return on equity and earnings per share. In terms of dominance within the industry, the relevant measure is the bank's Net profit growth, net interest margin, efficiency ration and ROA to determine the quality of its assets

### 4.2.1.2 Balanced Scorecard Measures at CBE

The researcher used the following balanced scorecard to assess the performance of CBE

Table 4.7: Balanced scorecard for Commercial bank of Ethiopia.

| COMMERCIAL BANK OF ETHIOPIA | | | | | | |
|---|---|---|---|---|---|---|
| FINANCIAL PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURES | Performance(%) and years | | | | |
| | | 2006 | 2007 | 2008 | 2009 | Average |
| Earning growth | Net profit growth(NPG) | 37 | 9.3 | 57.5 | 59.3 | 40.775 |
| Improve shareholder value | ROE | 3.1 | 2.7 | 3.7 | 3.2 | 3.2 |
| Asset Utilization | ROA | 74.3 | 27.8 | 40.9 | 38 | 45.25 |
| CUSTOMER PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURE | Performance(five point scale) | | | | |
| Customer Acquisition | Customer satisfaction | 4.08333 | | | | |
| Customer retention | Customer retention | .85156 | | | | |
| Customer loyalty | Customer intention | 3.983 | | | | |
| INTERNAL BUISNESS PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURES | Performance( five point scale) | | | | |
| Improve operational efficiency | Transaction speed | 3.219 | | | | |
| | Service responsiveness | 3.9 | | | | |
| | Service quality and diversity | 4.2 | | | | |
| LEARNING & GROWTH PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURES | Performance ( five point scale) | | | | |
| Retain and improve employee skill set | Payment satisfaction | 3.65 | | | | |
| | Social relationship | 3.54172 | | | | |
| | Working environment | 3.5 | | | | |
| | participation | 3.4107 | | | | |

*Source: Author computation based the data collected from the survey*

From the table 4.7, CBE has shown greater than an average score (3) performance in terms of learning and growth perspective, internal process perspective, customer perspective and an average of 40.775%, 3.2%, and 45.25% in financial perspective. Under internal process, CBE needs to do a lot more to improve its transaction speed and service responsiveness. This is because the customers' ratings toward the perceived transaction speed and service responsiveness are less than the satisfactory score (4). The customers' rating to service quality and diversity is with in the range of 4-5 points which indicates that customers are happy with the service quality and diversity of CBE.

It was also discovered that, CBE has recognized this challenge and has implemented software (smart banking) that will automate its transaction (loan processing and disbursement, en-cashing, and opening accounts) function and has implemented BPR mainly focused on customer's relationships and personal banking.

An interview with the financial controller of CBE has indicated that they are currently not using the balanced scorecard but there are plans to implement it in future with no definite time frame. On the benefits of the balanced scorecard, the financial controller had this to say,

> *"Will be able to address this when it is fully implemented. What we use now encourages competition within the cluster and foster drive for achieve corporate objectives."*

### 4.2.1.3 Measuring Performance at Dashen Bank

Dashen Bank has not adopted the balanced scorecard as its strategic and performance management model. It has adopted, however, customer survey and employees' survey to know the customers' and employees' satisfaction and to identify a gap if there is.

It, therefore, does not use the four perspectives of the balanced scorecard for evaluating the implementation and achievement of its corporate strategic vision.

The main strategic objectives as stated by the financial controller are to increase shareholders value, increase customer base (acquire more customers), work towards zero defect in its internal processes and attracting and retaining highly talented and qualified personnel.

The main strategy to increase shareholders value is to grow revenues through aggressive expansion and acquisition of more customers. Its objective of rendering convenient, accessible and reliable service to its customers is to create and deliver value to them through efficient processes supported by well talented and well trained staff. Below is the strategic grid for Dashen Bank:

Figure 4.2: Strategy grid for Dashen Bank.

<table>
<tr><td rowspan="2">Financial perspective</td><td colspan="3">Shareholder Value</td></tr>
<tr><td colspan="3">Grow Revenues</td></tr>
<tr><td>customer</td><td colspan="3">Grow Customer Base</td></tr>
<tr><td>Internal process</td><td colspan="3">Improve Operational Efficiency</td></tr>
<tr><td rowspan="2">Learning and growing</td><td>Human Capital</td><td>Information Capital</td><td>Organizational Capital</td></tr>
<tr><td>Attract, develop and retained best talents in.</td><td>Databases, System, Networking</td><td>Building leadership</td></tr>
</table>

*Source: Author's development based vision, mission and strategies of the bank*

Under the learning and growth perspective, there are three elements thus, human capital, information capital and organizational capital. Dashen bank believes that its people are its greatest asset. This is confirmed by the following statement culled from its website:

"*Dashen bank seeks to harness the power of its human capital in its vision of Inasmuch as Mount Dashen excels all other mountains in Ethiopia; Dashen continues to prove unparalleled in banking service.*

*We believe our people are our greatest resource and we invest in attracting, retaining and developing our people...*"

Dashen bank also sees technology as a core strategic tool as quoted on their corporate website:

*"Technology underpins the strategy of the bank. The "One Bank" concept is a major initiative designed to ensure that the bank operates to the same consistent standards in terms of processes and service delivery anchored on our .technology platform. To this end, a Technology and Shared Services Centre has been built in Addis Ababa to centralize and standardize middle and back office operations across the bank's branches. "*

This means that well trained staffs are empowered with online access to corporate information in order to deliver superior service to its customers.

Leadership is built from within through coaching and grooming such that the people are imbibed with the organizational culture and leadership skills that create the right strategic alignment between corporate strategic goals and that of individuals, teams and departments. The consequence of this is getting the people with the right attitude and skills to assist in achieving corporate strategy.

### 4.2.1.4 Balanced Scorecard Measures at Dashen Bank

From the above analysis, the few critical key indicators that will focus the bank's energies and resources in achieving its corporate strategy under the learning and growth perspective are employee satisfaction in terms of payment, social relationship, working conditions and participation where all learning and growth measurement metrics (such as employee satisfaction, employee stability index and employee innovativeness) are included in. The core foundation of having well trained, innovative and empowered staffs at the learning and growth stage will ensure that the bank has the right people to execute the processes at the internal business processes stage in order to deliver value to the customer. Under the internal processes perspective, the relevant measures are transaction speed (turn-around-time) on the core functions of the bank, service responsiveness and service quality and diversity. By measuring customer feedback on how best they are delivering on their core activities, it will give them an indication of whether they are on track or not on their customer service delivery strategy. Therefore, customer retention, customer satisfaction index and intention (loyalty) were the key indicators that were considered under the customer perspective. Since these three have direct bearing on the perception of quality of services being delivered by the personnel executing the internal processes in place. This therefore helps to support the strategic measures in the internal business processes, and learning and growth perspectives.

Very core to its strategy is to consistently deliver higher returns on shareholder value. There are key sustainability indicators that are defined by the group, but for the purpose of this study (given time and cost constraint), it is better shall limit the measures to only the following under the financial perspective: Return on Average Equity, Earnings per share, Return on Average Assets on percentage.

Table 4.8: Balanced scorecard for Dashen Bank**.**

| DASHEN BANK | | | | | | |
|---|---|---|---|---|---|---|
| FINANCIAL PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURES | Performance(%) & years | | | | |
| | | 2006 | 2007 | 2008 | 2009 | average |
| Improve shareholders value | Net profit growth(NPG) | 87.74 | 40.72 | 27.16 | 4.5 | 40.03 |
| | ROE | 2.94 | 3.11 | 3.1 | 2.57 | 2.93 |
| Asset utilization | ROA | 34.62 | 34.53 | 32.72 | 27.53 | 32.3425 |
| CUSTOMER PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURE | Performance(five points) | | | | |
| Create satisfied customer | Customer Satisfaction | 4.3182 | | | | |
| | Customer Retention | 0.80 | | | | |
| | Customer intention | 4.197 | | | | |
| INTERNAL BUISNESS PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURES | Performance(five points) | | | | |
| Improve customer service delivery | Transaction speed | 3.3804 | | | | |
| | responsiveness | 4.38 | | | | |
| | Service quality | 4.4 | | | | |
| LEARNING & GROWTH PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURES | Performance(five points) | | | | |
| Attract, develop and retain best talents | payment Satisfaction | 3 | | | | |
| | Social relationship | 3.6222 | | | | |
| | Working condition | 3.55 | | | | |
| | participation | 2.9429 | | | | |

*Source: Author's computation based the data collected from the survey*

Dashen bank has also demonstrated a greater than an average (3 points) performance in all non-financial KPIs under consideration except in participation which 2.9429 less than the average (3) rating score. Under the internal business process perspective, the bank still needs to do more in areas of transaction speed because the customers' rating indicates that the customers were not happy, though, they were positive to wards this function. The customers' ratings toward the overall satisfaction and their intention to continue with the bank are 4.3182 and 4.197 which are greater than satisfactory rate. The bank also needs to do a lot in areas of learning and growth perspective especially in the participation of employees (opportunity to develop creativity, satisfied response to change, leadership etc.) whose score is 2.9429 which implies employees were more negative than positive.

The average scores of financial KPIs of the bank, as it is shown in table 4.8, were 40.03%, 2.93%, and 32.3425% for the period under consideration. There was a great deviation in net profit after tax growth during the period under consideration from the highest 87.74% to the lowest 4.5%. The performance of the bank in ROE and ROA, relative to NPG, was consistent. What was common for all financial indicators under consideration was that the performance of bank in 2009 was low relative to the other years'.

The head of human resources stated that there are performance-based incentive packages that have been put in place to motivate staff to give their best towards the achievement of overall corporate strategic objectives. On the benefits of the balanced scorecard, the head of the performance management unit said, *"The balanced scorecard ensures a fair assessment of staff performance"*, while on its disadvantages he said, "*It is too cumbersome and tends to generalize performance of staff".*

### 4.2.1.5 Measuring Performance at United Bank

United Bank has not adopted the balanced scorecard as its strategic and performance management model, yet. It therefore does not use the four perspectives of the balanced scorecard for evaluating the implementation and achievement of its corporate strategic vision.

The main strategic objectives as stated by the financial controller are to increase shareholders value, increase customer base (acquire more customers), work towards zero defect in its internal processes and attracting and retaining highly talented and qualified personnel.

The main strategy to increase shareholders value is to grow revenues through aggressive expansion and acquisition of more customers and then increase ROE. Its objective of rendering convenient, accessible and reliable service to its customers is to create and deliver value to them through efficient processes supported by latest technology development, well talented and well trained staff. Below is the strategic grid for United Bank:

Figure 4.3: Strategy grid for United Bank.

| | | | |
|---|---|---|---|
| ***Financial perspective*** | ***Shareholder Value*** | | |
| | **Increase Return on equity** | | |
| **Customer perspective** | Grow customer base/acquire more customer | | |
| **Internal process** | Improve Operational Efficiency | | |
| **Learning and Growth** | Human Capital | Information Capital | Organizational Capital |
| | *Attract qualified employees & retain existing ones* | *Introduce state-of-the-- art Databases, System, Networking* | *Building Leadership* |

*Source: Author's development based the bank's vision, mission and strategies*

Core to its strategy is to deliver superior service to its customers using highly talented people. It has promised its shareholders to consistently deliver higher returns on its shareholders value.

As stated by the financial controller, the bank seeks to consistently improve its shareholders value, surpass customer expectation with its unique customer experience initiative while striving for excellence at all that it does with its crop of dedicated and talented pool of professionals. Its strategy therefore emphasizes long term shareholder value, operational efficiency, excellent internal processes, and attracting and retaining key talented staff. Hence using the following BSC to measure performance of United Bank is appropriate.

Table 4.9: Balanced Scorecard for United Bank (Ethiopia).

| United Bank | | | | | | |
|---|---|---|---|---|---|---|
| FINANCIAL PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURES | Performance(%) and years | | | | |
| | | 2006 | 2007 | 2008 | 2009 | average |
| Improve shareholder value | Net profit growth(NPG) | 41.3 | 47.1 | 41..6 | 2.9 | 33.225 |
| | ROE | 2.73 | 2.94 | 2.8 | 2.01 | 2.62 |
| | ROA | 22.83 | 17.87 | 19.46 | 18 | 19.54 |
| | | | | | | |
| CUSTOMER PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURES | Performance(five points) | | | | |
| Improve customer satisfaction and retention | Customer Satisfaction<br>Customer Retention<br>Customer intention | 4<br>0.72727<br>3.833 | | | | |
| INTERNAL BUISNESS PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURES | Performance(five points) | | | | |
| Improve customer service delivery | Transaction speed<br>responsiveness<br>Service quality | 3.5583<br>3.8125<br>4.125 | | | | |
| LEARNING & GROWTH PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURES | Performance(five points) | | | | |
| Retain and improve employee skill set | payment<br>Social relationship<br>Working condition<br>participation | 2.9<br>**3.667**<br>3.2<br>2.4571 | | | | |

*Source: Author's computation from the data collected from the survey.*

United Bank has shown a greater than an average performance in customer satisfaction, internal business process but under learning and growing perspective it scored both less than and greater than an average i.e. less than an average for payment and participation whereas greater than an average for social relationship and working condition. The rating scores indicate the bank has to do a lot to improve its customer perspective, internal business perspective and learning and growing perspective. Of course, customers were positive toward the bank. This does not give guaranty the bank that they will continue with the bank if they get a better banking service provider. Moreover, the employees of the bank were positive to social relationship and working condition but negative for payment and participation.

The performance of the bank in the financial perspective, as it is shown in table 4.9, includes both above and below average performance for the period under the consideration. The performance of the bank in ROA and ROE attained above an average for year 2006 and 2007; and less the average for year 2008 and 2009. The net profit after tax growth of bank was consistent and above an average for first three consecutive years but it heavily declined in year 2009. One more point to be mentioned is that the performance of the bank in all financial metrics during 2009 was low relative to previous years which the study focused in.

### 4.2.1.7 Measuring Performance at Wegagen Bank

Wegagen Bank has not adopted the balanced scorecard as its strategic and performance management model, yet. It has adopted, however, customer survey to know the customers' satisfaction level and accordingly to identify a gap if there is.

It therefore does not use the four perspectives of the balanced scorecard for evaluating the implementation and achievement of its corporate strategic vision.

The main strategic objectives as stated by the financial controller are to increase shareholders value, increase customer base (acquire more customers), work towards zero defect in its internal processes and attracting and retaining highly talented and qualified personnel.

The main strategy to increase shareholders value is to grow revenues through aggressive expansion and acquisition of more customers. Its objective of rendering convenient, accessible and reliable service to its customers is to create and deliver value to them through efficient processes supported by well talented and well trained staff. Below is the strategic grid for Wegagen Bank:

Figure 4.4: Strategy grid for Wegagen Bank.

<table>
<tr><td rowspan="2">Financial perspective</td><td colspan="3">Shareholder Value</td></tr>
<tr><td colspan="3">Grow Revenues</td></tr>
<tr><td>Customer</td><td colspan="3">Grow customer base/acquire more customer</td></tr>
<tr><td>Internal process</td><td colspan="3">Improve Operational Efficiency</td></tr>
<tr><td rowspan="2">Learning and Growth</td><td>Human Capital</td><td>Information Capital</td><td>Organizational Capital</td></tr>
<tr><td>Attract qualified employees & retain existing ones by offering good opportunities for career and skill development</td><td>- Introduce state-of-the--art<br>- Databases<br>- System<br>- Networking</td><td>- Building Leadership<br>-Empowering employees</td></tr>
</table>

*Source: Author's development based the bank's vision, mission and strategies*.

Under the learning and growth perspective, there are three elements thus, human capital, information capital and organizational capital. Wegagen bank believes that its people are the most ingredients to achieve its vision, mission and objectives. As confirmation of this believe the bank has human resource development strategy which aims at hiring experienced and qualified staff, enhancing competence by improving the skills of new and existing staff, and developing a working environment that would create a sense of commitment and belongingness. Through this program, the bank has been attempting to attract qualified employee and retain the existing ones by offering good opportunities for career and skills development. Employment of fresh graduates and training them to work as a banker has continued as a strategy to develop own people and strengthen belongingness.

It, therefore, devotes adequate resources in training and developing its people

Wegagen bank also sees technology as a core strategic tool as quoted on their corporate annual reports 2008/09:

*"Information and communication technology provides quality and efficient technology based services to increase efficiency and work for service excellence, and ultimately attain high returns and maintain them. To this end, there are important projects that are ready for execution and/or close to implementation. They are: Introducing a modern state-of-the-art technology core banking system replacing the existing; and the modern payment card systems project composed of Automated Teller Machines and Point of Sale Terminals. "*

This means that well trained staffs are empowered with online access to corporate information in order to deliver superior service to its customers.

Leadership is built from within through coaching and grooming such that the people are imbibed with the organizational culture and leadership skills that create the right strategic alignment between corporate strategic goals and that of individuals, teams and departments. The consequence of this is getting the people with the right attitude and skills to assist in achieving corporate strategy.

Table 4.10: Balanced Scorecard for Wegagwn Bank (Ethiopia).

| Wegagen Bank | | | | | | |
|---|---|---|---|---|---|---|
| FINANCIAL PERSPECTIVE | | | | | | |
| **STRATEGIC** OBJECTIVE | MEASURES | Performance(%) and years | | | | |
| | | 2006 | 2007 | 2008 | 2009 | average |
| Improve shareholder value | Net profit growth (NPG) | 48.53 | 56.61 | 25.11 | 30.08 | 40.0825 |
| | ROE | 27.83 | 27.52 | 22.93 | 21.59 | 24.97 |
| | ROA | 3.14 | 3.19 | 3.37 | 3.53 | 3.31 |
| | | | | | | |
| CUSTOMER PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURE | Performance | | | | |
| Improve customer satisfaction | Customer Satisfaction | 4.0667 | | | | |
| improve customer retention | Customer Retention | .7.022 | | | | |
| Create loyal customer | Customer intention | 3.885 | | | | |
| INTERNAL BUISNESS PERSPECTIVE | | | | | | |
| STRATEGIC OBJECTIVE | STRATEGIC MEASURES | Performance | | | | |
| Improve customer service delivery | Transaction speed | 3.4524 | | | | |
| | responsiveness | 3.9447 | | | | |
| | Service quality | 4.1 | | | | |
| LEARNING & GROWTH PERSPECTIVE | | | | | | |
| OBJECTIVE | MEASURES | Performance | | | | |
| Retain and improve employee skill set | payment | 2.92 | | | | |
| | Social relationship | **3.733** | | | | |
| | Working condition | 3.391 | | | | |
| | participation | 3.1048 | | | | |

*Source: Author's computation based on the data collected from the survey*

Table 4.10 shows that the net profit after tax growth or change (NPG) was above the average of the NPG of the period under consideration for the first two consecutive years and lower than the average for the other two years. There was no smooth direction (decreasing or increasing trend) for change in NPG during the period under study. That is it increased from 48.53% to 56.61% in 2007, decreased from 56.61% to 25.11% in 2008 and then increased from 25.11% to 30.08% in 2009. The ROE for the bank followed a declining trend for the period under consideration. The reason for the continuous declining of ROE was that the change in equity was greater than the change in net profit after tax during the period the study considered. Unlike ROE and NPG, the ROA followed an increasing trend for the period in focus.

The non-financial performance indictors of the bank were above the mid-point or average (M>3) for all areas under the customer, internal, and learning and growth perspectives except payment satisfaction(2.9) which calls the bank to revise its payment policy particular relating its policy of over time works. The metrics' scores indicate that almost on average the customers of the bank had positive perception towards the bank's banking service. Similarly the employees' ratings imply that on average the employees had a positive perception towards working condition, social relationship and participation employees of the bank. However, the payment rating indicates that on average employees had a negative perception to wards the payment policy of the bank.

### 4.2.2 Analysis of BSC Performance Measures and Metrics

The four perspectives of the balanced scorecard and the various measures and metrics derived from data on the four selected commercial banks in the previous sections will be analyzed in the next sections in order to establish if BSC provides additional information with respect to the performance of commercial banks in Ethiopia.

#### 4.2.2.1 Analysis of Financial Performance

Under financial perspective, the following measures/metrics were considered for all the four commercial banks:

1) Net profit after tax growth (NPG);
2) Return On Equity (ROE);
3) Return On Asset (ROA);

These are good indicators of the financial health of an organization since they measure how efficiently businesses are utilizing their assets and the value they are returning to shareholders on their investments. A business that is financially healthy will consistently return high ROA and ROE year in/year out. These measures will therefore give information to shareholders on the state of the businesses they have invested in.

Data on these measures were collected from both internal sources and National bank annual and quarterly bulletin. Net profit after tax is a measure of a company's earning power from ongoing operations, which is equal to earnings before deduction of legal reserve. The study used the net profit after tax growth or change to see the annual profitability growth of the commercial banks. This therefore has strong bearing on the performance of management in an organization and it indicates the degree of operating leverage for the organization.

The return on assets is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. It is calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment".

The assets of the company are made of both debt and equity. Both of these types of financing are used to fund the operations of the company. The ROA figure gives investors an idea of how effectively the company is converting the money it has to invest into net income. The higher the ROA number, the better, because the company is earning more money on less investment.

Return on Equity of ROE is an indicator of a company's profitability. It is the most important profitability metrics. Return on equity reveals how much profit a company earned in comparison to the total amount of shareholder equity found on the balance sheet. Shareholder equity is equal to total assets minus total liabilities. It's what the shareholders "own". Shareholder equity is a creation of accounting that represents the assets created by the retained earnings of the business and the paid-in capital of the owners. A business that has a high return on equity is more likely to be one that is capable of generating cash internally. For the most part, the higher a company's return on equity compared to its industry, the better. Earning per share (EPS) is. Basic EPS is computed by dividing net profit or loss attributable to ordinary shareholders by the weighted average number of ordinary shares outstanding during the period. EPS is a standard measure often used to assess an entity's profitability.

The above measures/metrics were calculated and presented in tables 5.7, 5.8, 5.9 and 5.10. The results are further summarized and presented in a table below:

Table 4.11: Financial Performance (%) Measures for CBE, Dashen bank, United bank and Wegagen bank.

| Bank | Net profit growth(NPG) | Return on Equity (ROE) | Return on Assets (ROA) |
|---|---|---|---|
| CBE | 40.8 | 45.25 | 3.2 |
| Dashen bank | 40.03 | 32.3425 | 2.93 |
| United bank | 33.225 | 19.54 | 2.62 |
| Wegagen bank | 40.0825 | 24.97 | 3.31 |

*Source: Author's computation based on the data collected from survey and annual reports of the CBs*

CBE's average growth of net profit after tax was 40.8%. Dashen bank, United bank and Wegagen bank had an average growth of net profit after tax of 40.03%, 33.225%, and 40.0825% respectively. This shows that during the period under study CBE and United bank had the highest and lowest NPG respectively.

On ROA; CBE again recorded a highest average figure of 3.2% next to Wegagen bank, Dashen bank had 2.93% and United bank recorded 2.62% during the period specified in the study.

With reference to ROE, CBE recorded an average of 45.25%, Dashen bank recorded 32.3425%, United bank had an average of 19.54% and Wegagen bank recorded an average of 24.97% for the period under review. The financial figures clearly indicate that the dominance of CBE in the banking industry.

This only shows the financial performance of the four commercial banks. The next sections will now examine in details what goes into attaining these financial results and if indeed the remaining measures to be discussed could provide additional information to shareholders regarding the performance of the commercial banks. The outcome of which should put the shareholders in a position of power so that they are able to make informed decisions about their investments based on the additional information from data gathered on the customer perspective, internal business processes perspective, and learning and growth perspective.

### 4. 2.2.2 Analysis of Customer Perspective

For commercial banks to survive and deliver consistent superior financial performance in the areas indicated under the financial perspective above, the commercial banks should have customers that are very satisfied with their products and services or unless those commercial banks enjoy some monopolies where there are no substitutes for their products and services and the switching cost is also very high. Except for such conditions, customers who are not happy with the services and products of one commercial bank will quickly switch to other banks resulting in declining deposits with outflow of funds that could otherwise be given out as loans to generate interest income. Some of the ways that commercial banks with poor processes and dissatisfied customers can retain their customers will be through low pricing of their products and services. But this is not a sustainable strategy because other commercial banks with efficient internal processes would easily match up by reducing their cost of operations which may translate into lower cost for their products and services thereby attracting the customers that are dissatisfied with their banks and are just hanging on because of only the pricing factor.

Therefore to measure how the customers see the banks, the metrics for customer perspective are customer satisfaction index, customer intention (loyalty) and customer retention rate. The customer satisfaction metric is the most important because customer satisfaction is directly linked to an organization's profits. Service delivery via various channels of IT applications has emerged as an important attribute in satisfying customers. Therefore, a company with very satisfied customers is able to create sustained profitability and high growth value. The company also benefits from word of mouth advertising from its satisfied customers thereby reducing its cost of advertising whiles at the same time increasing its customer base (Roger Best, 2007). This therefore means that the higher the satisfaction index, the higher the future profitability of an organization may be.

Customer retention is how long a business is able to keep a customer for the purpose serving the customer with repeated businesses. If a business is able to increase the number of customers it retains year on year, that business will be able to reduce the cost associated with customer dissatisfaction and exit and will not have to spend as much on marketing efforts to attract new customers. Also, because retained customers tend to bring in higher annual revenue and margin per customer than do lost or new customers, the total profits of the business should increase.

Table 4.12: Customer Measures (five points) for CBE, DB, UB and WB.

| Bank | Customer Satisfaction | Customer Intention | Customer Retention |
|---|---|---|---|
| CBE | 4.48 | 4.21 | .851563 |
| Dashen Bank(DB) | 4.3182 | 4.197 | .80269 |
| United Bank(UB) | 4 | 3.833 | .7272 |
| Wegagen Bank(WB) | 4.0667 | 3.885 | .7522 |

*Source: Author's computation based on the data collected from the survey.*

The results tabulated in table 4.12 from the survey indicate that, CBE got 4.48 points on a scale of 5 for overall customer satisfaction; Dashen Bank recorded 4.3182 points, United Bank recorded 4 while Wegagen Bank recorded 4.0667 points.

In terms of customer retention, CBE recorded 0.85 points on a scale of 1, Dshen Bank recorded a figure of 0..80, United Bank recorded 0.73 points and then Wegagen Bank with a figure of 0.7522 points. Once again the CBE excelled the other three commercial banks interims of customer retention. Similarly, 84.2%(4.21/5%), 83.94%(4.197/5%), 76.67%(3.833/5%) and 77.7%(3.885/5%) of customers of CBE, Dashen Bank, United Bank, and Wegagen respectively were loyal and agreed to continue with their respected bank commercial bank.

Customer satisfaction and retention are important linkages to a market-based strategy and profitability. A company's ultimate goal to succeed is to attract, satisfy and retain target customers. If a company is able to achieve this in an attractive market, the business will produce above-average profit.

The customer is a critical component in the profitability equation, but this fact is often over-looked in any financial analysis or annual reports. Customers are a marketing asset that businesses are yet to quantify in the accounting system, yet the company that is able to attract, satisfy and keep customers over their lifetime of purchases is in a powerful position to deliver superior levels of profitability.

This assertion is evidenced from the results of the survey where CBE with the highest customer retention value also is the most profitable followed by Dashen Bank and then Wegagen Bank. To examine if customer perspective provides any additional information regarding financial performance of the banks, the spearman's correlation co-efficient was calculated for metrics between the financial and the customer perspectives. The results are given in table 4.13.

From the table 4.13 there is generally strong correlation between customer perspective and financial performance with a correlation co-efficient of .8500and 0.8 between ROE (return on equity), the other two financial metrics and customer perspective metrics respectively. Similarly, there is also a strong correlation between the financial perspective metrics. This strong correlation may indicate that customer perspective metrics can give additional information that can help stakeholders to better decision making than relay on financial metrics alone.

Table 4.13: Spearman's Rank Correlation between Customer Perspective and Financial Perspective

| | | | NPG | RO A | ROE | CSI* | CII* | CRI* |
|---|---|---|---|---|---|---|---|---|
| Spearman's rho | NPG | Correlation Coefficient | 1.000 | 1.000** | .800** | .800** | .800** | .800** |
| | | Sig. (2-tailed) | . | . | .000 | .000 | .000 | .000 |
| | RO A | Correlation Coefficient | 1.000** | 1.000 | .800** | .800** | .800** | .800** |
| | | Sig. (2-tailed) | . | . | .000 | .000 | .000 | .000 |
| | ROE | Correlation Coefficient | .800** | .800** | 1 | .850** | .850** | .8500** |
| | | Sig. (2-tailed) | .000 | .000 | . | . | . | . |
| | CSI | Correlation Coefficient | .800** | .800** | .8500** | 1.000 | 1.000** | 1.000** |
| | | Sig. (2-tailed) | .000 | .000 | .000 | . | . | . |
| | CII | Correlation Coefficient | .800** | .800** | .8500** | 1.000** | 1.000 | 1.000** |
| | | Sig. (2-tailed) | .000 | .000 | .000 | . | . | . |
| | CRI | Correlation Coefficient | .800** | .800** | .8500** | 1.000** | 1.000** | 1.000 |
| | | Sig. (2-tailed) | .000 | .000 | .000 | . | . | . |

*Source: Author's computation based on the data collected from survey*

**. Correlation is significant at the 0.01 level (2-tailed).

*.CSI, CII, CRI stands for customer satisfaction, intention, and retention

## 4. 2.2.3 Analysis of Internal Business Processes

The efficiency of the internal processes of an organization can affect the way the company delivers service to their customers. Operational efficiency and effectiveness, therefore, allows company to render service to its customers at a lower or reduced cost. It could also be a source of differentiating factor by which the company can create competitive advantage in its industry. Also, a company with good internal processes is able to quickly respond to customer queries, respond to customers' needs through new product development with short speed-to-market time frames. Such a company also reduces the waiting time for the delivery of its services and increases availability of its services to customers through the use of the "state of the art" technology such as ecommerce, internet banking, SMS banking, ATM services, etc. Also through the application of software or technology such as customer relationship management (CRM) software, companies are able to better manage their relationship with their customers. Through such a platform, the company is able to gather information that makes it understand the needs of its customers in order to deliver superior service to wow its customers. This effort will definitely be recognized by customers who in turn reward the companies through repeat businesses, which leads to high customer retention because customers are very satisfied with the services they are getting from the companies. This makes the companies enjoy higher lifetime value of the satisfied and retained customers thereby leading to sustained financial performance such as higher profitability.

Table 4.14: Internal Business Processes Measures for CBE, DB, UB and WB.

| Bank | Transaction speed | Service Responsiveness | Service quality |
|---|---|---|---|
| CBE | 3.22 | 3.9 | 4.2 |
| Dashen Bank(DB) | 3.38 | 4.3864 | 4.41 |
| United Bank(UB) | 3.56 | 3.8125 | 4.13 |
| Wegagen Bank(WB) | 3.45 | 3.9447 | 4.1 |

*Source: Author's computation based on the data collected from the survey*

Therefore, there is a positive correlation between the performance of a company and the efficiency and effectiveness of its internal processes as evidenced from data available in this study. CBE recorded 3.22, 3.9 and 4.2 customer satisfaction ratings for transaction speed, service responsiveness and service quality respectively. Dashen Bank recorded 3.38, 4.3864 and 4.41 for transaction speed, service responsiveness and service quality respectively. United Bank and Wegagen Bank recorded for the same metric 3.56, 3.8125, 4.13 and 3.45, 3.9447, 4.1 respectively.

Also in assessing how the internal business processes perspective affects customer perspective, it can be inferred from the table below that, there is strong relationship between customer satisfaction and internal business processes with a correlation co-efficient of 0.8 and

1. That is transaction speed and service responsiveness, as it is displayed in the table below, had a correlation-coefficient of 0.8 and 1 with customer perspective metrics (CSI, CII, and CRI) respectively.

Table 4.15: Spearman's Rank Correlation between Internal Business Processes and Customer Perspectives.

| | | | CSI | CII | CRI | T. S | S.R |
|---|---|---|---|---|---|---|---|
| Spearman's rho | CSI | Correlation Coefficient | 1.000 | 1.000** | 1.000** | .800** | 1.000** |
| | | Sig. (2-tailed) | . | . | . | .000 | . |
| | CII | Correlation Coefficient | 1.000** | 1.000 | 1.000** | .800** | 1.000** |
| | | Sig. (2-tailed) | . | . | . | .000 | . |
| | CRI | Correlation Coefficient | 1.000** | 1.000** | 1.000 | .800** | 1.000** |
| | | Sig. (2-tailed) | . | . | . | .000 | . |
| | T.S | Correlation Coefficient | .800** | .800** | .800** | 1.000 | .800** |
| | | Sig. (2-tailed) | .000 | .000 | .000 | . | .000 |
| | S.R | Correlation Coefficient | 1.000** | 1.000** | 1.000** | .800** | 1.000 |
| | | Sig. (2-tailed) | . | . | . | .000 | . |

*Source: Author's computation based on the data collected from survey*

**. Correlation is significant at the 0.01 level (2-tailed).

*S.R= Service responsiveness, T.S=Transaction speed*

This therefore means that well structured internal business processes will lead to higher customer satisfaction rating, which could translate into better financial performance.

### 4.2.2.4 Analysis of Learning and Growth

A learning organization is a knowledgeable organization. An organization that empowers its staff and resource them adequately will surely reap the benefit in term of superior performance and growth. For most organizations that have treated their employees as their most critical resource, they have often been rewarded with higher and sustained profits. There is a saying that, "You cannot give what you don't have". Therefore, organizations with dissatisfied employees will often find out that, their customer service efforts are always not without problems. They may have very brilliant customer service framework or model, but will have serious issues implementing it because they have dissatisfied employees. Poor customer service delivery then affects customer satisfaction, which in turn affects customer retention and thereby reduces the "lifetime value of a customer" as a result of early exit. This scenario does not hold in the monopoly market or imperfect markets where customers cannot easily access substitutes.

An employee satisfaction interim of payment, social relationship, working condition and participation is very critical to the performance and survival of businesses. In other words, satisfied employees, smooth relationship among employees, comfortable working condition and conducive environment, and active participant employees in creativity (innovation), satisfied response for change, and leadership skill development are very critical to the performance and survival of businesses. How well these efforts are managed can affect a company's profitability and growth. Well motivated and talented staffs are always ready to go the extra mile to help in achieving corporate objectives and goals.

Table4.16: Learning and Growth Measures for CBE, DB, UB and WB.

| Bank | Payment satisfaction | Social relationship | Working condition | Participation |
|---|---|---|---|---|
| CBE | 3.65 | 3.96 | 3.75 | 3.54 |
| Dashen Bank (DB) | 3.00 | 3.89 | 3.55 | 3.42 |
| United Bank(UB) | 2.92 | 3.73 | 3.39 | 3.1 |
| Wegagen Bank(WB) | 2.9 | 3.27 | 3.2 | 2.87 |

*Source: Author's computation based on the data collected from the survey.*

With reference to the figures in table 4.15 above CBE with the best financial performance (please refer to table 4.7 for data on financial measures) recorded 3.65, 3.96, 3.75, and 3.54 for payment satisfaction, social relationship, working condition and participation respectively. This was followed by Dashen Bank with 3 for payment satisfaction, 3.89 for employee's social relationship, 3.55 for working condition satisfaction and 3.42 for employee's participation.

United Bank made a record of 2.92 for employee payment satisfaction, 3.73 for employees' social relationship, 3.39 for working condition and 3.1 for employee participation. All these records were higher than the records of Wegagen bank in learning and growth perspective which is contrary to financial performance where Wegagen Bank's performance was higher than the United Bank's performance in all financial metrics.

In examining the effect of the learning and growth perspective on internal business processes, it is apparent from the table below that there is strong relationship between learning and growing perspective and internal business processes perspective. This therefore means that, the bank that creates the enabling environment for satisfied and motivated employees to flourish will definitely be rewarded with efficient processes that lead to higher customer satisfaction index.

From the foregoing reasoning, it can therefore be deduced that the learning and growth perspective affects the performance of a company positively. In other words, there is a positive correlation between company's performance and its learning and growth strategy.

Table 4.17: Spearman's Rank Correlation between Learning & Growth and Internal Business Processes.

| | | | TS | SR | PPS | SRS | W.C | Part |
|---|---|---|---|---|---|---|---|---|
| Spearman's rho | TS | Correlation Coefficient | 1.000 | .800** | .800** | .800** | .800** | .800** |
| | | Sig. (2-tailed) | . | .000 | .000 | .000 | .000 | .000 |
| | SR | Correlation Coefficient | .800** | 1.000 | .9200** | .9200** | .9200** | .9200** |
| | | Sig. (2-tailed) | .000 | . | . | . | . | . |
| | PPS | Correlation Coefficient | .800** | 1.000** | 1.000 | 1.000** | 1.000** | 1.000** |
| | | Sig. (2-tailed) | .000 | . | . | . | . | . |
| | SRS | Correlation Coefficient | .800** | 1.000** | 1.000** | 1.000 | 1.000** | 1.000** |
| | | Sig. (2-tailed) | .000 | . | . | . | . | . |
| | WC | Correlation Coefficient | .800** | 1.000** | 1.000** | 1.000** | 1.000 | 1.000** |
| | | Sig. (2-tailed) | .000 | . | . | . | . | . |
| | PRS | Correlation Coefficient | .800** | 1.000** | 1.000** | 1.000** | 1.000** | 1.000 |
| | | Sig. (2-tailed) | .000 | . | . | . | . | . |

*Source: Author's computation based on data collected from the survey*

**. Correlation is significant at the 0.01 level (2-tailed).

Note: PPS, SRS, WC and PRS stands for payment satisfaction, social relationship, working condition, participation satisfaction

### 4.2.3 The relationship between the financial and the non-financial performance

In previous sections the study tried to assess the existing financial profile of the selected commercial banks using some selected financial ratios such as profit growth, return on equity and return on asset. Results of the financial ratios show the dominance of the Commercial bank of Ethiopia (CBE) in most of the financial metrics. In addition the study investigated the performance of the selected commercial banks using nonfinancial measures such as customer satisfaction, intention and retention; quality and cycle time operational measures; and employees' satisfaction in terms of payment, social relationship, working condition and participation of employees in creativity, empowerment, in developing satisfied response for change and training measures. The objective of this analysis was to measure the performance of the selected commercial banks using BSC and obtain stepwise relationship between the elements of the BSC. The results of the descriptive analysis show there was stepwise relationship between the elements of the BSC.

In this section correlation and regression analysis techniques were used to test the cause-and-effect relationships between the two variables (the financial and non-financial performance of the selected commercial banks).

Consistent with the latest developments in the performance measurement literature such as those advocated by proponents of the BSC (Kaplan & Norton, 1996) suggested every measure should be part of a cause-and effect relationship that culminates in improving long-term sustainable financial performance. Furthermore, they indicated that there is a cause and effect relationship between non-financial measures and financial performance. Finally they concluded that companies who understand this link will implement the best long-term approach to improving their financial performance.

Accordingly, the measurement system was expected to make the relationship among measures and the performance of the selected enterprises. It is expected that commercial banks that continuously improve their skilled work force (employee training and satisfaction) should achieve better performance in their internal business process perspective which will, in turn, lead to better performance in their customer perspective. All such efforts should lead to improve financial performance. Keeping in mind that these expected relationships, the focus of this study is on performance of the selected commercial banks. Therefore correlation and regression of the sampled enterprises is provided in the following tables to examine the relationships of financial and non-financial performance.

#### 4.2.3.1. Results of correlation analysis

Kaplan & Norton (1996b) suggested the use of correlation analysis to test the expected relationships in the balanced scorecard performance measurement variables. Accordingly, correlation analysis was used to test how the performance measurement perspectives (customer satisfaction, internal process/operational, and employee training/satisfaction measures) are correlated with the actual financial results (average profit growth, return on equity and return on asset).

Table 4.17: The relationships between the scores of financial performance and the non-financial performance of the selected commercial banks.

| | | NPG | ROA | ROE | CPI | IPP*** | LGP |
|---|---|---|---|---|---|---|---|
| NPG | Pearson Correlation | 1 | .887** | **.770**** | .993** | .991** | .972** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 | .000 |
| ROA | Pearson Correlation | .887** | 1 | .926** | .915** | .925** | .959** |
| | Sig. (2-tailed) | .000 | | .000 | .000 | .000 | .000 |
| ROE | Pearson Correlation | .770** | .926** | 1 | .821** | .840** | .891** |
| | Sig. (2-tailed) | .000 | .000 | | .000 | .000 | .000 |
| CPI | Pearson Correlation | .993** | .915** | .821** | 1 | **.998**** | .983** |
| | Sig. (2-tailed) | .000 | .000 | .000 | | .000 | .000 |
| IPP | Pearson Correlation | .991** | .925** | .840** | .998** | 1 | .990** |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | | .000 |
| LGP | Pearson Correlation | .972** | .959** | .891** | .983** | .990** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | |

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Author's computation based on the data collected from the survey

Findings from Pearson pair-wise correlations matrix presented in Table 4.17 show strong correlations between the measurement variables of the financial performance and the non-financial measures in the selected commercial banks.

This means that a higher score on the non-financial performance is related to a better performance of financial metrics. All aspects are strongly correlated to the financial performance (profit growth, return on equity and return on assets). The correlation coefficient varies from the lowest (0.77) to the highest (0.998). The variables are positively correlated and are significant ($p<0.0001$). The result implies financial performance increases with increase of the non-financial performance.

The results of the relationship are consistent with the assumption. Results from statistical analysis supported the expectations. This is consistent with similar studies by Sim & Koh (2001) also found relationships between the innovative techniques and employee training with financial performance.

Therefore, from the results of the correlation analysis one can conclude that it pays for companies not only to measure their financial performance, but to do this in an equal balance among all measures.

## 4.2.3.2 Regression analysis

The results of correlation analysis in the correlation section tested the statistical significance of the association and their directional relationships between the scores of the non financial performance and the financial performance. In addition to the correlation analysis the study further examined the effect of the independent variables on the dependent variables. Therefore, additional analysis that allows us to make better inferences was conducted.

Results of the regression analysis show the effect of net profit growth, return on equity and return on asset (dependent variables) with customer, operational and employee measures (independent variables).

***Regression equation:*** $Y_i = \alpha+\beta_1 x_1+\beta_2 x_2+\beta_3 x_3 +\epsilon$

*Where:* $Y_i$ *= dependent variables;* $\alpha$ *= intercept;* $\beta_1 \ldots \beta_3$ *= coefficients;* $x_1 \ldots x_3$ *= independent Variables;* $\epsilon$*= error term*

***Variables***

The variables in the model are:

**Dependent Variables:** $Y_1$ = Net profit growth (*NPATG*); $Y_2$ = Return on asset (*ROA*); $Y_3$=Return on equity (ROE)

**Independent Variables:** *X1* = Customers measurement index (*CPI*); *X2* = Internal process/operational (*IPPi*); *X3* = employee measurement index (LGPI)

### 4.2.3.2.1 Results and discussion

In this section, the relationships between the financial performance and the balanced performance measurement variables are examined. The findings from the multiple regression model confirms that the results of the cross tabulations for the type and directions of the relationship of most of the independent variables with dependent variables.

The regression results (see Table 4.18) indicated that the overall performance measurement perspectives (independent variables) explained about 89.3% of the variation of net profit growth ( $R^2$ = 0.893), 96.5% of the variation return on equity($R^2$=0.965), and 97.8% of the return on assets ($R^2$ =0.978). The net profit growth, ROE, and ROA variation shows the combined effect of measurement variables on the financial performance (net profit growth, ROE, and ROA) is statistically significant ($p$<0.001).

Therefore customer satisfaction, operational and employee measures were found to be the determinants factors of net profit growth, ROE, and ROA. The directional signs on the coefficients for these statistically significant explanatory factors are positive, which implies, increase in net profit growth, ROE, and ROA is the effect of increase in the overall performance measurement variables. The results were also consistent with the expectation that the non-financial measures have significant effect on financial performance (net profit growth).

The return on asset, return on equity, and net profit growth variation with an ANOVA of F-ratio (122.627, 639.519 &408.516 respectively) shows the overall effect of non-financial performance on return on asset, return on equity and net profit growth is statistically significant.

The coefficient representing customer satisfaction, operational measures and employee training and satisfaction measures are found to be strong determinant factors of return on assets ( $p<0.01$). The directional signs on the coefficients for these statistically significant explanatory factors are positive. This shows their strong relationships and is also consistent with the assumptions.

The result implies, in today's sophisticated technological and competitive business environment, competent people are the main determinant factors. It is not enough to have short-term financial results and happy customer in terms of quality, efficiency and delivery time without the prerequisite of growth and learning perspective. Results are also consistent with theories in the performance literature (Kaplan & Norton 1996).

Furthermore, the adoption of product quality and reduced cycle time measures, increase in customer satisfaction and loyalty, which in turn contributes towards attaining, increased market share. This result corresponds to the expectation that enterprises operating performance measurements link to improve financial performance. Hence the models became;

$$Y_1 = -67.395+22.773\ X1+27.458\ X2+4.326\ X3$$

$$Y2 = -39.793+47.065\ X1+80.563\ X2+33.559\ X3$$

$$Y3 = 7.877+2.445\ X1+3.228X2+.655\ X3$$

The coefficients of all independent variables are positive which indicate that an increase in the independent variables leads to an increase in the dependent variables. For instance if customer measures index, internal process index and employee measures index increase by one scale/ point then net profit after tax will increase by 22.773,27.458 and 4.326 respectively.

Table: 4.19 Results of the regression analysis between financial and non financial measures

| Dependent variable | R | $R^2$ | Adjusted $R^2$ | Std. Error of the Estimate |
|---|---|---|---|---|
| NPG | .945[a] | .893 | .886 | 1.05002 |
| ROE | .983[a] | .965 | .963 | .06330 |
| ROA | .989[a] | .978 | .976 | 1.65381 |

| Dependent variable | Mode | | Sum of squares | df | Mean of squares | F | Sig |
|---|---|---|---|---|---|---|---|
| NPG | 1 | Regression | 405.607 | 3 | 135.202 | 122.627 | .000[a] |
| | | Residual | 48.512 | 44 | 1.103 | | |
| | | Total | 454.120 | 47 | | | |
| ROE | 2 | Regression | 5247.441 | 3 | 1749.147 | 639.519 | .000[a] |
| | | Residual | 120.344 | 44 | 2.735 | | |
| | | Total | 5367.785 | 47 | | | |
| ROA | 3 | Regression | 4.910 | 3 | 1.637 | 408.516 | .000[a] |
| | | Residual | .176 | 44 | .004 | | |
| | | Total | 5.087 | 47 | | | |

| Dependent variable | Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|---|
| | | | B | Std. Error | Beta | | |
| NPG | 1 | (Constant) | -67.395 | 4.483 | 1.492 | 15.034 | .000 |
| | | CPI | 22.773 | 1.335 | 1.173 | 17.053 | .000 |
| | | IPI | 27.458 | 1.678 | .258 | 16.362 | .000 |
| | | LGPI | 4.326 | 1.186 | | 3.647 | .001 |
| ROE | 1 | (Constant) | -39.793 | 7.061 | .897 | 5.636 | .000 |
| | | CPI | 47.065 | 2.103 | -1.001 | 22.376 | .000 |
| | | IPI | 80.563 | 2.643 | .583 | -30.481 | .000 |
| | | LGPI | 33.559 | 1.868 | | 17.963 | .000 |
| ROA | 1 | (Constant) | 7.877 | .270 | 1.514 | 29.149 | .000 |
| | | CPI | 2.445 | .081 | 1.302 | 30.371 | .000 |
| | | IPI | 3.228 | .101 | .370 | 31.907 | .000 |
| | | LGPI | .655 | .072 | | 9.166 | .000 |

Notes: L evel of significance at ** *P*<0.01. *Source:* Author's computation based on survey data

## 4.7 Summary

Several companies that have implemented the balanced scorecard in Europe and the US have reported some significant gains in their performance. There are recent claims that more than 50% of US companies have implemented the balanced scorecard whiles in Europe the percentage is about 47% (Nightingale, 2005, p.4). In Ethiopia there is no comprehensive data on the usage of this concept or framework to assess performance of commercial banks.

But from the literature reviews in chapter three where the benefits and other related topics of the balanced scorecard were examined in detailed, one could draw the inference that if commercial banks in Ethiopia implement the balanced scorecard in their institutions, this will improve their performance and bottom line by enabling them stay more focused on their core strategies.

Being able to define their strategies in terms of such measurable outputs will assist them to work smarter, focus their energies and resources on key units and sub-units which are critical to their strategies and be able to drive their performance through these selected few metrics.

To derive the maximum benefit from the balanced scored will mean to avoid most of the issues or criticisms that were raised under the literature review in chapter two and rather concentrate on the implementation of the balanced scorecard

After implementation, there is also the need for continuous review and re-adjustment of the selected metrics in order to improve the scorecard. This could be through weekly or monthly review of performance targets against actual so that variations can be identified and corrected early enough to keep the boat on course in order to avoid wrecking it by waiting till the last minute as often is the case with most businesses.

# CHAPTER V

# CONCLUSION AND RECOMMENDATIONS

## 5.1 Introduction

This chapter concludes with the findings of the research and makes the appropriate recommendations for adoption. It also highlights the limitations of the research and the need for further work in the selected area.

## 5.2 Conclusion of study

From the analysis done so far in the preceding chapter, it can be inferred that using the balanced scorecard to assess performance of commercial banks in Ethiopia will give a more holistic view than using just the financials. From the data giving in the study, it is clear that the well performing commercial banks financially may not necessarily be the best banks in the industry when other perspectives or dimensions are taking into consideration. The sustainability of such performance may largely be dependent on certain practices that are not geared towards customer satisfaction and efficient business processes or practices in order to create superior returns and long term growth based on customer satisfaction and lower transaction cost.

It is therefore, very clear from the study that the customer perspective, learning and growth perspective, and internal business processes perspective affect the assessment of the performance of commercial banks to a very large extent in Ethiopia. With the kind of results that have been gathered through this research, any stakeholder who wants to know and evaluate about the performance and competitiveness of these commercial banks will be better informed with multi-dimensional measures in terms of customer perspective, internal business processes perspective (operational structures and controls), and learning and growth perspective (systems and leadership development) all of which affect the long term performance and survival of the banks than just looking at their financials alone. Customer perspective, internal business process perspective, and learning and growth perspective therefore play complementary roles in assessing performance of institutions. As alluded to in the previous chapters, for a business to be able to create sustainable growth and profit, that business must be able to aggressively recruit new customers and retain them through efficient service delivery and customer service. That is because if new customers are recruited and they are not satisfied with the services and product of the organization they may exit early and it will cost a lot more to the business to recruit to replace the lost customers in order to stay in business. It has been estimated that it cost about five times or more to recruit a new customer than it is to retain an existing customer. An early exit by a customer also makes the organization to lose the life time value of the customer which may run into several hundreds of thousands or even million of advertising costs. The higher cost of replacement will also lead to higher marketing cost for recruiting new customers or attracting back dissatisfied customers which will therefore result into dwindling profits.

From the interviews with the selected banks, they have not implemented the balanced scorecard before and may be considering doing that in the future. A further review of other banks indicates that other banks, the research observed that there is no bank which has fully implemented BSC.

The balanced scorecard could also assist in the performance of banks to a large extent if implemented as a strategic tool. The extent to which it will assist banks in Ethiopia can be deduced from the data analysis presented above. One obvious problem in the banking industry, which has been revealed by this study, is customers' dissatisfaction with the loan request processing and disbursement function of banks. It therefore means that a very smart bank that is able to perfect this function would have succeeded in creating a cash cow that could turn the fortunes of the bank. The failure of banks to adequately play this role has led to the proliferation of all manner of businesses that engage in lending money to the public at ridiculous interest rates. One such company that has recognized this niche market or need and has taken advantage of it is Unique Financial Services.

In conclusion therefore, the balanced scorecard framework can be implemented to assess performance of commercial banks in Ethiopia. The BSC framework can also assist by providing additional information using measures in several dimensions such as customer perspective, internal business processes perspective and learning and growth perspective to managers, shareholders and other interested stakeholders regarding the performance of the commercial banks in Ethiopia. This will enable commercial banks focus on the core strategies in order to create and deliver superior value and returns to their stakeholders. This puts the shareholders in an informed position regarding the value the banks are delivering to them in the short-run versus the long-run. This additional information that the BSC framework can provide could be viewed like a commentary on "facts behind the figures" to reveal the non-financial inputs that went into achieving the financial results and whether the results being reported by the banks are sustainable in the long run. From the data gathered and the analysis done so far, additional information on customer dissatisfaction on internal processing functions of the selected commercial banks, poor customer service and inefficient internal processes coupled with low employee motivation indicate that these commercial banks need to do a lot to satisfy their customers and motivate their employees. This information can be very useful to both shareholders and management of the banks which can help them fine tune the execution of their strategies.

## 5.3 Recommendations

From the results of this study, the researcher recommends the following:

a) Ethiopian commercial banks should implement the balanced scorecard and multi-dimensional measures as a performance measurement and strategic implementation tool to improve their operational performance and profitability.

b) National Bank of Ethiopia should include other non-financial perspectives as elaborated in this paper in its annual or quarterly report on the performance of banks so that the investors, academics and the general public are better informed on the holistic performance of banks in Ethiopia.

c) Lessons about the role and importance of the multi-dimensional performance measures for banks should be given for finance and banking students in reasonable depth.

There is the need to place emphasis on the fact that, when implementing this framework, banks must follow a well planned methodology and the advice that was given in different academicians and practitioners in order for them to reap the full benefit of their investment.

## 5.4 Limitation and Further Research

Due to time constraint, just a few of the metrics were selected for each of the four main perspectives to demonstrate the power of the balanced scorecard. In the event of a more corroborative research work between the academia and industry, the number of metrics under each perspective could be increased. The return on investment on the implementation of the balanced scored could also be investigated and a more detailed analysis using complex statistical models to determine the extent to which non-financial perspectives affect financial performances of organizations or institutions with a much bigger sample size. A further research work could also be done in other industries such as manufacturing, merchandize retailing and profit and non-profit institutions to help drive the implementation and measurement of their strategies.

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# APPENDIX A

## QUESTIONNAIRE/SURVEY QUESTIONS FOR BANK CUSTOMERS

The Application of Balanced Scorecard in assessing performance of commercial banks in Ethiopia.

**Dear Sir/ Madam**

**Completion of research questionnaire**

I am at present conducting research into the Ethiopian commercial banks, at Mekelle University, department of business accounting and finance towards an MSC degree in finance and investment. The topic is "Performance evaluation of Selected Ethiopian Commercial Banks using Balanced Scorecard". The object of the questionnaire is to obtain the views of the performance of the selected commercial banks and analyze how they are performing using balanced scorecard.

I should appreciate if you would complete the attached questionnaire or direct it to the person in charge with this responsibility. Due to limited resources a fairly small sample was selected to receive this questionnaire, thus your response is very crucial to the success of the survey. All information will be treated in the highest confidence and the respondent's name (optional information) will not be revealed.

**Thank you for your time and consideration**

I. **Please rate your perception for the following questions by circling the number which represents your perception rate**.

1. How many years have you been using the service of this branch?
2. Are you satisfied with the way the branch treats you as a customer?

   a. Very Dissatisfied b. Dissatisfied c. Undecided d. Satisfied e. Very Satisfied

3. With all required documentations provided, are you satisfied with how long you have to queue to cash money from the counter?

   1. Very Dissatisfied 2. Dissatisfied 3. Undecided 4. Satisfied 5. Very Satisfied

4. With all required documentations provided, are you satisfied with how long it takes for the bank to open a new account for you?

1. Very Dissatisfied 2. Dissatisfied 3. Undecided 4. Satisfied 5. Very Satisfied

5. With all required documentations provided, are you satisfied with how long it takes for the bank to process and disburse you loan application request?

   1. Very dissatisfied 2. Dissatisfied 3. Undecided 4. Satisfied 5. Very satisfied

6. How will you rate the bank's response time to issues you raise?

   1. Very dissatisfied 2. Dissatisfied 3. Undecided 4. Satisfied 5. Very satisfied

7. How will rate the competence and cooperation of the front and back office employees to resolve your complain?

   1. Very dissatisfied 2. Dissatisfied 3. Undecided 4. Satisfied 5. Very satisfied

8. Overall, how would you rate the products the bank is offering to you?

   1. Very dissatisfied 2. Dissatisfied 3. Undecided 4. Satisfied 5. Very satisfied

9. You are satisfied with my decision to establish a banking relationship this bank.

   1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

10. Taking everything into consideration, how do you feel about what you have received from the bank during the course of the banking relation? (Please circle a number)

    1. Very dissatisfied 2. Dissatisfied 3. Undecided 4. Satisfied 5. Very satisfied

11. If you require the services of a bank in the near future for a similar type of transaction, would you use/choose the same bank? (Please circle a number)

    1. Very improbable 2. Improbable 3. Unknown 4. Probable 5. Very Probable

12. Taking everything into consideration that other banks offer this transactions, what is the likelihood that you would choose this particular bank for similar type of transaction?(please circle a number)

    1. Very improbable 2. Improbable 3. Undecided 4. Probable 5. Very Probable

# APPENDIX B

## QUESSTIONNAIRE FOR BANK EMPLOYEE SATISFACTION SURVEY

### Survey questionnaire

This questionnaire is prepared to collect the satisfaction rate of employees concerning their working condition, social relationship, payment, and participation.Please rate your satisfaction level for the following items by ticking the number which indicates your satisfaction level. That is **1**= Very dissatisfied **(VDS) 2**=dissatisfied(**DS) 3**=undecided, 4=satisfied, **5**=Very satisfied **(VS)** .

| Items: The level of your satisfaction with: | VDS | DS | UN | S | VS |
|---|---|---|---|---|---|
| **1. Amount of basic salary** | 1 | 2 | 3 | 4 | 5 |
| **2. Receiving bonuses based on performance** | 1 | 2 | 3 | 4 | 5 |
| **3. Pay policy for over time works** | 1 | 2 | 3 | 4 | 5 |
| **4. Overall satisfaction of payment** | 1 | 2 | 3 | 4 | 5 |
| **5. The communication between you and your coworkers/ team** | 1 | 2 | 3 | 4 | 5 |
| **6. The relationship between you and your supervisor/ manager.** | 1 | 2 | 3 | 4 | 5 |
| **7. The communication between one employee, supervisor/ manager** | 1 | 2 | 3 | 4 | 5 |
| **8. Overall satisfaction with social relationships in the branch** | 1 | 2 | 3 | 4 | 5 |
| **9. Ergo logical comfort of the work space/suitability of work place** | 1 | 2 | 3 | 4 | 5 |
| **10. User friendliness of technology used by the bank** | 1 | 2 | 3 | 4 | 5 |
| **11 .Resources allocated to effectively perform your duties** | 1 | 2 | 3 | 4 | 5 |
| **12 .Overall satisfaction with working conditions and environment** | 1 | 2 | 3 | 4 | 5 |
| **13. Leadership skills of the supervisor/manager** | 1 | 2 | 3 | 4 | 5 |
| **14. Opportunity to develop leadership skills** | 1 | 2 | 3 | 4 | 5 |
| **15. Opportunity to develop creativity** | 1 | 2 | 3 | 4 | 5 |
| **16. Opportunity to develop satisfied response to change** | 1 | 2 | 3 | 4 | 5 |
| **17. Opportunity to develop professional competence** | 1 | 2 | 3 | 4 | 5 |
| **18. Enough job related training is given** | 1 | 2 | 3 | 4 | 5 |
| **19. Overall satisfaction with participation in the bank** | 1 | 2 | 3 | 4 | 5 |
| **20. Overall satisfaction with appraisal and feed back system of the bank** | | | | | |

**Thank you for your time and consideration**

## APPENDEX C

## THE RELATIONSHIP BETWEEN FNANCIAL AND NON-FINANCIAL METRICS

REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT NPAT /METHOD=ENTER CPI IPI LGPI.

**Regression**

[DataSet2] C:\Documents and Settings\tsigea\My Documents\final variables for regression.sav

**Variables Entered/Removed**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | LGPI, IPI, CPI[a] | . | Enter |

a. All requested variables entered.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .945[a] | .893 | .886 | 1.05002 |

a. Predictors: (Constant), LGPI, IPI, CPI

**ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 405.607 | 3 | 135.202 | 122.627 | .000[a] |
| | Residual | 48.512 | 44 | 1.103 | | |
| | Total | 454.120 | 47 | | | |

a. Predictors: (Constant), LGPI, IPI, CPI

b. Dependent Variable: NPATG

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -67.395 | 4.483 | | 15.034 | .000 |
| | CPI | 22.773 | 1.335 | 1.492 | 17.053 | .000 |
| | IPI | 27.458 | 1.678 | 1.173 | 16.362 | .000 |
| | LGPI | 4.326 | 1.186 | .258 | 3.647 | .001 |

a. Dependent Variable: NPATG

REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT ROA /METHOD=ENTER CPI IPI LGPI.

**Regression**

[DataSet4] C:\Documents and Settings\tsigea\My Documents\final variables for regression.sav

**Variables Entered/Removed**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | LGPI, IPI, CPI[a] | . | Enter |

a. All requested variables entered.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .983[a] | .965 | .963 | .06330 |

a. Predictors: (Constant), LGPI, IPI, CPI

**ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 4.910 | 3 | 1.637 | 408.516 | .000[a] |
| | Residual | .176 | 44 | .004 | | |
| | Total | 5.087 | 47 | | | |

a. Predictors: (Constant), LGPI, IPI, CPI

b. Dependent Variable: ROA

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 7.877 | .270 | | 29.149 | .000 |
| | CPI | 2.445 | .081 | 1.514 | 30.371 | .000 |
| | IPI | 3.228 | .101 | 1.302 | 31.907 | .000 |
| | LGPI | .655 | .072 | .370 | 9.166 | .000 |

a. Dependent Variable: ROA

REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT ROE /METHOD=ENTER CPI IPI LGPI.

**Regression**

[DataSet4] C:\Documents and Settings\tsigea\My Documents\final variables for regression.sav

**Variables Entered/Removed**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | LGPI, IPI, CPI[a] | . | Enter |

a. All requested variables entered.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .989[a] | .978 | .976 | 1.65381 |

a. Predictors: (Constant), LGPI, IPI, CPI

**ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 5247.441 | 3 | 1749.147 | 639.519 | .000[a] |
| | Residual | 120.344 | 44 | 2.735 | | |
| | Total | 5367.785 | 47 | | | |

a. Predictors: (Constant), LGPI, IPI, CPI

b. Dependent Variable: ROE

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -39.793 | 7.061 | | 5.636 | .000 |
| | CPI | 47.065 | 2.103 | .897 | 22.376 | .000 |
| | IPI | 80.563 | 2.643 | 1.001 | 30.481 | .000 |
| | LGPI | 33.559 | 1.868 | .583 | 17.963 | .000 |

a. Dependent Variable: ROE