Performance Evaluation of Banks in Bhutan using Balanced Scorecard

A Thesis Submitted

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By

Aaditya Pradhan

Dept. of Management

School of Professional Studies

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माइल, सामदुर, तादोंग -737102
गटोक, सिक्किम, भारत
न-03592-251212, 251415, 251656
लीफैक्स -251067
बसाइट - www.cus.ac.in

सिक्किम विश्वविद्यालय
SIKKIM UNIVERSITY
(भारत के संसद के अधिनियम द्वारा वर्ष 2007 में स्थापित और नैक (एनएएसी) द्वारा वर्ष 2015 में प्रत्यायित केंद्रीय विश्वविद्यालय)
(A central university established by an Act of Parliament of India in 2007 and accredited by NAAC in 2015)

6th Mile, Samdur,Tadong -737102
Gangtok, Sikkim, India
Ph. 03592-251212, 251415, 251656
Telefax: 251067
Website: www.cus.ac.in

Date: 05.02.2020

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Submitted by ***Mr. Aaditya Pradhan*** under the supervision of ***Dr. Krishna Murari, Associate Professor & Head of the Department of Management, School of Professional Studies, Sikkim University.***

.....

Signature of the Scholar

Aaditya Pradhan

.....

Dr. Krishna Murari
Head Dept. of Management
SIKKIM UNIVERSITY

Countersigned by Supervisor

Dr. Krishna Murari

.....

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I, Aaditya Pradhan, hereby declare that the research work embodied in this thesis titled **"Performance Evaluation of Banks in Bhutan using Balanced Scorecard"** submitted to **Sikkim University** for the Award of degree of **Doctor of Philosophy**, is my original work. Any content or any part of this thesis has not been submitted to any other institutions or for any academic purposes.

Aaditya Pradhan
Roll No.: 16PDMN01
Ph.D Registration No.: 16/Ph.D/MGM/01
Department of Management
School of Professional Studies

माइल, सामदुर, तादोंग -737102
टोक, सिक्किम, भारत
न-03592-251212, 251415, 251656
ीफैक्स -251067
साइट - www.cus.ac.in

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Gangtok, Sikkim, India
Ph. 03592-251212, 251415, 251656
Telefax: 251067
Website: www.cus.ac.in

Date: 05.02.2020

CERTIFICATE

This is to certify that the thesis titled **"Performance Evaluation of Banks in Bhutan using Balanced Scorecard"** submitted to the Sikkim University for partial fulfillment of the degree of Doctor of Philosophy in the Department of Management, embodies the result of bonafide research work carried out by **Mr. Aaditya Pradhan** under my guidance and supervision. No part of the thesis has been submitted for any other Degree, Diploma, Association and Fellowship.

All the assistance and help received during the course of investigation have been duly acknowledge by him.

We recommend this thesis to be placed before the examiners for evaluation.

Dr. Krishna Murari
Head, Dept. of Management
SIKKIM UNIVERSITY

Dr. Krishna Murari
(Supervisor)
Associate Professor & Head
Dept. of Management,
Sikkim University, Gangtok

Date: 10.02.2020
Place: Gangtok

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List of Abbreviations

ADB: Asian Development Bank

ATM: Automated teller machine

ANOVA: Analysis of Variance

BSC: Balanced Scorecard

BIL: Bhutan Insurance Limited

BOBL: Bank of Bhutan Limited

BNBL: Bhutan National Bank Limited

BDBL: Bhutan Development Bank Limited

BDFCL: Bhutan Development Finance Corporation Limited

BIS: Bank of International Settlements

BPE: Business per Employee

CAMEL: Capital adequacy, Asset quality, Management, Earnings and Liquidity

CAR: Capital Adequacy Ratio

CAGR: Compounded Annual Growth Rate

CDR: Credit Deposit Ratio

CV: Coefficient of Variation

CYC: Current Year's Credit

CYD: Current Year's Deposit

DEA: Data Envelopment Analysis

DPNBL: Druk Punjab National Bank Limited

ER: Efficiency Ratio

ETE: Expenditure on the training of employee

FDIC: The Federal Deposit Insurance Corporation

FAHP: Fuzzy Analytic Hierarchy Process

GC: Growth in Credit granted to customers

GD: Growth in Deposits

GBE: Growth in branches and Extensions

GSE: Growth in Skilled employees

HSD: Highly Significant Difference

IITA: Interest Income to Total Asset Ratio

IDR: Investment Deposit Ratio

KPI: Key Performance Indicators

NIM: Net Interest Margin

NBFI: Non-Banking Financial Institutions

NPPF: National Pension & Provident Fund

NPL: Non Performing Loan

OCC: Office of Comptroller of Currency

PPE: Profit per Employee

PYC: Previous Year's Credit

PYD: Previous Year's Deposit

PAT: Profit after Tax

ROA: Return on Assets

ROE: Return on Equity

ROD: Return on Deposit

ROC: Return on Capital

RICBL: Royal Insurance Corporation of Bhutan Limited

RMA: Royal Monetary Authority of Bhutan

RGoB: Royal Government of Bhutan

SD: Standard Deviation

TBL: Tashi Bank Limited

TDTL: Total Deposits to total liabilities Ratio

TrDTD: Term Deposits to Total Deposits Ratio

UTB: Unit Trust of Bhutan

WBTI: Wage Bill to Total Income Ratio

WBTC: Wage Bills to Total Cost Ratio

Table of Content

Chapter 1. Introduction

Performance measurement is the measure of ensuring whether the strategies of the company is implemented successfully. A successful performance measurement system creates a naturally balanced environment for the employee to work in. Therefore, to sustain in the market it is crucial for an organisation to measure its performance from time to time. Performance measurement helps the organisation to plan and control its activities so that they can achieve their pre-determined goals. Performance measurement is interchangeably used with performance appraisal, evaluation, monitoring etc. Manasa & Reddy (2009) define performance appraisal as "*a systematic and periodic process that assesses an individual employee's job performance and productivity in relation to certain pre-established criteria and organisational objectives*". A performance management system is also implemented with an aim to improve the performance of the organisation so that they can better serve its customers, employees, owners and another stakeholder (Johnson, 2007).

A performance measurement system helps a manager in keeping him up to date regarding the changes that are taking place inside and outside the organisation. It helps the organisation heads to compare and match the goals and objectives set by the organisation with its actual output. A good performance measurement system allows the organisation to know its strengths and weaknesses. This gives the organisation a chance to improve where they are lagging behind than their competitors and gain a competitive edge over their competitors in the area in which they are good. Performance measurement in recent years has been practised in various fields of management and have shown a positive change in the overall performance of many organisations.

Some of the reasons as to why organisations need performance measurement are:

1. Performance measurement helps the organisations to check whether they were able to meet the requirements of their customers.
2. It helps the organisation to set the objectives that are achievable and helps to check themselves if they are working accordingly to their objectives.
3. It establishes standards for comparison among the competitors.
4. It also helps the organisations to identify problems, prioritise them and take necessary action.
5. Finally, it provides feedback to the organisation for the improvement.

An assessment of the performance of an organisation not only helps the management in knowing as to where we are in comparison to other competitors but also helps the stakeholders in making wise decisions.

1.1 Performance Measurement System in the Banking Sector

The study of performance measurement of banking organisation is not a new concept in the world. It is necessary for banks to measure their performance to know their strengths and weakness so that the bank can increase the opportunities and to minimise threats arising from the banks' competitors. The performance of banks is measured through various methods that are used by different authors around the globe. Some widely used methods are discussed in this section.

1.1.1 Financial ratio

A financial ratio is one of the oldest methods of evaluating the performance of an organisation that is in use for the last many decades. It is a method of measuring the

financial performance of banks by using various ratios that are identified by various authors in their papers. Different sates of financial ratios are used to evaluate the performance of the banks. In due course of time, the number of ratios used by different authors has increased. For example, Bashir, (1999) in his study have used Return on Assets (ROA), Return on Equity (ROE) and Return on Deposit (ROD) as the financial ratio for measuring the performance of banks. Halkos & Salamouris, (2004) in his study have used ROA, ROE, the Efficiency Ratio (ER) and Net Interest Margin (NIM). The number ratios have increased with the passage of time, looking at the necessity of the organisation.

Financial ratios are used as an indicator for the financial situation of a firm and as well as its performance. These ratios help a firm to analyse its trend and also the financial performance of itself with others. Some of the commonly used financial ratios in banking sectors are:

a. Return on assets (ROA): It is calculated by dividing net income with total assets. It measures how effectively the firm is utilising its assets in order to generate profit.
b. Return on Equity (ROE): It calculates how much money a bank earns by utilising the shareholder's fund. It is calculated by dividing net income with shareholder's equity.
c. Return on Capital (ROC): ROC or Return on Capital Employed calculate the amount of profit generated from total capital employed by a firm. This ratio is considered more useful than the return on equity for evaluating the durability of the company.
d. Net-Interest Margin (NIM): NIM calculates the difference in interest income earned by the bank to the interest paid to its customer by a bank.

Some of the studies that have used financial ratios as the performance measurement tool are Ally, (2013), Growe et al., (2014), Mondal & Ghosh, (2012), Suvita Jha, (2012)

1.1.2 Data Envelopment Analysis (DEA)

Many researchers have used DEA as performance evaluation tools for many decades. DEA measures the performance and efficiency of an organisation by implementing many inputs and thereby giving out various output. Charnels, Cooper, & Rhodes first introduced DEA, in the year 1978. It is widely being used in various sectors like healthcare, education, finance and even transportation.

It is a mathematical approach that helps in accessing the efficiency of various institutes using different data. Cooper, Seiford, & Zhu, (2011) in their report, explained that DEA helps an organisation to set a benchmark to assess their performance. In economics and operation research, DEA is used to determine or estimate an optimum production frontier. A production frontier presents all the possible outcomes that can be produced using the combination of two goods and a given resource. It is a nonparametric method. The DEA method of assessment is also used in determining the performance of banking industries. By using DEA in management, the organisation can set a benchmark for the performance of an organisation. The benchmarks are set by using the measures or indicator that an author uses to measure the performance of an organisation.

The use of DEA can be seen in various sectors of an economy. C. T. Bruce Ho & Dash Wu, (2009) conducted a hybrid study on the performance of internet banking using data envelopment analysis (DEA) and principal component analysis (PCA). DEA was used to measure a composite score based on various output and inputs. After that, PCA was used to measure the efficiency of all the banks considered in the study. The study helped in understanding the strength and weakness of those banks who are trying to introduce internet banking for their customer. DEA model provides a benchmark to the management

officials for assessing the performance of the organisation. DEA helps in checking the efficiency of the traditional benchmarking methods used by an organisation to evaluate its performance (Donthu, Hershberger, & Osmonbekov, 2005).

DEA in the banking sector is used for making a comparison between the efficient banks with inefficient banks (Halkos & Salamouris, 2004). However, to have a proper assessment of the banks, it is important to design the factors used for benchmarking in the DEA model properly (Paradi & Zhu, 2013).

1.1.3 CAMEL model

In the year 1970s, The Federal Reserve, The Federal Deposit Insurance Corporation (FDIC) and Office of Comptroller of Currency (OCC) of the US proposed the CAMEL rating model. CAMEL model assesses the organisation's responsiveness towards the market risk. Market risk includes the risk arising from competitors or change in interest rate. The CAMEL stands for Capital adequacy, Asset quality, Management, Earnings and Liquidity. They are the five major components of the bank under which they are assessed. The model was later acronym changed to CAMELS in 1997. The sixth component was Sensitivity of banks towards market risk. CAMEL model was formed to examine the bank's examination processes by the USA. Later it was used to determining the financial positions of the banks. This model of evaluating the performance of the bank is used worldwide. Some of these are Alemu & Aweke, (2017), Aspal & Dhawan, (2016), Dash, (2017), Erol et al., (2014), Ferrouhi, (2014), Kumar, (2016), Masood et al., (2017), Reddy & Prasad, (2011), Srinivasan & Saminathan, (2016), Zaheer, (2016), Srinivasan & Saminathan, (2016), Dincer, Gencer, Orhan, & Sahinbas, (2011), Masood et al., (2017).

1.1.4 Fuzzy Analytic Hierarchy Process (FAHP)

Fuzzy AHP is another method of measuring the performance of banks. Fuzzy AHP is basically used in the process of decision making. It also considers all the factors, financial and nonfinancial, while decision making. Studies have found that it is an effective tool for measuring the performance of banks. A study was conducted by Seçme, Bayrakdaroğlu, & Kahraman, (2009) on the performance of five major banks in Turkey using FAHP. It was concluded that, in a competitive environment, a bank must consider the nonfinancial aspect if they want to perform better.

FAHP is also important in validating the findings of a study where different tools are used to reach a proper solution. One such study was conducted by Rostami, Goudarzi, & Zaj, (2015), who used the BSC model for evaluating the performance of banks. To validate the usefulness of their model, the authors used FAHP. Wu, Tzeng, & Chen, (2009) also used Fuzzy Multiple Criteria Decision Making (FMCDM) approach for measuring the performance of banks.

1.1.5 Balanced Scorecard

A balanced scorecard is a tool for measuring the performance of an organisation which was developed by Robert Kaplan and David Norton. It considers not only the financial aspects of an organisation but also considers the non-financial measures. The traditional performance measurement tools only measure the financial aspects of an organization. However, these techniques have been criticised in recent years. It is believed that the performance of any organization is not only measured by the financial aspect of it. The non-financial also play an equal role in determining the performance of an organization.

A Balanced Scorecard is a tool that considers both the financial and nonfinancial aspects of an organization. It was designed in order to overcome the drawbacks of the traditional performance measurement tools. The detail about the historical evaluation and the implication of BSC have been discussed in detail in chapter 2: Review of Literature.

Various tools discussed in the above section are proven best for analyzing the performance of banks. The most widely used method for the evaluation of the performance of banks is ratio analysis method. However, many authors have argued that ratio analysis only considers the financial aspects of banks for measuring its performance and it does not show the complete picture of the bank's performance. Due to which various authors have proposed other modern tools for the performance evaluation of banks. For the purpose of this study, BSC would be used to evaluate the performance of banks in Bhutan. However, before evaluating the performance of banks in Bhutan, it is necessary to understand the importance or the role of the banking sector in the economy of Bhutan.About the Economy of Bhutan

Table 1.1 presents the contribution of banks in Bhutan to the GDP of the country. From the table, it can be seen that the banks in Bhutan contribute more than 50% of the total GDP of the country. The banking sector in Bhutan provides credit to government and the private sectors out of which the majority of credit is granted to the private sectors. Likewise, the major portion of total deposits to the banks are contributed by the private sectors. The majority of the deposit received by the banks are in terms of saving deposit followed by current and then time deposits. There is also a decrease in the amount of foreign currency deposit with the banks in Bhutan. The credit to deposit ratio for the banks in Bhutan is recorded to be more than 95% for the period of study.

Table 1.1: Contribution of banks in Bhutan to the GDP of the Bhutanese economy

Indicator	2012	2013	2014	2015	2016
Credit Concentration by Institution					
Total banking sector credit (Nu. millions)	46,274.4	51,255.6	56,140.3	64,006.5	75,859.4
% share of total credit					
Government	2.3	4.2	3.3	0.1	6.1
Other Public Sectors*	3.2	4.5	7.9	11.2	8
Private Sectors **	94.5	91.3	88.8	88.7	85.8
Deposit Concentration by Institution					
Total deposits (Nu. millions)	43,732.2	53,770	57,683.2	62.398.2	73,061
% share of total deposits					
Government***	NA	NA	NA	NA	NA
Other Public Sector	28.4	26.4	18.2	16.4	15.3
Private Sector****	71.6	73.6	81.8	83.6	84.7
Growth Rates of Deposits by Type					
Total Deposits	0	23	7.3	8.2	17.1
Current Deposits	10.5	33.9	-6.9	-4.7	-2.6
Saving Deposits	8	15.2	24.3	15.7	10.1
Time Deposits	-4.4	22.4	7.7	15.9	22.9
Foreign Currency	-48.6	-15.6	35.1	-29.5	29.9
Ratios (in %)					
Credit to Deposit	105.8	95.3	97.3	102.6	103.8
Credit to Asset	77.6	71.6	69.7	73.8	77.9
Savings to Credit	24.6	25.6	29.1	29.5	28
Credit to GDP	54.1	51.5	53.8	53.5	57.5

*Other Public Sector includes Government Corporations and Public Corporations.
**Private Sector includes loans and advances to Private companies, Individuals and NBFIs.
***Government is a net borrower from the banking sector
****Includes Private Companies, NBFIs, Individuals and Foreign Currency Deposits.

Source: Royal Monetary Authority, Annual Report, 2015/16

1.2 Bhutanese Financial System

The financial system of Bhutan comprises five commercial banks and three non-banking financial institutions. The non-banking financial institutions consist of Royal Insurance Corporation of Bhutan Limited (RICBL), National Pension & Provident Fund (NPPF) and Bhutan Insurance Limited (BIL). The five commercial Banks presently operating in the country are Bank of Bhutan Limited (BOBL), Bhutan National Bank Limited (BNBL), Druk Punjab National Bank Limited (DPNBL), Bhutan Development Bank Limited (BDBL) and Tashi Bank Limited (TBL). Figure 1.1 presents the financial structure of Bhutan.

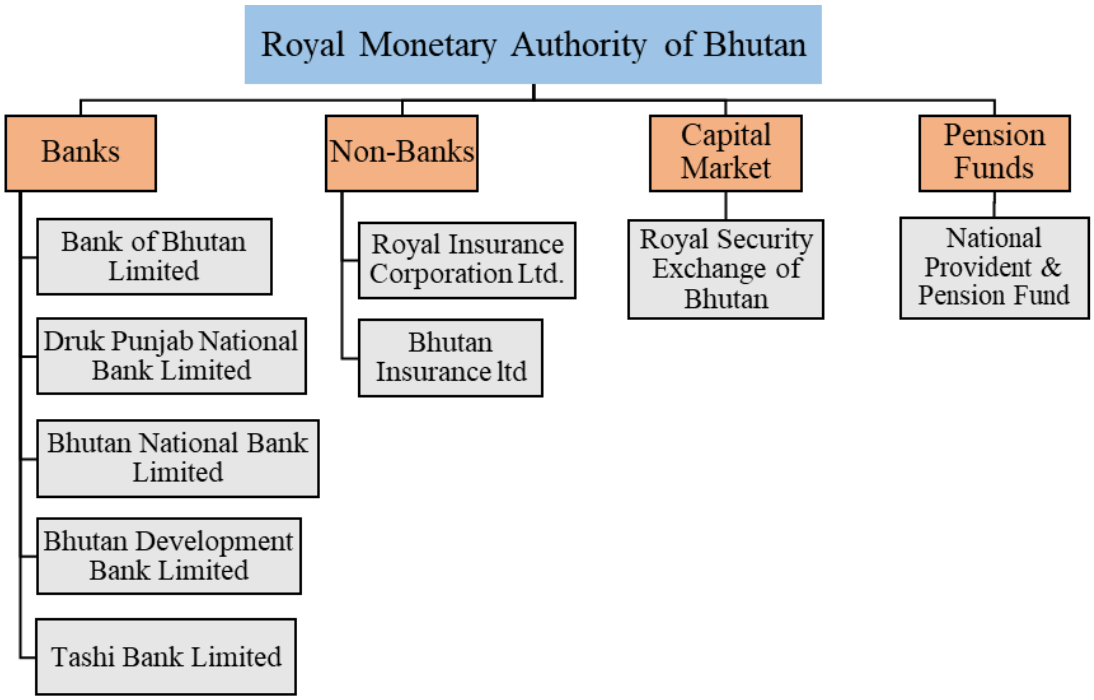

Figure 1.1: Structure of Bhutanese financial system

The brief introduction and background to each component of the Bhutanese financial system given in the forthcoming sections.

1.3 Royal Monetary Authority of Bhutan

The Royal Monetary Authority of Bhutan (RMA) is the central bank of Bhutan which was established in 1982 under the RMA Act, which was passed during the 56th session of the national assembly of Bhutan.

RMA functions like any other central bank in the world. RMA regulates the banks in Bhutan and it stabilises the currency of the country. RMA is the apex body that issues and manage currency in Bhutan and also manages golds, foreign exchange and other international reserves. RMA also issues the certificate to run a banking business in the country.

1.4 Non-Banking Financial Institutions

Non-banking financial institutions are the financial institutions that do not function as a regular bank nor they have any banking licence and are not guided by any national or international banking regulators. However, NBFIs function like a bank and play a major role in the economic development of a country. some of the functions of NBFIs include mobilising funds, createing employment opportunities and providing credit to the general public. Some of the NBFIs in Bhutan are discussed in the forthcoming section.

1.4.1 Royal Insurance Corporation of Bhutan Limited (RICBL)

RICBL was established in 1975 under the charter of His Majesty the fourth Druk Gyalpo Jigme Singye Wangchuck. The primary objective of RICBL was to provide insurance facilities to the people of Bhutan and to have the active participation of the people in the economic development of Bhutan. 39% of its total shares are owned by the Government of Bhutan and have 25 business branches located in the country.

The company mainly provides products like life insurance, automobile insurance and also provides insurance to the industrial sector and fixed and movable assets from any natural calamities. RICBL also works as a financial institution which provides various services to the people of the country. RICBL provides finance to those who want to invest money in big and small business projects.

1.4.2 National Pension and Provident Fund (NPPF)

NPPF was established in March 2000 and was launched in July 2002. NPPF provides services like education loan, student loan, and housing loan to its member. It is also the largest operating real estate developer in the country. NPPF provides its services to government, corporate agencies and armed forces. It has 52,000 members at present and is providing pension to 4,800 citizens of Bhutan.

1.4.3 Bhutan Insurance Limited (BIL)

Under the Company Act of Kingdom of Bhutan 2000, the Bhutan Insurance Limited was established in 2009. It is also listed in Royal Securities Exchange of Bhutan (RSEBL). It has a license of conducting business with large corporation as-well-as individuals of the country. BIL also provides financing and investment services under the provision of the Royal Monetary Authority (RMA) of Bhutan. BIL has its branches in 13 *Dzongkhag*[1] and has its headquarter in Thimphu.

[1] Dzongkhag is the administrative and judicial district of Bhutan.

1.5 Banking Institutions

The banking sector plays an important role in mobalising money from savers to borrowers in a country. The growth and development of an economy largely depends on the success and efficient functioning of the banking sector. The performance of banking institutions also affects the GDP, inflation rate and even the economic development of a country. Banking institutions are also referred to as a backbone of the country as they help in the economic development of a country and also provide various value-added services. The banking sector in Bhutan consists of five banks that are discussed in detail in the forthcoming section.

1.5.1 Bank of Bhutan Limited (BOBL)

The evolution of Banking business in Bhutan dates back to 1968 when the first Bhutanese Bank was established. The first commercial bank in Bhutan was the Bank of Bhutan. BOBL was established as a joint venture with the Chartered Bank of India, Australia and China and they held 25 per cent share of the bank. Later in 1970, these shares were transferred to State Bank of India and it held 40% of the bank's equity and helped to manage the Bank. However, these holdings were reduced to 20% when Druk Holding and Investments (DHI) took over the private sectors in Bhutan in 2007.

Since it was the first bank to operate in the country, it had trouble at the initial stage with the funds needed to run smoothly. So, to deal with this problem, the government of Bhutan made it mandatory for the government official to deposit their earnings with BOBL. Until 1982, there was no central bank operating in Bhutan. BOBL acted as the central Bank of Bhutan until the Royal Monetary Authority which was established in 1982.

It is the oldest and the largest bank presently operating in Bhutan. It operates in all *dzongkhag* (District) of the country. Bank of Bhutan provides products and services like deposits, loan, trade finance, and trades in the money market. In the latest addition to their services, BOBL launched "Mobile and Agency Banking" services in 2015. This helped the customers of BOBL to access the bank with the help of their smartphones anywhere at any time. Table 1.2 highlights the milestones achieved by BOBL from 2012 to 2016.

Table 1.2: Milestones achieved by BOBL for the year 2012-2016

Years	**Milestone Achieved**
2012	• Total income earned Nu. 2,136.11 million, net profit earned Nu. 660.12 million and loans and advances grew by 11.45% • Provided mobile van services to the people of Thimphu • Established internet banking services for the customers. • installed 8 new ATMs all over the country & total of 136 employees received training from different institutes outside Bhutan. • Launched VISA credit card facilities in August 2012
2013	• Total deposit of the bank increased by 7.23%, Loans and Advances by 2.62%, total profit increased by 1.89%, and interest expenses increased by 29.87% • Opened a branch at Gasa and added 20 new ATMs across the country • Launched B-Wallet service, and started Utility bill payment services through internet banking • Started Tashi Cell toll-free call services
2014	• Started Sunday banking services at B category bank branches. • Conducted a Teambuilding Exercise at Wangdue Phodrang and Tencholing • Launched Corporate Credit cards and also uniforms to the employees. • conducted 8 days' customer service training by 120 employees of the bank. • Total income grew by 5.43%, Interest income increased by 14.22%,
2015	• M-BoB, a mobile and agency banking service was launched. • Signed an agreement with TATA Consultancy Service for a new and improved banking system • Merchant Payment for two supermarkets at Thimphu was launched • Signed an agreement with Bhutan Football Federation. • Income increased by 16.22%, interest income increased by 10.65%, and interest expenses increased by 14.48%

2016	• Installed Kiosk system in Thimphu • Launched Prepaid Card services. • BPC bill payment through M-BoB launched • Cardless withdrawal services launched • Deposit increased by 13.60%, advances by 7.86% • Upgraded banking system from Oracle FLEXCUBE to TCS BaNCS
Source: Annual reports of BOBL (2012-2016)	

1.5.2 Bhutan Development Bank Limited (BDBL)

In 1988, to serve the need of small and medium enterprise and to encourage the development in the agricultural sector, the government established Bhutan Development Finance Corporation Ltd. (BDFCL). BDFCL was established with assistance from the Asian Development Bank (ADB). It started functioning as a proper commercial bank from 2010 and is known as Bhutan Development Bank Limited since then.

Bhutan development bank is the only bank whose primary customers are the farmers of the country. They provide credits to farmers in the form of seasonal, small and medium-term loans. The bank also provides credit facilities to small and medium industries and agro-based ventures in the country. BDBL has also introduced farmer outreach programme where the agents of the bank go to the villages for collection, deposits, withdrawal and loan disbursement at a specified time. The bank focuses on increasing the income of the people by providing micro, small and medium financial services and improve the standard of living. Table 1.3 highlights the milestones achieved by BDBL during 2012 to 2016.

Table 1.3: Milestones achieved by BDBL for the year 2012-2016

Years	Milestones achieved
2012	• The overall growth of the bank was recorded at 32.12% and total business of the bank increased by 58.16% • The active client based reached 34,790 • "Mobile Banking" service was re-termed as "Farmers' Outreach Banking" • Bank initiated the Biogas project with the Department of Livestock. • During the year a total of 71 employees was sent for training outside the country.
2013	• Banks saw a growth of 35.50% due to the growth in Loan and Advances. • The profit of the bank increased by 17.23%, the income from operation increased by 63.83% and interest on deposits and investment increased by 92.75% • 4 new branches and 5 field offices were opened across the country. • the bank launched SMS and Internet Banking service for the customer and 5 new ATMs were installed during the year • 84 employee underwent ex-country training. • The total client reached 40,712
2014	• the total client base reached to 46,326 during the year. • the rural loan portfolio grew from Nu. 4.53 billion to Nu. 6.23 billion out of which agricultural loan was the maximum. • The bank opened 6 new extensions and 6 field offices during the year • the bank started a new saving scheme named "*Drinchen Ama* Saving[2]" for the public. • With collaboration with the Business Opportunity and Information Centre, the bank started delivering post-fund sanction services.
2015	• Interest from operation increased by 33% and interest expenses increased by 42%. • Total loan portfolio increased by 30% and total client based reached to 48,518 • 6 new extensions were opened during the year and a new branch office was constructed at Punakha. • With the direction from the government, the bank took over service of community Centre operation from March 2015. • Total of 132 staffs received training from abroad.
2016	• The total revenue of the firm increased by 21% and the operating income grew by 20%. • The total client base reached to 56,162 and the total loan outstanding grew to Nu. 16.35 billion. • 400 employees received training during the year • Cottage and Small Industry Financing Department was established. • 15 new ATMs was installed all over the country • The new product named Home Settlement Loan Scheme was launched by the bank
Source: Annual reports of BDBL (2012-2016)	

[2] A special saving scheme provided to the armed force and their spouses in rural and urban region of Bhutan.

1.5.3 Bhutan National Bank Limited (BNBL)

On July 1980, by the undertaking of the Royal Government of Bhutan, Unit Trust of Bhutan (UTB) was incorporated. With the contribution of the Royal Government of Bhutan (RGoB) and Royal Insurance Corporation of Bhutan (RICB), the trust commenced with an initial capital of Nu. 2.5 Million. The primary motive of the new trust was mainly to initiate saving among the public of Bhutan and to convert the idle and unused funds of the public into different production operations. Later in 1992, RGoB declared UTB as an Individual Financial Institution and it was able to earn the profit of Nu. 9,618.63 during its first year of operation.

In 1995 with the order by the Royal Government of Bhutan, the Unit Trust of Bhutan (UTB) was converted into a commercial bank. It was possible with the technical assistance of the Asian Development Bank. The UTB was successfully converted into a full-fledged commercial bank in January 1997 as the Bhutan National Bank Limited (BNBL).

BNBL was also recognised as the first fully computerised financial institution in the Kingdom. BNBL was the first bank to provide the ATM services to the people of Bhutan. It also became the first publicly traded bank in Bhutan when the bank's equity was sold to public investors in 2006.

BNBL operates with five major values[3] which guide them to excel in their performance. These values are:

1. Integrity: through fair and honest action
2. Innovation: by being a learning organisation that puts good ideas into practice

[3] Annual Report, 2016, Bhutan National Bank Limited, pg. 2

3. Leadership: for example, humility, recognition, and empowerment
4. Teamwork: through individual respect, underpinned by a united purpose
5. Discipline: through people, though, and action.

Table 1.4 highlights the milestones achieved by BNBL from 2012 to 2016.

Table 1.4: Milestones achieved by BNBL for the year 2012-2016

Years	**Milestones achieved**
2012	• 2.55% of growth in Business. • 36.83% increase in net profit • 6 new ATM were installed • Piggy banks account was opened for children of the country • B-Wallet service was launched • The in-house training program was conducted for employees of *Phuentsholing, Samdrupjongkhar* and *Trashigang* branches.
2013	• B-Wallet service user reached to 2445 • Internet Banking user reached to 3167 • Loan portfolio increased to 18.17 billion. • Whistle Blower Policy was formulated for employees of BNBL
2014	• 48% increase in net profit • total loans and advances increased by 3% • total deposits increased by 13% • piggy banks term deposit account was launched • Total Asset increased by 14% • 2 In-house training programs were conducted • the bank upgraded its software used by BNBL to Oracle's UBS 12.0 Core Banking System
2015	• 40% increase in net profit • Total advances increased by 14% • 3 extensions were opened and 5 new ATM was installed • The training was provided to 147 employees • Total Asset increased by 6%
2016	• Total loans and advances increased by 16% • 2 new extensions were opened and 2 new ATMs were installed • The training was provided to 261 employees • Unified Communication and Control Center was launched • Launched mPAY mobile banking services • Axis Remit Direct system was launched
Source: Annual reports of BNBL (2012-2016)	

1.5.4 Druk Punjab National Bank Limited (DPNBL)

Druk Punjab National Bank Limited (DPNBL) was founded in Bhutan in January 2010 by opening its first branch at Thimphu. The DPNBL became the first bank in Bhutan through foreign direct investment (FDI) route. The total capital of the bank is Nu.300 million out of which 51% share is of Punjab National Bank of India, 19% Bhutanese promoters and 30% initial share was floated to the public of Bhutan. In its initial year of business, DPNBL was able to gather more than 20,000 customers and had a business turnover crossing over Nu. 500 crores. Table 1.5 highlights the milestones achieved by DPNBL from 2012 to 2016.

Table 1.5: Milestones achieved by DPNBL for the year 2012-2016

Years	Milestone achieved
2012	• 23% of growth in Business with a 47% increase in net profit • Total advances increased by 27% and total deposits increased by 21% • 2 new bank branches were opened and 3 new ATM was installed • The training was provided to 43 employees • Business per employee: Nu. 90 Million
2013	• 3.24% of growth in business with 13% growth in net profit • Total advances increased by 4.23% and total deposits increased by 2.52% • The training was given to 52 employees • Business per employee increased to Nu. 98 Million
2014	• 7.85% of growth in business and 5.22% growth in net profit • Total advances increased by 4.68% and total deposits increased by 17% • 1 new bank branch was opened and 1 new ATM was installed • The training was given to 29 employees
2015	• 17.8% of growth in business with 4.79% growth in net profit • Total advances increased by 12.16% and total deposits increased by 10.04% • 1 new bank branch was opened and 1 new ATM was installed • The training was given to 32 employees • Business per employee increased to Nu. 1.12 Million
2016	• 17.70% of growth in business and 26.89% growth in net profit • Total advances increased by 11.52% and total deposits increased by 17.10% • 1 new ATM was installed • The training was given to 22 employees • Business per employee increased to Nu. 1.26 Million
Source: Annual reports of DPNBL (2012-2016)	

1.5.5 Tashi Bank Limited (TBL)

Tashi Bank Ltd is the fourth commercial bank in the Kingdom, licensed by the Royal Monetary Authority of Bhutan under the Financial Institutions Act of Bhutan, 1992. It commenced its banking operation with the establishment of Corporate Office and Thimphu branch office on 12th March 2010. It was established by three domestic promoters who hold 60% of its share (20% each) and 40% floated for public subscription. The total paid-up capital of the bank is Nu. 300 million. The main objective was to meet the growing demand of the banking services of the general public and to provide cohesive competition in the financial sector in Bhutan. Over the years the bank expanded its branch networks to pivotal locations namely *Phuentsholing, Wangdue; Phodrang, Gelephu and Paro*. Table 1.6 highlights the milestones achieved by TBL from 2012 to 2016.

Table 1.6: Milestones achieved by TBL for the year 2012-2016

Years	Milestones achieved
2012	• Earned profit of Nu. 369,48,150; Total Assets Nu. 39970,96,312; Loans and Advances Nu. 22982,18,249; Interest income Nu. 105,23,753; Total Expenses Nu. 1323,33,160
2013	• The bank received more of Recurring and saving Deposits • There was an increase in the loan portfolio. • Total Assets reached to Nu. 4,156,178,630; profit earned Nu. 18,870,050
2014	• Net Profit ratio increased to 15.62%, Statutory Liquidity Ratio by 51.42% and Capital Adequacy Ratio by 17.29% • Total Assets reached to Nu. 4,863,018,849; profit earned Nu. 36,655,173
2015	• Net Profit Ratio decreased to 9.69%, Statutory Liquidity Ratio decreased to 45.56% and Capital Adequacy Ratio increased to 19.79% • Total Assets reached to Nu. 4,666,677,021; Profit earned during the year was Nu. 36,754,304
2016	• The total credit growth of the bank was recorded at 62.72% • The Growth in total interest earned was 5%, and Loan and advances were increased by 62.72%. • 30 employees were recruited and 53 employees received training during the year. • The Net Profit Ratio increased by 11.59%, SLR decreased to 25.75% and CAR decreased to 14.45%
Source: Annual reports of TBL (2012-2016)	

A banking institution plays a major role in the development of a country. They are the institutions that provide the loan, accepts deposits from the public and provides various value-added services to the people of a country. It is therefore very important to understand the functioning of banks in an economy. With this background, the study on the functioning and performance assessment of banks is necessary. The performance measurement of banking sectors mainly focuses on the financial aspects of banks. However, in this era considering only the financial aspects of banks is not enough. It is equally important and necessary for banks to consider the non-financial aspects of too. Understanding the non-financial parameters of banks will help the organisation to realize its long-term objectives. Therefore, this implies that the banks should adopt tools like BSC for their performance evaluation, which may help them to assess themselves from not only the financial aspects but also from non-financial aspects too. Moreover, in the economy like Bhutan, it is important to evaluate the performance of Banks using a modern performance measurement tool like BSC to compete with the rest of the world.

1.6 Financial Health of Banks in Bhutan

There are many parameters for checking the financial health of a bank. Capital adequacy ratio is the one which is highly emphasized upon for ensuring financial health. The Capital Adequacy Ratio sets standards for banks by looking at a bank's ability to pay liabilities, respond to credit risks, and operational risks. A bank that has a good CAR has enough capital to absorb losses. Thus, it has less risk of becoming insolvent and losing depositor's money. After the financial crisis in 2008, the Bank of International Settlements (BIS) began setting stricter CAR requirements to protect depositors.

Capital adequacy ratio (CAR) is a ratio of a bank's capital to its risk-weighted assets. It is a ratio of a bank's capital to the risk associated with it. A bank must keep a minimum amount of capital adequacy ratio to absorb losses arising from the banking operation. Figure 1.2 highlights the Capital Adequacy Ratio of banks in Bhutan for the period between 2012 and 2016. According to Basel III norms, an ideal CAR is 8%, while, as per the directives of the Royal Monetary Authority of Bhutan, every financial institution should maintain an ideal CAR of 10%.

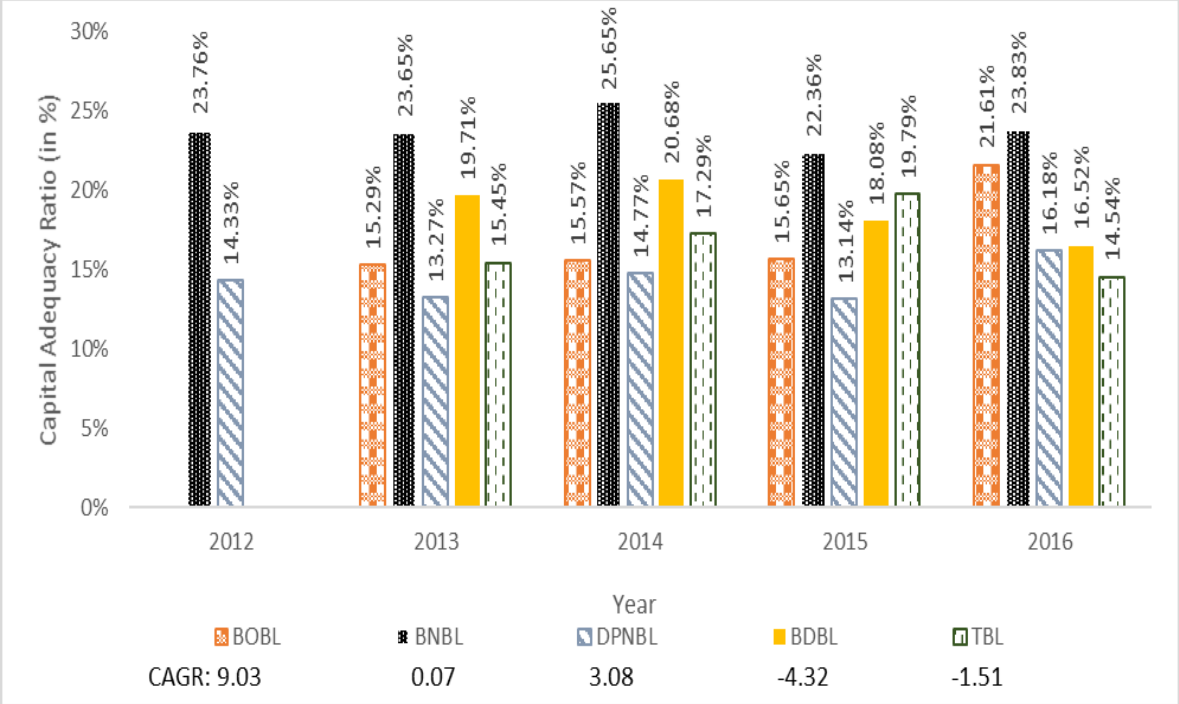

Figure 1.2: Capital Adequacy Ratio of Banks in Bhutan

Based on Basel III norms and RMA norms on Ideal CAR ratio, every bank in Bhutan has been able to manage its CAR ratio successfully and is much higher than the ideal norms (10%). While comparing the CAR ratio of different banks, BNBL has a better CAR ratio in comparison to BOBL, DPNBL, BDBL, and TBL. Also, BNBL has been able to manage its CAR ratio higher than 20% since 2012, which is higher than every other bank during the timeframe of the study. While in terms of CAGR of CAR among the five different

banks in Bhutan, BOBL has a CAGR of 9.03% and has seen, its CAR ratio increased from 15.29% in 2013 to 21.61% in 2016. DPNBL also has a notable CAGR of 3.08%. A CAGR of 3.08% has resulted in an increase in the CAR ratio of DPN BL from 14.33% in 2012 to 16.18% in 2016. On the other hand, although, the CAGR of BDBL and TBL is -4.32% and -1.51%, still these banks have managed to maintain minimum ideal CAR as prescribed by RMA. It can also be said that the banks in Bhutan are maintaining a proper amount of capital at their disposal. This helps the banks to tackle any sudden financial obligation arising from their banking operation.

1.7 Statement of the Problem

The study on performance evaluation of banks in Bhutan has not been carried out by any researcher till date. The present study will be first of its kind and will help banks to understand how well they are performing. This study will also bring out the areas where the banks have to improve for providing a better service to the public.

1.8 Significance of the study

The bank plays a very important role in the development of any country's economy. It can be said banks are the pillars of any countries' economic development. The concerned study will help in understanding the operational mechanism of Banks. The study will help to understand the various problems faced by the Banks in Bhutan. The current descriptive and analytical study will gaze into the problems faced by the banks in Bhutan both analytically and critically. The problems as highlighted in the above paragraph will be analysed from different perspectives which will surely help the Banks in Bhutan overcome it. In the long run, my study will have an impact not only on the banks in Bhutan but from the overall macroeconomic perspective.

1.9 Limitations of the Study

Some of the limitations of this study are:

1. The study only considered the data for the period of 2012-2016. This was mainly because one bank did not have complete data from the beginning of its operation.
2. On the other hand, few of the analysis of some banks were excluded because the respective banks were unable to provide the appropriate data for the analysis purpose.
3. The findings of this study are based on the empirical calculation of selected KPIs under BSC for all the banks in Bhutan for 2012-2016. Therefore, the suggestion can only be applicable to the banks for the same period of study.

Chapter 2. Review of Literature

2.1 Balanced Scorecard: Theoretical Framework

For an organisation to sustain in the long run, it is crucial to develop a performance evaluation system that helps the organisation. A properly designed performance measurement tool helps an organisation to identify their strengths and weaknesses for their further improvement. One of the most widely used tools for the performance evaluation of organisations is the Balanced Scorecard (BSC). It is a tool that not only measures the financial aspects of an organisation but also measures the non-financial aspects of an organisation that impacts significantly in the operation of the organisation.

BSC is a strategic planning and measurement system that helps an organisation to achieve their set visions and missions. It was initially introduced by Robert Kaplan and David Norton in the early 1990s. According to Robert S. Kaplan, BSC gives the information of an organisation to a manager at a glance. The balanced scorecard is also helpful in mapping the strategy of an organisation. Strategy mapping is a powerful business tool which shows graphically how organisations create value for their customers and investors. Good strategy maps communicate strategic intent internally and externally and are one of the most effective communication tools. With the help of this, an organisation can build alignment accountable, and a focus on results.

The main objective of any measurement system is to motivate employees and as well as the managers, to implement business strategy successfully. Norton, (1996) in his book states the importance of building a scorecard that communicates a business strategy. The reasons are: *a) The scorecard describes the organisation's vision of the future; b) The*

scorecard creates a holistic model of the strategy that allows all employees to see how to contribute to organisational success; c) The Scorecard focuses on change efforts. If the right objectives and measures are identified, successful implementation will likely occur.

The framework added the strategic non-financial performance measures besides the traditional financial metrics to give managers and executives a more 'balanced' view of organisational performance. The non-financial performance measures include internal business process, learning and growth strategies and customer perspectives. However, the approaches to measure (quantify) these strategies may vary across organisations.

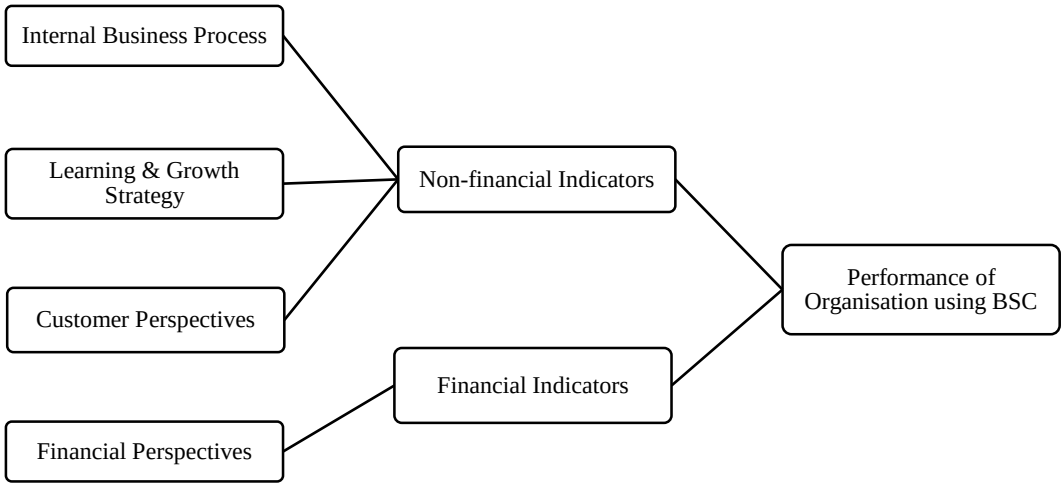

Figure 2.1: Components on BSC

2.1.1 Financial Performance Perspective

Kaplan and Norton do not disregard the traditional need for financial data. In fact, often there is more than enough of handling and processing of financial data. With the implementation of a corporate database, it is hoped that more of the processing can be centralised and automated. But the point is that the current emphasis on financials leads to the "unbalanced" situation with regard to other perspectives. There is perhaps a need to include additional financial-related data, such as risk assessment and cost-benefit data, in this category. Various authors have used the following key performance indicators under the Financial Performance Perspective:

Table 2.1: KPIs for Financial Performance Perspectives

KPIs	Description
Return on Assets	Return on assets is obtained by taking the ratio of net profits to total assets of the bank. This indicates the relative profitability of banks.
Cash deposit ratio	Cash deposit ratio explains the relationship between cash and deposits, which are considered to be important elements for the banking industry.
Credit deposit ratio	The credit deposit ratio is the proportion of loan assets created by banks from the deposits received. The higher the ratio the higher the loan assets created from deposits.
Interest income to total assets ratio	It is the ratio of interest income of the firm to its total assets. Higher the ratio is the indication of the efficient utilisation of assets
Net interest margin to total assets ratio	It is the ratio of net interest margin (difference in interest earned and interest spent) to total assets.
The ratio of NPA to net advances	This ratio explains the relationship between money not recoverable as against the total money lent by the bank. A higher value of this ratio shows the inefficient and ineffectiveness of the recovery department.
Capital adequacy ratio	The capital adequacy ratio is the ratio of the bank capital to the risk-weighted assets of the bank.

Product Profitability	The product profitability consists of the revenue from the product and the amount it costs to make a sale. Knowing the profitability of a product also allows making a comparison between different products.
Leverage ratio	This ratio is calculated by dividing total liabilities with total assets. A leverage ratio is any one of several financial measurements that look at how much capital comes in the form of debt (loans) or assesses the ability of a company to meet financial obligations.
Return on investment	This is calculated by dividing profit after-tax by total cost
Source: (Dave S. R., 2008) *& (Balkovskaya & Filneva, 2015)*	

2.1.2 Internal Business Process Perspective

This perspective defines more about internal business processes. This perspective permits the managers to know how well their business is being conducted, and whether its products and services are providing satisfaction to the customers are fulfilling their desires. In order to quantify the efficacy of the internal business processes, various authors have used the following key performance indicators:

Table 2.2: KPIs for Internal Business Process Perspective

KPIs	Description
Business per employees	The returns given to the employees, that is, their pay packages, are not time-bound but are performance bound. Even the method of promotion depends on target achievements.
Profit per employee	Banks can calculate this indicator in two ways. 1) Banks can find out total profit and then it is divided by the total number of employees of the organisation. 2) Banks can find out profit for each of the different kind of businesses and it can be divided by the number of employees of the respective type of business.
The ratio of wage bill to	This ratio indicates the employees' cost of generating business for their bank. It is calculated by dividing the total wage bill of the bank by its total revenue.

total bank revenue	
Target specification and realisation	Banks often give specific targets to their employees as far as productivity growth is concerned. Performance of the branches or performance of the employees is measured on the basis of target realisation or the failure to do so.
The ratio of wage bill to total cost	This indicates the cost of bank personnel in the total administrative cost of banking operations. The lower the cost, the more efficient the personnel are and they depict much higher productivity.
The ratio of customers to the bank employee	This ratio indicates the average number of customers handled by an employee. An increase in this ratio along with its correlation to the ratio of wage bill to total revenue is an indicator of the efficiency of the bank employees.
Time lag involved in banking operations	Banking operations include activities such as processing loan request, the opening of a bank account, issuing a credit card and so on. The efficiency of internal business processes can be measured in terms of the time involved in each of these operations.
Time for new product or service development and launch	This indicator means the average total time bank requires to develop and launch a new product or service in the market.
Source: (Dave S. R., 2008) *& (Balkovskaya & Filneva, 2015)*	

2.1.3 Learning & Growth Perspective

This perspective comprises of employee training and corporate cultural attitudes related to both individual and corporate advancement. Kaplan and Norton highlighted that 'learning' is more than 'training' and also includes the things like mentors and tutors within the organisation, as well as that ease of communication among workers that allows them to readily get help on a problem when it is needed. In order to quantify the learning and growth perspectives of the organisational performance, various authors have used the following key performance indicators:

Table 2.3: KPIs for Learning & Growth Perspective

KPIs	Description
Number of ATMs	It means the total number of ATMs that the bank has all over the country.
Number of debit cards	It refers to the total number of debit cards that the bank have disbursed to their customers.
Professional training	It is denoted by the number of training sessions per employee
Training costs	The amount that bank invest in training new and as well as existing employees in the bank
The ability to respond to new information for bank	The response time that the bank takes to new development in the market.
Staff turnover	The number of laid-off and resigned employees divided by the total number of employees.
Motivation	Number of incentive programs (bonuses, awards, rewards to the best workers, etc.) per employee
Level of education	It depicts the level of educational qualification of employees in the banks.
Professional Development Program	The number of development programmes that bank organise in order to increase the skills of its employees
Source: (Dave S. R., 2008) *& (Balkovskaya & Filneva, 2015)*	

2.1.4 Customer Perspective

In recent time, the organisation has increased its concerns about the customer's needs and customer satisfaction. If the customers are not satisfied with the services of the organisation, they switch to other suppliers (organisations) who can help them meet their demand via a wide range of different services they can provide. Thus, this perspective helps the organisation to develop the indicators to check customer satisfaction. In order to quantify customer perspectives, various authors have used the following key performance indicators:

Table 2.4: KPIs for Customer Perspective

KPIs	Description
Growth of credit granted to Customers	The amount of credit extended to the customer by the bank. Continuous increase in credit granted reflects reasonable interest charges and better customer care services.
Growth in the number of accounts holders	Increase in the number of account holders with a bank indicates a preference for the services offered by a specific bank.
Growth in priority sector lending	Priority sector includes agriculture and allied activities, small scale and cottage industries, lending to minorities and women, etc. If lending to this sector increases, it implies that the bank is more concerned with the economic development at the grass-root level.
Growth of deposits with Bank	Credit creation is the primary source of profit for a bank, the base for credit creation lies in the money deposited by the depositors with the bank. The larger the amount of deposits, the larger is the reserve base upon which credit can be created.
Growth in the number of accounts holders	Increase in the number of account holders with a bank indicates a preference for the services offered by a specific bank.
Customer rating	Customer rating has been used by banks to classify the customers in different categories considering their transactions and interaction with the banks.

Evaluation of products and services provided	Timely evaluation of products and services provided by the bank will help to disclose the information regarding the product and services and hence, the mere process will help banks to improve the effectiveness of their products and services where ever necessary.
Number of active products or services per customer	The average number of active products or services per customer.
Growth of marketing expenses	The amount that banks invest in marketing their products.
Growth of volume of business	The total area covered by the banking operations of a specific bank.
The target number of obtaining customers	The difference in the number of targeted customers and the number of customers the bank has actually obtained.
Source: (Dave S. R., 2008) & *(Balkovskaya & Filneva, 2015)*	

2.2 Use of Balanced Scorecard in Performance Evaluation

The balanced scorecard as discussed above is a strategic planning and management system that any organisations can use irrespective of their size or type of business operation. Developed by Kaplan and Norton in 1992, the balanced scorecard has been effective in providing the management, insights to understand better the functioning of an organisation. The balanced scorecard helps the management to see as to where and how the improvement is required for long-term benefits. The BSC can be used in different organisations for performance evaluation and management by using customised Key Performance Indicators (KPIs) according to the nature of business. The following section describes the use of a balanced scorecard approach for understanding the performance of organisations in various sectors.

2.2.1 Balanced Scorecard in the Health Care Sector

The use of balanced scorecard can be seen in various fields around the world. One of the sectors that have used balanced scorecard as a measurement tool is the health care sector. For instance, in Afghanistan, the Ministry of Public Health has implemented the use of BSC as a measurement tool for all the health care organisation operating in the country. In the study conducted by Hansen et al., (2008), the author found that the use of BSC in Afghani health care units has improved the performance scores as compared to the performance scores prior to their study. It also helped them to identify the areas which they need to improve. Similar results were also found in the studies conducted by various authors in different countries. Some of the authors who conducted similar studies are Arah, Westert, Hurst, & Klazinga, (2006), Bisbe & Barrubés, (2012), Xiao-yun Chen, Yamauchi, Kato, Nishimura, & Ito, (2006), Fields & Cohen, (2011), Kocakülâh & Austill, (2007), Patel, Chaussalet, & Millard, (2008), Radnor & Lovell, (2003), Stewart & Bestor, (2000), Zelman, Pink, & Matthias, (2003).

To the medical sector, the balanced scorecard has not only helped in smooth operations of health care sectors but it also helps in reducing the cost and improve the quality of health care sectors by removing the bottlenecks in the operations of the organisation (Meena & Thakkar, 2014). Mutale et al., (2014) conducted an experimental study on the critical health care unites of Zambia. They created three controlled units of critical health care in three different villages of Zambia. A modified BSC was implemented in these health units and were observed for twelve months. It was found that the controlled units were able to perform better compared to the health care units which did not implement BSC.

Though the use of balanced scorecard improves the performance in health care sectors, as seen in above-mentioned studies, it is also tough to implement it in this sector. The staff especially young and trained nurse managers prefer the implementation of BSC as their performance measurement tool (Naranjo-Gil, 2009).

The study was conducted to check the effectiveness of BSC in the health care sector of two hospitals of China and Japan. The authors (Xiao-yun Chen et al., 2006) concluded their study by stating that the implication of BSC on the hospital management system. The hospitals were able to identify the existing problems and also able to identify the opportunities for their growth. In another study conducted by Aidemark, (2010) the author found that by the use of BSC the health care sector could increase the volume and improve the quality of health care services provided by a private organisation in the south of Sweden.

Reynolds (2002) used BSC to check the issues that can be solved in the healthcare sectors. The issues were related to well-defined vision, mission, strategy, motivation among employees, challenges & barriers during the development & implementation process. The findings of the study suggested that by implementing BSC in healthcare sectors, they could improve their positioning in the market to give a better competition to the rivals, improve their financial results and most importantly increase the customer satisfaction. The BSC measures of performance evaluation can also help the organisation to revise the organisation's policies and get it aligned with modern management techniques and approaches (Grigoroudis, Orfanoudaki, & Zopounidis, 2012a)

The use of balanced scorecard also helps the healthcare organisation in having proper inter-department communication. This, in turn, helps the organisation to have more satisfied

customers and helps in making better decisions for the organisation (Chow-Chua & Goh, 2002). It also provides an organisation with a standardised method for accessing the performance of an organisation in a consistent manner (Steinke, Webster, & Fontaine, 2010).

2.2.2 Balanced Scorecard in the Hospitality Sector

The performance measurement is also a key factor in determining the performance of the hotels and hospitality industry. There are limited studies carried out in determining the performance of the hotel industry using BSC. Some of the studied that have used BSC to measure the performance of the hotel industry are discussed in this section.

The study of Phillips & Louvieris, (2005) suggested four key concepts to develop the performance of hospitality sector using four perspectives of BSC. First, the organisation must have a proper budgetary control mechanism to increase revenue. Second, the organisation should consider customer relationship management to have an improvement in management and customer retention. Third, strategically managing the management of the organisation to have a proper internal business process. Fourth, considering the internal as well as the external factor to have innovation and increase the learning of the employee.

In another study by F. H. Chen et al.,(2011), the authors conducted an empirical study using the four perspectives of BSC and Multiple Criteria Decision Making (MCDM) to check the performance of hotel industries. It was concluded that the performance of non-financial measures listed under BSC have a direct effect on how the firm performs financially. Further to check the uses of BSC in the hotel, the authors McPhail, Herington, & Guilding, (2008) conducted a study on hotel industry only using one dimension of BSC (learning and growth). It was found that the HR managers of the hotel did not implement a proper

parameter to measure the company's learning and growth. There was a deviation between the BSC framework of hotels and what actually was implemented.

2.2.3 Balanced Scorecard in Public Sector Organisation

The use of BSC can also be seen in the public sector organisation as well. The use of BSC in the public sector organisations has been useful in measuring the performance of public sectors and it has also helped the organisations to increase their efficiency. The evidence of this can be seen in the study of Moullin, (2017) where the author conducted a study on public sectors using a predetermined BSC known as Public Sector Scorecard (PSS). He concluded by stating that the implementation of the PSS framework has helped the organisations to improve their outcomes without increasing the cost associated with it. It also helped the employees of the organisation to achieve the targeted goals. In the study of Greatbanks & Tapp, (2007) the authors stated that BSC in public sector organisations helps employees to perform effectively which in turn support organisational strategy. Measures of BSC also help the employees to have a sense of clarity in their work. This ultimately helps in delivering better customer service.

2.2.4 Balanced Scorecard in Insurance Companies

Insurance companies also implement BSC as the performance measurement tool in their organisation. It has been proven that BSC improves its performance. Some of the findings of the study conducted on insurance companies are as follows. Ak & Öztay Csi, (2009) in their study have stated that the performance of an organisation cannot solely be determined by financial perspective. It is equally important to consider the Internal Business Process Perspectives (i.e. the non-financial aspects of a company) as the key parameter to measure

the organisation's performance. BSC also helps the organisation's managers to implement and execute the organisation's goals, mission, visions and strategies more effectively.

In another study Ege, Ilhan, Gizer, & Zeynep, (2012) have stated that, though many studies support the fact that non-financial parameters are very important in determining the performance of insurance companies, there are few works of literature which support that financial measures form four perspectives of BSC is also equally important. His study supports the fact that financial measure is an important factor to determine the performance of insurance companies that are using BSC as the performance measurement tool.

Though BSC helps the management to have the desired result in the case of performance and profit; it would be effective only if the managers are able to use BSC properly. In the study by Hanif, Ahmad, & Farooq, (2013) the author stated that in Pakistan, only 15% of the managers and employees working in insurance companies are aware of BSC as the performance measurement tool. 97% of total employees believes that financial measures are the only factors that have a significant bearing on the performance and the sustenance of insurance companies in Pakistan.

2.3 Balanced Scorecard in Banking Sector

As this study mainly focuses on the performance evaluation of Banks in Bhutan, some of the studies and their findings relating to the use of BSC in banks and financial institutions across the globe are discussed below:

Davis & Albright (2004) conducted a quasi-experimental study on banks using BSC and banks not using BSC. The study was conducted to determine that after implementing BSC, whether there was an improvement in financial performance and whether the change in

financial performance is greater than that of the performance observed in a similar type of situation where a traditional performance measurement system using only financial measures is employed. The study concluded with a finding that the banks which implemented BSC outperformed the banks which did not and concluded that BSC can be used to improve the financial performance.

The financial performance is not the only parameter based on which the relative success and failure of the banks are measured. Evaluating the performance of the banks solely based on the financial perspective will not provide a clear picture in terms of the overall performance of the banks (Panicker & Seshadri, 2013). The financial performance of banks is, in fact, an outcome of many performance indicators and financial processes (Ombuna, et. al, 2013). The inclusion of the non-financial indicators is also equally important in evaluating the overall performance of the banks. Panicker & Seshadri, (2013) concluded that the performance of the Standard Chartered Bank of India improved during the initial two years after the implication of the BSC. The study found that the score associated with the financial perspective was overshadowed by the score associated with the individual perspective, and thereby raised issues about the traditional method of performance evaluation that stressed on financial measures, and ignored other measures.

Banks need to emphasize on the non-financial indicators to improve their overall performance. Consumer dissatisfaction will affect the overall performance of the banks (Syum, 2010). Banks should adopt and implement strategies related to non-financial measures such as customer satisfaction, procedures and processes, innovation, technology, employees, and the environment (S. Kumar, 2015). Setting the standards for customer preferences, receiving feedback from the customers, and regular communication with

customers will help in retaining customer loyalty towards the bank (Tariq, Ahmed, Rafi, & Ahmed, 2014). As such, in addition to the financial perspective, banks should also emphasize and direct their attention towards the nonfinancial perspective that will have a bearing on the performance of the banks. The findings of this study are being supported by the study of (Rostami et al., 2015).

In a study conducted by Anand, Sahay, & Saha (2005) it was found that establishing a cause and effect relation in different perspectives of BSC is always a difficult task. But once the perspectives are finalised and implemented, the companies were able to reduce their cost of production and this in return helped the company in earning more profit. These findings indicate that the use of BSC can help an organisation to earn more profit. However, in the study, the author has also stated that formulating the KPIs in each perspective is equally important and difficult.

Though BSC helps managers in achieving organisational goals by dividing overall goals into short and long term goals, provide directions to workforce and etc. but at the same time, it is also difficult to apply BSC in large organisations. Kinya (2012) states that the main difficult task of strategy implementations include building a capable organisation, developing reward system, exerting strategic leadership, linking budgets with strategy, establishing administrative support systems, building a strategy support corporate culture.

Zhang & Li (2009) emphasised the importance of BSC in many commercial banks. The author described that the traditional performance evaluation tools helped the organisation to earn more profit but, it only helped the organisation financially. It is equally important for an organisation to consider the non-financial aspects as well. Therefore, a service sector organisation like a bank would require a tool that not only measures the financial

performance but also helps the banks to measure the performance of banks from the non-financial fronts. The introduction of this tool will also enable a bank to check their performance from time to time. The BSC has been used as a performance measuring tool by many of the global business community, and some of these are major international banks. The use of BSC not only helps in increasing the performance of banks in town but also helps in increasing the performance of banks in rural areas. Lihong & Chenwei (2009) has evaluated the performance of banks of villages and banks of town. The study concluded stating the reasons for which BSC is applied in a banking organisation. The reasons were: firstly, the customer Perspective of BSC is constructed mainly because of two aspects, customer satisfaction, and customer loyalty. Secondly, the internal business process dimension is constructed mainly for two aspects, service capabilities and the efficiency of the business. Thirdly, the learning and growth dimension is constructed due to two aspects, employees' learning and growth and the bank's learning and growth. Lastly, the financial dimension is constructed mainly because of three aspects, survival, success and prosperity. With this guiding principle, BSC helps a bank to operate better than other banks which are not using BSC as a performance measurement tool.

In a study conducted by Mohammed (2015), the author emphasizes on the increase in the performance of banks in Nigeria after using BSC. The author stated that the banks were using BSC as their performance measurement tool however, all the four perspectives were not implemented properly. This, in turn, did not provide a holistic view of the performance of banks of Nigeria. This study shows that the banks need to consider all the perspectives of BSC to have a complete understanding of their management.

Rostami, Goudarzi, & Zaj, (2015), identified various indicators for the four perspectives in BSC and rated them using the Fuzzy Analytic Hierarchy Process (Fuzzy-AHP). It was found that out of the four perspectives, the customer perspective was ranked first followed by financial than internal process and finally the learning and growth perspective. However, the author stated that ranking of these perspectives can change across countries due to the technological, environmental, social and economic positions.

Chowdhury & Shaha (2016) emphasised on the inclusion of BSC for the sustainable growth of the banking sector in Bangladesh. The authors highlighted that the banking industry in Bangladesh has been facing active changes with both working and technical advancements; demanding the banks to reassess their business strategies. Financial globalisation, cut-throat rivalry and off-balance sheet activities together with an increased association in stock markets are gaining more significance every day. BSC is the answer for sustainability through the long-term and short-term strategy implementation with enhancement in the external and internal process and managerial performance improvement.

Ongore & Kusa (2013) observed that apart from the internal variables that affect the performance of the bank, the microeconomic variables also had a significant impact on the performance of the banks operating in Kenya. Linear multiple regression model and Generalized Least Square method using a panel data were used in this study. The authors also emphasized that financial factors had a minimum bearing on the performance of banks that were studied. This study supports the fact that the performance of banks is not only determined by the financial aspects of the organisation but also determined by their size, control and credit quality. Credit risk, liquidity, total assets that an organisation possess and also the disclosure of information to the general public too act as a determinant of an

organisation's performance (Khalfaoui & Saada, 2015; Nassreddine, Fatma, & Anis, 2013).

Nouaili, Abaoub, & Ochi (2015) found that the performance of banks had a positive relation with capitalization, privatisation and quotation. Bank size, concentration index and efficiency were negatively related to the performance of the bank. The performance of the banks was done using net interest margin, return on assets and return on equity and regression analysis and panel data technique with the linear model were used in the study.

Naifar (2010) found that the performance of banks is mainly determined by its expense management, ownership structure and bank loans. If the ownership of the state is reduced and the banks are opened to foreign capital, the banks would have a competitive edge with its competitors and on the other hand, it will lead to product innovation. This will in-turn help the banks to have a better performance.

In a study conducted by Ittner & Larcker (1998), the authors found that customer satisfaction was the leading indicator of the internal performance measurement of an organisation. In another study by Salehi & Ghorbani (2011) the author stated that the organisations in Iran are more interested in increasing the financial performance of their organisation. The evaluators are mostly interested in using financial criteria rather than nonfinancial ones. For a service organisation like banks, reporting financial performance only in terms of evaluating its performance is not enough. The banks should consider applying BSC for proper performance evaluation (Ozturk & Coskun, 2014)

Kumar, (2015) in his study state that, for a service orientated organisation, to achieve the objectives formulated by them, they should form their strategies keeping in mind the non-financial measures. Only focusing on financial measures of the organisations will not help the organisation to achieve its goals. By focusing on non-financial measures of an organisation, they can achieve innovation on products, technological advancement and increases employee efficiency. The findings of the study conducted by (Upadhaya, Munir, & Blount, 2014), states that in Nepal, about 40.58% of the total financial institutions has implemented BSC as their performance measurement tools and it has been proven that BSC has helped them to improve their performance greatly.

2.4 Summary of Literature Reviewed

Table 2.5: Literature Review Summary

Name of the author(s)	Objective/s	Research Design	Findings
Davis & Albright (2004)	To check the efficiency of BSC, in measuring the performance of the bank branches over others where performance was measured by traditional performance measurement tools.	Quasi-experimental study where different branches of the same bank were selected.	Bank branches that implemented BSC as the performance measurement tool outperformed the bank branches which did not implement BSC as the performance measurement tool.
Anand, Sahay, & Saha (2005)	To check the issues faced by the management of an organisation in formulating and implementing BSC as a performance measure in the organisation.	Survey Research using questionnaire methods	Assigning weights to different perspectives and establishing cause and effect relationship among various KPIs is one of the most difficult jobs. After implementing BSC as a performance measurement tool, the organisation was able to reduce cost and in turn, it increased the profit of the organisation.

Zhang & Li, (2009)	To explore the cause and effect relationship among the indicators of BSC	Hypothesis Testing-Cause and effect relationship using a Set of primary and secondary data.	The use of BSC as a performance measurement tool helped the banks to increase their performance greatly.
Lihong & Chenwei, (2013)	To understand the impact of BSC in implementing proper management in banks of villages and town.	Primary and secondary sources of data were used. The analysis was done by using Balanced Scorecard method of performance evaluation	The finding shows that the BSC helps banks operating both in towns and villages to define parameters to increase their performance.
Yahaya (2009)	To understand the importance of BSC in the performance evaluation of banks.	Structured interviews and questionnaires were used. Data were analysed using frequency table and the scores were compared between different banks	Nonfinancial perspectives also played an important role in increasing the bank's performance. Ignoring the nonfinancial perspectives immensely affected customer satisfaction.
Syum (2010)	To assess the performance of Ethiopian banks using BSC	The combination of both quantitative and qualitative techniques of data collection was used. The results were analysed using descriptive	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. One of the major concern found in this study was the dissatisfaction of

		statistics, regression and correlations.	customers towards the loan request processing and disbursement function of banks.
Mohammed, (2015)	To explore the use of BSC in assessing the performance of banks of Nigeria.	Purposive sampling technique was used to collect data from 11 banks operating in Nigeria. Descriptive statistics, Kruskal-Wallis test and ANOVA were used to analyse the data for the study	Banks were highly dependent on the financial aspects of BSC followed by customer perspective. The banks observed under this study did not incorporate all four perspectives of BSC properly and author emphasized that the banks must implement all the perspectives of BSC to have a holistic view of the bank.
Panicker & Seshadri, (2013)	To understand, develop and implement BSC in foreign sector banks in India	Secondary data was collected from secondary sources. A case study approach was used in formulating BSC scores for the bank.	The finding of this study challenges the traditional performance evaluation measures which were concentrated only on financial measures and ignored other measures.
Tariq, Ahmed, Rafi, & Ahmed, (2014)	To understand the practical use and effectiveness of BSC in an organisation.	The primary source of data collection was used for the study. The OLS regression model was used for data analysis	Though financial perspectives of BSC plays a significant role in Bank's overall performance, nonfinancial measures are also considered equally important. For example, setting the standards for customer preferences, getting feedback from the customers and continuous

			communication with customers makes the customers be loyal to Bank. The training and growth of the employee are also important as it increases their efficiency.
Kumar, (2015); Ozturk & Coskun, (2014)	To understand the use of BSC in an organisation.	Primary data gathered from 200 bankers. The analysis data was done by using simple frequencies, percentages, averages, Weighted Average Scores (WAS), Mann-Whitney test (U-test)	For a service organisation like banks, it is important to consider the nonfinancial measures to have their goals realised.
Rostami, Goudarzi, & Zaj, (2015)	To evaluate the performance of banks using BSC and Fuzzy AHP.	Primary data was collected through a questionnaire that was designed based on a five-point Likert scale. Data were analysed using FAHP and Freidman ranking test	Out of the four perspectives, the customer perspective was ranked first followed by financial than internal process and finally the learning and growth perspectives. However, the ranking can change across countries. This change arises due to technological, environmental, social and economic positions of that country.

Chowdhury & Shaha, (2016)	To assess the importance of BSC in evaluating the performance of banks in Bangladesh.	The data for the study was collected from the available secondary sources like bank websites and annual reports for five years (2010-2014).	BSC as a tool for performance measurement does not only help the organisation to realise its mission and vision but also helps an organisation prepare themselves for any changes taking place in the environment.
Ongore & Kusa, (2013)	To study the factors that have a significant impact on the performance of banks in Kenya.	The data for the study was collected from the published statements of banks of Kenya. The data were analysed using multiple regression to check the relationship between the financial performance of the banks in Kenya and the factors that are specific to banks and other microeconomic factors.	The bank-specific factor has a significant role in determining the financial performance of the banks in Kenya.
(Khalfaoui & Saada, 2015; Nassreddine et al., 2013)	To identify the determinants of the performance of the Tunisian banking sector.	The data was collected from the secondary sources from eleven banks listed in the Tunisian stock market for the period of 2000-2013. The data were	Credit risk, liquidity, total assets that an organisation possess and also the disclosure of information to the general public were seen as the major determinant of the Tunisian banking sector

		analysed using a regression model.	
Nouaili, Abaoub, & Ochi (2015)	To determine the internal and external factors that affect the performance of banks in Tunisia.	The data or the study was collected from secondary sources and the analysis was carried out using regression analysis.	The performance of the bank was positively related to capitalization, privatization and quotation. On the other hand, the bank's performance was negatively related to bank size, concentration index and efficiency.
Naifar (2010)	To determine the factors affecting the performance of banks in Tunisia	Time-series and cross-sectional data from the bank's official website.	The bank's performance was mainly determined by expenses management, ownership structure and bank loans. Other findings show that by reducing state ownership and expanding openness to foreign capital, the bank was able to have product innovation and which helped the bank to have a competitive advantage over other banks.
Ittner & Larcker (1998)	To check the effect of customer satisfaction on the performance of banks.	The data for the study was collected from secondary sources. The data was analysed by using regression analysis.	Customer satisfaction plays a major role in determining the performance of the banks. It is one of the major factors that all the banks must consider if the bank wants to improve in future.

Salehi & Ghorbani, (2011)	To check how the financial and non-financial parameters are used to evaluate the performance of banks in Iran.	The data for the study was collected through a primary survey and ANOVA and t-test was used to analyse the data.	The main indicator for performance measurement of banks in Iran was the financial indicators. It was also found that bank management was aware of BSC as a performance evaluation tool but they neglected the non-financial aspects of banks to measure their performance.
Upadhaya, Munir, & Blount, (2014)	To assess the role of performance management tool in the organisational development.	The data for the study was collected from the mail survey method and the data were analysed using multiple regression model.	The non-financial parameters show a highly significant relationship with the efficiency of the organisation. On the other hand, the organisation gives less focus on customer and employees related performance indicators.
Hansen et al., (2008)	To assess the functioning of BSC as a performance tool in the health care sectors in Afghanistan.	The data for the study was collected from both the primary as-well-as secondary sources.	The use of BSC has improved the functioning of the healthcare sector of Afghanistan. Implementing BSC as a performance measurement tool, the healthcare sectors of Afghanistan was able to identify the priority areas to serve their patients more efficiently.

Arah, Westert, Hurst, & Klazinga, (2006)	To develop a balanced framework for the health care sector.	The data for the study was gathered from primary as-well-as secondary sources.	The findings of the study helped the organisation to modify the existing health care performance index that was in use before.
Chen, Yamauchi, Kato, Nishimura, & Ito, (2006)	To check the feasibility of BSC as a performance measurement tool in hospital of China and Japan.	By developing a comparative measurement tool using BSC.	BSC was effective in for solving existing problems in the organisation and was able to identify opportunities for improvement.
Stewart & Bestor, (2000); Meena & Thakkar, (2014)	This study, the authors aim at designing a performance measurement tool for the hospital industry.	For this purpose, one composite financial parameter and 12 non-financial parameters were designed to determine the performance of the hospital industry	The findings of this study helped the organisation to link the day-to-day activity of the organisation to the overall objectives of the organisation
Zelman, Pink, & Matthias, (2003)	To discusses the importance and use of BSC in the healthcare sector.	BSC method was used to identify and analyse different factors in determining the performance of healthcare sectors.	The use of BSC in the healthcare sector is possible however it needs to be modified.

Mutale, (2014)	To measure the performance of hospitals using BSC in Zambia.	This study was an experimental based study where hospital management was kept under observation for 12 months after implementing BSC as their performance measurement tool.	Training and health information to patients played a major role in assessing the performance of the hospital sectors in Zambia.
Naranjo-Gil, (2009)	To assess the effectiveness of BSC in the healthcare sectors.	For the purpose of this study, the data was collected from 218 nurses using questionnaires.	Young employees in the healthcare sector were more positive towards implementing BSC as the performance measurement tool than the older employees.
Aidemark, (2010)	To compare the healthcare services provided in Sweden before and after the privatisation of healthcare sector using BSC.	A longitudinal study was conducted using secondary data and data collected through observation.	The performance of the healthcare sector in Sweden as the private contractors were able to manage both the volume and efficiency of healthcare given to its people by using BSC.
Reynolds, (2002)	To assess the difficulties of implementing BSC as a performance measurement tool in the healthcare sector.	The data was collected by conducting surveys and analysed using the BSC method.	It was found that formulating KIPs for measuring the performance of the healthcare sector was one of the most difficult tasks. But after implementing BSC as a performance measurement tool the healthcare sectors were able to give better competition to its rival.

Grigoroudis, Orfanoudaki, & Zopounidis, (2012)	To present the importance of the use of BSC in the healthcare sectors.	The data collected for this study were analysed using MCDA approach.	Helped the organisation to evaluate and revise its strategy.
Phillips & Louvieris, (2005)	To assess the importance of BSC as a performance measurement tool for the hotel industry in the United Kingdom.	It was an exploratory study and the data was analysed using the BSC approach.	The study found that there were four main factors that affected the performance of hotel industries in the UK. These factors were properly maintaining the budget to increase the earning of the hotel industry, use customer relationship management to improve service provided by the hotel industry, induce strategic management and collaboration.
(F.-H. Chen et al., 2011)	The impact of non-financial parameters on the financial parameters on the performance of hotel industries.	BSC framework was used to analyse the data.	The performance of any organisation highly depends on the financial performance of that organisation. However, the non-financial parameters also greatly define the financial performance of an organisation.
McPhail, Herington, & Guilding (2008)	To studied the usage of learning and growth perspective of BSC in 14 hotels.	The data was collected through the interview method from the	The hotels that were studied did not implement BSC properly. The only factor that determines

		HR managers of respective hotels.	the learning and growth of hotels studied was employee satisfaction.
Moullin, (2017)	To studies the importance of Public Sector Scorecard in improving the performance of public sector organisation.	The study adopted a case study method for analysis of the data.	PSS helps the public sector organisation immensely. PSS enables the organisation to improve the outcomes of the public sector which creates loyal stockholders.
Greatbanks & Tapp, (2007)	To assess the impact of implementing BSC to measure the performance of public sectors.	A longitudinal case analysis approach was used for the study.	Implementing BSC, the employees of the public sector were able to understand their roles in the organisation more clearly which lead to increase in their performance.
Ak & Öztay\Csi, (2009)	To check the efficiency of BSC in insurance companies.	For this propose secondary data were collected and various KPIs were identified and analysed thereof.	The performance of insurance companies cannot only be determined by the financial performance of the organisation. The company also have to consider non-financial aspects of the organisation to excel in future.
Ege, Ilhan, Gizer, & Zeynep, (2012)	To introduce BSC in the insurance companies of Turkey.	For this purpose, various KPIs were introduced to measure the performance and feasibility of BSC in insurance companies.	The use of BSC is yet to be seen in insurance companies in Turkey. If the insurance companies consider using BSC as their performance measurement tool, it would

		The data was collected using the survey method.	improve the performance of insurance companies in Turkey.
Hanif, Ahmad, & Farooq, (2013)	To understand the implication of BSC in the performance management of insurance companies in Pakistan.	For the study, the data was collected from 23 out of 36 insurance companies functioning in Pakistan.	The study stated that 97% of a total employee considered in this study believed that to measure the performance of insurance companies in Pakistan.
Dincer, Gencer, Orhan, & Sahinbas, (2011)	To measure the performance of the bank of Turkey after the 2001 and 2008 crisis using the CAMEL model.	CAMELs ratio was used to analyse the data.	The findings of the study stated that, after the 2001 crisis, the banks of Turkey has seen many positive reforms. Because of this, the economic crisis of 2008 did not affect the Turkish vastly.
Seçme, Bayrakdaroğlu, & Kahraman, (2009); Wu, Tzeng, & Chen, (2009)	To assess the performance of banks in Turkey using Fuzzy AHP.	Five major banks of Turkey was studied using a fuzzy multi-criteria decision model to analyse their performance.	Banks should not only focus on financial performance. It is necessary for banks to consider the non-financial aspects also.
Akter, Hoque, & Chowdhury, (2016)	The studied the perceptions of bankers towards the financial and	The data for the study was collected using the survey	The findings showed that the banks were focusing more on improving the financial performance of banks in Bangladesh.

	non-financial dimension of the bank.	method and the BSC method was used.	However, to improve the performance of banks it is necessary to consider both the aspects. Therefore, it was recommended to the bankers of Bangladesh to consider both aspects of banks to excel in future.
H. Y. Wu, (2012)	The study aims to link the KPIs in the strategy of banks using BSC.	The Decision Making Trial and Evaluation Laboratory method, a multiple criteria analysis tool was used for this purpose.	The bank's management can utilise their limited resources in the areas that needed more improvement.
Sharma, Raina, & Singh, (2012)	To study the technical efficiency of commercial banks in India from 2005-2009.	Ratio analysis was used to analyse the data.	The findings of the study stated that the banks of India have shown a growth in technical efficiency.
Source: Author's Compilation			

2.5 Research Gap

In the lights of literature reviewed in this chapter, this paper will determine various KPIs to measure the performance of banks in Bhutan using Balanced Scorecard approach. The study of the use of BSC in banks around the world is not a new concept. However, the performance assessment of banks in Bhutan has not been conducted. Therefore, this study will assess the performance of banks in Bhutan for the period of five years (i.e. 2012-2016). This study will also mention the present performance assessment techniques used by banks in Bhutan at present. It will also rank the banks as per their performance measured by BSC.

2.6 Objectives of the Study

1. To evaluate the performance of Banks in Bhutan using selected KPIs under the financial perspective of BSC.
2. To evaluate the efficacy of banks in Bhutan using selected KPIs under Internal Business Process perspective of BSC.
3. To evaluate the bank's efficiency using selected KPIs under the Learning and Growth perspective of BSC.
4. To assess the efficiency of Banks in Bhutan using selected KPIs under customer perspective of BSC.
5. To evaluate the overall performance of Banks in Bhutan using selected KPIs of BSC approach.

2.7 Hypotheses of the study

Based on the literature reviewed and objectives set for the study, the following null hypotheses have been formulated:

H_1: There is no significant difference in the performance of banks in Bhutan based on select KPIs under the financial perspective of BSC.

H_2: There is no significant difference in the performance of banks in Bhutan based on the learning and growth perspectives.

H_3: There is no significant difference in the performance of banks in Bhutan based on the internal process perspectives.

H_4: There is no significant difference in the performance of banks in Bhutan based on customer perspectives.

Chapter 3. Research Methodology

3.1 Nature of the study

This study is empirical in nature. Empirical research can be defined as the study that uses the empirical results which use direct and indirect methods of understanding the area of study. This study uses a quantitative method of describing the end results of the study.

3.2 Sources of data

The data used for this study is from the secondary sources. The data was gathered from the published annual reports of the banks. The data that was not reflected in the reports were collected from the official documents provided by the concern officials of the banks.

3.3 Research design

3.3.1 Overall Research Design

Since BSC uses different Key Performance Indicators under its four different perspectives, the KPIs were designed considering the context of Bhutanese financial system. For each perspective of BSC, different sets of KPIs are used as presented in Figure 3.1

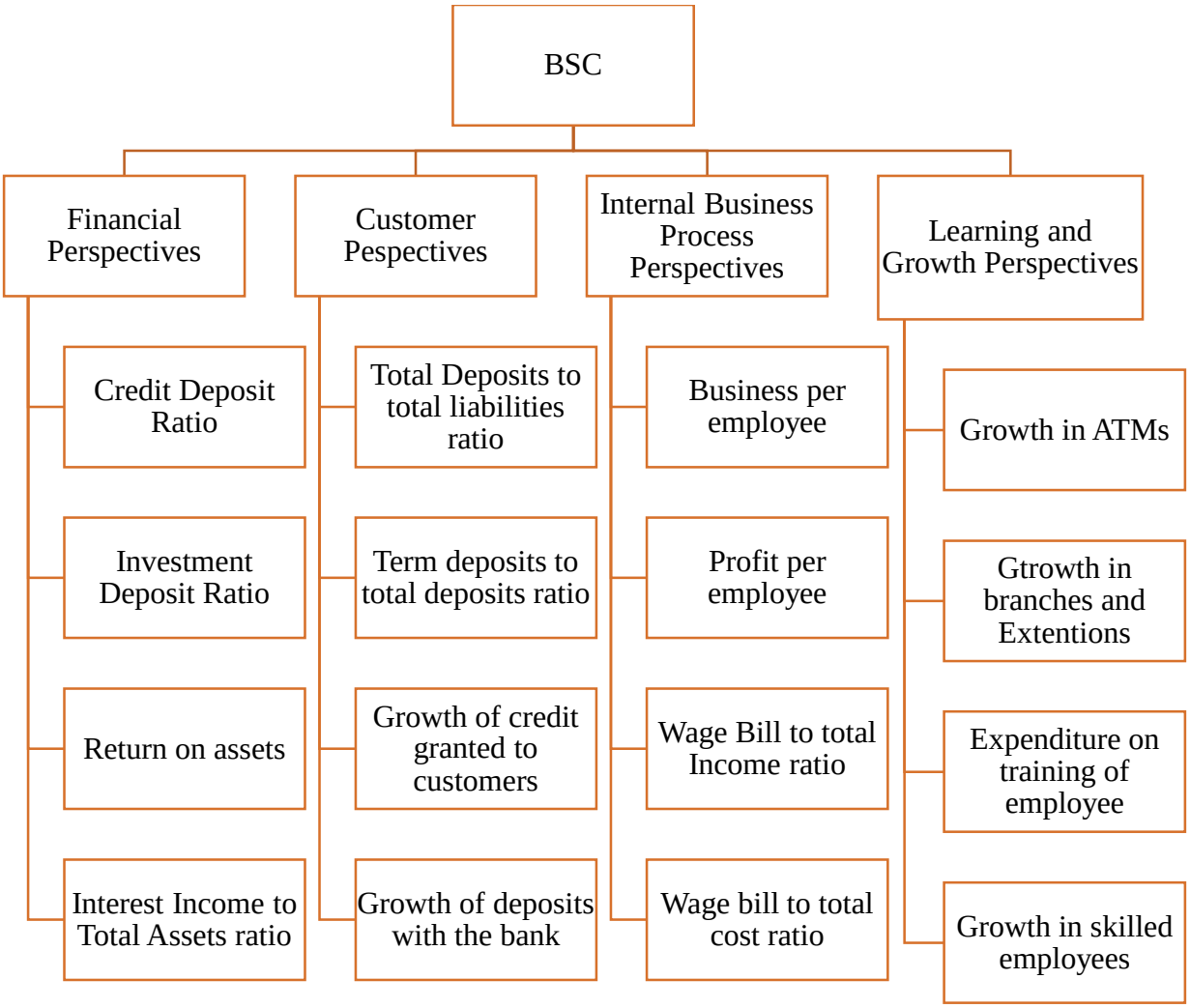

Figure 3.1: Balanced Scorecard for Banks in Bhutan

3.3.2 Scope of the Study

The banking sector of Bhutan is considered as the universe of the study. Since there are only five banks operating presently in Bhutan, all the banks are considered as the sample size for this study.

3.3.3 Source of Data

The data used in this study was collected from secondary sources. Annual reports of all five banks operating in Bhutan was collected (2012-2016). Annual reports of the Royal Monetary Authority (RMA) were also used for data collection.

3.3.4 Time Period of the Study

For the purpose of this study, the total time period considered is for 5 years that is from 2013-2017. Due to the unavailability of the data for the previous year, this time period had to be selected. This is because, the banks who were newly established, a proper record of their operations were not maintained.

3.3.5 Statistical Data Analysis Tools

The software used for this study is MS Excel and SPSS. The testing of the hypotheses was done using ANOVA and post HOC HSD Tukey test. This test was done with the help of SPSS version 20. MS Excel was used for data recording and calculating mean and compounded annual growth rate (CAGR). Graphical representation of data is done where ever it was found necessary.

3.3.6 Operational Design

As mentioned earlier in sources of data, the data was collected from annual reports of the banks. The data of Bank of Bhutan Limited (BOBL), Bhutan National Bank Limited (BNBL) and Druk Punjab National Bank Limited (DPNBL) was available from their official websites. However, the reports of Tashi Bank Limited (TBL) and Bhutan Development Bank Limited (BDBL) was not available on their official website. To get the reports, the key person of the banks was met. The reports of BDBL was provided by the HR manager and for TBL, as the reports were not been published in their official website, the finance manager of the concerned bank provided me with the financial statements of the bank in soft as well as in hard copy.

3.3.7 Operational Definition of KPIs (Variables)

For the purpose of this study, various KPIs have been identified. The operational definition of these KPIs is described in Table 3.1

Table 3.1: Operational Description of KPIs.

Financial Perspectives			
KPIs	**Definition**	**Calculation Approach**	**Performance standards and inference**
Credit Deposit Ratio	CDR is the ratio of Loans and Advances (which is considered as a credit in this study) to total deposit for the bank for a year.	$CDR = \frac{Loansand\ Advances}{Total\ Deposits}$	Higher the Credit deposit ratio means that the bank has disbursed loans from the total deposits that they have received. This ratio is said to be ideal when it is between 80-90%
Investment Deposit Ratio	The IDR is the ratio total investment of banks to the total deposits of the bank.	$ID = \frac{Total\ Investment}{Total\ Deposits}$	If the bank has a higher investment deposit ratio, it means that the banks are not taking risk of losing their money because of incapability of customers to pay their debt (i.e. in case of CDR).
Return on Asset	Return on Assets (ROA) is the amount of profit earned by banks from investments activities or credit granted to customers.	$ROA = \frac{PAT}{Total\ Assets}$	Higher ROA shows that the banks are able to recover its loan on time and this, in turn, leads to a reduction of nonperforming assets.m Generally, return on assets more than 5% is considered good for banks.

Interest Income to Total Asset Ratio	IITA is the ratio of total interest earned by banks by doing investing activities to the total assets of the bank for a particular period.	$\text{IITA} = \frac{Interest\ Income}{Total\ Assets}$	It is considered that the higher the interest income to total asset ratio, the better is the utilisation of assets by banks.
Customer Perspectives			
Total Deposits to total liabilities Ratio	It is the proportion of total deposits of the customers to the total liabilities of the bank	$TDTA = \frac{Total\ Deposits}{Total\ Libalities}$	An increase in this ratio depicts an increase in the total deposits of the firm. It shows that the bank is able to attract more customers to the bank.
Term Deposits to Total Deposits Ratio	It is the ratio of total term deposits of the bank to the total amount of deposits of customers in the bank for a particular period.	$TrDTA = \frac{TermDeposits}{TotalDeposits}$	An increase in this ratio shows an increase in total term deposits received by the bank for a particular period.
Growth in Credit granted to customers	It is the percentage change in total loans and advances (credit) for the period of study.	$GC = \frac{CYC - PYC}{PYC}$ [4]	Higher change in credit granted shows reasonable interest rates and a proper customer care service of a bank.

[4] CYC= Current Year's Credit & PYC= Previous Year's Credit

Growth in Deposits	It is the percentage change in the total deposit received by the bank for the period of study.	$GD = \frac{CYD - PYD}{PYD}$ [5]	Higher growth in deposit shows reasonable interest rates and a proper customer care service of a bank.
Internal business process			
Business per Employee	BPE is the indicator of the productivity of employees in the bank.	Figures given in annual reports are used in this study.	Higher Business per employee indicates better performance of the employee
Profit per Employee (Nu.)	It is the ratio of net profit of the bank divided by the total number of employees in the bank for a period.	$PPE = \frac{PAT}{Total\ No.of\ Employees}$	Higher Profit Per Employee indicates the better performance of employees for a bank.
Wage Bill to Total Income Ratio	It is the ratio of total salaries disbursed to the employee to the net profit of the bank for a particular year.	$WBTI = \frac{Salaries}{PAT}$	This ratio presents the total cost employed by a bank to generate profit. If this ratio decreases over time but the bank's revenue increases for the same period, it shows that the employee is playing a vital role in the banking operation.
Wage Bills to Total Cost Ratio	It is the ratio of total salaries to the total expenses of the bank for a year. Total expenses included interest expenses and operating expenses.	$WBTC = \frac{Salaries}{Total\ Expenses}$	Increase in this ratio shows an increase in the bank's business (Expansion)

[5] CYD= Current Year's Deposit & PYD= Previous Year's Deposit

Learning and Growth Perspectives			
Growth in ATMs	It is the increase in the total number of ATMs of a bank in the country for the period of study	The number of ATMs is directly collected from the annual reports of respective banks.	Higher the growth in ATMs more will be the reach of banks in the country.
Growth in branches and Extensions	It is the increase in the number of branches and extensions of the banks over the period of study.	The number of branches and extensions are directly collected from the annual reports of respective banks.	Higher the growth in branches and extension more will be the reach of banks in the country.
Expenditure on the training of employee	It is the amount that bank invest in training of new and as well as existing employees of the bank.	The number of expenditure on training is directly collected from the annual reports of respective banks.	The higher amount of expenditure on the training of employees shows that the bank has invested more of its capital in the skill enhancement of the employees
Growth in Skilled employees	It is the change in the number of trained employees in a bank for the period of study. Trained employees are those who have undergone any skill development program in a year.	The number of growth in skilled employees is directly collected from the annual reports of respective banks.	Increase in this number means the operation of banks and it's earning mainly depends upon the skills of bank's employees.
Source: Author's Compilation			

Chapter 4. Data analysis

After defining all the Key Performance Indicators (KPIs) used for this study, the analysis of these KPIs in banks in Bhutan is needed. Therefore, this chapter will focus on interpreting the results of the results found by doing analysis using the KPIs defined in Previous Chapters.

For the purpose of data analysis, One-way analysis of variance was conducted and to check the mean difference in the performance of banks, Post-HOC Tukey test was conducted. The analysis in this chapter is narrative and partly explanatory. Tables and graphs have been used to interpret the results.

To fulfil the objectives described in Chapter 2, the performance of the banks has been tested individually under four perspectives of Balanced Scorecard (BSC). Under these four perspectives, different KPIs have been identified and used. However, for some perspectives, few banks have been ignored due to the unavailability of data.

The KPIs used in this study have been modified for the ease in the collection of data from the banks presently operating in Bhutan. The KPIs that are used for this study are given in Table 3.1. Most of these KPIs are adopted form the study on Indian banks i.e. (Dave & Dave, 2012; Balkovskaya & Filneva, 2016).

In Bhutan, only Bank of Bhutan Limited (BOBL) used a modified BSC for measurement of their performance. BOBL however, did not disclose the information related to the KPIs it uses, to the public. Therefore, to maintain uniformity in checking the performance of all the banks independently, the KPIs given in Table 3.1 are used.

The testing of the hypothesis of this study is done using One-way ANOVA as mentioned earlier. In this, the mean performance of one bank measured using respective KPIs under each perspective of BSC is compared with the mean performance of all the other banks under the same perspective. All the tests have been conducted at 5% level of significance or 95% confidence level. The analysis also presents Post-HOC Tukey test results to check the highest significant mean difference in the performance of all the banks individually. This test was also conducted at 5% level of significance or 95% confidence level.

As a decision rule, if the p-value calculated in ANOVA table is less than the level of significance (i.e. 5% or 0.05), we reject the null hypothesis and state that there is a significant difference in the performance of the banks measured using specific KPI under that particular perspective. This means the performance of banks in that particular KPI is different from the performance of other banks.

Since ANOVA only gives the significant mean difference in the average of variables (here KPIs) of all banks as a whole, we have to consider Post-HOC Tukey test which shows the pair of groups (banks in this case) with a significant mean difference. If the mean difference between the pair is significant at 5% level of significance, the performance is said to be significantly different from each other in that pair.

4.1 Financial Perspective

Financial perspective answers the question like, *to succeed financially, how should we appear to our shareholders*? (Malgwi & Dahiru, 2014). Financial perspective shows the financial position of an organisation. Performance of banks in Bhutan is evaluated under the financial perspective of the BSC approach using the following four KPIs:

1. Credit Deposit Ratio (CDR)
2. Investment Deposit Ratio (IDR)
3. Return on Asset (ROA)
4. Interest Income to Total Assets Ratio (IITA)

Growth in these ratios shows that the bank has a sound financial performance due to the proper utilization of funds.

4.1.1 Credit Deposit Ratio

The credit deposit ratio is the proportion of loan assets created by banks from the deposits received. The higher the ratio, the higher are the loan assets created from deposits. Credit deposit ratio is a risky investment by a bank because the risk of not recovering money from a debtor is always high. A bank that is maintaining its CDR at 80%-90%, is considered ideal. 100% of CDR means the bank is lending every deposit that it has received to the public. It is not advisable to have 100% of CDR because the banks may face a shortage of capital to function properly.

Figure 4.1 highlights the total deposits of banks in Bhutan. Among all the banks in Bhutan, BDBL has the highest compounded annual growth rate of 42.11% in total deposits over a period of 2012-2016. The total deposit of BDBL increased from Nu. 4420.44 Million in 2012 to Nu. 18029.40 Million in 2016. During the period of study, BDBL has recorded a continuous increase in its total deposit.

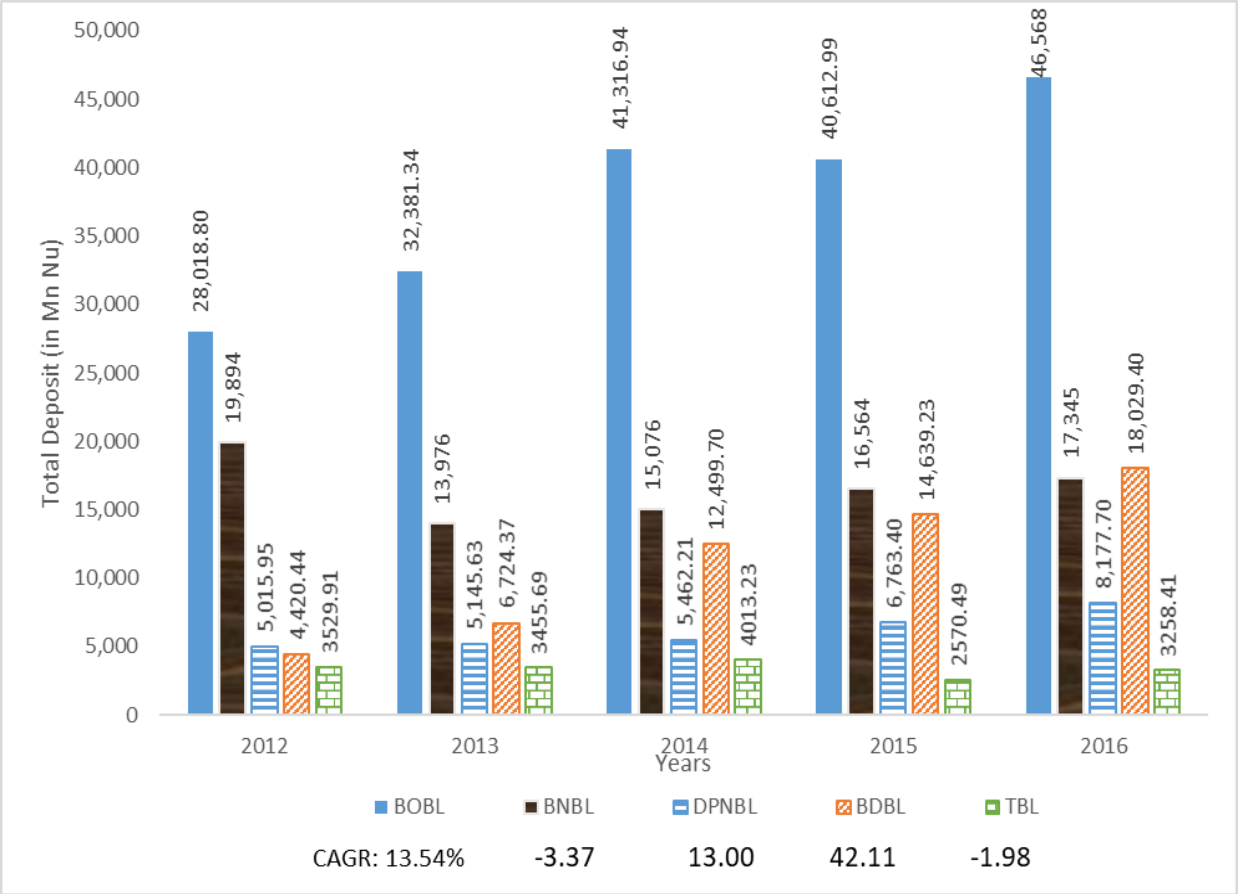

Figure 4.1: Total Deposits of Banks in Bhutan

BOBL has the second-highest growth in total deposits for the period of study. BOBL has recorded the growth in CAGR by 13.54% and its total amount increased from Nu. 28018.8 Million in 2012 to Nu. 46568 Million in 2016. However, BOBL has recorded negative growth in 2015. In the year 2015, the total deposit amount of BOBL decreased to Nu. 40,612.99 Million from 41,316.94 Million in 2014. The decrease was mainly because of the decreases in the current deposit of BOBL. Although there was an increase in time deposit for BOBL in 2015, the demand deposit (current deposit) of the bank decreased in 2015. This led to a decrease in the total deposit of BOBL for the year 2015.

DPNBL also recorded an increasing growth trend in the deposits for the period of study. The CAGR of DPNBL was recorded to 13% and its actual deposits increased from Nu. 5,015.95 Million in 2012 to Nu. 8,177.70 Million in 2016. DPNBL also recorded a continuous increase in its total deposit for the period of study.

However, BNBL and TBL had negative growth in their deposits. The deposits of BNBL decreased from Nu. 32666.52 Million in 2012 to 25418.36 Million in 2016. The total deposits amount for BNBL has shown a decrease in the year 2012 and 2013. The decrease in total deposits was mainly because of the withdrawal that was made by BNBL's corporate clients for the year 2012-2013. The deposits of TBL decreased from Nu. 3529.91 Million in 2012 to Nu. 3258.41 Million in 2016 with the CAGR of -1.98%. The highest amount of total deposit for TBL was recorded in the year 2014 at Nu. 4013.23 million.

Figure 4.2 highlights the credit (loans and advances) sanctioned by banks in Bhutan. It can be seen that the highest growth in credit based on CAGR was for BDBL with 27.12%. The amount of loans and advances for BDBL increased from Nu. 5893.69 Million in 2012 to Nu. 15389.77 Million in 2016. BDBL has recorded continuous growth in credit amount disbursed to its customers. This was mainly because, BDBL functions as a development bank in Bhutan. BDBL's customers are farmers and people who have innovative business plans. BDBL provides small and microfinance to support new business ideas.

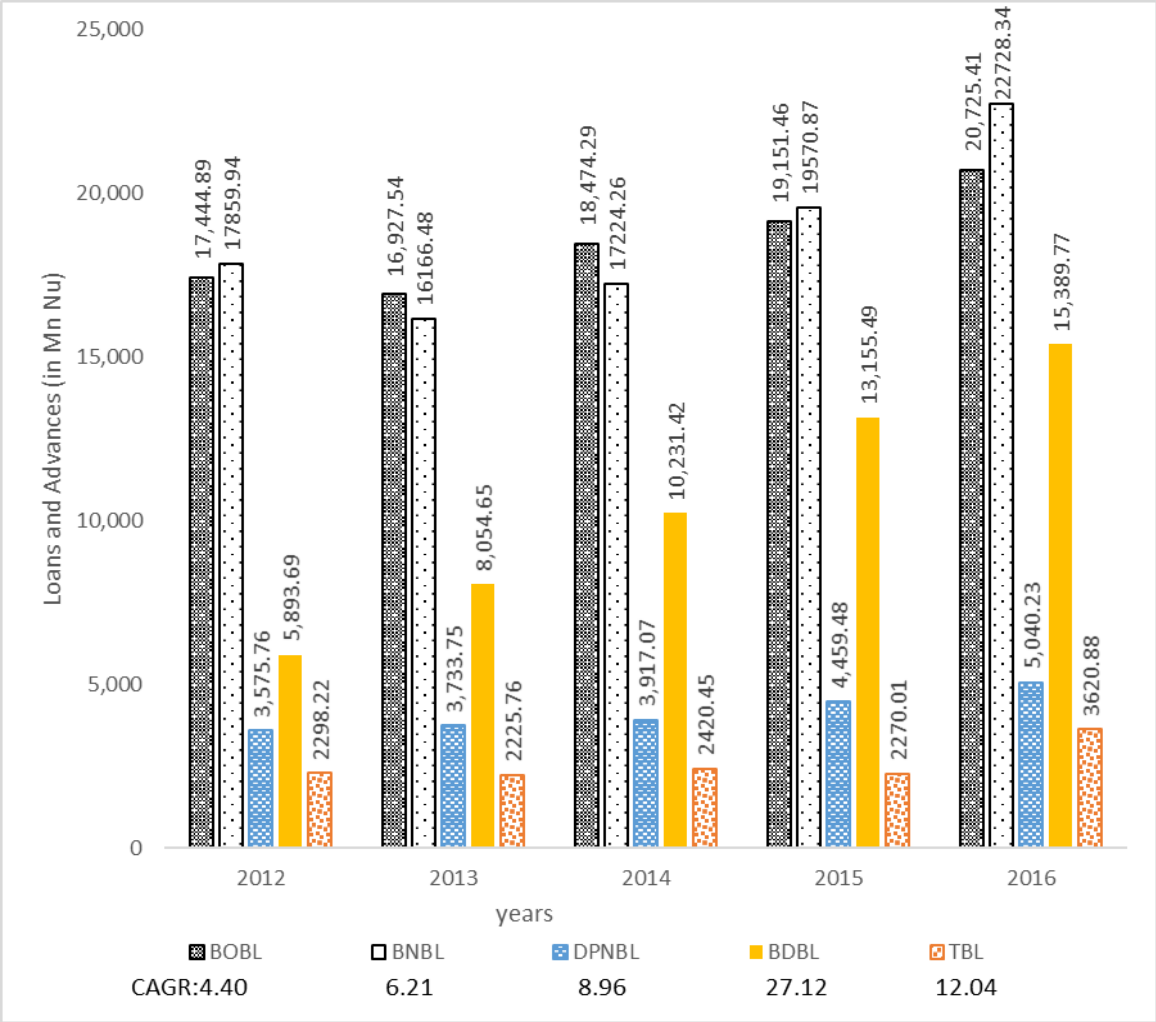

Figure 4.2: Loans and Advances of Banks in Bhutan

TBL which is the newest functioning bank in Bhutan has the second-highest CAGR (12.04%) in loans and advances in the country. TBL's loans and advances amount increased from Nu. 2298.22 Million in 2012 to Nu. 3620.88 Million in 2016. However, TBL's total credit amount decreased in the year 2013 and 2015. This decrease was mainly because of less demand from the public.

DPNBL also had a continuously increasing trend in credit during the period of study. The CAGR in loans and advances of DPNBL was recorded to be 8.96%. BNBL, on the other hand, has the second-lowest CAGR of 6.12% in loans and advances. The total credit of

BNBL declined in the year 2014. The bank that had the lowest growth in loans and advances was BOBL with a CAGR of 4.4%.

The result for descriptive statistics for Credit Deposit Ratio (CDR) is shown in Table 4.1. It shows that BNBL has the highest mean CDR among all the banks. A CDR is said to be ideal when it is 80%-90% (Trefis, 2017). A CDR shows how much a bank relies on the deposit that it has received for lending money as a credit to its customers. A high CDR indicates that a bank is relying too much on its deposits for creating the credit to the customers.

Table 4.1: CDR of Banks in Bhutan

Years/Measures	**BOBL**	**BNBL**	**DPNBL**	**BDBL**	**TBL**
2012	73.63%	89.78%	71.29%	133.33%	65.11%
2013	66.28%	98.02%	72.56%	119.78%	64.41%
2014	55.39%	114.25%	71.71%	81.85%	60.31%
2015	59.66%	118.15%	65.94%	89.86%	88.31%
2016	56.79%	131.04%	61.63%	85.36%	111.12%
Mean	**62.35%**	**110.25%**	**68.63%**	**102.04%**	**77.85%**
SD	**0.068**	**0.147**	**0.042**	**0.206**	**0.193**
CV	**10.86%**	**13.33%**	**6.12%**	**20.22%**	**24.82%**
Source: Author's Calculation					

The statistics in Table 4.1 shows that none of the banks has an ideal CDR (i.e. 80%-90%). For the period of study, BOBL and DPNBL have maintained a minimum CDR. BOBL has disbursed the highest of 73.63% (in 2012) of its total deposits as a loan to its customers. On the other hand, DPNBL has disbursed the highest of 72.56% (in 2013) of its total deposits as a loan to its customers.

TBL has maintained a minimum CDR from 2012 to 2014. In the year 2015, TBL could manage to maintain CDR of 88.31%. However, in the year 2016, TBL's CDR increased to

111.12%. This is because of the fact that TBL used other sources to provide credit to the customers other than the deposits for the year 2016. TBL also have highest CV (24.28%) value among all the banks in Bhutan. It shows that the yearly CDR of TBL is more dispersed from its mean of 77.85%.

The CDR of BDBL for the year 2012 and 2013 is more than 100% however; BDBL was able to maintain an ideal CDR from the year 2014 onwards. BDBL has the highest SD value (0.206) which shows that there is inconsistency in CDR of BDBL. The CV value of BDBL (20.22%) also depicts that there is a greater variation in yearly CDR of BDBL from the mean CDR of 102.04%

The CDR for BNBL has exceeded 100% from the year 2014, which shows that the bank has given loans to its customers more than the deposits that they have received from its account holders. This is not good for the bank because BNBL will not have sufficient cash at their disposal to meet any unforeseen events in the near future.

As per the CV ratio, DPNBL was the most consistent bank in comparison to other banks, although it could not maintain the minimum CDR of 80-90%. DPNBL also has the lowest CV ratio of 6.12%. It means that the yearly figures of DPNBL under KPI CDR is less dispersed from the mean of 68.63%. It also means that the variability in CDR of DPNBL is less as compared to other banks in Bhutan.

4.1.2 Testing of Hypothesis for CDR of Banks in Bhutan

The following null hypothesis related to credit deposit ratio as KPI under the financial perspective of BSC has been tested using One-way ANOVA:

H_{01}: There is no significant difference in the average Credit Deposit Ratio (CDR) of banks in Bhutan.

The results of the One-way analysis of variance for the average Credit Deposit Ratio are presented in Table 4.2. It shows that F-statistics (9.36) is statistically significant at 5% level of significance (p-value 0.000). Therefore, we may reject the null hypothesis and conclude that there is a significant difference in the average Credit Deposit Ratio (CDR) of five banks in Bhutan.

Table 4.2: ANOVA table for CDR of Banks in Bhutan

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9752.99	4	2438.25	9.36	0.000
Within Groups	5209.20	20	260.46		
Total	14962.18	24			
Source: Author's Calculation					

The highest significant difference in average CDR of banks was found using the posthoc Tukey HSD test (Table 4.3) Its shows that the average CDR of BNBL is statistically significantly different from the average CDR of BOBL, DPNB and TBL at 1% level of significance. On the other hand, the average CDR of BOBL and DPNBL is also statistically significantly different from the average CDR of BDBL at 5% level of significance.

Table 4.3: Post Hoc Tukey HSD for CDR

(I) Name of banks	(J) Name of banks	Mean Difference (I-J)
BOBL	BNBL	-51.42***
	BDBL	-39.68**
BNBL	BOBL	51.42***
	DPNBL	45.15***
	TBL	35.92***
DPNBL	BOBL	-45.15***
	BDBL	-33.41**
TBL	BOBL	-35.92***
BDBL	BOBL	39.68**
	DPNBL	33.41**
*** The mean difference is significant at the 0.01 level. ** The mean difference is significant at the 0.05 level. This table presents only those banks whose CDR was significantly different *Source: Author's Calculation*		

4.1.3 Investment Deposit Ratio

Investment to total deposit ratio is the ratio of the total investment divided by the total deposits of the bank for a particular period. Banks mainly invest their money in government bonds and securities which are considered to be safe.

Figure 4.3 presents the total investments made by the banks in Bhutan during the period of study i.e. 2012-2016. From the figure, it can be seen that the bank that had the highest growth in investment was BDBL with a compounded annual growth rate of 175.48%. The highest growth in the investment of BDBL was recorded in 2015 & 2016. BDBL's volume of investment increased from Nu.7.38 Million in 2012 to Nu. 425.06 Million in 2016.

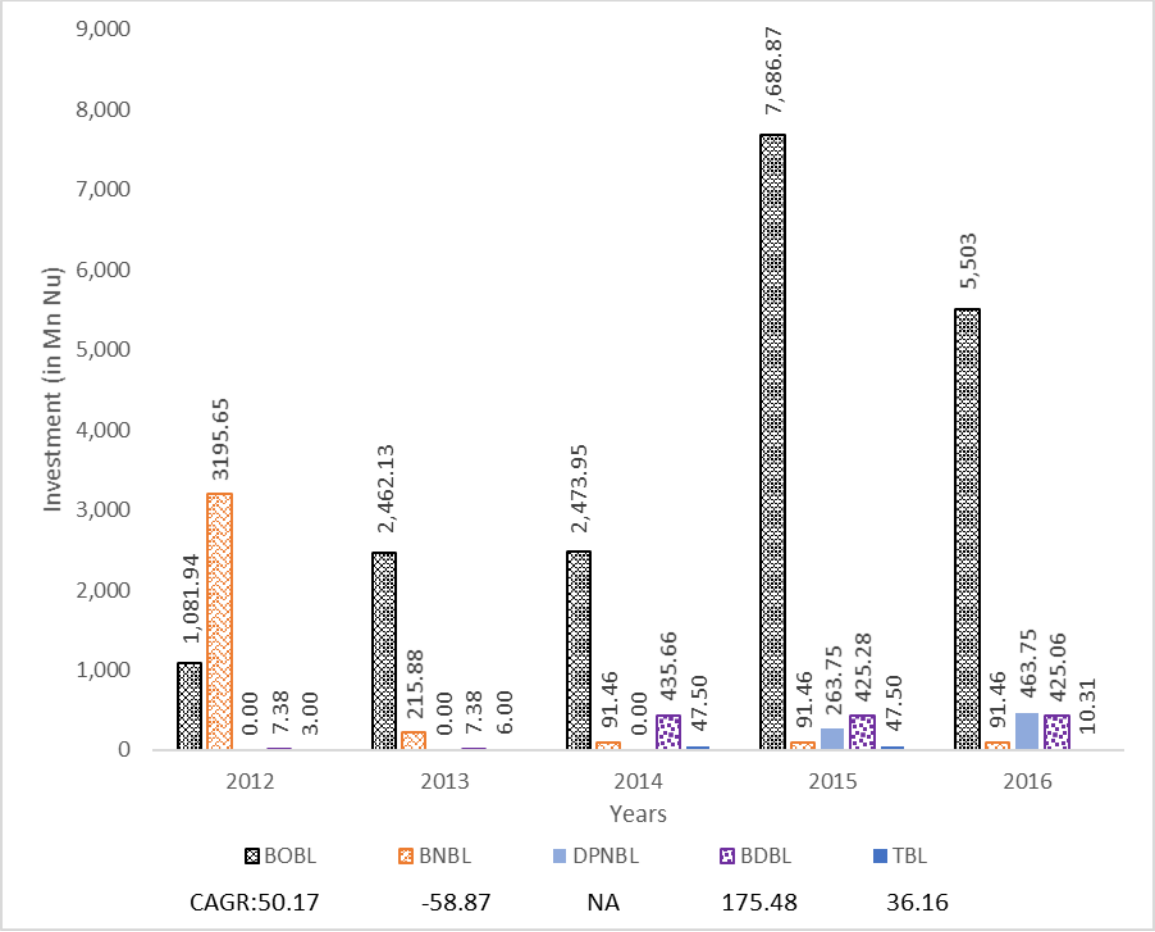

Figure 4.3: Investment of banks in Bhutan

BOBL is the bank with the highest investments from 2013 to 2016 but it has the second-highest growth in its investment for the period of study. The highest growth in BOBL's investment was seen in the year 2015 when the total investment of BOBL increased from Nu. 2,473.95 Million in 2014 to Nu. 7,686.87 Million in 2015. This was mainly because BOBL increased its investment portfolio in the government treasury. However, the investment of BOBL decreased in the year 2016. This was mainly due to the maturity in the government terusary bill of Nu. 2.18 billion which the bank had invested earlier.

The investment for TBL, however, was only recorded for 2015 and 2016. In both years TBL has recorded an increasing trend. However, the growth of DPNBL could not be calculated due to the unavailability of data.

Lastly, BNBL had negative growth of -58.87%. The volume of investment decreased from Nu. 3,195.65 million in 2012 to Nu. 91.46 Million in 2014.

A detailed discussion on the deposits of banks in Bhutan is made in section 4.1.1

For calculating the Investment Deposit ratio, DPNBL has to be excluded due to the inadequacy of the data. Thus, the analysis conducted for Investment Deposit Ratio considers four banks operating in Bhutan. Among these four banks, BOBL had the highest mean value of IDR as shown in Table 4.4. An increase in the investment portfolio for BOBL from Nu.254 million in 2013-14 to Nu. 778 million during the financial year 2014-2015 resulted in a significant increase in the mean value of BOBL. The reason for this increase is that the investment portfolio for BOBL increased from Nu.254 Million in 2014 to Nu. 778 Million in 2015. On the other hand, the investment portfolio of BNBL reduced

from Nu. 3195.65 million in 2012 to Nu. 91.46 million in 2016. The lowest mean value of IDR was observed in TBL.

Table 4.4: Investment Deposit Ratio of banks in Bhutan

Year/Measures	BOBL	BNBL	BDBL	TBL
2012	4.57%	16.06%	0.17%	0.08%
2013	9.64%	1.16%	0.11%	0.17%
2014	7.42%	0.61%	3.49%	1.18%
2015	23.94%	0.55%	2.91%	1.85%
2016	15.08%	0.53%	2.36%	0.32%
Mean	**12.13%**	**3.78%**	**1.80%**	**0.72%**
SD	**0.076**	**0.069**	**0.016**	**0.008**
CV	**63.04%**	**181.61%**	**87.14%**	**106.30%**
Source: Author's Calculation				

TBL has the lowest SD (0.008) as compared to BOBL, BNBL and BDBL for the period of study. It shows the TBL has a consistent IDR for the period of study. TBL is followed by BDBL with IDR 0.016 than BNBL with 0.069 and lastly BOBL with 0.076.

4.1.4 Testing of Hypothesis for IDR of Banks in Bhutan

The following null hypothesis related to investment deposit ratio as KPI under the financial perspective of BSC has been tested using One-way ANOVA:

H_{02}: There is no significant difference in the average Investment Deposit Ratio (IDR) of banks in Bhutan.

The result of one-way ANOVA highlighted in Table 4.5 shows that the F-statistics of IDR is statistically significant at 5% level of significance. Therefore, we may reject the null hypothesis and state that there is a significant difference in the performance of banks in Bhutan measured by Investment Deposit Ratio there is a significant difference in the average Investment Deposit Ratio (CDR) of banks in Bhutan.

Table 4.5: ANOVA of IDR for banks in Bhutan 2012-2016

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	400.53	4	100.13	3.92	0.02
Within Groups	434.39	17	25.55		
Total	834.92	21			
Source: Author's Calculation					

A post hoc test was conducted to check the difference in the average IDR of banks. The result of post HOC test is presented in Table 4.6. At 5% level of significance, it was found that the average IDR of BOBL was significantly different from the mean average IDR of TBL and BDBL

Table 4.6: Post hoc Tukey-HSD for IDR

(I) Name of Banks	(J) Name of Banks	Mean Difference (I-J)
BOBL	TBL	11.41**
	BDBL	10.32**
TBL	BOBL	-11.41**
BDBL	BOBL	-10.32**
** The mean difference is significant at the 0.05 level. This table presents only those pairs of banks whose IDR was significantly different *Source: Author's Calculation*		

4.1.5 Return on Asset

Return on assets is obtained by taking the ratio of net profits to total assets of the bank. This indicates the relative profitability of banks.

The growth in profit of all the banks in Bhutan is presented in Figure 4.4. It can be seen that the net profit of DPNBL has shown the highest growth of 19.69%. The profit of DPNBL increased from Nu. 85.98 Million in 2012 to Nu. 176.43 Million in 2016. DPNBL was able to maintain stable growth in profit for the period of study. DPNBL was able to earn more profit due to careful management on the cost of the deposit.

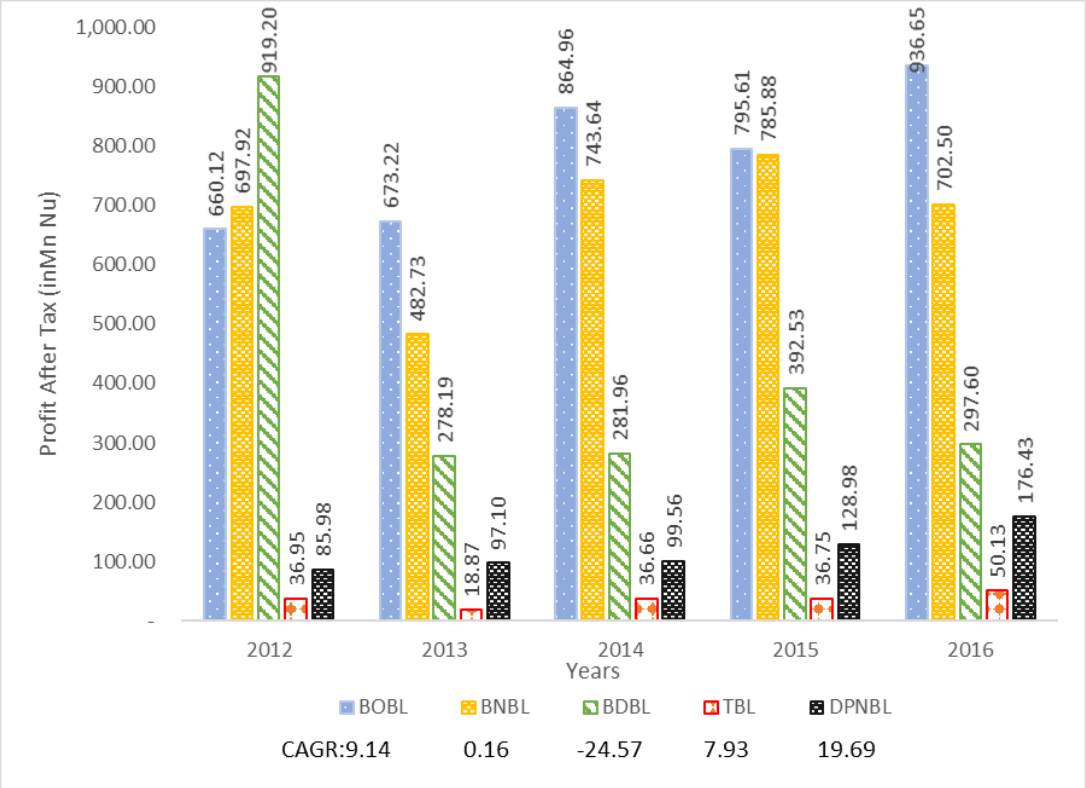

Figure 4.4: Profit after Tax for Banks in Bhutan

BOBL had the second-highest growth and their profit increased from Nu. 660.12 Million in 2012 to Nu. 936.65 Million in 2016. However, BOBL had a decline in net profits in the year 2015. The decline in profit was attributed by an increase in operating expenses of BOBL. The net profit of TBL, however, declined in the year 2013 mainly because of an increase in interest paid on time deposit liabilities and an increase in non-performing loan (NPL).

Although BNBL had the second-highest amount of net profit, it had a marginal growth of 0.16%. BNBL also recorded a decline in profit in 2013 and 2016. This was mainly due to an increase in interest expenses, which was due to the amount paid to corporate clients as interest.

The profit of BDBL decreased from Nu. 919.2 Million in 2012 to Nu. 297.5 Million in 2016. Among all the banks in Bhutan, BDBL showed the highest decline in net profit in the year 2012-2013.

The amount of total assets of all the banks are highlighted in Figure 4.5. During the period between 2012 and 2016, BDBL recorded the highest growth rate of 30.99%, an increase in the total asset from Nu. 7,694.18 Million in 2012 to Nu. 22,649.24 Million in 2016. BDBL recorded continuous growth in the total assets during the period between 2012-2016.

The second-highest growth rate was recorded by DPNBL, which recorded a growth of around 13.91% in total assets, and recorded continuous growth in its total assets from the period between 2012-2016.

Though having the highest amount of total asset among all the banks in Bhutan, BOBL recorded the third-highest growth trend with the CAGR of 10.91% of total assets. However, the number of total assets decreased from Nu. 39,793.61 Million in 2014 to Nu. 39,138.32 Million in 2015. This was mainly because of the reduction in cash balances with RMA from Nu. 15,694.6 Million in 2014 to Nu. 7,884.8 Million in 2015. An evidence of it can be seen in Table 4.7.

TBL also recorded a constant growth trend for the period of study. TBL recorded the growth rate of 8.84%.

Table 4.7: Cash balances of BOBL with RMA (in Nu. Million)

Particulars	**As at 31.12.2015**	**As at 31.12.2014**
Cash Reserve with RMA	3,397.93	1,728.77
Balances with RMA	3,803.33	13,353.26
Total	7,884.81	15,694.66
Source: Annual report of BOBL (2015)		

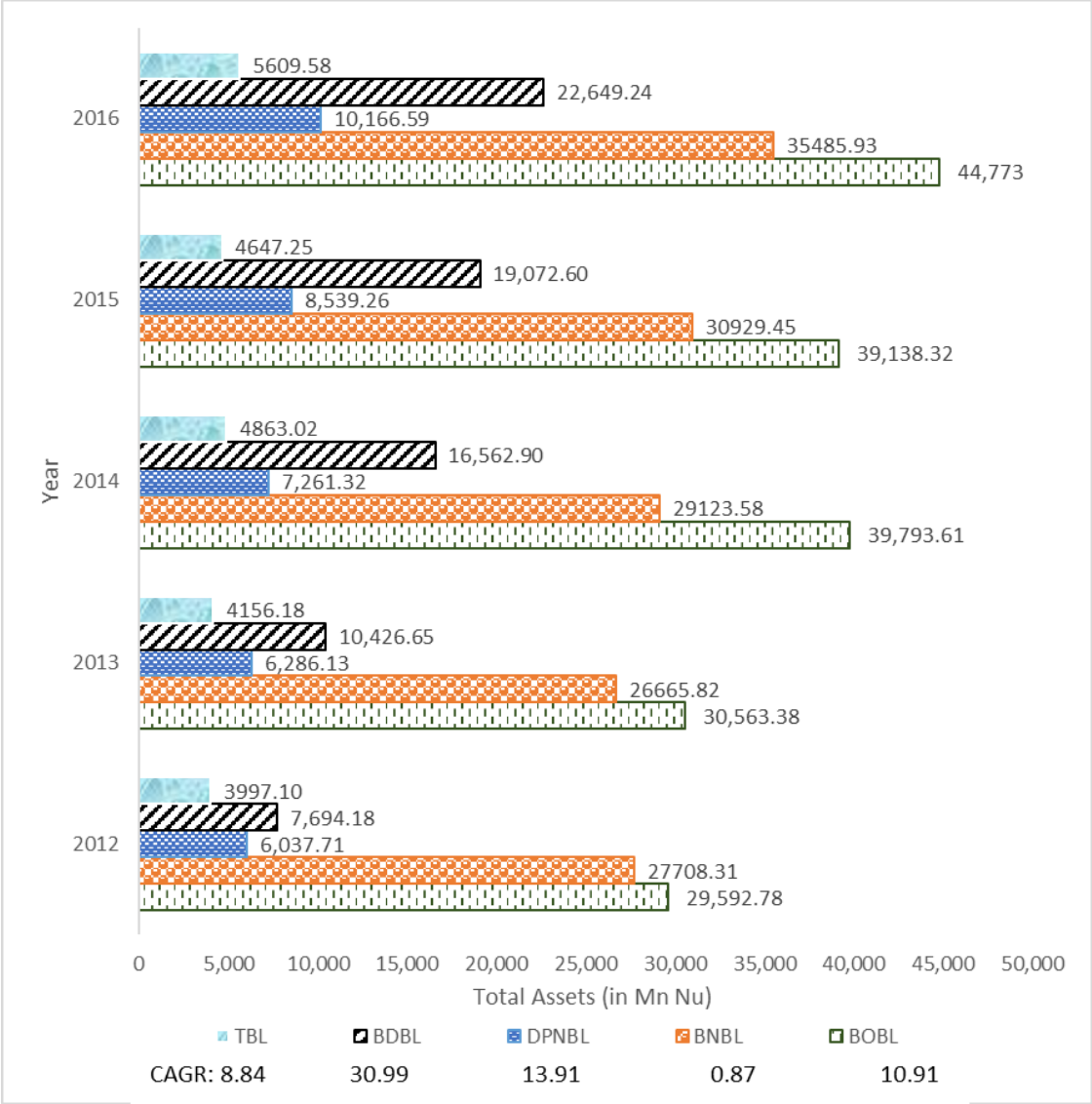

Figure 4.5: Total Assets of Banks in Bhutan 2012-2016

Despite being one of the oldest banks in Bhutan, BNBL recorded the lowest growth in the asset with a meagre increase of 0.87

However, on average, all the banks have recorded an increase in their total assets from the period between 2012 and 2016.

The mean ROA of BDBL (3.94%) shown in Table 4.8 is the highest among all banks operating in Bhutan. The mean ROA of BNBL (2.37%) and BOBL (2.15%) followed it. The lowest mean ROA was recorded by TBL (0.76%). Though TBL has the highest mean

ROA value, the bank that performed better under the mean ROA was BOBL. However, no banks in Bhutan have proper ROA. Generally, ROA is regarded well when it is more than 5% but the banks in Bhutan have not achieved ideal ROA.

Table 4.8: ROA for banks in Bhutan

Years/Measures	BOBL	BNBL	DPNBL	BDBL	TBL
2012	2.23%	2.52%	1.42%	11.95%	0.92%
2013	2.20%	1.81%	1.54%	2.67%	0.45%
2014	2.17%	2.55%	1.37%	1.70%	0.75%
2015	2.03%	2.54%	1.51%	2.06%	0.79%
2016	2.09%	1.98%	1.74%	1.31%	0.89%
Mean	**2.15%**	**2.28%**	**1.52%**	**3.94%**	**0.76%**
SD	**0.001**	**0.003**	**0.001**	**0.040**	**0.002**
CV	**3.42%**	**14.01%**	**8.26%**	**102.32%**	**21.88%**
Source: Author's Calculation					

The Standard deviation of BOBL (0.001) and DPNBL (0.001) is lowest among all the banks in Bhutan under the KPI ROA. Lower Standard deviation of BOBL and DPNBL indicates that these banks have a consistent ROA during the period between 2012-2016. However, the variability of data for BOBL (CV value=3.42%) is the lowest among all the banks in Bhutan for the period of study.

4.1.6 Testing of Hypothesis for ROA of Banks in Bhutan

The following null hypothesis related to return on assets ratio as KPI under the financial perspective of BSC has been tested using One-way ANOVA:

H_{03}: There is no significant difference in the average Return on Asset (ROA) of banks in Bhutan.

The results of One-way analysis of variance for Return on Asset highlighted in Table 4.9 show that F-statistics is not statistically (p-value 0.192) significant at 5% level of

significance. Therefore, we fail to reject the null hypothesis and state that there is no significant difference in the average Return on Assets (ROA) of banks in Bhutan.

Table 4.9: ANOVA of ROA for Banks in Bhutan

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	27.73	4	6.93	1.69	0.192
Within Groups	82.00	20	4.1		
Total	109.73	24			
Source: Author's Calculation					

4.1.7 Interest Income to Total Asset Ratio

Interest income is the main source of profit for any banks. This is the amount earned by banks by doing investment activities and the interest amount received on loans and advances given to customers. When this ratio is higher, it can be interpreted that the bank is utilizing its assets in the proper direction and it is a good sign for any bank.

As highlighted in Figure 4.6, the highest growth in interest earned was for DPNBL at CAGR of 13.35%. Interest earned by DPNBL increased from Nu. 389.18 Million in 2012 to Nu. 642.55 million in 2016. BOBL with the CAGR of 10.89% had the second-highest growth in interest income among all the banks in Bhutan. BOBL had marginal growth in interest income in the year 2012-2013. However, BOBL had significant growth in interest income from the year 2014 to 2016. BNBL reported to have the highest amount of interest income earned, but it could show a CAGR of only 8.5% for the period of study. BNBL also recorded constant growth in interest income earned from its banking operation.

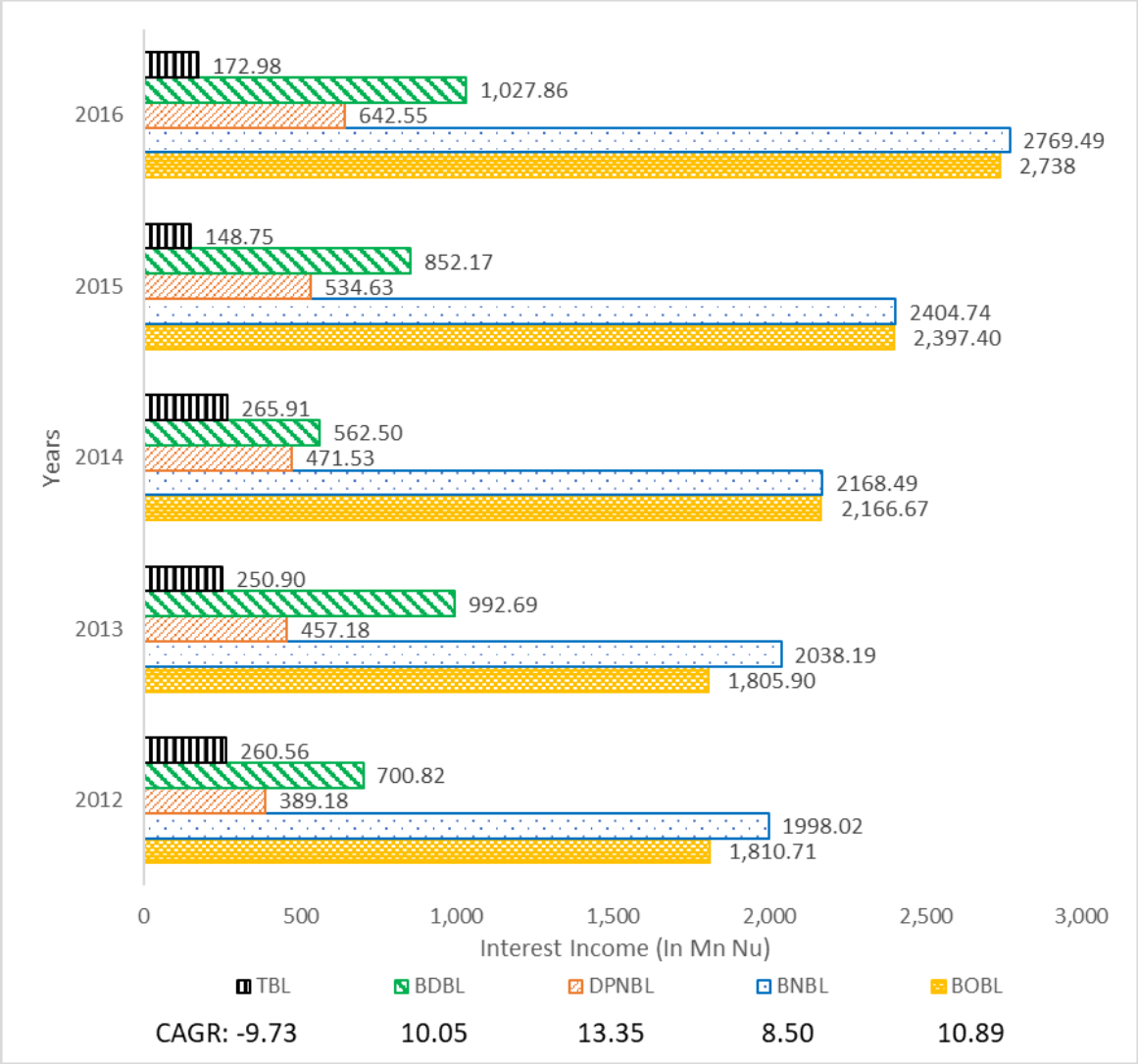

Figure 4.6: Interest Income of Banks in Bhutan 2012-2016

The bank that had a negative growth rate in interest income was TBL at -9.73%. TBL's interest income decreased from Nu. 260.56 Million in 2012 to Nu 172.98 Million in 2016. TBL recorded its lowest interest income earned during the year 2015. In 2016, the interest income increased from Nu. 148.75 Million in 2015 to Nu. 172.98 Million. The growth was attributed because of the revision of interest rates on loans and advances. The highest interest earned by the bank was from short-term investments that contributed 49.88% of total interest income for TBL.

A detailed discussion on total assets has been made a section in 4.1.5. Same figures are used to calculate the IITA ratio under this section as well.

Table 4.10 presents the descriptive statistics of Interest Income to Total Assets Ratio. It can be seen that BNBL has the highest average IITA ratio (7.58%) among all the banks for the period of study. BNBL also have the lowest Standard deviation (0.002) and CV value (3.28%) for the period of study. It shows that BNBL has a consistent IITA ratio for the period of study.

BDBL, on the other hand, has recorded the highest IITA ratio for 2012 and 2013. However, the ratio decreased to 3.4% in 2014 from 9.52% in 2013. In 2014, BDBL recorded the lowest IITA ratio for the entire period of study.

BOBL recorded a decreasing trend in IITA ratio for the financial year 2012, 2013 & 2014. However, the IITA ratio of BOBL has increased in the year 2015. In the year 2016, the IITA ratio of BOBL again decreased by 0.11%.

TBL has recorded a decreasing trend in IITA ratio for the entire period of study. The average IITA ratio of TBL decreased from 6.52% in 2012 to 3.08% in 2016.

Though BNBL has the highest IITA ratio, on the basis of coefficient of variation, BOBL performed better under IITA ratio. BOBL has the lowest CV ratio among all the banks in Bhutan for the period of study.

Table 4.10: IITA Ratio for Banks in Bhutan

Years/Measures	BOBL	BNBL	DPNBL	BDBL	TBL
2012	6.12%	7.21%	6.45%	9.11%	6.52%
2013	5.91%	7.64%	7.27%	9.52%	6.04%
2014	5.44%	7.45%	6.49%	3.40%	5.47%
2015	6.13%	7.77%	6.26%	4.47%	3.20%
2016	6.12%	7.80%	6.32%	4.54%	3.08%
Mean	**5.94%**	**7.58%**	**6.56%**	**6.21%**	**4.86%**
SD	**0.003**	**0.002**	**0.004**	**0.029**	**0.016**
CV	**4.93%**	**3.28%**	**6.25%**	**46.36%**	**33.19%**
Source: Author's Calculation					

4.1.8 Testing of Hypothesis of IITA of Banks in Bhutan

The following null hypothesis related to IITA ratio as KPI under the financial perspective of BSC has been tested using One-way ANOVA:

H_{04}: There is no significant difference in the average Return on Assets (ROA) of banks in Bhutan.

The results of one-way ANOVA for IITA are shown in Table 4.11. It was found that F-statistics (4.49) was statistically significant at 5% level of significance (p-value 0.009). Therefore, we reject the null hypothesis and state that there is a significant difference in the average Interest Income to Total Assets (IITA) ratio of banks in Bhutan.

Table 4.11: ANOVA of IITA Ratio for Banks in Bhutan

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	247.05	4	61.76	4.49	0.009
Within Groups	275.25	20	13.76		
Total	522.31	24			
Source: Author's Calculation					

To check the difference in the mean of banks in Bhutan, a post hoc Tukey HSD test was conducted. The results are presented in Table 4.12. It was seen that, at 5% level of significance, the mean of BOBL was significantly different from the mean of DPNBL, TBL and BDBL.

Table 4.12: Post Hoc Tukey HSD for IITA

(I) Name of banks	(J) Name of banks	Mean Difference (I-J)
BOBL	DPNBL	7.29*
	TBL	8.99*
	BDBL	7.64*
DPNBL	BOBL	-7.29*
TBL	BOBL	-8.99*
BDBL	BOBL	-7.64*
** The mean difference is significant at the 0.05 level. This table presents only those banks whose IITA was significantly different *Source: Author's Calculation*		

4.2 Customer Perspectives

An important dimension of the BSC approach focuses on customer's opinion or reflection towards the services offered by any organisation. Customers are the key stakeholder of the bank. Performance of banks in Bhutan is evaluated under customer perspectives of the BSC approach using the following four KPIs:

a) Total Deposits to Total Liabilities Ratio (TDTL)

b) Term Deposits to Total Deposits Ratio (TrDTD)

c) Growth in Credit granted to Customers (GC)

d) Growth in Deposits by Customers (GD)

Substantial growth in the above mentioned KPIs indicates that customers are happy with the product and services of banks and vice-versa. Thus, the KPIs using the customer perspective are discussed below:

4.2.1 Total Deposits to Total Liabilities (TDTL) Ratio

This ratio is calculated by dividing the total deposits of customers in the bank for a particular year with the total assets of the bank for that year. A higher ratio of TDTL indicates the customer's faith in the bank. However, banks have to convert these deposits into the return generating assets to ensure higher profitability (Wang & Wang, 2015).

A detailed discussion on total deposits of the banks in Bhutan is already made in section 4.1.2.

The total liabilities of the banks are highlighted in Figure 4.7. total liabilities of bank include demand and time liabilities, Borrowings from Other Banks and Bank Capital. It can be seen that the total liabilities of all the banks in Bhutan have recorded an increasing trend from 2012-2016. Especially, BDBL has shown the highest growth rate of 30.99% from Nu. 7,694 Million in 2012 to Nu. 22,649 Million in 2016.

DPNBL has recorded second-highest growth with 13.19% in total liabilities. DPNBL also has recorded constant growth in total liabilities for the period of study.

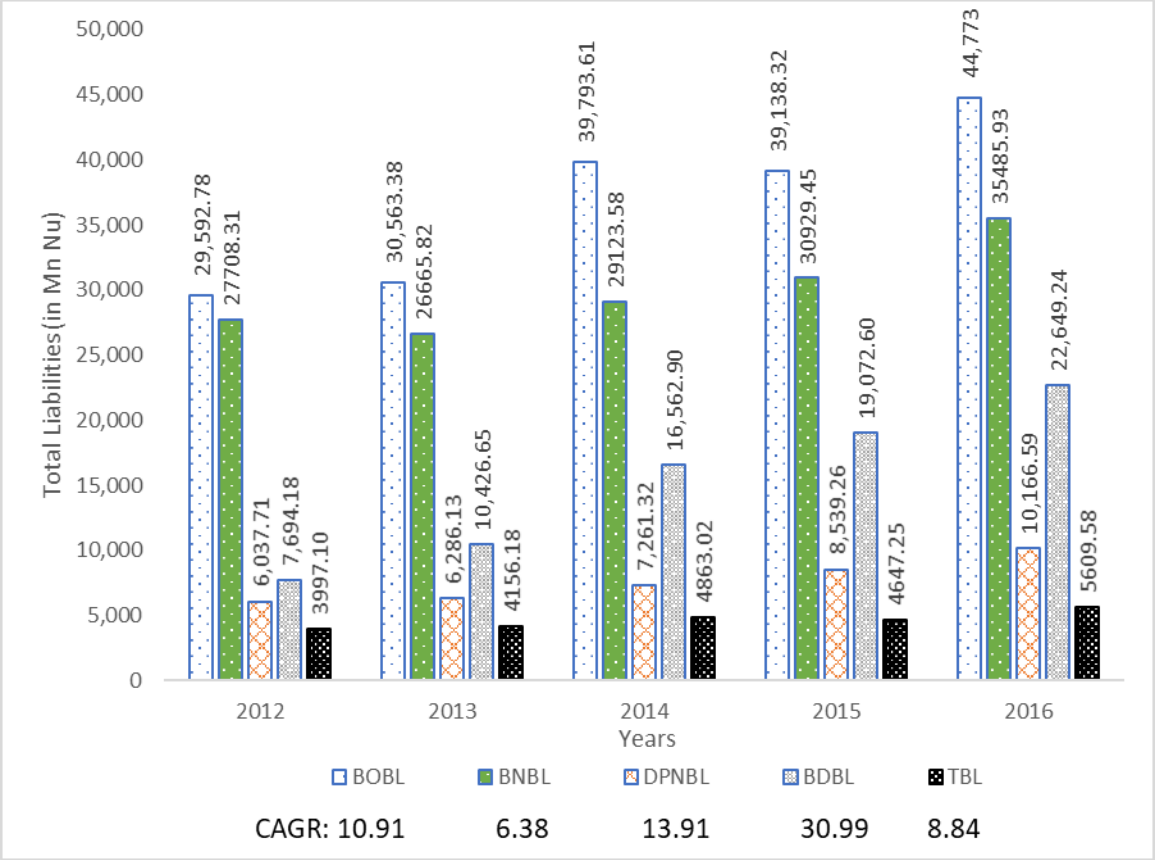

Figure 4.7: Total Liabilities of Banks for2012-2016 (in Million Nu)

Though having the highest amount of total liabilities, BOBL has recorded the third-highest growth trend among all the banks in Bhutan. However, the amount of total liabilities for BOBL has decreased in the year 2015. The decrease in liabilities was mainly due to a decrease in customer deposits from Nu. 3,349 Million in 2014 to Nu. 3,225 Million in 2015. TBL also recorded an increasing trend in total liabilities for the period of study. However, there has been a fall in total liabilities amount in the year 2015.

The bank that recorded the lowest growth rate in total liabilities was BNBL at CAGR of 0.87%. However, the total liabilities of BNBL are the second-highest among all the banks in Bhutan. BNBL has a fluctuating growth trend for the period of study. The amount of total liabilities decreased in the year 2013 because of the decrease in the amount of total deposits by the customers.

The TDTL ratio is shown in Table 4.13. The highest average TDTL ratio was observed for BOBL with 82.19% followed by DPNBL at 79.96% and TBL at 73.48%. However, the coefficient of variation of BOBL and DPNBL is 1.68% and 3.38% respectively. This indicates that BOBL and DPNBL have the TDTL ratio centered around the mean ratio compared to TBL (18.88%), BNBL (16.20%) and BDBL (11.87%). Based on the TDTL ratio, it can be said that BOBL and DPNBL are doing better than other banks in Bhutan. On the other hand, the most consistent TDTL ratio was recorded for BOBL with a SD of 0.014 followed by DPNBL with a SD of 0.027 than BDBL with SD of 0.084 than BNBL with a SD of 0.096 and finally TBL with a SD of 0.139.

Table 4.13: TDTL Ratio of Banks in Bhutan

	BOBL	**BNBL**	**DPNBL**	**BDBL**	**TBL**
2012	0.801	0.718	0.831	0.575	0.883
2013	0.836	0.695	0.819	0.645	0.831
2014	0.838	0.518	0.752	0.755	0.825
2015	0.820	0.536	0.792	0.768	0.553
2016	0.815	0.489	0.804	0.796	0.581
Mean	**82.19%**	**59.10%**	**79.96%**	**70.75%**	**73.48%**
SD	**0.014**	**0.096**	**0.027**	**0.084**	**0.139**
CV	**1.68%**	**16.20%**	**3.38%**	**11.87%**	**18.88%**
Source: Author's Calculation					

From Table 4.13, it can be seen that, among all the banks in Bhutan, BNBL has the lowest TDTL ratio among all the banks in Bhutan. As TDTL depicts the proportion of deposits in the total liabilities of a bank, it can be reported that BNBL has the lowest proportion of total deposits to total liabilities received from its customers. However, being the newest and most inconsistent bank in Bhutan, TBL (SD= 0.139; CV=18.88) has the third-highest average TDTL ratio among the banks in Bhutan.

4.2.2 Testing of Hypothesis for TDTL Ratio of Banks in Bhutan

The following null hypothesis related to total deposits to total liabilities ratio as KPI under customer perspective of BSC has been tested using One-way ANOVA:

H_{05}: There is no significant difference in the average TDTL ratio of banks in Bhutan.

A one-way analysis of variance was conducted to test the significant mean difference in TDTL ratio. The results are presented in Table 4.14. It was seen that F-statistics (6.43) is statistically significant (p-value 0.002) at 5% level of significance, hence we may reject the null hypothesis. It means that there is a significant difference in the mean TDTL ratio for at least one of the banks in Bhutan from other banks.

Table 4.14: ANOVA Table for TDTL ratio for banks in Bhutan

Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Between Banks	2182.19	4	545.55	6.43	0.002
Within Banks	1697.93	20	84.90		
Total	3880.12	24			
Source: Author's Calculation					

To check the highest significant mean difference in the TDTL ratio, Post Hoc Tukey HSD test was performed. The results are given in Table 4.15. It can be seen that the mean TDTL ratio of BOBL is significantly different from BNBL. Similarly, the average TDTL ratio of BNBL is significantly different from the mean TDTL ratio of DPNBL & TBL and the mean TDTL of DPNBL and TBL is significantly different from the mean TDTL of BOBL.

Table 4.15: Tukey HSD for TDTL ratio for banks in Bhutan

(I) Name of banks	(J) Name of banks	Mean Difference (I-J)
BOBL	BNBL	26.51***
BNBL	BOBL	-26.51***
	DPNBL	-24.27***
	TBL	-17.79**
DPNBL	BOBL	24.27***
TBL	BOBL	17.79**
*** The mean difference is significant at the 0.01 level ** The mean difference is significant at the 0.05 level This table presents only those banks whose TDTL ratio was significantly different. *Source: Author's Calculation*		

4.2.3 Term Deposits to Total Deposits (TrDTD) Ratio

Term Deposit to total deposits ratio shows the portion of term deposits in the total deposits of a bank. An increase in this ratio shows that the customers are attracted by the banks to save their money for long term purposes.

Figure 4.8 presents the trend in the total amount of term deposits made by the customers with the banks in Bhutan. The bank, which had the highest growth in term deposits, was BDBL whose term deposit increased from Nu. 3,367.75 Million in 2012 to Nu. 14,165.43 Million in 2016 with a growth rate of 43.21%. BDBL has the highest amount of term deposits in the year 2016 disbursed to its customers.

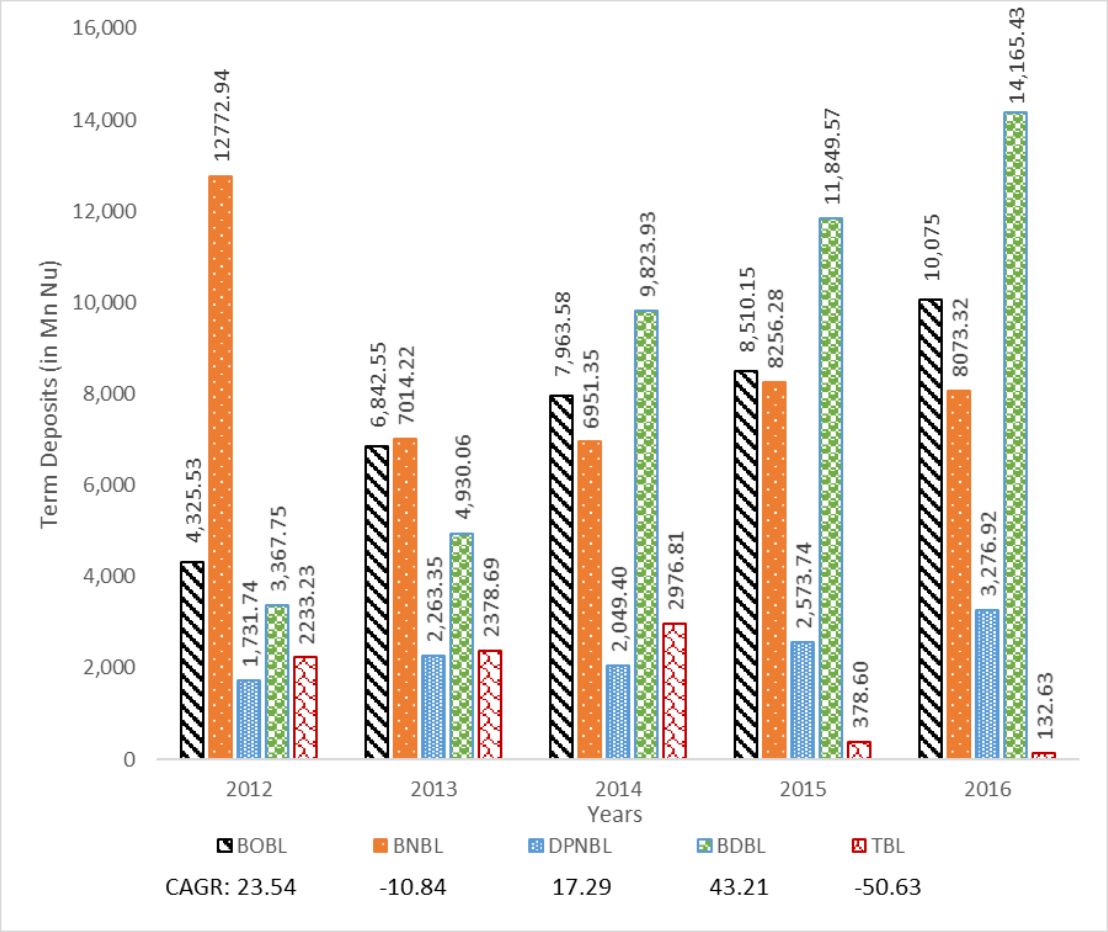

Figure 4.8: Term Deposits of customers in Banks for 2012-2016

BOBL with a CAGR of 23.54% has the second-highest CAGR among the banks in Bhutan. BOBL and BDBL have recorded a continuous growth trend in the term deposits among all the banks in Bhutan. DPNBL showed a CAGR of 17.29% for the period of study. However, DPNBL witnessed a fall in the amount of term deposits in the year 2014.

On the other hand, BNBL has shown a declining trend in term deposits with CAGR of -10.84%. The term deposits of BNBL decreased from Nu. 12,772.94 Million in 2012 to Nu. 8,073.32 Million in 2016. The amount of term deposit for BNBL has decreased to its minimum in the year 2014. In 2015, BNBL recorded an increase in term deposits but in 2016 the amount of term deposit declined again.

The amount of term deposit for TBL decreased from Nu. 2233.23 Million in 2012 to Nu. 132.63 Million in 2016. The term deposits of TBL had increased for the period 2012-2014 but declined afterwards.

The details regarding total deposits have been discussed in 4.1.1 (Credit Deposit Ratio). Same figures have been used to calculate TrDTD ratio under this segment.

The TrDTD ratio for banks in Bhutan is shown in Table 4.16. The average TrDTD ratio for BDBL (77.52%) was the highest among all the banks in Bhutan. BDBL has the highest amount of term deposits among all the banks in Bhutan because it provides a comparatively better interest when compared with other banks in Bhutan. BDBL also provides small saving schemes where people can save their money for six months and above. BDBL also has the second-lowest SD value (0.026) and CV value (3.34%) among all the banks in Bhutan. This shows that BDBL has a constant growth in its TrDTD ratio as compared to

its competitor banks. The CV value also depicts that the variability in yearly TrDTD value of BDBL is very minimum that is up to 3.34%.

TBL has the second-highest average TrDTD ratio with 45.01%. However, there is higher dispersion (CV=65.48%) of the ratio around the mean which shows a large variation in the TrDTD ratio during the period of study. TBL also have the highest SD value (0.295) which shows that the bank has very inconsistent TrDTD ratio compared to other banks in Bhutan.

DPNBL has the third-highest average TrDTD ratio with 38.83% for the period of study with the SD value of 0.031. DPNBL also has the second-lowest CV value (8.06%) among all the banks in Bhutan. BNBL has the fourth-highest TrDTD ratio (32.63%) with the SD value of 0.038. However, BNBL has the second-highest CV value (11.55%) among all the banks in Bhutan. It means that, though there is a consistency in TrDTD ratio for BNBL for the period of study, there is a larger dispersion of the ratio from its average TrDTD ratio.

The bank that recorded the lowest average TrDTD ratio was BOBL (19.69%). However, BOBL has the lowest SD value (0.023) compared to all the banks in Bhutan. It means that BOBL is the most consistent bank as per the TrDTD ratio for the period of study. However, it is the most consistent bank under the KPI TrDTD ratio; BOBL has the third-highest CV value (11.52%). It means that there is a higher dispersion of TrDTD data from the average TrDTD ratio of BOBL.

Table 4.16: TrDTD ratio for Banks in Bhutan

	BOBL	BNBL	DPNBL	BDBL	TBL
2012	15.44%	39.10%	34.52%	76.19%	63.27%
2013	21.13%	27.46%	43.99%	73.32%	68.83%
2014	19.27%	31.56%	37.52%	78.59%	74.18%
2015	20.95%	33.26%	38.05%	80.94%	14.73%
2016	21.64%	31.76%	40.07%	78.57%	4.07%
Mean	**19.69%**	**32.63%**	**38.83%**	**77.52%**	**45.01%**
SD	**0.023**	**0.038**	**0.031**	**0.026**	**0.295**
CV	**11.52%**	**11.55%**	**8.06%**	**3.34%**	**65.48%**
Source: Author's Calculation					

4.2.4 Testing of Hypothesis for TrDTD Ratio of Banks in Bhutan

The following null hypothesis related to term deposits to total deposits ratio as KPI under customer perspective of BSC has been tested using One-way ANOVA:

H_{06}: There is no significant difference in the average TrDTD ratio of banks in Bhutan.

The results of one way ANOVA are presented in Table 4.17. It was seen that the F-statistics (8.09) was statistically significant at 5% level of significance (p-value 0.000). Therefore, we may reject the null hypothesis and state that there is a significant difference in the average TDTL ratio of banks in Bhutan.

Table 4.17: ANOVA table for TrDTD Ratio of Banks in Bhutan

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7608.31	4	1902.08	8.09	0.000
Within Groups	4704.80	20	235.24		
Total	12313.11	24			
Source: Author's Calculation					

Table 4.18 presents the post HOC comparison using the Tukey HSD test. It was calculated to identify the pair of banks whose TrDTD ratio was statistically significantly different. It could be seen that the mean TrDTD ratio of BDBL was significantly different from mean TrDTD ratio BOBL, DPNBL and TBL. However, the mean TrDTD ratio of TBL was statistically significantly different from the mean TrDTD ratio of BDBL only.

Table 4.18: Tukey HSD for TrDTD ratio of Banks in Bhutan

(I) Name of banks	(J) Name of banks	Mean Difference (I-J)
BOBL	BDBL	-52.91***
DPNBL	BDBL	-38.69***
TBL	BOBL	-32.50**
BDBL	BOBL	52.91***
	DPNBL	38.69***
	TBL	32.50**

*** The mean difference is significant at the 0.01 level.
** The mean difference is significant at the 0.05 level.
This table presents only those banks whose TDTL ratio was significantly different.
Source: Author's Calculation

4.2.5 Growth in Credit granted to Customers (GC)

GC is calculated as a percentage increase in the credit granted to customers in the current year over the previous year. A continuous increase in credit granted reflects reasonable interest charges and better customer care services.

Table 4.19 presents the growth in credit granted to customers by banks in Bhutan. It can be seen that the mean GC of BDBL (29.92%) was comparatively higher than other banks in Bhutan. This was mainly because, BDBL being a development bank in Bhutan, provides loans to people from the lower level of the pyramid (e.g. Farmers). BDBL has varieties of loan products with minimum collateral requirements. The bank provides 37 different loan services where the period of loan product range from 1 year to 20 years.

Table 4.19: GC for Banks in Bhutan

	BOBL	**BNBL**	**DPNBL**	**BDBL**	**TBL**
2012	11.45	7.69	26.91	40.32	3.63
2013	-2.97	1.72	4.42	36.67	-3.15
2014	9.14	-5.19	4.91	27.03	8.75
2015	3.67	13.62	13.85	28.58	-6.22
2016	8.22	16.13	13.02	16.98	59.51
Mean	**5.90**	**6.79**	**12.62**	**29.92**	**12.50**
SD	**5.103**	**7.797**	**8.156**	**8.139**	**24.075**
CV	**86.49%**	**114.75%**	**64.62%**	**27.21%**	**192.54%**
Source: Author's Calculation					

DPNBL showed an average growth of 12.62% in credit granted to customers followed by TBL with 12.5%. DPNBL had the highest growth in credit in 2012, however, the growth rates are highly dispersed (CV 64.62%) around the mean. This was mainly because of the fact that DPNBL was able to disburse a limited amount of credit to its customers during the period of study. Similarly, TBL had a decline in total credit for the year 2013 and 2015. This was mainly because of the decline in demand for credit by the public.

BNBL being the second oldest bank in Bhutan showed an average growth in credit to customers only 6.79% with larger variation (CV 114.75%). BNBL also recorded a decline in GC in the year 2014. However, BNBL was able to increase its growth in credit in the following 2 years (i.e. 2015 and 2016).

BOBL, the oldest bank in Bhutan had the lowest growth in credit for the period of study. The growth in credit declined to -2.97% in 2013 from 11.45% in 2012. Though having the lowest growth in credit, BOBL has the lowest SD value (5.103). It means that BOBL has the most consistent growth in growth in credit in credit to customers for the period of study. BOBL was followed by BNBL with the CV value of 7.797 than BDBL with 8.139 and DPNBL with 8.156. The bank that had the most inconsistent growth in credit was TBL with the SD value of 24.075.

On the other hand, BDBL has the lowest CV value (27.12%) which shows that the yearly data on growth in credit for BDBL is less dispersed from the average growth in credit for the period of study. Similarly, TBL has the highest variability in the yearly growth in credit data from the average growth in credit as it has the highest CV value (192.54%) as compared to all the banks in Bhutan.

4.2.6 Testing of Hypothesis for GC of Banks in Bhutan

The following null hypothesis related to growth in credit granted to customers as KPI under customer perspective of BSC has been tested using One-way ANOVA:

H_{07}: There is no significant difference in the average Growth in Credit (GC) granted to customers by banks in Bhutan.

The result of the One-way ANOVA is presented in Table 4.20. It can be seen that the F-statistics (2.28) was not statistically significant at 5% level of significance (p-value 0.097). Therefore, we fail to reject the null hypothesis and state that there is no significant difference in the mean growth in Credit (GC) granted to customers by banks in Bhutan.

Table 4.20: ANOVA table of GC for Banks in Bhutan

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	1862.57	4	465.64	2.28	0.097
Within Groups	4091.66	20	204.58		
Total	5954.23	24			
Source: Author's Calculation					

4.2.7 Growth in Deposits by Customers (GD)

Credit creation is the primary source of profit for a bank and the base for credit creation lies in the money deposited by the depositors with the bank. The larger the amount of deposits, larger is the reserve base upon which credit can be created. Therefore, GD is calculated as the percentage increase in the amount of money deposited by the customers in the current year over the previous year.

From the descriptive statistics presented in Table 4.21. The highest mean value was recorded for BOBL (10.91%) though BOBL had a decline in total deposit in the year 2015.

BDBL had an average growth of 0.54% for the period of study. However, BDBL had seen a decline in the growth in deposit for the year 2013 and 2015. DPNBL also had a decline in GD ratio for the year 2013 and 2016. DPNB recorded a growth rate of 0.15%.

Table 4.21: Growth in Deposits for banks in Bhutan

	BOBL	**BNBL**	**DPNBL**	**BDBL**	**TBL**
2012	6.23	-1.67	0.21	0.92	0.10
2013	7.79	-29.75	0.03	0.52	-0.02
2014	30.60	7.87	0.06	0.86	0.16
2015	-3.75	9.87	0.24	0.17	-0.36
2016	13.67	4.72	0.21	0.23	0.27
Mean	**10.91**	**-1.79**	**0.15**	**0.54**	**0.03**
SD	**11.33**	**14.51**	**0.09**	**0.31**	**0.22**
CV	**1.04**	**-8.10**	**0.59**	**0.57**	**7.20**
Source: Author's Calculation					

TBL, on the other hand, has a negative growth in deposits in the year 2013 and 2015. TBL recorded the growth rate of 0.03% in deposits. BNBL has shown a negative growth trend under GD. The mean value of GD for BNBL was recorded to be -1.79%.

Though BOBL had the highest mean value of GD, the consistency in the growth rate was shown by the BDBL (CV 0.57). It means that though BDBL was able to receive a consistent amount of deposits from its customers. Therefore, it can be concluded that BDBL performed better under GD.

4.2.8 Testing of Hypothesis for GD of Banks in Bhutan

The following null hypothesis related to growth in deposits received from the customers as KPI under customer perspective of BSC has been tested using One-way ANOVA:

H_{08}: There is no significant difference in the average Growth in Deposits (GD) received from customers of banks in Bhutan.

The result of the one way ANOVA test is presented in Table 4.22. The F-statistics (5.34) was statistically significant at 5% level of significance (p-value 0.004). Therefore, we reject

the null hypothesis and state that there is a significant difference in the mean growth in Deposits (GD) of banks in Bhutan.

Table 4.22: ANOVA for Growth in Deposits of banks in Bhutan

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	9829.29	4	2457.32	5.34	0.004
Within Groups	9209.20	20	460.46		
Total	19038.48	24			
Source: Author's Calculation					

Post-HOC Tukey test was conducted to check the highest significant mean differences in GD of the banks. The results of the test are presented in Table 4.23. It can be seen that the mean GD of BDBL was significantly different from the mean GD of BOBL, BNBL and TBL.

Table 4.23: Post Hoc Tukey HSD for GD of Banks in Bhutan

(I) Name of banks	**(J) Name of banks**	**Mean Difference (I-J)**
BOBL	BDBL	-43.21**
BNBL	BDBL	-55.91***
TBL	BDBL	-51.12***
BDBL	BOBL	43.21**
	BNBL	55.91***
	TBL	51.12***
*** The mean difference is significant at the 0.01 level. ** The mean difference is significant at the 0.05 level. This table presents only those banks whose GD was significantly different. *Source: Author's Calculation*		

4.3 Internal Business Process Perspective

Internal Business process (IBP) perspective focuses on the growth of an organisation with regard to customer's satisfaction and improving upon the financial health. It helps the organisation to check if the vision of the organisation is achieved or not. It helps the organisation to check the policies in use and also identifying the faults in the organisational process. IBP also helps the organisation to check how the employees are performing and

checking the efficiency in terms of Process improvements (for example, streamlining an internal approval process), Quality optimisation (such as reducing manufacturing waste) and Capacity utilisation (using technology to boost efficiency, for instance). Performance of banks in Bhutan is evaluated under the internal business process perspective of the BSC approach using the following four KPIs:

a) Business per Employee (BPE)
b) Profit Per Employee (PPE)
c) Wage Bill to Total Income Ratio (WBTI)
d) Wage Bill to Total Cost ratio (WBTC)

Substantial growth in the first two ratios will lead to the improved financial health of an organisation. It also shows how satisfied the customers are, with the bank as this perspective is associated with the services provided to the customers by the banks. A detailed discussion on the results obtained for the above mentioned KPIs under Internal Business Process perspective is made hereunder:

4.3.1 Business per Employee (BPE)

The returns are given to the employees, i.e. their pay packages, are not time-bounded rather performance bounded in many organisations. Even the method of promotion depends on target achievements. Employees are under pressure to perform better and generate business for the organisation they work with. Thus, business per employee can be considered as one of the most important indicators under the internal business process perspective of BSC in today's competitive world.

Figure 4.9 presents the business generated by banks in Bhutan per employee. It should be noted that due to the unavailability of data for TBL, BPE is calculated for three years. BNBL has the highest BPE as compared with other banks. BNBL and BOBL have a comparatively high value of BPE among all the banks in Bhutan because of their larger base of operations and customer base. These two banks have the highest and the second-highest customer base as compared to the other three banks operating in the country.

The CAGR of BPE shows that BDBL (15.6%) has the highest growth of BEP among all the banks in Bhutan for the period of study. DPNBL with a CAGR of 8.48% has the second-highest growth in BEP followed by BOBL 5.51%. BNBL and TBL, on the other hand, had a decline in BEP with -6.83% and -2.55% respectively for the period of study.

Higher BPE shows that the performance of employees of the banks is better than that of its competitors. Employees were able to bring more business for the bank that results in higher profit. As per the coefficient of variation, BOBL has the best performance under mean BPE among all the banks in Bhutan.

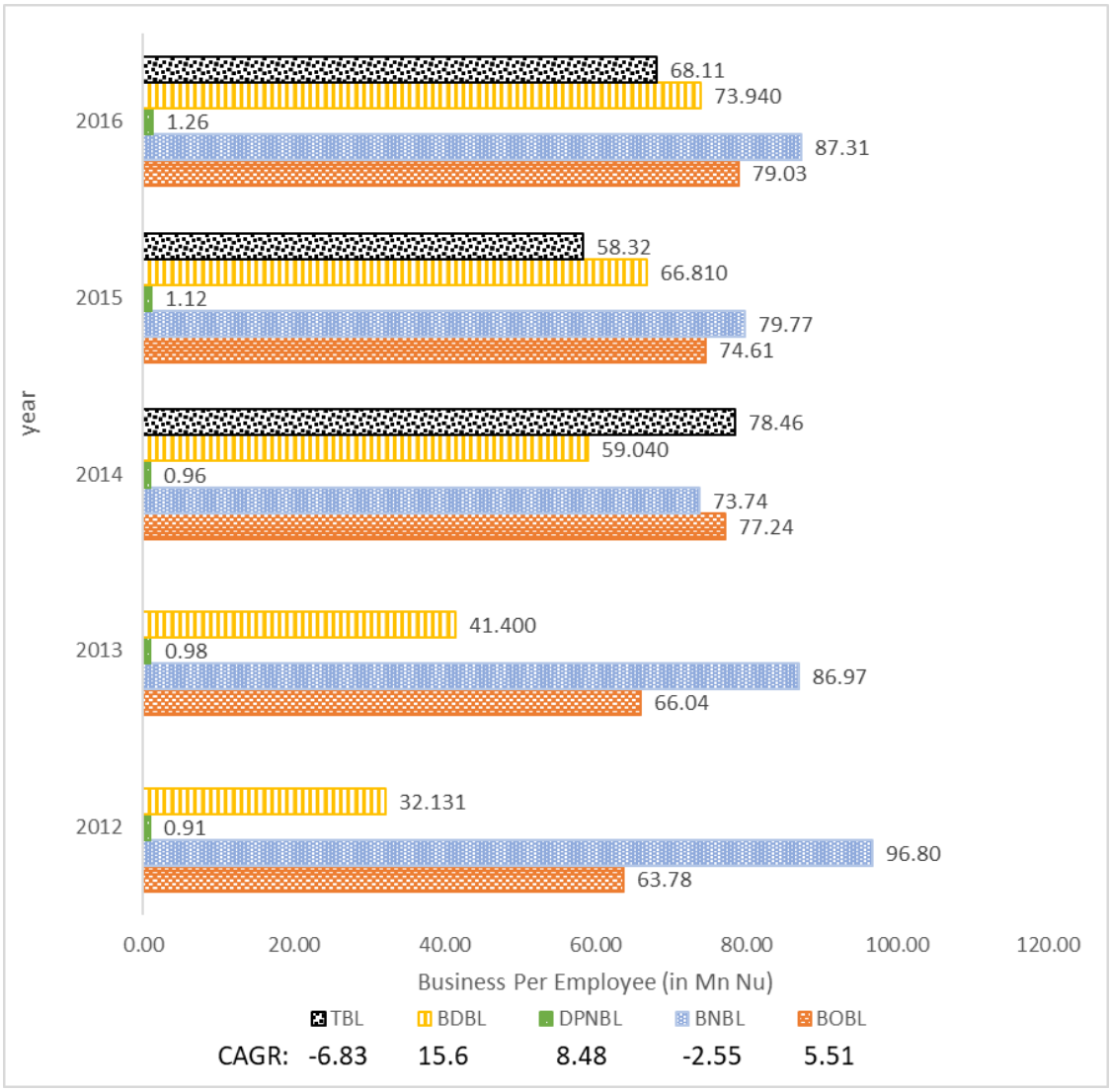

Figure 4.9: Business per employees for banks in Bhutan

4.3.2 Testing of Hypothesis for BPE

The following null hypothesis related to business per employee as KPI under Internal Business Process perspective of BSC has been tested using One-way ANOVA:

H_{09}: There is no significant difference in the average BPE of banks in Bhutan.

The ANOVA table for testing the significant mean difference in BPE is presented in Table 4.24. It shows that F-statistics (49.44) was statistically significant at 5% level of significance (p-value 0.000). Therefore, we may reject the null hypothesis and state that there is a significant difference in the average BPE generated by banks in Bhutan.

Table 4.24: ANOVA Table of BPE for banks in Bhutan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	21029.87	4	5257.47	49.44	0.000
Within Groups	1914.14	18	106.34		
Total	22944.01	22			
Source: Author's Calculation					

The Post-hoc Tukey test presented in Table 4.25 shows that the average BPE of BOBL was statistically significantly different from the average BPE of DPNBL. It can also be seen that the average BPE of BNBL was statistically significantly different from the average BEP of DPNBL and BDBL. The average BPE of DPNBL was also statistically significantly different from the average BPE of TBL and BDBL.

Table 4.25: Post-hoc Tukey HSD for BPE of banks in Bhutan

(I) Name of banks	(J) Name of banks	Mean Difference (I-J)
BOBL	DPNBL	71.09***
BNBL	DPNBL	83.87***
	BDBL	30.25***
DPNBL	BOBL	-71.09***
	BNBL	-83.87***
	TBL	-67.25***
	BDBL	-53.61***
TBL	DPNBL	67.25***
BDBL	BNBL	-30.25***
	DPNBL	53.61***
*** The mean difference is significant at the 0.01 level. This table presents only those banks whose BPE was significantly different. *Source: Author's Calculation*		

4.3.3 Profit per Employee (PPE)

Profit per employee (PPE) is calculated by dividing the profit after tax with the total no. of the employee working with the bank in respective years. It is an important ratio that roughly measures how much money each employee generates for the bank. The PPE is most useful when comparing it against that of other companies in the same industry, or looking at historical changes in a company's own ratio. Here, the ratio is calculated for banks in

Bhutan and a comparison is made for understanding the performance of each bank operation in Bhutan.

Figure 4.10 presents the total number of employees with different banks in Bhutan. BOBL has the highest number of employee base in the country followed by BNBL and BDBL than finally TBL. DPNBL was excluded from this analysis due to the non-availability of data about the employees. BOBL and BNBL have the highest number of employees in the country because of the large size of the operation. On the other hand, TBL has the lowest number of employees because it operates only from 5 branches located in few places of Bhutan.

The CAGR of the total number of employees presented in Figure 4.10 shows that all the banks in Bhutan (excluding DPNBL), had an increase in the total number of employees working in respective banks. It should also be noted that the number of years used to calculate CAGR for TBL is 3 years due to the unavailability of data for 2012 and 2013. For this reason, the CAGR of TBL will not be considered in this section. Among three banks (i.e. BOBL, BNBL and BDBL), BDBL has the highest growth in the total number of employees for the period of study with a CAGR of 6.08% followed by BNBL with 4.16% and finally BOBL with 2.93%.

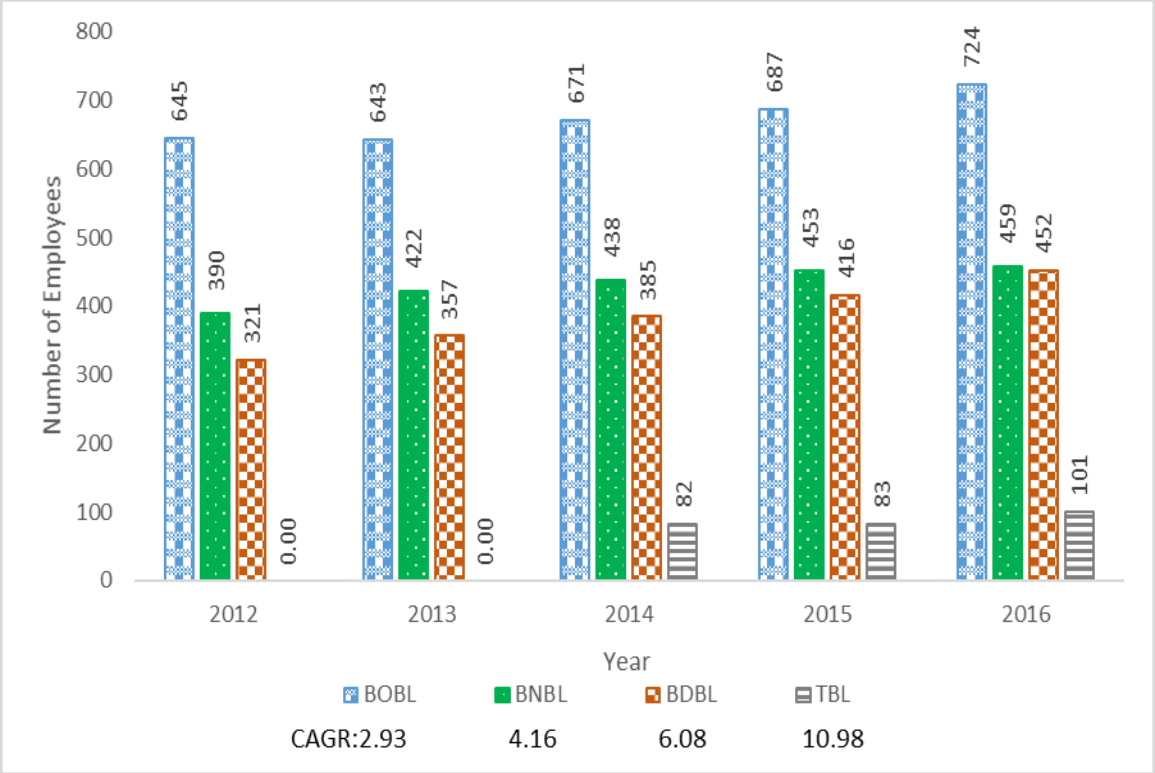

Figure 4.10: Total number of employees in Banks of Bhutan

The number of years considered in calculating profit per employee is five years. However, due to unavailability of data, the number of years considered for TBL is only three. The mean PPE for TBL has not been considered for interpretation. It can also be seen that DPNBL is omitted from this analysis because of the unavailability of any information from the bank. As shown in Table 4.26, the highest mean value of PPE ratio during the period of study was for BNBL (Nu. 1.579 million) followed by BDBL (Nu. 1.195 million) and BOBL (Nu. 1.162 million). However, the distribution of PPE around the mean is smaller for BOBL (9.88%) than BNBL (14.83%) and BDBL (70.21%). It signifies that BOBL and BNBL are more consistent in generating PPE than BDBL.

As high profit per employees indicates a better performance of employees in an organisation, it can be stated that the performance of BNBL is better than the performance

of other banks in Bhutan. It also indicates that the employees of BNBL are skilled enough to solve the grievances of its customers and thereby generate more profit to the bank.

Though BOBL has the lowest mean value of PPE for the period of study, it is the most consistent bank for the period of study (SD=0.115). BOBL also have the lowest CV value (9.88%) which means there is a low dispersion of the ratio around the mean, which shows a lower variation in the PPE ratio during the period of study. On the other hand, BDBL has a very inconsistent PPE ratio for the period of study (SD=0.839). BDBL also have the highest CV value of 70.21% that depicts a higher dispersion of the ratio around the mean, which shows a large variation in the PPE ratio during the period of study.

Table 4.26: PPE for banks in Bhutan (Nu. In Million)

Years/Measures	**BOBL**	**BNBL**	**BDBL**	**TBL**
2012	1.02	1.79	2.86	NA
2013	1.05	1.14	0.78	NA
2014	1.29	1.70	0.73	0.45
2015	1.16	1.73	0.94	0.44
2016	1.29	1.53	0.66	0.50
Mean	**1.162**	**1.579**	**1.195**	**0.462**
SD	**0.115**	**0.234**	**0.839**	**0.024**
CV	**9.88%**	**14.83%**	**70.21%**	**5.26%**
Source: Author's Calculation				

4.3.4 Testing of Hypothesis for PPE of Banks in Bhutan

The following null hypothesis related to profit per employee as KPI under Internal Business Process perspective of BSC has been tested using One-way ANOVA:

H_{10}: There is no significant difference in the average PPE of banks in Bhutan.

The results of one way ANOVA for PPE of Banks in Bhutan are shown in Table 4.27. The F-statistics (2.82) was not statistically significant at 5% level of significance (p-value 0.077). Thus we fail to reject the null hypothesis and conclude that there is no significant difference in the average PPE of banks in Bhutan.

Table 4.27: One way ANOVA for PPE of banks in Bhutan

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.33	3	0.78	2.82	0.077
Within Groups	3.85	14	0.28		
Total	6.19	17			
Source: Author's Calculation					

4.3.5 Wage Bill to Total Income Ratio

This ratio indicates the proportion of wages/salaries paid to employees of banks to the total income of the bank. It is actually the cost to the bank for generating business. It is calculated by dividing the total wages/salaries of the bank by its total income. The proportion should neither be too high nor too less. If it is very high, it means the bank is incurring a huge cost on paying to its employees and if it is, too less it means that either the number of employees is less or they are not paid sufficiently. In the latter case, the employee will try to look for a better opportunity somewhere else.

Figure 4.11 presents the total amount of wages/salaries disbursed to employees of banks in Bhutan. The highest growth in salaries disbursed to employees was for TBL, which increased from Nu. 23.15 Million in 2012 to Nu. 43.32 million in 2016 with a growth rate of 16.97%. This was mainly because of the hiring of new and skilled employees by TBL. The cost of the employee for TBL is high because TBL is the newest bank in Bhutan. TBL had to employ skilled employees so that they could reduce the cost of training the new employees.

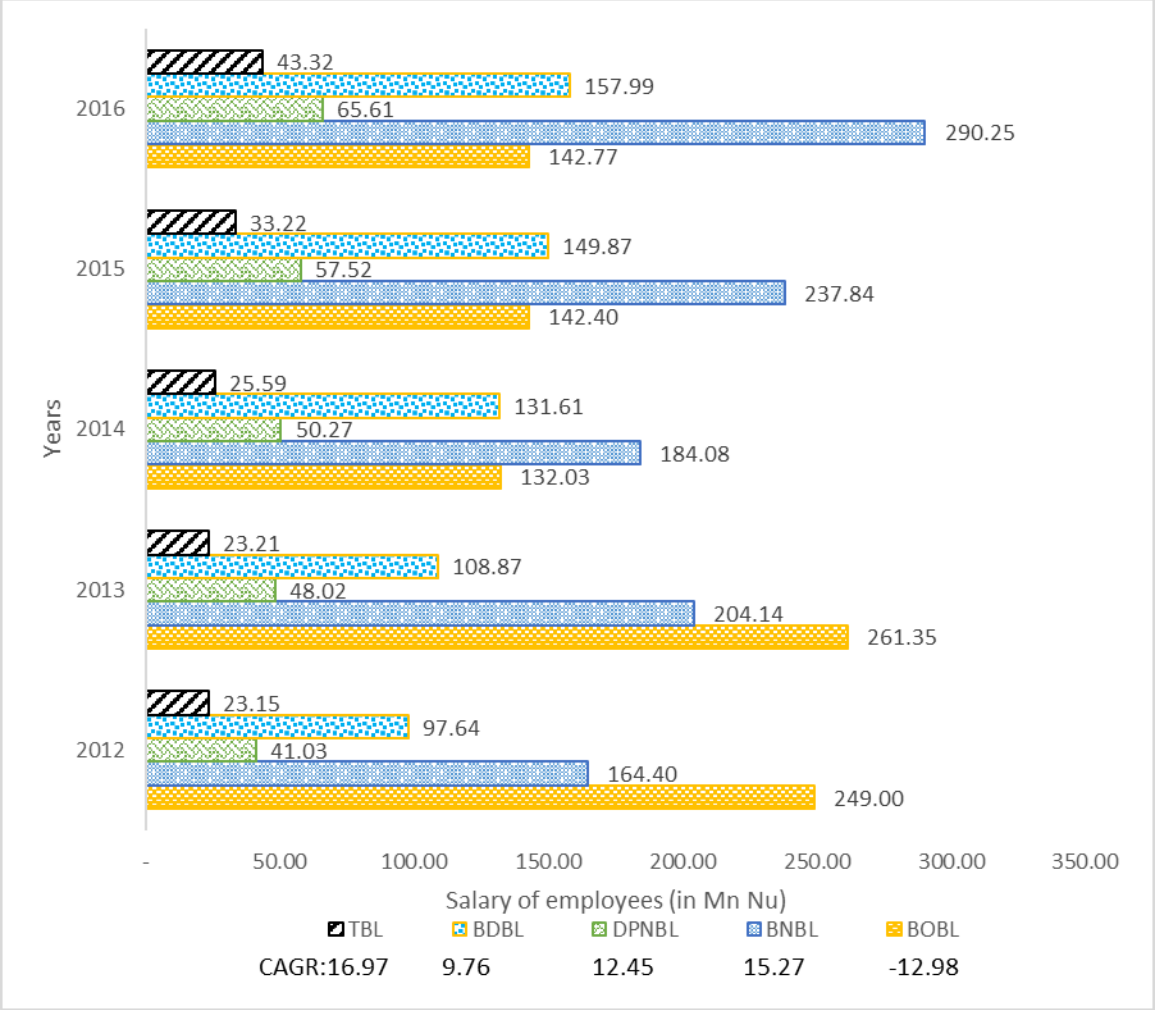

Figure 4.11: Salaries of Employees of Banks in Bhutan

BNBL has the second-highest growth (15.27%) in wages/salaries disbursed to employees. BNBL had a decline in salaries in 2014 due to employees resigning from the bank. DPNBL has the third-highest CAGR of 12.45% among all the banks in Bhutan. DPNBL recorded a stable growth in total salaries disbursed to employees. BDBL also recorded a growth in wages/salaries by 9.76%. It is to be noted that the total amount of wages/salaries for BOBL has decreased annually at the rate of -12.98% during the period 2012-2016. The total amount of salaries disbursed to employees for BOBL decreased from Nu. 249 Million in

2012 to Nu. 142.77 Million in 2016. This was mainly due to a decrease in the workforce of employees from BOBL.

Table 4.28 presents the descriptive statistics of wage bill to total income ratio of banks in Bhutan. If there is a decrease in this ratio over time but the profit of banks increases for the same period of time, it shows that the employees of the bank are playing a vital role in the banking operations. It can be seen that the performance of BOBL is better as compared to other banks operating in the country. BOBL's wage bill to total income ratio has decreased over time, but the profit has increased for the same period. Table 4.29 presents PAT for all the banks for the period of study. As such it can be said that the employees of BOBL have played a pivotal role in the earnings of the bank.

Table 4.28: WBTI ratio of banks in Bhutan

Years/Measures	**BOBL**	**BNBL**	**DPNBL**	**BDBL**	**TBL**
2012	0.38	0.24	0.48	0.11	0.63
2013	0.39	0.42	0.49	0.39	1.23
2014	0.15	0.25	0.50	0.47	0.70
2015	0.18	0.30	0.45	0.38	0.90
2016	0.15	0.41	0.37	0.53	0.86
Mean	**0.25**	**0.32**	**0.46**	**0.38**	**0.86**
SD	**0.12**	**0.09**	**0.05**	**0.16**	**0.23**
CV	**0.50**	**0.27**	**0.11**	**0.43**	**0.27**
Source: Author's Calculation					

Table 4.29: PAT for all the banks in Bhutan (Nu. in Million.)

Years/Measures	**BOBL**	**BNBL**	**DPNBL**	**BDBL**	**TBL**
2012	660.12	697.92	85.98	919.20	36.95
2013	673.22	482.73	97.10	278.19	18.87
2014	864.96	743.64	99.56	281.96	36.66
2015	795.61	785.88	128.98	392.53	36.75
2016	937	702.50	176.43	297.60	50.13
Source: Author's Compilation					

BDBL, on the other hand, was the lowest performer in WBTI ratio as KPI under Internal Business Process perspective. BDBL's wage bill to total income ratio has increased for the period of five years. This itself is a bad indicator for the bank. It can also be seen that the profit of the bank for the same period of time has decreased by -24.57%. This shows that though the bank has invested more on the skill enhancement of their employees, they are unable to perform properly in generating the business to BDBL.

4.3.6 Testing of Hypothesis for WBTI Ratio of Banks in Bhutan

The following null hypothesis related to WBTI as KPI under Internal Business Process perspective of BSC has been tested using One-way ANOVA:

H_{11}: There is no significant difference in the WBTI ratio of banks in Bhutan.

One-way ANOVA test was conducted at 5% level of significance and the results are shown in Table 4.30. The result shows that the F-statistics (21.45) was significant (p-value 0.000) at 5% level of significance and hence we may reject the null hypothesis. Therefore, we can state that there is a significant difference in the average WBTI ratio of banks in Bhutan.

Table 4.30: ANOVA table of WBTI ratio

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	16990.96	4	4247.74	21.45	0.000
Within Groups	3960.814	20	198.04		
Total	20951.77	24			
Source: Author's Calculation					

To check the significant difference in the mean performance of banks, Post hoc Tukey HSD test was conducted and its results are shown in Table 4.31. It was seen the average WBTI ratio of BOBL was significantly different with the mean WBTI ratio of TBL. Similarly, the average WBTI ratio of BNBL was significantly different from the average WBTI ratio of DPNBL and TBL and BDBL. The average WBTI ratio of TBL was also significantly different from the average WBTI of BDBL.

Table 4.31: Tukey HSD for WBTI Ratio

(I) Name of banks	(J) Name of banks	Mean Difference (I-J)
BOBL	TBL	-61.46***
BNBL	DPNBL	-37.15***
	TBL	-77.70***
	BDBL	-28.80**
DPNBL	BNBL	37.15***
	TBL	-40.55***
TBL	BOBL	61.46*
	BNBL	77.70***
	DPNBL	40.55***
	BDBL	48.90***
BDBL	BNBL	28.80**
	TBL	-48.90***

*** The mean difference is significant at the 0.01 level.
** The mean difference is significant at the 0.05 level
This table presents only those banks whose WBTI ratio was significantly different.
Source: Author's Calculation

4.3.7 Wage Bills to Total Cost Ratio

WBTC ratio indicates the proportion of cost (wages/salaries) of bank personnel in the total administrative and operating cost of bank's operations. The lower the cost, the more efficient the personnel are and they depict much higher productivity. An increase in this ratio also indicates that the organisation has increased its business operation (expansion).

Figure 4.12 shows the data related to the total operational cost of the banks in Bhutan. BNBL showed the highest growth in total operating cost among all the banks in Bhutan.

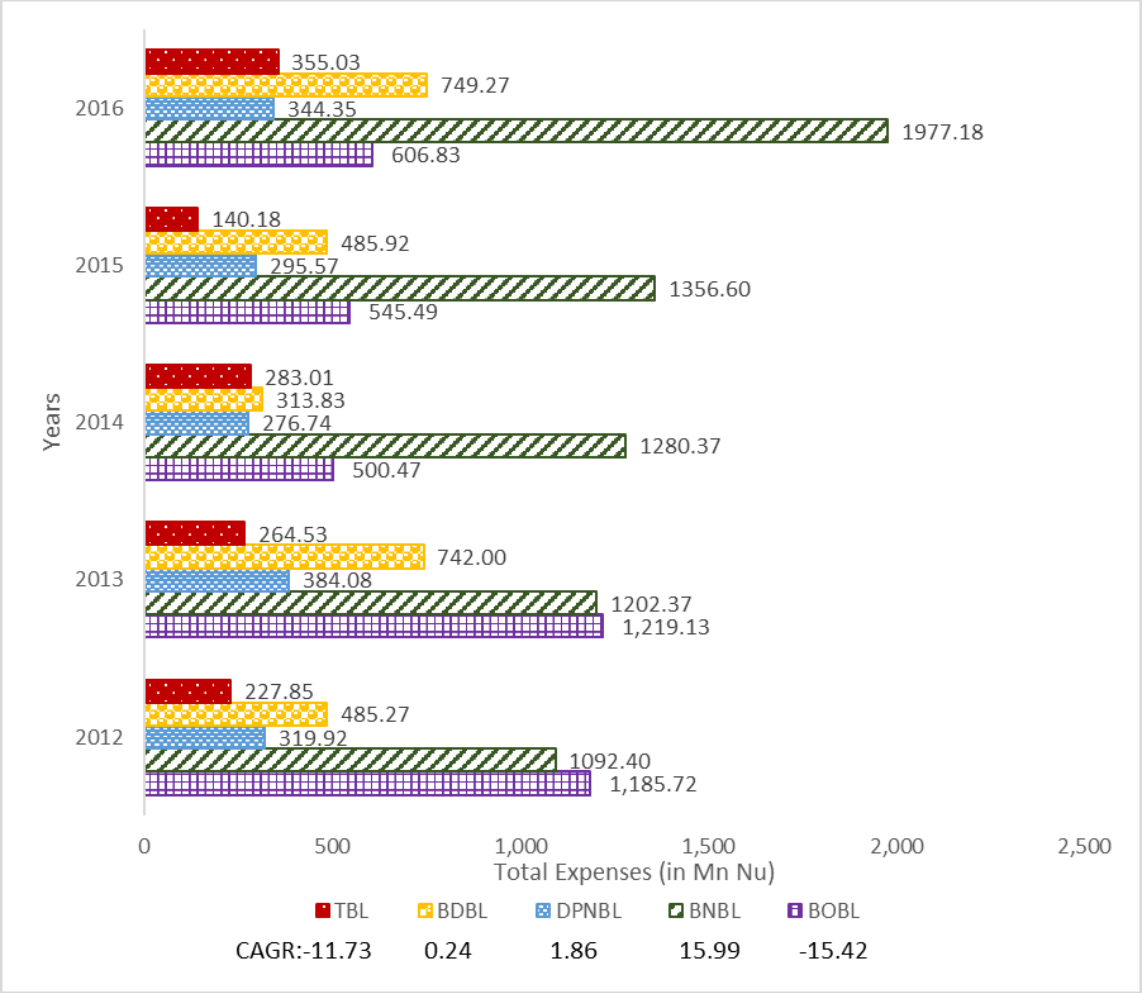

Figure 4.12: Total operating cost of banks in Bhutan

The total operating cost increased from Nu. 1185.72 Million in 2012 to Nu. 1977.18 million in 2016 with a growth rate of 15.99%. BNBL could see the highest increase in total cost in the year 2016. This was mainly because of two reasons: 1) due to an increase in depreciation charges & 2) due to an increase in wages/salaries and number of employees in BNBL. There was not much growth in the total cost of DPNBL (1.86%) and BDBL (0.24%) for the period of study. BOBL and TBL were able to reduce the total operational cost. BOBL's total cost decreased by -15.42% and TBL with -11.73%.

Table 4.32 presents the descriptive statistics for the WBTC ratio of Banks in Bhutan. The average WBTC ratio for BDBL (25.73%) was the highest among all the banks in Bhutan

followed by BOBL (23.69%) and DPNBL (16.40%). However, BDBL showed the highest average WBTC ratio; BNBL maintained a higher consistency (CV 8.15%) around the mean WBTC ratio during the period of study was the better performing bank in Bhutan in accordance with the coefficient of variation. This was mainly because of an increase in the total operational cost of BNBL for the period of 2012-2016. In the total operational cost, a substantial amount of expenses was incurred towards the training of employees, maintenance made to existing branches and extensions and opening of new branches around Bhutan. BNBL has the second-highest branch network and operational base in Bhutan after BOBL.

Table 4.32: WBTC Ratio of Banks in Bhutan (in %)

Years/Measures	**BOBL**	**BNBL**	**DPNBL**	**BDBL**	**TBL**
2012	21.00	15.05	12.83	20.12	10.16
2013	21.44	16.98	12.50	14.67	8.77
2014	26.38	14.38	18.17	41.94	9.04
2015	26.10	17.53	19.46	30.84	23.70
2016	23.53	14.68	19.05	21.09	12.20
Mean	**23.69**	**15.72**	**16.40**	**25.73**	**12.77**
SD	**2.25**	**1.28**	**3.08**	**9.63**	**5.59**
CV	**9.52%**	**8.15%**	**18.79%**	**37.44%**	**43.79%**
Source: Author's Calculation					

4.3.8 Testing of Hypothesis for WBTC ratio

The following null hypothesis related to WBTC ratio as KPI under Internal Business Process perspective of BSC has been tested using One-way ANOVA:

H_{12}: There is no significant difference in the average WBTC ratio of banks in Bhutan.

ANOVA table for Wage Bills to Total Costs Ratio is presented in Table 4.33. The F-statistics (4.40) was statistically significant (p-value 0.01) at 5% level of significance. Therefore, we may reject the null hypothesis and state that there is a significant difference in the average WBTC ratio of banks in Bhutan.

Table 4.33: ANOVA table for WBTC ratio of Banks in Bhutan

Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	617.34	4	154.34	4.40	0.01
Within Groups	701.75	20	35.09		
Total	1319.09	24			
Source: Author's Calculation					

The results of posthoc Tukey HSD test are presented in Table 4.34. The highest significant mean difference in average WBTC ratio was found in the banks operating in the country. The average WBTC of DPNBL was significantly different from the mean WBTC ratio of BNBL and TBL.

Table 4.34: Post hoc Tukey HSD test for WBTC Ratio

(I) Name of banks	(J) Name of banks	Mean Difference (I-J)
TBL	BDBL	-12.95**
BDBL	TBL	12.95**
** The mean difference is significant at the 0.05 level. This table presents only those banks whose WBTC ratio was significantly different. *Source: Author's Calculation*		

4.4 Learning and Growth Perspective

Learning and growth perspective helps the organisation to answer the question like how to sustain in a dynamic environment. This perspective is related to the employees of the organisation and the organisation's initiative in enhancing the skills of employees. (Abofaied, 2015). Performance of banks in Bhutan is evaluated under the learning and growth perspective of the BSC approach using the following four KPIs:

a) Growth in ATMs (GA)

b) Growth in Branches and Extensions (GBE)

c) Expenditure on Training of Employees (ETE)

d) Growth of skilled employees (GSE)

Growth in these KPIs shows that the employees of the bank are well trained and skilled enough to handle the grievances of customers. It also shows that the bank is expanding its business. The results and discussion of the above KPIs under learning and growth perspective is given below:

4.4.1 Growth in ATMs

Automated Teller Machines (ATMs), now a day, is considered as an important facility offered by the banks to their customers. The sufficient no. of ATMs in a particular location indicates that the customers need not to visit the branches for many services such as cash withdrawal, deposits, cheques submission, balance enquiry, Passbook entry etc. Growth in the number of ATMs indicates the outreach of a bank in the country.

The graphical presentation of number and growth related data on ATMs of banks in Bhutan is shown in Figure 4.13. It can be seen that BOBL has the highest outreach to the customers through highest numbers of ATMs located in Bhutan. It is also emphasising on increase in the outreach as the no. of ATMs increased from 42 in 2012 to 78 in 2016. However, the highest growth in numbers of ATMs was seen for BDBL (85.66%) as the number of ATMs increased from 5 in 2012 to 32 in 2016. BNBL has the second-highest numbers of ATMs network in Bhutan. BOBL and BNBL are the oldest banks operating in Bhutan. BNBL was the first bank that introduced ATM cards in Bhutan in the year 2007 . BNBL was also the bank that brought automation in banking industry of Bhutan. TBL being the newest bank has the least number of ATMS in the country.

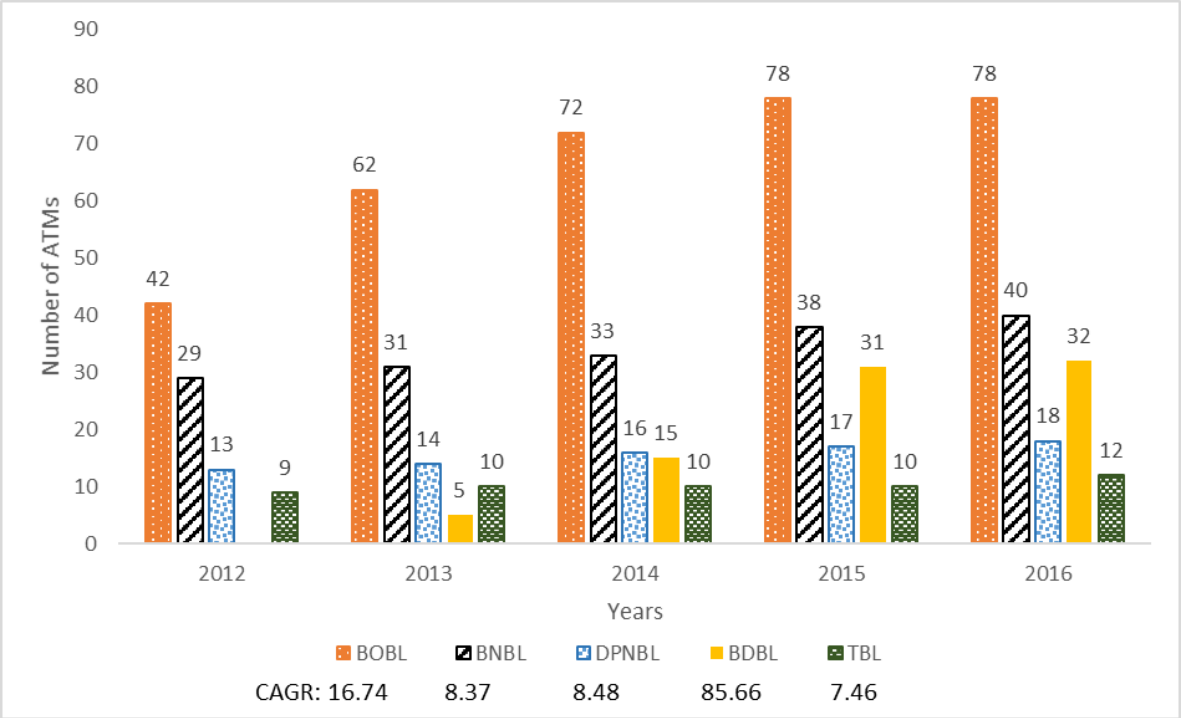

Figure 4.13: Numbers of ATMs of Banks in Bhutan

4.4.2 Testing of Hypothesis for Growth in ATMs

The following null hypothesis related to the outreach of banks in Bhutan measured using number of ATMs as KPI under Learning and Growth perspective of BSC, has been tested using One-way ANOVA:

H_{13}: There is no significant difference in the outreach of banks in Bhutan measured in terms of average no. of ATMs under learning & growth perspective of BSC approach.

The results of one-way analysis of variance for outreach of banks measured using no. of ATMs is presented in Table 4.35. The F-statistics (31.07) was statistically significant at 5% level of significance (p-value 0.000). Therefore, we may reject the null hypothesis and state that there is a significant difference in the outreach of banks measured using average no. of ATMs of banks in Bhutan.

Table 4.35: ANOVA table for Outreach measured by no. of ATMs of Banks in Bhutan

Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10051.21	4	2512.80	31.07	0.000
Within Groups	1536.75	19	80.882		
Total	11587.96	23			
Source: Author's Calculation					

Post hoc Tukey HSD test results for finding the pair of banks with highest significant mean difference in ATMs of banks in Bhutan is shown in Table 4.36. It is clear that the outreach of BOBL was significantly different from other banks of the country at 1% level of significance. On the other hand, the average no. of ATMs of BNBL was also significantly different from the average no. of ATMs of DPNBL and TBL at 5% level of significance.

Table 4.36: Post hoc Tukey HSD Test for Outreach /measured using no. of ATMs

(I) Name of banks	(J) Name of banks	Mean Difference (I-J)
BOBL	BNBL	32.2***
	DPNBL	50.8***
	TBL	56.2***
	BDBL	45.65***
BNBL	BOBL	-32.2***
	DPNBL	18.6**
	TBL	24**
DPNBL	BOBL	-50.8***
	BNBL	-18.6**
TBL	BOBL	-56.2***
	BNBL	-24***
BDBL	BOBL	-45.65***
*** The mean difference is significant at the 0.01 level. ** The mean difference is significant at the 0.05 level. This table presents only those banks whose outreach measured using no. of ATMs was significantly different. *Source: Author's Calculation*		

4.4.3 Growth in Branches and Extensions (GBE)

Another KPI used to evaluate the performance under learning and growth perspective is to no. of branches and extension counters of banks in Bhutan. The growth in branches and extensions reflects the bank's commitment to grow in long run and indicates the size of the bank. It is also another tool to assess the outreach of the bank to the population of the country.

Figure 4.14 shows the data related to no. of branches and extension counters of the banks in Bhutan. BDBL being the developmental bank, has the highest no. of branches network among all the banks in Bhutan. BDBL has opened many extensions in the villages of Bhutan. On the other hand, BOBL being the oldest bank in Bhutan has the second-highest numbers of branches and extensions.

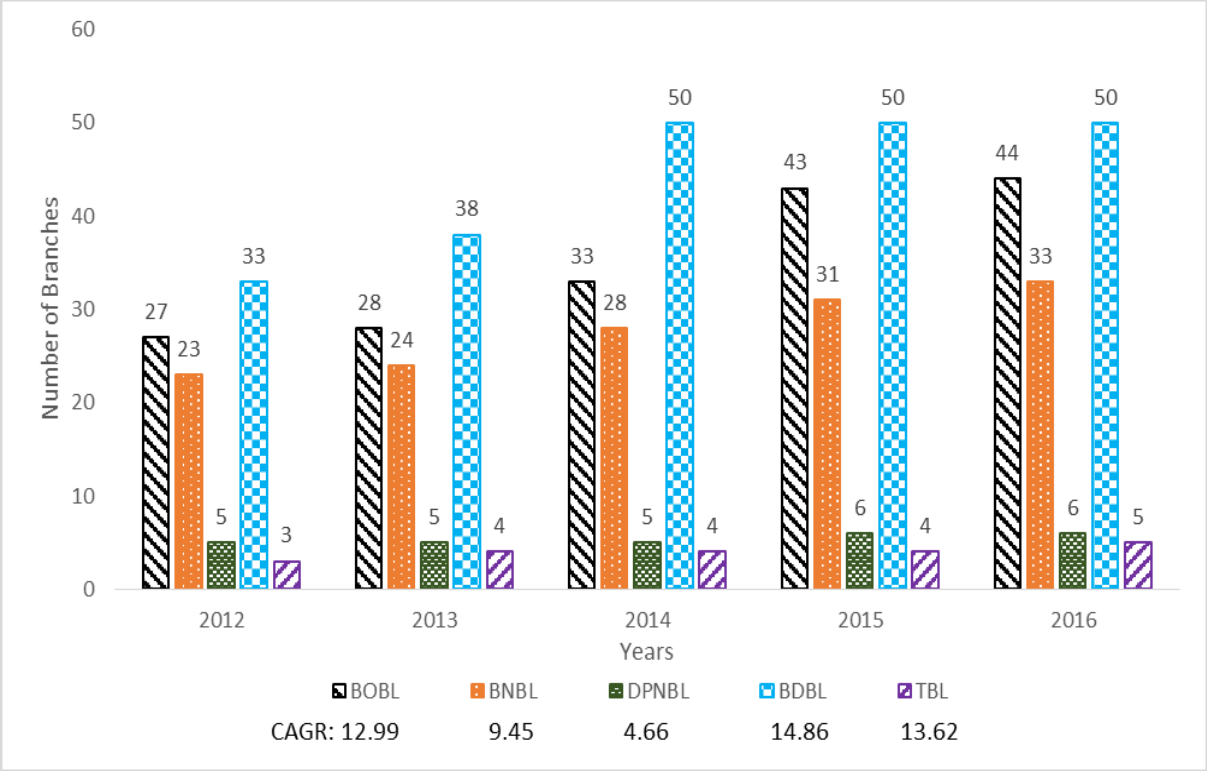

Figure 4.14: Growth in Branches and Extension network of Banks in Bhutan

4.4.4 Testing of Hypothesis for Growth in Branches and Extensions

The following null hypothesis related to the outreach of banks in Bhutan measured using number of branches and extensions as KPI under Learning and Growth perspective of BSC, has been tested using One-way ANOVA:

H_{14}: There is no significant difference in the outreach of banks in Bhutan measured in terms of average no. of branches and extensions under learning & growth perspective of BSC approach.

The results of one-way analysis of variance are presented in Table 4.37. The F-statistics (53.19) was statistically significant at 5% level of significance (p-value 0.000). Therefore,

we may reject the null hypothesis and state that there is a significant difference in the outreach average Growth in Branches and Extensions of banks in Bhutan.

Table 4.37: ANOVA table for Outreach measured using no. of Branches & Extensions

Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6434.24	4	1608.56	53.19	0.000
Within Groups	604.8	20	30.24		
Total	7039.04	24			
Source: Author's Calculation					

To check the significant difference in the average growth in branches and extensions of banks, post hoc Tukey HSD test was conducted and its results are shown in Table 4.38. It was seen the average outreach measured by no. of branches and extensions of BOBL was significantly different with the average outreach measured by no. of branches and extensions of DPNBL and TBL at 1% level of significance. Similarly, the average outreach measured by no. of branches and extensions for BNBL was significantly different with the average outreach measured by no. of branches and extensions of DPNBL, TBL and BDBL. DPNBL also had a significant difference with BDBL measured by KPI no. of Branch and extension ay 1% level of significance. Finally, the average outreach measured by no. of branches and extensions for TBL was significantly different with the average outreach measured by branches and extensions of BDBL.

Table 4.38: Post hoc Tukey HSD test for outreach measured using branches & extensions

(I) Name of banks	(J) Name of banks	Mean Difference (I-J)
BOBL	DPNBL	29.6***
	TBL	31***
BNBL	DPNBL	22.4***
	TBL	23.8***
	BDBL	-16.4***
DPNBL	BOBL	-29.6***
	BNBL	-22.4***
	BDBL	-38.8***
TBL	BOBL	-31***
	BNBL	-23.8***
	BDBL	-40.2***
BDBL	BNBL	16.4***
	DPNBL	38.8***
	TBL	40.2***

*** The mean difference is significant at the 0.01 level of significance.
This table presents only those banks whose outreach measured using no. of branches & extensions was significantly different.
Source: Author's Calculation

4.4.5 Expenditure on Training of Employee (ETE)

The amount that bank invest in training new and existing employees in the bank is actually an investment by the bank for it future growth. Training is needed for the skill enhancement of the employee and to increase the working efficiency. Training can be of two types viz. on the job training and off the job training. In the former case, the training is given to the new or the experienced employees to make them familiar with roles and responsibilities and process of doing the work in a specific working environment. In off the job training, an expert who is not an employee of the bank would train the employees of the bank. It is required to train an employee not only because of changing technology but also to have a competitive advantage over its competitors.

Figure 4.15 presents the expenditure incurred on the training of employees in the banks in Bhutan. The bank that spent highest on the training of employees was BDBL with a CAGR

of 125.88%. The expenditure on training of employees increased from Nu. 0.87 Million in 2012 to Nu. 22.62 Million in 2016. DPNBL had the second-highest growth (34.15%) in training expenses to employees followed by BNBL at 10.85%. The only bank that had negative growth in training expenditure to employees was BOBL. The expenditure on training of employees decreased from Nu. 60 Million in 2012 to Nu. 14.08 Million in 2016.

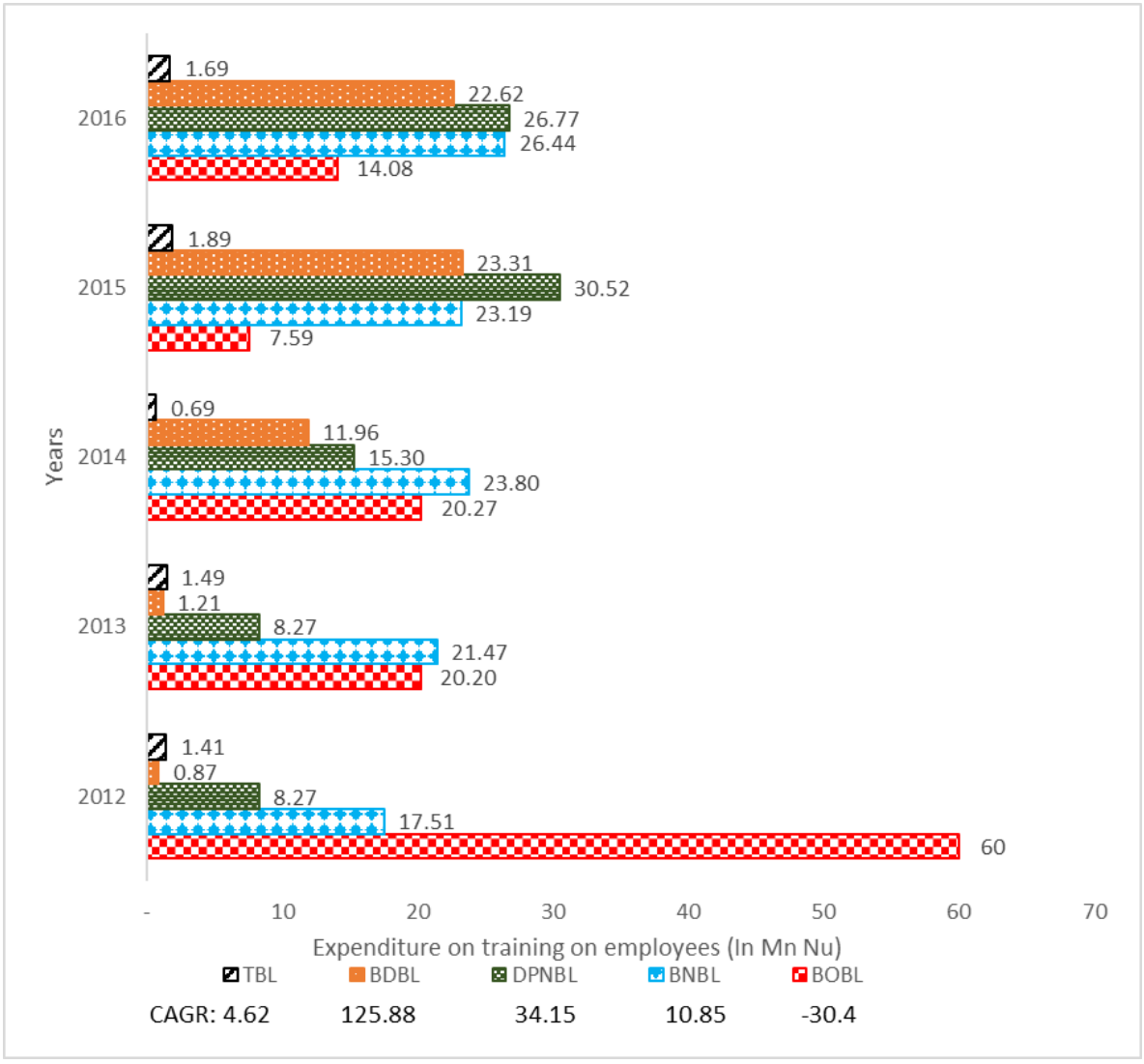

Figure 4.15: Expenditure on the training of employees

During the period of study, BOBL spent maximum average amount (Nu. 24.43 million) on providing training to its employees followed by BNBL with Nu. 22.48 million (Table 4.39). however, BNBL was more consistent (CV 13.14%) than the BOBL (CV 75.28%).

Table 4.39: Expenditure on the training of employees (Nu. in Million)

Years/Measures	BOBL	BNBL	DPNBL	BDBL	TBL
2012	60	17.51	8.27	0.87	1.41
2013	20.20	21.47	8.27	1.21	1.49
2014	20.27	23.80	15.30	11.96	0.69
2015	7.59	23.19	30.52	23.31	1.89
2016	14.08	26.44	26.77	22.62	1.69
Mean	**24.43**	**22.48**	**17.82**	**11.99**	**1.43**
SD	**18.39**	**2.96**	**9.28**	**9.81**	**0.41**
CV	**75.28%**	**13.14%**	**52.04%**	**81.78%**	**28.51%**
Source: Author's Calculation					

4.4.6 Testing of Hypothesis for Expenditure on Training of Employees

The following null hypothesis related to the expenditure incurred banks of Bhutan on providing training to its employees as KPI under Learning and Growth perspective of BSC, has been tested using One-way ANOVA:

H_{15}: There is no significant difference in the average expenditure incurred by banks in Bhutan in providing Training to the Employees.

One-way ANOVA test was conducted at 5% level of significance and the results are shown in Table 4.40. The result shows that the F statistics (3.25) is significant (p-value 0.033) hence we may reject the null hypothesis. Therefore, we can state that there is a significant difference in the average Expenditure incurred by banks in providing Training to the Employees of banks in Bhutan.

Table 4.40: ANOVA Table of Expenditure in Training of Employees

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1719.62	4	429.91	3.25	0.033
Within Groups	2646.76	20	132.34		
Total	4366.38	24			
Source: Author's Calculation					

Further, the result of the post-hoc Tukey test is presented in Table 4.41. It shows that the average expenditure incurred on training of employees by BOBL and BNBL was significantly different from TBL at 1% and 5% level of significance. There was no significant difference found in the average expenditure incurred by other banks.

Table 4.41: Tukey HSD

(I) Name of banks	(J) Name of banks	Mean Difference (I-J)
BOBL	TBL	24.24***
BNBL	TBL	22.71**
*** The mean difference is significant at the 0.01 level. ** The mean difference is significant at the 0.05 level. The table presents only the pairs of banks with significant mean difference. *Source: Author's Calculation*		

4.4.7 Growth in Skilled Employees (GSE)

The increase in the number of skilled employees is another KPI used under learning and growth perspective of BSC approach. It is the total number of employees that have undergone for training in a particular period. Figure 4.16 presents the number of employees that underwent training in a particular period. Only four banks are considered in calculating the growth of skilled employees. TBL was excluded from this analysis because of the unavailability of data. The bank that had the highest growth in number of employees that underwent training was BOBL followed by BNBL. BNBL, however, reported a decline in its numbers of skilled employees in the year 2013 and 2015. DPNBL and BDBL had negative growth in number of employees that underwent training for the

period 2012-2016. BDBL has the highest number of employees trained in 2013 because in that particular year, BDBL started its operation in many villages in the country.

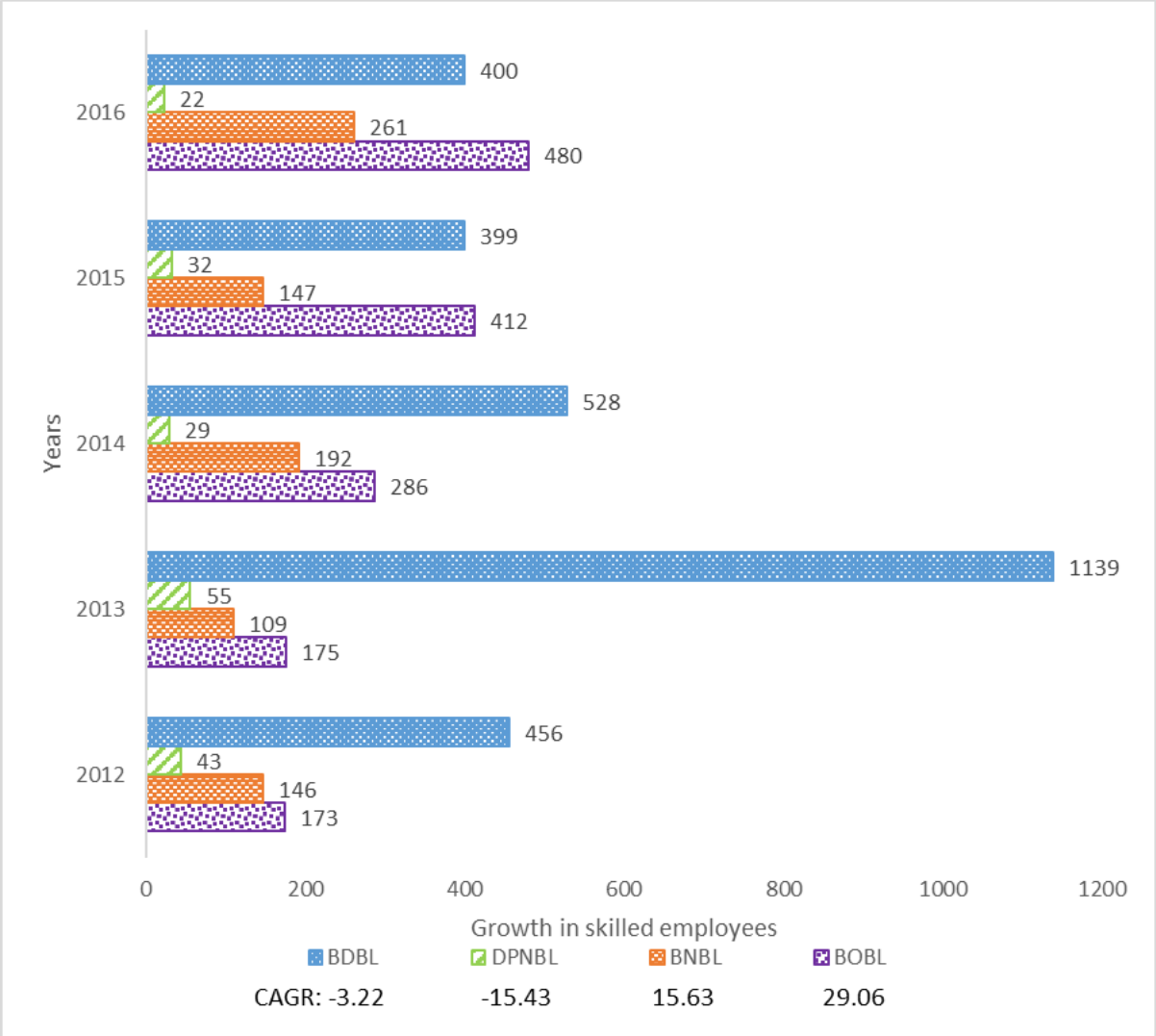

Figure 4.16: Growth in skilled employees

Table 4.42 highlights the exact numbers of employees that has undergone training for the period of study. TBL was excluded from this analysis due to the unavailability of adequate data. BDBL has the highest average (584.4) number of employees that has undergone training for the period of study. BDBL also has the highest SD value (314.49) as compared to remaining banks in Bhutan excluding TBL. It means that BDBL was unable to maintain

a constant number of employees for any skill enhancement program organised by the bank. BDBL also have a highest CV value (0.54) which shows a higher variation in the data from the mean number of skilled employees.

BDBL was followed by BOBL with a mean of 305.2 and then BNBL with the mean of 171. BOBL and BNBL also have a high SD value (138.53 & 58.28 respectively) which shows that both the bank was unable to maintain a constant number of employees available to undergo any training programs for the period of study. However, BNBL has the lowest CV value (0.34) compared to other banks in Bhutan except TBL, which shows a lower variation in the data from the mean number of skilled employees of BNBL.

On the other hand, DPNBL has the lowest mean value (36.2) as compared to other banks in Bhutan excluding TBL. DPNBL also have the lowest SD value (12.95) which shows that DPNBL was able to maintain a constant number of employees available to undergo any training program for the period of study.

Table 4.42: No. of Skilled Employees of banks in Bhutan

Year/ Measure	**BOBL**	**BNBL**	**DPNBL**	**BDBL**
2012	173	146	43	456
2013	175	109	55	1139
2014	286	192	29	528
2015	412	147	32	399
2016	480	261	22	400
Mean	**305.20**	**171.00**	**36.20**	**584.40**
Std. Deviation	**138.53**	**58.28**	**12.95**	**314.49**
CV	**0.45**	**0.34**	**0.36**	**0.54**
Source: Author's Calculation				

4.4.8 Testing of Hypothesis for Growth in Skilled Employees

The following null hypothesis related to the expenditure incurred banks of Bhutan on providing training to its employees as KPI under Learning and Growth perspective of BSC, has been tested using One-way ANOVA:

H_{16}: There is no significant difference in the average growth in skilled employees of banks in Bhutan.

The results of one-way analysis of variance are shown in Table 4.43. shows a significant relationship in the average growth in skilled employees of banks in Bhutan at a 5% level of significance. Therefore, we reject the null hypothesis and state that there is a significant difference in the average growth in skilled employees of banks in Bhutan.

Table 4.43: ANOVA Table for Growth in Skilled Employees

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	822396.4	3	274132.1	9.01	0.001
Within Groups	486640.8	16	30415.05		
Total	1309037	19			
Source: Author's Calculation					

The results of post Hoc Tukey HSD test are presented in Table 4.44. The average growth in skilled employees of BDBL was significantly different from the average growth in skilled employees of BNBL and DPNBL at 1% level of significance. There was no significant difference found in the mean growth in skilled employees of other banks.

Table 4.44: Post hoc Tukey HSD for Growth in skilled employees

(I) Name of Banks	(J) Name of Banks	Mean Difference (I-J)
BNBL	BDBL	-413.4***
DPNBL	BDBL	-548.2***
*** The mean difference is significant at the 0.01 level. The table presents only the pairs of banks with significant mean difference. *Source: Author's Calculation*		

4.5 Performance Based Rank Analysis of Banks under BSC Approach

4.5.1 Financial Perspectives

Table 4.45 presents the ranking of banks in Bhutan under CDR as the KPI. From the table, it can be seen that the performance of BNBL is the best among all the banks. The performance of BNBL under CDR as the KPI has improved over the period of study. BNBL

got ranked 1st in the year 2014, 2015 and 2016. It shows that BNBL was able to maintain a continuous growth in the credit deposit ratio. BDBL was the bank that had the second-best performance under the CDR as the KPI of financial perspective. However, it can be seen in the table that the performance of BDBL has declined over time. DPNBL ranked third followed by TBL with an average rank of 3.6 and 3.8 respectively. The bank that did not perform well under this KPI was BOBL which had the lowest rank among all the banks operating in the country.

Table 4.45: Ranks of Banks under CDR

Year/ Measure	**2012**	**Rank**	**2013**	**Rank**	**2014**	**Rank**	**2015**	**Rank**	**2016**	**Rank**	**Avg. Rank**
BOBL	0.74	3	0.66	4	0.55	5	0.60	5	0.57	5	4.4
BNBL	0.90	2	0.98	2	1.14	1	1.18	1	1.31	1	1.4
DPNBL	0.71	4	0.73	3	0.72	3	0.66	4	0.62	4	3.6
BDBL	1.33	1	1.20	1	0.82	2	0.90	2	0.85	3	1.8
TBL	0.65	5	0.64	5	0.60	4	0.88	3	1.11	2	3.8
Source: Author's Calculation											

For ranking of banks in Bhutan under Investment Deposit Ratio as KPI, only four banks have been considered. DPNBL is not added in this analysis due to the lack of related information on the bank. As shown in Table 4.46, the bank that had a maintained the performance under IDR was BOBL. The performance of BOBL was ranked first among four banks in Bhutan under IDR. BOBL ranked first for four years (i.e. 2013-2016) which shows that BOBL had highest investments made out of the total deposits that they received. BNBL was ranked 2nd with an average rank of 2.6. The IDR of BNBL on the other hand decline from the year 2012-2015. BNBL had the first rank in the year 2012 but the rank decreased to fourth in the year 2015. However, in the year 2016, the IDR ratio of BNBL improved. The performance of BDBL improved from the year 2014 as it can be seen in the table that BDBL had 4th and 3rd rank in the year 2012 and 2013 respectively. TBL was ranked 4th under IDR with an average rank of 3.4.

Table 4.46: Ranks of Banks under IDR

Year/ Measure	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. Rank
BOBL	0.046	2	0.096	1	0.074	1	0.239	1	0.151	1	1.2
BNBL	0.161	1	0.012	2	0.006	4	0.006	4	0.005	3	2.8
BDBL	0.001	4	0.002	3	0.012	3	0.018	3	0.003	4	3.4
TBL	0.002	3	0.001	4	0.035	2	0.029	2	0.024	2	2.6
Source: Author's Calculation											

Under the ROA as KPI of financial perspective shown in Table 4.47, the performance of BNBL is seen to be the highest among all the banks in Bhutan. It shows that BNBL was able to earn more profit after tax for the period of study. BOBL ranked second among all the banks in Bhutan with an average rank of 2.4. BDBL ranked third with an average rank of 3. The performance of BDBL, however, has declined over the period of study. BDBL had first rank in the year 2012 and 2013 but in the year 2014, the rank of BDBL declined to fourth. DPNBL has the fourth rank among all the banks in Bhutan followed by TBL.

Table 4.47: Ranks of banks under ROA

Year/ Measure	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. Rank
BOBL	2.23%	3	2.20%	2	2.17%	2	2.03%	3	2.09%	2	2.4
BNBL	2.52%	2	1.81%	3	2.55%	1	2.54%	1	1.98%	2	1.8
DPNBL	1.42%	4	1.54%	4	1.37%	5	1.51%	4	1.74%	3	4
BDBL	11.95%	1	2.67%	1	1.70%	4	2.06%	2	1.31%	4	3
TBL	0.92%	5	0.45%	5	0.75%	3	0.79%	5	0.89%	5	4.6
Source: Author's Calculation											

Table 4.48 shows the overall ranks of banks under the Interest Income to Total Assets Ratio as KPI of financial perspective. Under this KPI, the performance of BNBL was seen the best as it could be seen that for the last five years (2012-2016) the bank ranked first and second. It shows that BNBL was able to earn highest amount of interest as compared to other banks. The performance of DPNBL was ranked second among all the banks in Bhutan. It can be also seen that the performance of DPBNL under IITA had improved for the period of study. DPNBL ranked third under the IITA ratio with the average rank of 3.

However, The IITA ratio of BDBL has shown a declining trend over the period of study. BOBL and TBL were ranked fourth as it can be seen that the cumulative average rank assigned to these banks was 4th. However, it could be noted that the performance of BOBL has improved for the period of study, but the performance of TBL had declined over the period of study.

Table 4.48: Ranks of Banks under IITA ratio

Year/ Measure	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. Rank
BOBL	0.061	5	0.059	5	0.054	4	0.061	3	0.061	3	4
BNBL	0.072	2	0.076	2	0.074	1	0.078	1	0.097	1	1.4
DPNBL	0.064	4	0.073	3	0.065	2	0.063	2	0.063	2	2.6
TBL	0.065	3	0.06	4	0.055	3	0.032	5	0.031	5	4
BDBL	0.091	1	0.095	1	0.034	5	0.045	4	0.045	4	3
Source: Author's Calculation											

4.5.2 Customer Perspectives

Table 4.49 presents the ranks of banks under the TDTL ratio for 5 years. The average ranks have been derived by adding all the ranks of the banks and dividing it with the number of years. From this analysis, it can be seen that the overall performance of BOBL for five years (2012-2016) was better as compared to the other four banks. DPNBL and TBL have the same average rank for the period of study and have been ranked second. However, it can be seen that the performance of DPNBL has improved over the period of 2012-2016, but the performance of TBL has decreased for the same period of study. BDBL ranked third with an average rank of 3.8. On the other hand, BNBL, which is the second oldest bank operating in Bhutan had the lowest rank among all the banks on the basis of TDTL ratio.

Table 4.49: Ranks of banks using TDTL ratio

Year/ Measure	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. rank
BOBL	0.80	3	0.84	1	0.84	1	0.82	1	0.82	1	1.4
BNBL	0.72	4	0.70	4	0.52	5	0.54	5	0.49	5	4.6
DPNBL	0.83	2	0.82	3	0.75	4	0.79	2	0.80	2	2.6
BDBL	0.58	5	0.65	5	0.76	3	0.77	3	0.79	3	3.8
TBL	0.88	1	0.83	2	0.83	2	0.55	4	0.58	4	2.6
Source: Author's Calculation											

In Table 4.50, it can be seen that the BDBL was ranked at 1st position during the five years of study under TrDTD ratio as KPI because the TrDTD ratio of BDBL was the highest compared to all the banks operating in Bhutan. DPNBL was ranked second among all the banks in Bhutan for the period of study. It can be seen that the performance of DPNBL has improved for the period of study. TBL was ranked third with an average rank of 3.2. TBL has seen an increasing trend for the year 2012-2014, but the performance of TBL on TrDTD ratio decreased for the years 2015 and 2016. On the other hand, two of the oldest banks in Bhutan i.e. BNBL and BOBL had the lowest rank during the period of study. BNBL ranked fourth with an average rank of 3.4 and BOBL ranked last with an average rank of 3.8.

Table 4.50: Ranks of banks under TrDTD ratio

Year/ Measure	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. Rank
BOBL	0.15	5	0.21	5	0.19	5	0.21	4	0.22	4	3.8
BNBL	0.39	3	0.27	4	0.32	4	0.33	3	0.32	3	3.4
DPNBL	0.35	4	0.44	3	0.38	3	0.38	2	0.40	2	2.8
BDBL	0.76	1	0.73	1	0.79	1	0.81	1	0.79	1	1
TBL	0.63	2	0.69	2	0.74	2	0.15	5	0.04	5	3.2
Source: Author's Calculation											

Table 4.51 shows the overall ranks of banks under the Growth in Credit granted to customers as KPI of customer perspective. Under this KPI, the performance of BDBL was seen the best as it can be seen that for last four years (2012-2015) BDBL disbursed the highest amount of loans to the customers as compared to other banks. DPNBL was ranked second under this KPI among all the banks in Bhutan. The third rank was given to BOBL,

BNBL and TBL who had the same average rank of 3.6. However, it can be seen that among these three banks, BNBL had shown better performance for the period of study. TBL, on the other hand, had a negative growth in credit for the year 2013 and 2015 but had the highest amount of credit disbursed in the year 2016.

Table 4.51: Ranks of banks under Growth in Credit granted to customers

Year/ Measure	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. Rank
BOBL	11.45	3	-2.97	4	9.14	2	3.67	4	8.22	5	3.6
BNBL	7.69	4	1.72	3	-5.19	5	13.62	3	16.13	3	3.6
DPNBL	26.91	2	4.42	2	4.91	4	13.85	2	13.02	4	2.8
BDBL	40.32	1	36.67	1	27.03	1	28.58	1	16.98	2	1.2
TBL	3.63	5	-3.15	5	8.75	3	-6.22	5	59.51	1	3.6
Source: Author's Calculation											

Table 4.52 presents the ranks of banks under the GD as KPI of customer perspective. Under this KPI, the performance of BOBL was considered the best as compared with other banks. BOBL had the highest growth in deposits as compared to other banks during the period of study except in year 2015 when the growth in deposit was negative. BDBL had the second-best performance in terms of growth in deposits among all the banks in Bhutan. However, it could not maintain the continuous growth after 2014. BNBL ranked third with an average rank of 3. The growth in deposit for BNBL was negative in the initial two years of study. However, BNBL was able to improve its performance in the final three years of study. DPNBL ranked fourth with an average rank of 3.6 followed by TBL which was ranked fifth with an average rank of 3.8.

Table 4.52: Ranks of banks under Growth in Deposit

Year/ Measure	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. Rank
BOBL	6.23	1	7.79	1	30.60	1	-3.75	5	13.67	1	1.8
BNBL	-1.67	5	-29.75	5	7.87	2	9.87	1	4.72	2	3
DPNBL	0.21	3	0.03	3	0.06	5	0.24	2	0.21	5	3.6
BDBL	0.92	2	0.52	2	0.86	3	0.17	3	0.23	4	2.5
TBL	0.10	4	-0.02	4	0.16	4	-0.36	4	0.27	3	3.8
Source: Author's Calculation											

4.5.3 Internal Business Process Perspective

Under internal business process perspective of Balanced Scorecard, BPE, PPE, WBTI and WBTC ratio have been used as KPI for assigning ranks to the banks of Bhutan. Table 4.53 presents the rank analysis of banks in Bhutan based on BPE as KPI in internal business process perspective. The rank analysis for TBL could not be calculated as the data for 2012, 2013 was not available. The BPE of TBL had decreased to Nu. 58.32 million in the year 2015 from Nu. 78.46 million in 2014. TBL was able to recover its BPE in the year 2016 where the amount reached to Nu. 68.11million in 2016. The bank that was ranked first under the BPE was BNBL with an average rank of 1.4 followed by BOBL with average rank of 2. BDBL was ranked third with the highest BPE of Nu.73.94 million in 2016 during the period of study. DPNBL was the ranked fourth in terms of business per employee with average rank of 4.6.

Table 4.53: Business per Employees (Yearly figures in Nu. Million)

Banks/ Years	**2012**	**Rank**	**2013**	**Rank**	**2014**	**Rank**	**2015**	**Rank**	**2016**	**Rank**	**Avg. Rank**
BOBL	63.78	2	66.04	2	77.24	2	74.61	2	79.03	2	2
BNBL	96.8	1	86.97	1	73.74	3	79.77	1	87.31	1	1.4
DPNBL	0.91	4	0.98	4	0.96	5	1.12	5	1.26	5	4.6
BDBL	32.13	3	41.4	3	59.04	4	66.81	3	73.94	3	3.2
TBL		NA		NA	78.46	1	58.32	4	68.11	4	NA
Source: Author's Calculation											

Under PPE as KPI, only four banks have been considered and DPNBL is excluded due to the lack of related information on the bank. Also the data was not found for TBL for year 2012 and 2013. The figures are presented in Table 4.54 are in Nu. Million. BNBL had a continuous growth in the PPE and hence was ranked at first position. BOBL ranked second with an average rank of 2.2 followed be BDBL at third rank with an average rank of 2.6.

The rank to TBL was not assigned because the data for two years i.e. 2012 and 2013 was not available. However, it can be seen that TBL has the lowest profit per employee among all four banks in Bhutan for the year 2014-2016.

Table 4.54: Ranks of Banks under PPE (in Mil. Nu.)

Year/ Measure	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. Rank
BOBL	1.02	3	1.05	2	1.29	2	1.16	2	1.29	2	2.2
BNBL	1.79	2	1.14	1	1.7	1	1.73	1	1.53	1	1.2
BDBL	2.86	1	0.78	3	0.73	3	0.94	3	0.66	3	2.6
TBL	NA	-	NA	-	0.45	4	0.44	4	0.5	4	-
Source: Author's Calculation											

Table 4.55 presents the ranking of banks under the WBTI ratio as the KPI. It can be seen from the table that the rank assigned to BOBL and BDBL for the year 2013 is 1 because the mean WBTI ratio for these two banks was the same. The bank that performed best among all the banks in Bhutan under this KPI was BOBL. BOBL was able to keep a consistent check on WBTI ratio for the entire period of study. BNBL was ranked second with an average rank of 2.2. BDBL was ranked third but the performance of BDBL has declined over the period of study. In the initial years of study, the WBTI ratio of BDBL was the lowest among all the banks but its WBTI ratio declined over the period of study. DPNBL was ranked fourth followed by TBL with fifth rank under WBTI ratio as the KPI of internal business process of BSC approach.

Table 4.55: Ranks of banks under WBTI ratio

Year/ Measure	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. Rank
BOBL	0.38	3	0.39	1	0.15	1	0.18	1	0.15	1	1.4
BNBL	0.24	2	0.42	2	0.25	2	0.3	2	0.41	3	2.2
DPNBL	0.48	4	0.49	3	0.5	3	0.45	4	0.37	2	3.2
BDBL	0.11	1	0.39	1	0.47	4	0.38	3	0.53	4	2.6
TBL	0.63	5	1.23	4	0.7	3	0.9	5	0.86	5	4.4
Source: Author's Calculation											

Table 4.56 shows the overall ranks of banks under WBTC ratio as another KPI of internal business process perspective. Under this KPI, the performance of BOBL was seen the best among all the banks for the period of study. BDBL had the second-best performance among all the banks in Bhutan with an average rank of 1.8.

Table 4.56: Ranks of Banks under WBTC ratio

Year/ Measure	**2012**	**Rank**	**2013**	**Rank**	**2014**	**Rank**	**2015**	**Rank**	**2016**	**Rank**	**Avg. Rank**
BOBL	21	1	21.44	1	26.38	2	26.1	2	23.53	1	1.4
BNBL	15.05	3	16.98	2	14.38	4	17.53	5	14.68	4	3.6
DPNBL	12.83	4	12.5	4	18.17	3	19.46	4	19.05	3	3.6
BDBL	20.12	2	14.67	3	41.94	1	30.84	1	21.09	2	1.8
TBL	10.16	5	8.77	5	9.04	5	23.7	3	12.2	5	4.6
Source: Author's Calculation											

BNBL and DPNBL had the same average rank for the period of study. However, it can be seen that from the year 2014-2016 the performance of BNBL has declined but DPNBL was able to maintain stable growth for the period of study. The lowest-performing bank based on WBTC ratio in Bhutan is TBL with an average rank of 4.6.

4.5.4 Learning and Growth Perspectives

Expenditure on training of employees, no of skilled employees, no. of ATMs and no. of branches and extensions of the bank are the selected KPIs that reflect the bank's investment on skill enhancement on its employees and actions towards future growth. Table 4.57 presents the ranking of banks with respect to expenditure incurred by the banks on the training of employees. The investment by BNBL on the skill enhancement of its employees has been better as reflected in average rank of 1.8 and hence was ranked at first position. DPNBL and BOBL were at 2nd and 3rd positions respectively in terms of making investment on providing training to their employees. BDBL was ranked at 4th position followed by the TBL at 5th position with average rank of 3.8 and 4.6 respectively.

Table 4.57: Ranks of banks under Expenditure on the training of employees (Nu. in Million)

Year/ Measure	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. Rank
BOBL	60	1	20.2	2	20.27	2	7.59	4	14.08	4	2.6
BNBL	17.51	2	21.47	1	23.8	1	23.19	3	26.44	2	1.8
DPNBL	8.27	3	8.27	3	15.3	3	30.52	1	26.77	1	2.2
BDBL	0.87	5	1.21	5	11.96	4	23.31	2	22.62	3	3.8
TBL	1.41	4	1.49	4	0.69	5	1.89	5	1.69	5	4.6
Source: Author's Calculation											

The ranking of banks based on Growth in Skilled employees is done only for four banks and TBL is excluded from analysis because of unavailability of relevant information as shown in Table 4.58. BDBL was ranked at first position with an average rank of 1.4. BDBL has the highest increase in skilled employees in the year 2013 where the number of employees that underwent training was 1139. BOBL and BNBL ranked second and third respectively though they have the highest number of employees. The bank that did not perform well was DPNBL who had an average rank of four for the five years of study.

Table 4.58: Ranks of Banks Based on the Growth of Skilled Employees

Year/ Measure	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. Rank
BOBL	173	2	175	2	286	2	412	1	480	1	1.6
BNBL	146	3	109	3	192	3	147	3	261	3	3
DPNBL	43	4	55	4	29	4	32	4	22	4	4
BDBL	456	1	1139	1	528	1	399	2	400	2	1.4
Source: Author's Calculation											

Table 4.59 presents the growth in ATMs of Banks in Bhutan for the period of study. BDBL the number of years considered for BDBL was only four years because of unavailability of data for the year 2012. It can be seen that the first rank is assigned to BOBL which had highest outreach in terms of the number of ATMs located throughout the country. BOBL was followed by BNBL with the total 40 ATMs located in the country in the year 2016. The third rank was assigned to BDBL but as mentioned earlier the number considered for the calculation was only four years. However, the number of ATMs of BDBL has increased

during the last four years of study. DPNBL was ranked fourth with 18 ATMs followed by TBL at fifth position which had the lowest number of ATMs located in the country.

Table 4.59: Ranking based on Growth in ATMs (yearly figures in Numbers)

Year/ Measure	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. Rank
BOBL	42	1	62	1	72	1	78	1	78	1	1
BNBL	29	2	31	2	33	2	38	2	40	2	2
DPNBL	13	3	14	3	16	3	17	4	18	4	3.4
BDBL	NA	NA	5	5	15	4	31	3	32	3	3.75
TBL	9	4	10	4	10	5	10	5	12	5	4.6
Source: Author's Calculation											

Table 4.60 presents the rank analysis of banks in Bhutan based on the number of branches and extensions in the country. The first rank was assigned to BDBL because of the highest number of branches and extensions among all the banks operating in the country during the period of study.

Table 4.60: Ranking based on Number of Branches and Extensions of banks in Bhutan

Banks/ Years	2012	Rank	2013	Rank	2014	Rank	2015	Rank	2016	Rank	Avg. Rank
BOBL	27	2	28	2	33	2	43	2	44	2	2
BNBL	23	3	24	3	28	3	31	3	33	3	3
DPNBL	5	4	5	4	5	4	6	4	6	4	4
BDBL	33	1	38	1	50	1	50	1	50	1	1
TBL	3	5	4	5	4	5	4	5	5	5	5
Source: Author's Calculation											

The second rank was assigned to the BOBL, which had the second highest numbers of branches and extensions followed by the BNBL, which was ranked as third. DPNBL rank fourth with only 6 numbers of branches and extensions in the country. TBL was ranked fifth in terms of no. of branches and extensions as KPI under learning and growth perspective.

Chapter 5. Findings, Suggestions and Conclusion

5.1 Findings of the Study

The financial perspectives are undoubtedly the most important parameters to measure the performance of banks. However, profit-making is one of the objectives out of various objectives of a banking institution. Therefore, measuring the performance of banks solely by the financial perspective will not present a complete image of a banking organisation. For example, the bank may also have the objective of expanding its business to other areas (i.e. within the geographical boundary of a country of outside the geographical boundary of a country), introduce various products to satisfy the needs of its customers and many more. In this case, financial indicators will not serve the purpose to measure its other objectives. In such cases, tools like balanced scorecard come in play. With this background, various KPIs were formed to measure the performance of banks in Bhutan using BSC. The findings with respect to the performance of each bank under BSC approach are given below in the following sections:

5.1.1 Performance of Bank of Bhutan Limited (BOBL)

Bank of Bhutan Limited is the oldest bank operating in Bhutan, and it is the only bank in the country to implement a modified balanced scorecard to measure its performance. But, under financial perspective of BSC, BOBL could not perform better as compared to other banks for the period of study. BOBL has to improve its performance under financial perspective. The performance of BOBL under financial perspective was evaluated using four KPIs viz. credit deposit ratio, investment deposit ratio, return on assets and interest income to total assets ratio. The credit deposit ratio of BOBL has shown a decreasing trend. It means that the BOBL is not able to disburse the credit to the public at an increasing rate.

On the other hand, investment deposit ratio of BOBL has increased. This shows that BOBL has invested its money received from its customer on government securities and bonds rather than disbursing it in the form of loans and advances (credit). It can also be said that BOBL has invested its deposits more on safer investment opportunities as defined in table 3.1; investment deposit ratio is safer than credit deposit ratio as it bears less risk. Therefore, *it can be said that BOBL used a conservative approach in doing the business*. Consequently, return on assets for BOBL has also decreased for the period of study. It means that BOBL was unable to earn more profit from the assets they have invested. However, BOBL was unable to earn from the investment in assets, yet it had the second highest average ROA as compared to other banks. BOBL also showed a decreasing trend in the interest income to total asset ratio. In general, the interest earned from investment activities is lower than the interest earned from credit granted to customer, and as per the data collected, BOBL has less amount of interest earned from credit activities than the investment activities. Finally, it has been found that, *BOBL is not doing good under financial perspective of BSC approach.*

Under Customer perspectives, the performance of BOBL was measured by five KPIs namely, total deposit to total liabilities ratio, term deposits to total deposits ratio, growth in credit granted to customers and growth in deposits. There was a stable growth in total deposit to total liabilities ratio for BOBL with the highest mean value compared with the other four banks competing in Bhutan. The ratio of term deposit to total deposit also increased during the period of study. It is an indicator that BOBL received more of term deposit and had the highest CAGR in a term deposit to total deposit ratio as compared with other banks. But, the growth in credit granted to customers by BOBL showed a declining

trend. However, the growth in deposit for BOBL increased by 17%. *It can be concluded that customers are showing interest towards the BOBL, but the bank is not able to meet the customers' expectations.*

Performance of BOBL under internal business process perspectives was determined by four KPIs namely business per employees, profit per employee, wage bill to total income ratio and wage bill to total expenses ratio. BOBL had the second highest mean value of business per employee. It indicates that the employees are efficient enough to bring more business for BOBL as business per employee shows the performance of employee for the bank. Profit per employee for the BOBL has increased for the period of study. It is the only bank that has a positive compounded annual growth rate compared with other banks operating in Bhutan. Wage bill to total income ratio presents the contribution of employees in the banking operation of the bank. As mentioned in Table 3.1, a decrease in this ratio with an increase in income of the bank for the same period shows that the employee has played a vital role in banking operation. BOBL is one of the banks out of five banks that have fulfilled this criterion. Therefore*, it can be said that the employee's efficiency of BOBL is better when compared with other four banks operating in Bhutan*. Wage bill to total expenses ratio of Bank of Bhutan Limited has decreased over the period of study.

The performance of BOBL under learning and growth perspective was also measured using four KPIs viz. growth in ATMs, growth in branches and extensions, expenditure on the training of employee and growth in skilled employees. Growth in ATMs shows that BOBL has the highest number of ATMs located in the country. It also indicates that BOBL has maximum reach to customers in the country. BOBL also has the highest number of branches and extensions located in the country. However, *BOBL is not serious about*

learning and growth of its employees as reflected in its decreased expenditure on the skill enhancement of the employees. The amount invested in the training of employee has decreased over time however; BOBL has the highest average expenditure incurred on training of its employee as compared to other banks in Bhutan. BOBL also has the second-highest average no. of skilled employees. It indicates that the operation of the bank mainly depends upon the skills of its employees.

Based on ranking, under the non-financial perspective of BSC, the performance of bank of Bhutan limited was better under two perspectives i.e. under internal business process and Customer perspective. BOBL was ranked first under two out of four KPIs of customer perspectives and internal business process perspectives. The overall performance of BOBL was seen satisfactory under the non-financial perspectives of BSC.

5.1.2 Performance of Bhutan National Bank Limited

Under financial perspective, the credit deposit ratio of BNBL has increased for the period of study (i.e. 2012-2016). It shows that BNBL has increased the amount of credit disbursed to the public. On the other hand, investment deposit ratio of BNBL has decreased for the same period (i.e. 2012-2016). This shows that BNBL has invested a minimum amount of money received from its customer on government securities and bonds. Return on assets for BNBL has also decreased for the period of study (i.e. 2012-2016). It means that BNBL was unable to earn more profit from the assets. Though BNBL was unable to earn return from the investment of its assets, yet it had the highest average ROA as compared to other banks operating in Bhutan. BNBL showed an increasing trend in the interest income to total asset ratio. BNBL was the only bank to have a positive CAGR in interest income to

total asset ratio. Overall, *BNBL was the best bank in terms of its performance under financial perspective of BSC.*

Under customer perspective, the total deposit to total liabilities ratio and term deposit to total deposit ratio have declined for BNBL for the year 2012-2016. BNBL is using an aggressive approach in granting the credit and hence the growth in credit granted to customers has increased during the period of study. However, BNBL has shown a negative trend in the growth in the deposits. Overall, *the performance of BNBL is not satisfactory under customer perspective of BSC approach.*

Under internal business process perspective, BNBL had the highest average of business per employee, however it had a declining trend. It indicates that the employees are efficient enough to bring more business for BNBL but, the efficiency of the employee of BNBL has declined during the period of study (i.e. 2012-2016). Profit per employee of BNBL also declined for the period year 2012-2016. However, BNBL has the highest mean value of the profit per employee. There is an increasing trend in the wage bill to total income ratio for BNBL. Wage bill to total cost ratio of BNBL has increased over the period of study (i.e. 2012-2016). It shows that BNBL has increased its training expenses for employees.

Under learning and growth perspective, the growth in ATMs shows that BNBL has the second-highest number of ATMs located in the country. There was an increasing trend in the growth in ATMs for BNBL. BNBL also had the second-highest number of branches and extensions located in the country. BNBL showed a decline in the expenditure incurred in the skill enhancement of the employees. However, BNBL had the second highest average expenditure incurred on the training of employees. The number of skilled employees also increased for BNBL during the period of study.

The balanced scorecard based performance analysis indicates that *the performance of the BNBL was best under the financial perspective of the balanced scorecard*. *BNBL also showed a better performance in Internal Business Process perspectives of BSC as compared with other banks operating in Bhutan. However, the performance of BNBL was poor under the customer perspectives. BNBL is also not performing well in the Learning and Growth perspectives.*

5.1.3 Performance of Druk Punjab National Bank Limited

Though being the second private bank in Bhutan, DPNBL's performance was not good among all the banks in Bhutan. Financially the performance of DPNBL was seen to be poor. Out of five KPIs, DPNBL was ranked second in three KPIs under customer perspective. DPNBL did not perform well under internal business process perspective and learning and growth perspective as well.

The credit deposit ratio of DPNBL has decreased for the period of study (i.e. 2012-2016). On the other hand, investment deposit ratio of DPNBL was not calculated for this because of the unavailability of data from DPNBL. Return on assets for DPNBL has also decreased for the period of study (i.e. 2012-2016). It means that DPNBL was unable to earn more profit from the assets invested. DPNBL has the highest negative compounded annual growth rate value of return on assets among all the banks operating in Bhutan. DPNBL has a decreasing trend in the interest income to total asset ratio.

Under customer perspective, DPNBL had the second highest mean value of the total deposit to total liabilities ratio. However, there is negative growth of total deposit to total liabilities ratio for DPNBL for the year 2012-2016. DPNBL has shown an increasing trend in the ratio of term deposit to total deposit during the period of study (i.e. 2012-2016). The

growth in credit granted to customers by DPNBL had decreased for the year 2012-2016. No growth trend was seen in the deposit of DPNBL.

DPNBL had the lowest mean value of the business per employee as KPI under internal business process perspective. However, the amount of business per employee had increased for DPNBL for the year 2012-2016. It indicates that the employees of DPNBL are becoming more efficient and bringing in more business for the bank. There is an increasing trend in the wage bill to total income ratio for DPNBL. The cost of training on employees over the total cost of the bank had increased for the period of study.

DPNBL has 18 ATMs located in Bhutan. The bank did not show much growth in case of the total number of ATMs located in the country. DPNBL also could not show a substantial growth in the number of branches and extensions. DPNBL had invested more of its money on the skill enhancement of its employee. On an average, DPNBL had invested Nu. 17.826 million in the training of its employee. There was a decline in the number of skilled employees working with DPNBL.

5.1.4 Performance of Bhutan Development Bank Limited

BDBL has performed better in customer perspectives and Learning and Growth perspectives. Under customer perspectives, the performance of BDBL was considered best in two out of four KPIs. Under learning and growth perspectives also, BDBL was ranked first in two out of four KPIs. The financial performance of BDBL was poor for the period of study. The performance of BDBL under internal business process perspective was better as compared to its performance in financial perspectives.

The performance of BDBL under non-financial perspectives was comparatively better than its performance on financial perspectives. Under the customer perspective, BDBL ranked first in two out of four KPIs and it also ranked first in two out of four KPIs under learning and growth perspectives.

Under financial perspective, BDBL had the decline in the credit deposit ratio however it had the second highest mean value of credit deposit ratio as compared with other banks. BDBL had the highest growth rate in the investment deposit ratio during the period of study. BDBL had a declining trend in the return on assets and interest income to total asset ratio.

Under customer perspective, BDBL had the highest growth in the total deposit to total liabilities ratio and term deposit to total deposit ratio. It had the highest average of term deposit to total deposit ratio among all the banks operating in Bhutan. BDBL had the declining trend in the credit granted to customers and in growth in deposits as well during the period of study.

Under internal business process perspective, BDBL had the highest growth rate in business per employee. it showed an increasing trend in profit per employee as well. BDBL had the highest growth in the wage bill to total income and wage bill to total cost ratio.

Under learning and growth perspective, there was an increasing trend in the growth in ATMs during the years 2013-2016 for BDBL. BDBL was ranked at first position in terms of growth in branches and extensions in the country. BDBL had the highest growth in expenditure on the training of employee among all the banks in Bhutan. However, the growth in skilled employees for BDBL declined for the years 2012-2016.

5.1.5 Performance of Tashi Bank Limited

From the analysis, it was found that the performance of TBL was not satisfactory under four perspectives of BSC. The overall ranking assigned to TBL was fifth based on its performance during the period of study. TBL has performed poorly in three out of four KPIs in financial perspectives. However, the bank was ranked 2nd in investment to deposit ratio. Under non-financial perspectives, the performance of TBL was not seen to be better than other banks. However, TBL is one of the two banks in Bhutan that had decline in wage bill to total income ratio and the profit had increased for the same period. This shows that the employee of TBL were able to bring in more profit for the bank. TBL has the lowest performance under the Learning and Growth perspective of BSC as compared to other banks in Bhutan. Since it is the newest bank in the country, it has high potential to grow. Implementing BSC as a performance measurement tool, TBL can excel more in future.

Under the financial perspective, out of four KPIs TBL was ranked in three KPI as 3rd, 4th and 5th. Under customer perspective, except TDTL (2nd rank), the TBL could not perform satisfactorily in terms of other KPIs. Under internal business process perspectives, TBL was ranked 4th and 5th in two out of four KPIs. Finally, under learning and growth perspective, TBL rank last in all the KPIs. TBL had the highest growth in the credit deposit ratio. It shows that for the period of study (i.e. 2012-2016) TBL had given more credit from the total amount that the bank had received as deposits from its customers. There was an increasing trend in the investment deposit ratio of the TBL. It indicates that TBL had invested more in government bonds and securities. However, the mean value of investment deposit ratio was lowest as compared with the other banks in Bhutan. TBL was the only

bank that had a growth in the return on asset. TBL had the highest declining rate in the ratio of interest income to total assets ratio.

Under customer perspective, TBL had the highest declining rate in total deposits to total liabilities ratio. It indicates that the total deposits that the bank had received from its customers had decreased during the period of study. TBL had the highest negative growth rate in term deposit to total deposit ratio. However, TBL had the highest growth in credit granted to customers. TBL also had an increasing trend in deposits for the year 2012-2016.

Under internal business process perspective, business per employee had decreased for the year 2014-2016. TBL had an increasing trend in the profit per employee for years of available data. The wage bill to total income ratio and Wage bill to total cost ratio for TBL had decreased for the year 2012-2016 but not at satisfactory rate as the other banks.

Under learning and growth perspective, TBL had seen growth in the number of ATMs located in the country. However, it had the lowest growth rate among all the banks operating in Bhutan. TBL also had the highest growth rate in branches and extensions indicating its efforts for increasing the outreach in the country. However, TBL had the lowest average in all the KPIs under learning and growth perspective as compared to other banks in Bhutan.

The findings of this study are similar to the findings of Nouaili et al.,(2015) and Ongore & Kusa, (2013), who have stated that the size of the bank plays a vital role in delivering better services to its public. In this study also, the bank that had the best performance as compared to other bank was BNBL. BNBL has the second-highest branches in the country. It is the second oldest and the first private bank of Bhutan.

On the other hand, TBL had the lowest performance among all the banks in Bhutan. TBL is the newest bank in the country and has the lowest number of branches and extensions presently operating in the country.

The findings of the study are also in accordance with the findings of Khalfaoui & Saada, (2015) and Nassreddine et al., (2013) who stated that giving higher loans and advance to the customer results in low liquidity position of banks. It also increases the chance of decrease in profit if the loan becomes NPL for the bank. TBL had disbursed higher amount as loan to its customer for 2015-2016. This is one of the reasons for decrease in the cash and bank balance of TBL for the same period of time. This resulted in decrease of loan and loan product to its customers in the subsequent years.

Table 5.1 shows the summary of rankings assigned to the banks in Bhutan under various perspectives of BSC. This section presents the summarised findings on the performance of banks in Bhutan under each perspective of BSC.

5.1.6 Overall Ranking of Banks in Bhutan under BSC Approach

Table 5.1 presents the overall ranking of banks in Bhutan under BSC approach. From the table it can be seen that BOBL was ranked first with the median rank of 2 among all the banks in Bhutan. It shows that BOBL is the best bank in Bhutan under the BSC approach. BNBL ranked second with the median rank of 2.5 followed by BDBL with the median rank of 2.6 and DPNBL with the median rank of 3.5. The bank that did not perform well under BSC approach was TBL which is the newest bank in Bhutan.

Table 5.1: Summary of Overall Ranking of Banks in Bhutan under BSC Approach

BSC Perspective	**KPIs**	**Overall Ranking**				
		BOBL	**BNBL**	**DPNBL**	**BDBL**	**TBL**
Financial Perspective	*CDR*	4.4 (5)	1.4 (1)	3.6 (3)	1.8 (2)	3.8 (4)
	IDR	1.2 (1)	2.8 (3)	NA	3.4 (4)	2.6 (2)
	ROA	2.4 (2)	1.8 (1)	4 (4)	3 (3)	4.6 (5)
	IITA	4 (4)	1.4 (1)	2.6 (2)	4 (4)	3 (3)
Customer Perspective	*TDTL*	1.4 (1)	4.6 (4)	2.6 (2)	3.8 (3)	2.6 (2)
	TrDTD	3.8 (5)	3.4 (4)	2.8 (2)	1 (1)	3.2 (3)
	GC	3.6 (3)	3.6 (3)	2.8 (2)	1.2 (1)	3.6 (3)
	GD	1.8 (1)	3 (3)	3.6 (4)	2.5 (2)	3.8 (5)
Internal Business Process	*BPE*	2 (2)	1.4 (1)	4.6 (4)	3.2 (3)	NA
	PPE	2.2 (2)	1.2 (1)	NA	2.6 (3)	NA
	WBTI	1.4 (1)	2.2 (2)	3.2 (4)	2.6 (3)	4.4 (5)
	WBTC	1.4 (1)	3.6 (3)	3.6 (3)	1.8 (2)	4.6 (4)
Learning & Growth	*ETE*	2.6 (3)	1.8 (1)	2.2 (2)	3.8 (4)	4.6 (5)
	GSE	1.6 (2)	3 (3)	4 (4)	1.4 (1)	NA
	ATMs	1 (1)	2 (2)	3.4 (3)	3.75 (4)	4.6 (5)
	GBE	2 (2)	3 (3)	4 (4)	1 (1)	5 (5)
Median Rank		2	2.5	3.5	2.6	3.8
Overall Ranking		1	2	4	3	5

Note: Figures in parenthesis are the absolute ranks based on average ranking;
NA-Data not available
Source: Author's Calculations

5.1.7 Summary of Testing of Hypotheses

Based on the results of testing of hypotheses in each perspective of BSC approach about the significant difference in the respective KPIs, it was found that the null hypotheses related to Return on Asset (ROA) as KPI in financial perspective, growth in Credit (GC) as KPI in customer perspective and profit per employee (PPE) as KPI in internal business process perspective were not rejected at 5% level of significance. It implies that there was no significant mean difference in the ROA and Growth in credits of banks in bhutan. The other hypotheses in each perspective were rejected as shown in Table 5.2.

Table 5.2: Summary of Testing of Hypotheses

BSC Pespective	Null Hypotheses	F-Statistics	Decision on Ho at 5% LoS
Financial Perspective	*H_{01}: There is no significant difference in the average Credit Deposit Ratio (CDR) of banks in Bhutan.*	8.12	Rejected
	H_{02}: There is no significant difference in the average Investment Deposit Ratio (IDR) of banks in Bhutan.	3.92	Rejected
	H_{03}: There is no significant difference in the average Return on Assets (ROA) of banks in Bhutan.	1.69	Failed to Reject
	H_{04}: There is no significant difference in the average Interest Income to Total Asset Ratio (IITA) of banks in Bhutan.	4.49	Rejected
Customer Perspective	*H_{05}: There is no significant difference in the average TDTL ratio of banks in Bhutan.*	6.43	Rejected
	H_{06}: There is no significant difference in the average TrDTD ratio of banks in Bhutan.	8.09	Rejected
	H_{07}: There is no significant difference in the average Growth in Credit (GC) granted to customers by banks in Bhutan.	2.28	Failed to Reject
	H_{08}: There is no significant difference in the average Growth in Deposits (GD) received from customers of banks in Bhutan.	5.34	Rejected
Internal Business Process	*H_{09}: There is no significant difference in the average BPE of banks in Bhutan.*	49.44	Rejected
	H_{10}: There is no significant difference in the average PPE of banks in Bhutan.	2.28	Failed to Reject
	H_{11}: There is no significant difference in the WBTI ratio of banks in Bhutan.	21.45	Rejected
	H_{12}: There is no significant difference in the average WBTC ratio of banks in Bhutan.	4.40	Rejected
Learning & Growth	*H_{13}: There is no significant difference in the outreach of banks in Bhutan measured in terms of average no. of ATMs under learning & growth perspective of BSC approach.*	31.07	Rejected
	H_{14}: There is no significant difference in the outreach of banks in Bhutan measured in terms of average no. of branches and extensions under learning & growth perspective of BSC approach.	53.19	Rejected
	H_{15}: There is no significant difference in the average expenditure incurred by banks in Bhutan in providing Training to the Employees.	3.25	Rejected
	H_{16}: There is no significant difference in the average growth in skilled employees of banks in Bhutan.	9.01	Rejected
Source: Author's compilation based on the results of testing hypotheses			

5.1 Suggestions

Based on the findings mentioned for the study the following suggestions are given.

1. The performance of BNBL was seen well in 2 out of 4 perspectives (i.e. financial and internal business process perspectives). BNBL being the second oldest bank had a decrease in the deposits received during the period of study. It is essential for the bank to bring up new products to attract customers. The amount of term deposit that the bank received against total deposits was higher compared to other banks. BNBL may grab this competitive advantage that they have against other banks to improve their total deposits to liabilities ratio.
2. The credit to deposit ratio for Tashi bank Limited was seen to be very high. The bank has to keep it in the range of an ideal CDR ratio. If the trend continues, the bank will be facing a liquidity problem in the near future. It is suggested to the bank that they limit the loans that they grant to their customer.
3. The training cost of the employees for BOBL has decreased over time. BOBL, being the oldest bank, has the highest number of employees working in all over the country. To keep their employees updated with new technology the employee must be trained.
4. BOBL has the highest number of branches and extensions in the country with the largest customer base which can be used as an advantage to improve its financial performance. On the other hand, BOBL also has a large number of skilled employees who can help the bank to attract more customers.

5.2 Conclusion

The traditional methods of evaluating the performance of banks are based on only those parameters that can be measured (e.g. financial parameters). However, these parameters do not give a holistic approach to the actual performance of a bank. Most of the time, it can be seen that the banks perform very well under the financial aspects but the non-financial aspects of banks are completely neglected. For example, the financial ratio analysis may only measure the financial aspects of banks but it will not be able to show the productivity of employees that are working in the bank. Due to these drawbacks of traditional performance measurement system, we employed a comprehensive performance evaluation approach i.e. balanced scorecard which not only measures the financial performance of banks but also takes into the consideration of those nonfinancial aspects of banks that are equally important while evaluating the performance of banks.

The performance of BOBL was seen superior among all the banks in Bhutan measured by BSC. The performance of BOBL was seen best under the KPI internal business process perspectives. It can be said that the performance of BOBL is better under the non-financial aspects of the bank.

On the other hand, TBL, the newest bank in Bhutan performed lowest in almost all the KPIs under the four perspectives of BSC. It is advisable to TBL that to improve their performance, the bank must use an innovative tool like BSC.

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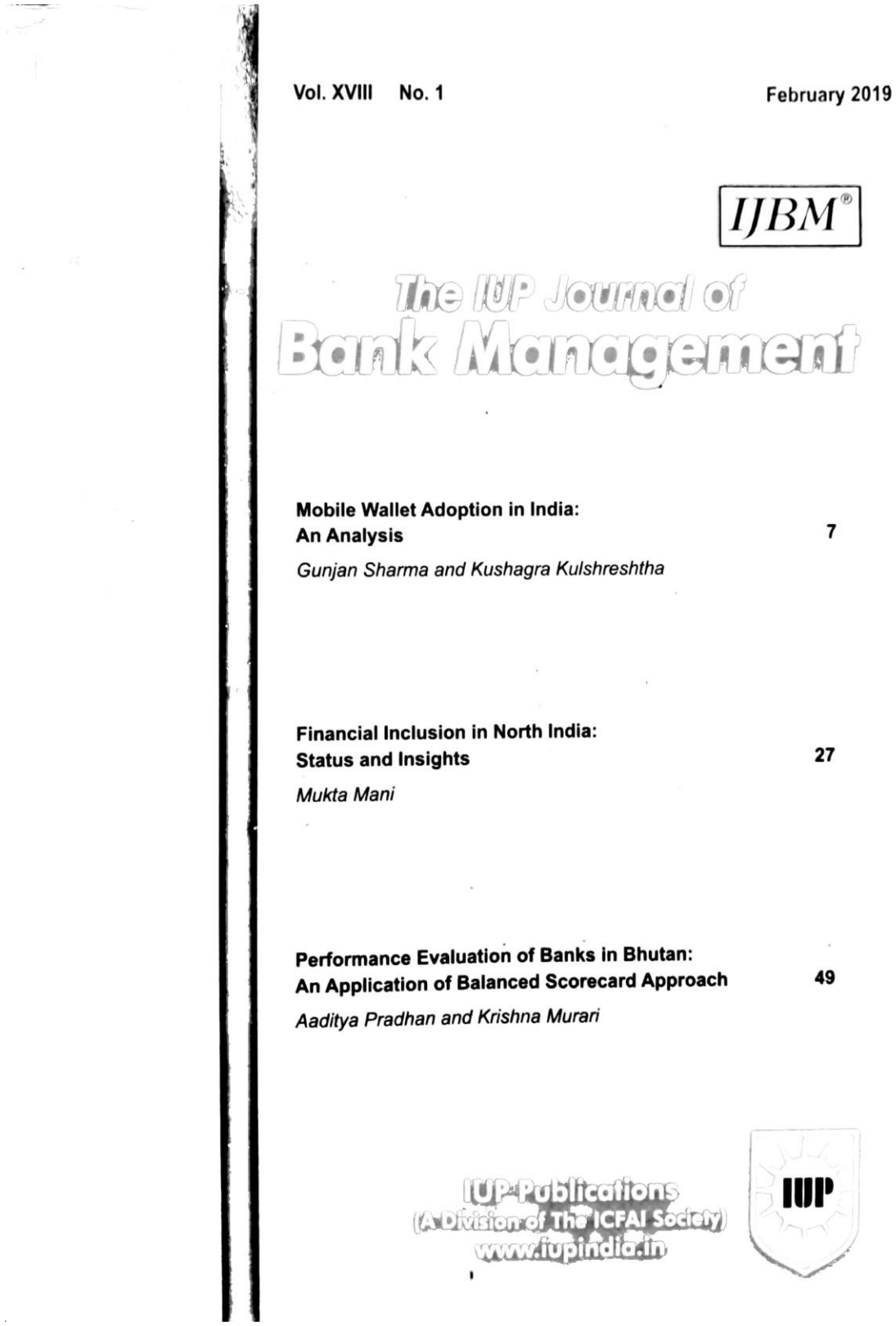
Annexure



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Performance Evaluation of Banks in Bhutan: An Application of Balanced Scorecard Approach

Aaditya Pradhan* and Krishna Murari**

The performance of an organization in the modern era is not only measured by its financial parameters, but also by other key non-financial indicators. The Balanced Scorecard (BSC) approach is extensively used to have a holistic view of how the firm is performing in terms of financial and non-financial aspects. This study tries to compare the performance of banks operating in Bhutan using BSC. The two oldest banks in Bhutan, i.e., Bank of Bhutan Limited (BOBL) and Bhutan National Bank Limited (BNBL), are chosen for performance evaluation. The data collected for this study is from secondary sources and the analysis is done using descriptive statistics, t-test, and Compounded Annual Growth Rate (CAGR) for the four key perspectives of BSC, i.e., financial, customer, internal business process and learning and growth. The results reveal that the performance of BOBL is comparatively better than BNBL under all perspectives of BSC. However, the results show that BOBL is lagging in internal business process perspective of BSC. Therefore, it is important for BOBL to concentrate more on improving its performance on internal business process perspective.

Introduction

In recent times, performance measurement system has gained importance because of cutthroat competition not only in business world, but also in financial services sector. A performance measurement system works as an information system that enables an organization to establish a communication channel between all the organizational units. This helps the organization in formulating organizational targets. Performance measurement system also provides input and output measures. Input measures track the resources that an organization uses to provide a service such as number of bank branches, number of employees, or the number of buildings operated in or ATMs installed. Output measures are indicators of the amount of service provided such as the number of accounts opened, the amount of loans and advances disbursed, or the investment made by the banks.

* Research Scholar, Department of Management, Sikkim University, Gangtok, Sikkim 737102, India. E-mail: aadityapd1990@gmail.com

** Associate Professor and Head, Department of Management, Sikkim University, Gangtok, Sikkim 737102, India; and is the corresponding author. E-mail: krishnamurari9@gmail.com

Several performance measurement approaches are used to assess the performance of the organization for the use of the management and various other stakeholders. These include traditional performance measurement using financial measures of productivity, effectiveness, quality and timeliness, financial statements and ratio analysis, Data Envelopment Analysis (DEA) and Balanced Scorecard (BSC).

Traditional performance measurement system does not provide the user a complete picture of the organization's performance. For example, the financial measures used to determine the performance of banking sector have been criticized by many practitioners. It is said that the performance of any organization cannot merely be determined by financial measures. Financial measures can only determine the performance of an organization for a short period of time. The traditional methods of performance measurement lacked on various fronts. For example, the companies that used financial measures for performance measurement considered only the financial gains and losses as the performance indicators for their company. These measures had no concern for the non-financial performance indicators that were as equally important as financial indicators. Besides, financial measures of performance are criticized for being short-term oriented, considering past performance, being non-consistent with current business's environment, focusing on tangible assets, lacking predictive power, and being irrelevant for all levels in the organizations.

The BSC approach to performance measurement is an advanced method created in the early 1990s to determine whether the activities of an organization are meeting its objectives in terms of vision and strategy. It was first introduced by David Norton and Robert Kaplan in 1992 (Kaplan and Norton, 1992). BSC is a measurement system that considers all aspects of an organization and also the non-financial aspects of an organization along with financial aspects. BSC is intended not only as a strategic measurement system, but also as a strategic control system which can align departmental and personal goals to overall strategy (Nørreklit, 2000). The performance of an organization under BSC is measured considering four perspectives, i.e., financial, customer, learning and growth and internal business process. These perspectives are formulated considering the operation of an organization. A brief introduction to the nature and scope of these perspectives is inevitable here to understand the application of BSC approach.

- Financial Perspective: It helps an organization to analyze whether the strategies implemented by the organization have improved the financial performance. It also helps in measuring the financial outcome of the organization.
- Customer Perspective: It is one of the major indicators for any service-oriented organization like banks. It helps the organization in measuring the satisfaction, time taken to handle the grievances of customers by the organization and the cost associated with the services provided by the organization. Customer perspectives also help the organization in introducing new products to the market with the help of customer feedback.
- Internal Business Process: It deals with the process of business operations in the organization. A properly maintained business process eliminates any bottlenecks arising in the organization. BSC helps an organization to evaluate the business process

of an organization through various Key Performance Indicators (KPIs) formulated under it. This in turn helps the organization in providing flawless service to its customer.

- Learning and Growth Perspective: It deals with the employee and business of an organization. In the words of Visalakshi and Kasilingam (2015), learning and growth perspective mainly deals with the human resource of an organization. The employees in an organization need to constantly improve their knowledge and skills based on the changing technology and environment that the organization is operating in.

Thus, the use of financial and non-financial indicators in BSC approach presents a strong interest in evaluating banks' performance. However, the BSC, as a performance evaluation tool, did not find its way to the Bhutanese financial sector in general and to the banking sector in specific. The authors did not encounter any research work mainstreamed to the BSC application in the banking sector in Bhutan. In addition, the performance measurement used in the Bank of Bhutan Limited (BOBL) and Bhutan National Bank Limited (BNBL) is still based on financial measures and monthly or annual reports. Although the banks' administration is not aware of it, the dependence on financial measures is misleading because it does not provide a holistic view about how the bank is doing on the internal processes, customer, and learning and growth perspectives. Therefore, this study shall address the problem of developing a BSC model to measure the performance of banks in Bhutan with special reference to BOBL and BNBL. The performance evaluation results can benefit the banks studied, the stakeholders, and financial sector analysts.

Literature Review

The use of BSC approach for measuring the performance has increased in recent times. BSC, developed by Kaplan and Norton in 1992, measures the performance of a company both financially and non-financially. BSC is a tool that helps the organizations to convert their visions and objectives into reality (Bhagwat and Sharma, 2007). It is known as a 'balanced' approach because it considers both financial and non-financial parameters which are evaluated by its four perspectives. Since 1992, the BSC approach has been used in many sectors for measuring the performance of organizations such as banking sector (Ozturk and Coskun, 2014; and Balkovskaya and Filneva, 2016), construction sector (Kagioglou *et al.*, 2001; and Bassioni *et al.*, 2004 and 2005), healthcare sector (Chang *et al.*, 2002; Inamdar *et al.*, 2002; Zelman *et al.*, 2003; Weir *et al.*, 2009; Bisbe and Barrubés, 2012; and Behrouzi *et al.*, 2014), IT sector (Herath *et al.*, 2010) and education sector (Karathanos and Karathanos, 2005; Umashankar and Dutta, 2007; Yu *et al.*, 2009; Schobel and Scholey, 2012; and Mehralian *et al.*, 2016).

Banking industry across the world has used several measures to assess the performance of banks such as financial measures like financial statement analysis. The performance of banks in the industry has been measured for a long time by considering the financial figures from the financial statements of banks (Lin and Zhang, 2009; Čihák and Hesse, 2010; Beck *et al.*, 2013; and Ongore and Kusa, 2013).

Another most widely used performance measurement tool is CAMELS model. CAMELS model is extensively used for assessing the bank's Capital Adequacy (C), Asset Quality (A), Management Efficiency (M), Earnings Efficiency (E), Liquidity (L) and Sensitivity to Market (S). Some of the studies that have used CAMELS approach are Kaur (2010), Misra and Aspal (2013), Khatik and Nag (2014), Kaur *et al.* (2015), Ahsan (2016) and Ishaq *et al.* (2016).

DEA approach has also been used by the researchers to evaluate the performance of an organization. This technique evaluates the performance of different units of an organization in the ratio of inputs and outputs. This technique helps the organization set a benchmark for the comparison of their performance with others (Schaffnit *et al.*, 1997; Golany and Storbeck, 1999; Paradi and Zhu, 2013; Shahwan and Hassan, 2013; Thagunna and Poudel, 2013; and Othman *et al.*, 2016).

The use of BSC approach to evaluate the performance of banks is found to be more relevant in modern times to implement the strategic vision through KPIs. It has been found that the performance of banks that used BSC as a measure of performance evaluation was better than that of those that were not using it (Ozturk and Coskun, 2014). The extensions of BSC such as IT-BSC (Karasneh and Al-Dahir, 2012), change management (Farooq and Hussain, 2011), and AHP networking and sensitivity (Wu *et al.*, 2011; and Raut *et al.*, 2017) have also been explored over the last 25 years. The authors suggested that the use of BSC in banks is crucial to increase their efficiency and is helpful in preventing any unforeseen events.

From the literature reviewed above, it is evident that the performance measurement systems play a key role in evaluating the strategic performance of an organization, but adoption of a specific evaluation system may not fulfill the need of all categories of organizations. Hence, in recent years, a shift towards BSC has emerged as a managerial approach to evaluate the strategic performance of the organization. It has been applied in many developed and developing countries as reviewed above. The basic purpose of this study is to evaluate the performance of BOBL and BNBL using the four perspectives of BSC. Due to lack of research work in this area, especially in the banking sector of Bhutan, this study shall contribute to the knowledge on how banks in Bhutan may apply the BSC to evaluate their performance, and how they might turn strategic vision into potential performance. The use of BSC developed here is limited to the banks studied; however, the approach could trigger reflections among policy makers and other banks in Bhutan to start using BSC.

Objectives

Keeping in mind the need of the research and the stated problem, the study aims at the following objectives:

- To compare the growth in operations of both the banks, i.e., BOBL and BNBL, in absolute terms; and
- To evaluate the performance of both the banks under the four perspectives of BSC separately.

Hypotheses

To achieve the objectives mentioned above, the following four null hypotheses have been formulated for testing:

H_{01}: *There is no significant difference in the performance of BOBL and BNBL under the customer perspective of BSC.*

H_{02}: *There is no significant difference in the performance of BOBL and BNBL under the financial perspective of BSC.*

H_{03}: *There is no significant difference in the performance of BOBL and BNBL under the internal business process perspective of BSC.*

H_{04}: *There is no significant difference in the performance of BOBL and BNBL under the learning and growth perspective of BSC.*

Data and Methodology

This study is based on a hypothesis testing research design. The data for the study is collected from secondary sources. Annual reports of BOBL and BNBL (2011-2016) are used as the source of data. The two banks for the study are selected using judgmental sampling after considering the following criteria:

- BOBL is the first national bank of Bhutan and BNBL is the first private bank of Bhutan.
- Both banks offer the same products and services to the people of Bhutan.

Key Performance Indicators Used Under BSC Approach

The study applies the BSC approach to evaluate the performance of two oldest banks in Bhutan. The various KPIs used under each perspective of the BSC approach are as follows:

1. Customer Perspective: Total Deposits to Total Assets ratio (TDTA), Term Deposits to Total Deposits Ratio (TrDTD), Growth in Credit Granted (GC), and Growth of Deposits with the Bank (GD).
2. Financial Perspective: Credit-Deposit Ratio (CDR), Investment-Deposit Ratio (IDR), Return on Assets (ROA) and Interest Income to Total Assets Ratio (IITA).
3. Internal Business Process Perspective: Business Per Employee (BPE), Wage Bill to Total Income Ratio (WBTI), Wage Bill to Total Cost Ratio (WBTC) and Profit Per Employee (PPE).
4. Learning and Growth Perspective: Growth in ATMs (GA), Growth in Branches and Extension (GBE), Expenditure on Training of Employee (ETE), and Growth in Skilled Employees (GSE).

Results and Discussion

Table 1 presents the descriptive statistics of both the banks in absolute figures. Compounded Annual Growth Rate (CAGR) has been calculated for all the performance parameters used in

Table 1: Comparison of BOBL and BNBL in Absolute Terms

(in Nu.*)

Performance Parameter	BOBL			BNBL		
	2011	2016	CAGR (%)	2011	2016	CAGR (%)
Deposits	18,779,155,422	36,492,874,675	14.21	8,190,717,608	17,345,044,331	–3.37
Term Deposits	3,523,806,113	10,075,087,034	23.38	12,041,272,532	8,073,317,803	–10.84
Total Deposits	**22,302,961,535**	**46,567,961,709**	**15.86**	**20,231,990,140**	**25,418,362,134**	**–6.08**
Cash and Bank Balances	9,614,321,322	14,078,764,443	7.93	8,233,789,585	10,556,655,991	14.02
Investments	1,116,858,210	5,502,626,800	37.57	661,124,351	91,463,480	–58.87
Loans and Advances	15,653,233,656	20,725,407,844	5.77	16,584,934,983	22,728,340,278	6.21
Total Assets	**26,959,599,329**	**44,773,368,941**	**10.68**	**16,584,934,983**	**28,685,571,349**	**0.87**
PBT	921,319,732	1,340,800,227	7.79	729,003,790	1,012,058,133	0.40
PAT	644,388,770	936,648,443	7.77	510,057,588	702,498,939	0.16
Interest Income	1,413,714,623	2,737,970,482	14.13	1,752,929,453	2,769,487,130	8.50
Non-Interest Income (other income)	343,980,693	370,559,478	1.50	279,467,425	115,735,251	–10.07
Net Interest Income (Spread)	1,070,442,129	1,629,278,336	8.76	1,054,577,158	1,654,152,354	8.45
Total Income	**1,757,695,317**	**1,999,837,814**	**2.61**	**1,334,044,584**	**2,885,222,381**	**7.32**

Table 1 (Cont.)

Performance Parameter	BOBL			BNBL		
	2011	2016	CAGR (%)	2011	2016	CAGR (%)
Interest Expense	343,272,494	1,108,692,146	26.43	698,352,294	1,115,334,776	8.59
Operating Expenses	449,330,633	606,829,752	6.19	269,859,215	861,840,770	31.27
Total Expenses	**836,375,585**	**606,829,752**	**–6.22**	**968,211,509**	**1,977,175,546**	**15.99**
Net Income	921,319,732	1,393,008,062	8.62	1,064,185,368	908,046,835	–4.30
ATM (Nos.)	34	78	18.07	21	40	8.37
Salary	198,219,593	142,768,405	–6.35	158,002,643	290,247,258	15.27
Number of Employees	502	724	7.60	390	459	4.16
Number of Branches	27	44	10.26	22	33	9.45
Expenditure on Training of Employee	60,000,000	14,083,245	–25.16	16,170,382	26,437,724	10.85
Number of Skilled Employees	161	480	24.42	94	261	15.63

Note: * Nu is Ngultrum, the Bhutanese currency.

Source: Compiled from the annual reports of the banks

comparing both the banks. Total deposits of BNBL decreased during the period of study (CAGR= –6.08%), but the deposits of BOBL increased during the same period (CAGR= 15.86%). BNBL also shows a negative growth in terms of investment. This can be because in 2014, BNBL recorded a negative growth of 93% as they withdrew Nu. 1 bn from their active income to invest in RMA Treasury Bills. There was also a decrease in the non-interest income of BNBL. The statistics also shows that the total expenses of BOBL is less than that of BNBL and has a negative growth over the period of five years. The net income of BNBL is greater than BOBL, however, there has been a negative growth in the net income of BNBL. The salary paid to employees of BOBL has shown a negative growth.

Testing of Hypothesis

Customer Perspective

Table 2 presents the descriptive statistics of BOBL and BNBL under customer perspective. The overall performance of BNBL is better as compared to the performance of BOBL. However, TDTA of BOBL stands better as compared to BNBL, the growth in deposits for BNBL is higher as compared to BOBL. On the other hand, by looking at the values of standard deviation of both the banks, it can be said that the performance of BOBL is more consistent than the performance of BNBL.

To find out the significant difference in the various KPIs, *t*-test was conducted at 5% level of significance. From Table 3, the *t*-statistics for TrDTD (–3.71) is found to be significant (*p*-value = 0.004) at 5% level of significance, so the null hypothesis is rejected, and it can be stated that there is a significant difference in TrTD ratio of BOBL and BNBL.

However, on the other hand, for the other variables under the customer perspective, the *t*-test statistics is not significant. Thus, the null hypothesis cannot be rejected for TDTA, GC and GD and it is concluded that there is no significant difference in these ratios between BOBL and BNBL. Hence, on the dimension of customer perspective, there is no significant difference except for attracting the term deposits.

Financial Perspective

Table 4 shows the descriptive statistics of BOBL and BNBL based on the financial perspective. The mean performance of BNBL is better than the mean performance of BOBL. However, the mean of IDR is greater in the case of BOBL. The values of standard deviation show that the performance of BOBL is consistent than the performance of BNBL.

The performance based on financial perspective is tested using four KPIs, viz., CDR, IDR, ROA and IITA. The test statistics for CDR (–3.497) and IITA (–4.361) are found to be statistically significant at 5% level of significance (Table 5). Thus, the null hypothesis may be rejected in favor of alternate hypothesis, and we conclude that there is significant difference in the financial performance of both the banks assessed using CDR and IITA. However, the *t*-value for IDR (1.668) and ROA (–1.776) is found to be significant (*p*-value>0.05) at 5% level of significance. Thus, we do not reject the null hypothesis and conclude that both the banks are on par in their financial performance if assessed using IDR and ROA.

Table 2: Descriptive Statistics of BOBL and BNBL (Customer Perspective)				
KPIs	Banks			
	BOBL		BNBL	
	Mean	SD	Mean	SD
TDTA	99.16	8.974	96.7	19.336
TrDTD	19.039	2.768	37.1	11.605
GC (%)	5.9	5.705	6.8	8.718
GD (%)	14.896	13.904	26.4	66.041

Table 3: *t*-Test for Significant Difference in KPIs of Customer Perspective			
KPIs	Test Statistics (*t*) Assuming Equal Variances	df	Sig. (2-tailed)
TDTA	0.283	10	0.783
TrDTD	–3.71	10	0.004
GC	–0.192	8	0.853
GD	–0.381	8	0.713

Table 4: Descriptive Statistics of BOBL and BNBL (Financial Perspective)				
KPIs	Banks			
	BOBL		BNBL	
	Mean	SD	Mean	SD
CDR	65.851	10.926	125.620	40.420
IDR	11.099	7.290	4.498	6.389
ROA	2.187	0.124	2.491	0.403
IITA	5.826	0.387	8.383	1.383

Table 5: *t*-Test for Significant Difference in KPIs of Financial Perspective			
KPIs	Test Statistics (*t*) Assuming Equal Variances	df	Sig. (2-tailed)
CDR	–3.497	10	0.006
IDR	1.668	10	0.126
ROA	–1.766	10	0.108
IITA	–4.361	10	0.001

Internal Business Process Perspective

The descriptive statistics of BOBL and BNBL under internal business process perspective is presented in Table 6. The performance of BNBL is better than the performance of BOBL when compared by KPIs BPE and PPE. However, the mean performance of BOBL is better than BNBL when compared by KPIs WBTI and WBTC.

Table 6: Descriptive Statistics of BOBL and BNBL (Internal Business Process Perspective)

KPIs	Banks			
	BOBL		BNBL	
	Mean	SD	Mean	SD
BPE (in Nu.)	81,971,599.690	8,909,724.151	103,341,562.330	14,046,641.252
PPE (in Nu.)	1,182,492.063	125,067.556	1,534,075.176	259,152.208
WBTI	9.907	2.001	9.258	1.561
WBTC	23.692	2.254	15.823	1.304

Table 7 presents the results of hypothesis testing for performance of BOBL and BNBL assessed using various KPIs under internal business process perspective. The *t*-test statistics for BPE (–3.147), PPE (–2.993) and WBTC (7.401) is found to be statistically significant at 5% level of significance. Thus, we may reject the null hypothesis in favor of alternate hypothesis and state that there is significant difference in the internal business process of both the banks based on BPE, PPE and WBTC. However, the performance of BOBL and BNBL is not significantly different based on WBTI as the test statistics is not significant (*p*-value 0.545). Thus, it can be stated that WBTI ratio of both the banks is same.

Table 7: *t*-Test for Significant Difference in KPIs of Internal Business Process Perspective

KPIs	Test Statistics (*t*) Assuming Equal Variances	df	Sig. (2-tailed)
BPE (in Nu.)	–3.147	10	0.01
PPE (in Nu.)	–2.993	10	0.014
WBTI	0.626	10	0.545
WBTC	7.401	10	0.000

Learning and Growth Perspective

The mean performance of BOBL in the case of learning and growth perspective is better compared to the performance of BNBL as shown in Table 8. However, the value of standard deviation shows that there is better consistency in the performance of BNBL than that of BOBL.

Based on the various KPIs under the learning and growth perspective, the growth in ATMs is found to be statistically significant at 5% level of significance (Table 9). Thus, the null

Table 8: Descriptive Statistics of BOBL and BNBL (Learning and Growth Perspective)				
KPIs	Banks			
	BOBL		BNBL	
	Mean	SD	Mean	SD
GA (Nos.)	61	18.921	32	6.812
GBE (Nos.)	33.67	7.941	26.83	4.535
ETE (in Nu.)	30,358,049.17	23,432,147.77	21,430,574.5	3,920,871.584
GSE (Nos.)	281.1667	137.17641	158.1667	60.87172

Table 9: *t*-Test for Significant Difference in KPIs of Learning and Growth Perspective			
KPIs	Test Statistics (*t*) Assuming Equal Variances	df	Sig. (2-tailed)
GA (Nos.)	3.532	10	0.005
GBE (Nos.)	1.83	10	0.097
ETE (in Nu.)	0.92	10	0.379
GSE (Nos.)	2.008	10	0.072

hypothesis may be rejected, and it can be concluded that there is a significant difference in the learning and growth strategies of both the banks.

On the other hand, the performance based on learning and growth perspective of BSC using the other KPIs such as GBE, ETE and GSE is not found to be significant. Hence, it may be concluded that both the banks are using similar approach of learning and growth.

To sum up, the descriptive statistics of both the banks show that BNBL has maintained consistency in the performance as compared to BOBL. Besides, the overall performance of BOBL is higher than BNBL under BSC approach. However, BNBL outperformed BOBL under internal business process perspective of BSC. Under all the dimensions of BSC approach, there is no significant difference in the performance of both BOBL and BNBL banks, except for learning and growth perspective. In addition, the growth in ATMs (GA) is significantly different at 5% level of significance.

Conclusion

Performance measurement is one of the important aspects of an organization. It is the performance that determines the sustenance of an organization in the market. Performance measurement system helps the organization to identify its strengths and weaknesses. From the results, it can also be seen that the growth of deposits ratio for BNBL is negative. This is because in the years 2012, 2013 and 2014, there was a decrease in bank deposits. On the

other hand, the deposit growth of BOBL increased at a stable rate during the entire period of the study. As evident from this study, using BSC approach, the performance of BOBL was significantly better than the performance of BNBL. However, the results show that BOBL is lagging in internal business process perspective of BSC. Therefore, it is important for BOBL to concentrate more on improving its performance on internal business process perspective dimension of BSC. It could also be seen that the expenses incurred by BOBL in increasing the efficiency and knowledge (expenditures on training of employees) have decreased over time as shown in Table 1, which is not a good indicator for the bank as it is not serious about providing training and knowledge updates to its employees. ★

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CONTENTS

Determinants of Financial Performance of Banks in Bhutan: A Case study of Bhutan National Bank Ltd

Aaditya Pradhan and Krishna Murari

Abstract

Banking can be defined as an activity of accepting, as-well-as preserving money owned by other individuals and entities. Then banks lend out this money to other needy individuals or corporates in order to earn a profit. The economy of a country mostly depends on how strong their banking system is. This paper highlights the determinants that are responsible for the financial performance of commercial banks presently operating in Bhutan with a reference to Bhutan National Bank. The data collected for this study are from Bhutan National Bank from 2005-16. Multivariate regression analysis is performed on three dependent variables (Return on Assets, Return on Equity and Net Interest Margin) using five independent variables. The result showed that for explaining the determinants of financial performance of Banks in Bhutan, ROA model was considered to be the best as compared with ROE and NIM. The independent variables which had bearing on ROA were Interest income to total income, Interest on loan, Interest expenses to deposit and Credit to deposit ratio.

Keywords: *Bhutan National Bank Limited, Return on Assets, Return on Equity, Net Interest Margin, Determinants*

The banking sector plays an important role in channelizing the funds from savers to borrowers. The growth and development of an economy largely depends on the success and efficient functioning of the banking sector. For any sector to survive, profitability of that sector is critical. There are many factors that affect the profitability of banks. These factors are not only bank specific but also industry specific. Banking performance is also affected by the macro economic variables. These variables are GDP of the country, inflation rate, the financial environment and also the development level of a country.

Banks are the financial intermediaries that play an important role in the development of a country's economy by providing different services. It strengthens the economic activities and growth of an economy and is also considered as the back bone of the economy.

This paper aims at determining the factors that are affecting the financial performance of Bhutan National Bank Limited (BNBL). It was established in 1997 with the technical assistance of Asian Development Bank. BNBL operates through 11 branches in the country and it was the first bank to launch ATM service in Bhutan for convenient banking service.

The findings of this paper are based on three different models which consider three different dependent variables; Return on Assets, Return on Equity and Net Interest Margin.

Review of Literature

The banking sector is considered to be a crucial part of a sustainable economic growth in any economy. However, the performance of banking sectors is affected by many internal and external forces of a country's economy. In the words of Nouaili, Abaoub, & Ochi, (2015), the performance of banks is measured mainly by two advanced indicators. These are the profitability of assets (i.e. return on assets and return on equities) and the net margin interest. However, the performance of banks cannot only be measured by these two variables. There are other variables that must be considered for the overall performance of banks.

These variables include number of managers, the capital ratio, loans, ownership structure, the expenses management, the liquidity ratio as well as the size of the bank. In the findings of Naifar, (2010) the performance of banks was significantly related to expenses management, ownership structure and bank loans. The banks should also have to consider these factors to be more competitive in the market and this will in turn encourage financial innovation.

An empirical study conducted by Petria, Capraru, & Ihnatov (2015) revealed that credit and liquidity risk, management efficiency, the diversification of business, the market competition and the economic growth have influence on bank profitability, measured by Return on Average Assets and Return on Average Equity. In another study by Tariq et. al. (2014), the authors have explained the banks' profitability by using Return on Equity and Net Interest Margin. The result indicated that the capital strength of a bank was found to have high significance in affecting its performance and was observed to be less risky. This in turn would lead to the banks having higher profit.

Khalfaoui & Saada, (2015), conducted an empirical analysis on the factors affecting the performance of banks in Tunisia. It was found that credit risk management, liquidity, size, and disclosure of credit information are the main determinants of bank performance. In another study by Jabbar (2014), the author has also concluded by stating that the size of banks and adequate capital helps in earning more profit for a firm. The other studies have found that the performance of banks is also affected by the board of directors of banks and its management (Ongore & Kusa, 2013)

The determinants of bank performance can be divided in two factors that is; internal and external factors. Internal factors comprise of microeconomic determinants, while external variables are those which reflect economic and legal environment in which the bank operates. The results of this paper show that size, control and credit quality are the important variables that can determine the performance of bank. The size of banking business is considered to be important factor because larger banks which are expected to promote economies of scale, reduce the cost of gathering and processing information. (Garoui, Sessi, & Jarboui, 2013). Staikouras & Wood (2004) in their study stated that the profitability of banks operating in European countries is influenced not only by those factors related to their management decisions but also by the changes in the external macroeconomic environment. This study contradicts the other studies where the authors have found that the profitability of a bank is affected by the internal business environment (Bhatia, Mahajan, & Chander, 2012; Samad, 2015).

The performance and profitability of bank is not only determined by liquidity, size, credit risk management, etc. but also effected by external forces. Wong et.al (2007), in their

report have presented that when market consolidation take place, the competition of banks decreases in that place by increasing the profitability of the firm. On the other hand, cost efficiency is positively correlated with bank's profitability. The banks whose cost efficiency is high will be able to attract more customers.

The performance of banks are also affected by the economic growth (GDP) of the country. In the study of Mushtaq et. al. (2014), the author concluded by stating that the GDP of a country can have an impact on financial performance of the banks.
In other studies, the authors have found ROA as a significant measure of determinants for explaining profitability of banks using panel data regression analysis and independent variables like equity, overheads, interest bearing assets, macroeconomic and financial structure indicators (Naceur, 1992), size, capital credit risk, efficiency, stock market capitalization, GDP, interest rates, cyclical outputs, economic development (Ramlall, 2009), asset utilisation, efficiency, total income to total capital employed, deposit concentration, loan concentration, asset concentration, total deposits to owned funds, capital adequacy, interest expended to interest earned, interest spread, net interest income to total funds (Malhotra, Poteau, & Singh, 2011). On the other hand some authors have found NIM and ROE as a significant measure of determining banks profitability using independent factors like default risks, opportunity cost of non-interest bearing reserves, leverage and management efficiency (Angbazo, 1997), individual bank's characteristics as well as macroeconomic conditions, taxation, regulations, financial structure and legal indicators (Demirguc-Kunt & Huizinga, 1999), Capital Asset Ratio (Berger, 1995).

With the background of above mentioned reviews, this paper will make an attempt to identify the determinants that have an impact on financial performance of banks in Bhutan with special reference to BNBL.

Objectives of the Study

The following are some of the objectives for this study:

a) To identify factors that have a significant bearing on the performance of Bhutan National Bank Limited
b) To determine which factors impact significantly on bank's profitability.
c) To determine the best measure of profitability from NIM, ROA and ROE.

Hypotheses of the Study

Based on review of literature the following hypotheses are formed.

H_{0a}: Interest income to total income has no significant relation with profitability of BNBL
H_{0b}: Interest on loan ratio has no significant relation with profitability of BNBL
H_{0c}: Interest expenses to deposit has no significant relation with profitability of BNBL
H_{0d}: Credit to deposit ratio has no significant relation with profitability of BNBL
H_{0e}: EPS has no significant relation with profitability of BNBL

Research Methodology

Research design

This study uses a hypothesis testing research design. Three models are checked with different dependent variables i.e. ROA, ROE and NIM. The model equations are given below:

Model I: $ROA = a + b_1IITI + b_2IITL + b_3IETD + b_4EPS + b_5CDR + e$

Model II: $ROE = a + b_1IITI + b_2IITL + b_3IETD + b_4EPS + b_5CDR + e$

Model III: $NIM = a + b_1IITI + b_2IITL + b_3IETD + b_4EPS + b_5CDR + e$

Where a is constant and b_1, b2, b3, b4 and b_5 are the coefficients of the respective independent variables; e is the error term.

Sources of data

The data that are used in this paper are all from secondary sources. The data is collected from the annual reports of Bhutan National Bank (2005-2016) and annual reports of Royal Monetary Authority of Bhutan (2005-2016). Information related to all dependent and independent variables is collected for a period of 10 years from BNBL and RMA.

Operational design

Since this paper aims at identifying the determinants that have a bearing on the performance of Bhutan National Bank, the following variables are considered.

1. **Return on Assets (ROA):** It is a financial ratio that shows the percentage of profit a company earns in relation to its overall resources. ROA is generally calculated by dividing net income divided by total assets. Net income is calculated by deducting taxes from gross profit of the company. The total assets derived from the balance sheet of the company.

2. **Return on Equity (ROE):** It is a measure of profitability that calculates how much of profit a company generates with the money collect from shareholders' equity. Return on Equity is calculated by dividing Net Income by Shareholders' Equity. ROE is sometimes called “return on net worth.” Net Income is derived from income statement of the company which is calculated by deducting taxes from gross profit of the company. A rising ROE suggests that a company is increasing its ability to generate profit without needing as much capital.

3. **Net Interest Margin (NIM):** NIM is a ratio that measures how successful a firm is at investing its funds in comparison to the expenses on the same investments. A negative NIM denotes the interest expenses greater than the amount of returns generated by the investment.

4. **Earnings per Share (EPS):** EPS is generally considered to be the single most important variable in determining a share’s price. It is the part of profit earned by the company which is earned from each outstanding shares of the company.

5. **Interest income to total income (IITI):** It is the difference in revenue generated from a bank’s assets and expenses associated with paying out its liabilities. It is calculated by dividing interest income of the company with company’s total income.

6. **Credit deposit ratio (CDR):** It is the ratio of how much a bank lends out of the deposits it has mobilised. Credit deposits ratio helps in assessing a bank's liquidity and indicates its health. If the ratio is low, banks may not be earning as much as they could be. If the ratio is high, it means that banks might not have enough liquidity to cover any unforeseen funds requirement.

7. **Interest expenses to total deposits (IETD):** It is the ratio of interest spent to total deposits of the bank.

8. **Interest Income to loans & advances (IITL):** It is the ratio of interest income divided by total loans and advances.

Tools for analysis

The data collected is analysed using statistical software. The tools like correlation and multivariate linear regression modelling is used to model the determinants. In order to find the best model for financial performance of banks in Bhutan, adjusted R2 along with F-statistics, Variance inflation Factor (VIF) and Durbin-Watson (DW) statistics is used.

Findings and Analysis

To determine the relation of different variables with the performance of banks, three different models were tested using regression. These models considered three different dependent variables which were Return on Assets, Return of Equity and Net Interest Margin. Collinearity Diagnosis was also done to check if there was any multi collinearity problem. Some of the results are discussed below.

Table 0.1: Correlation matrix of independent variables

Variables	Statistics	CDR	IITI	IITL	EPS	IETD
CDR	Correlation (Sig. 2-tailed)	1				
IITI	Correlation (Sig. 2-tailed)	0.517 (0.085)	1			
IITL	Correlation (Sig. 2-tailed)	-.652 (0.021)	-0.438 (0.154)	1		
EPS	Correlation (Sig. 2-tailed)	-0.018 (0.956)	0.443 (0.149)	-0.039 (0.904)	1	
IETD	Correlation (Sig. 2-tailed)	.876 (0.000)	0.355 (0.257)	-0.326 (0.301)	-0.184 (0.568)	1
Source: Authors' calculations						

Table 0.1 presents the correlation between different independent variables considered in three different models. From the table it can be seen that the most significant variables were Credit to deposit ratio and Interest expenses to deposit ratio. Interest on loan shared a strong negative relation with Credit to Deposit ratio.

Table 0.2: Descriptive Statistics of the dependent and independent variables

DV & IV	Minimum	Maximum	Mean	Std. Deviation
ROA	0.017	0.042	0.034	0.008
ROE	0.298	3.364	1.562	1.068
NIM	0.024	0.058	0.042	0.010
CDR	0.068	1.310	0.794	0.346
IITI	0.857	0.988	0.913	0.040
IITL	0.106	0.998	0.190	0.255
EPS	0.190	2.682	0.977	0.815
IETD	0.025	0.064	0.039	0.013
Source: Authors' calculations				

Table 0.2 presents the descriptive statistics of three dependent variables i.e. Return on Assets (ROA), Return on Equity (ROE), Net Interest Margin (NIM) and five independent variables i.e. Credit to Deposit ratio (CDR), Interest Income to Total income (IITI), Interest Income to total Loans & advances (IITL), Earning per Share (EPS) and Interest expenses to total deposits (IETD) to be used for modelling under this study.

Table 0.3: Model I, Dependent Variable-ROA

Predictor Variables	Coefficients	Std. Error	t- statistics	Collinearity Diagnostics	
				Tolerance	VIF
(Constant)	0.122	0.038	3.228**		
IITI	-0.116	0.044	-2.654**	0.516	1.937
IITL	0.034	0.009	3.72**	0.292	3.425
IETD	-1.031	0.298	-3.463**	0.106	9.43
EPS	0.000	0.002	-0.171	0.618	1.618
CDR	0.066	0.014	4.836*	0.07	14.25
Model Summary	R^2: 0.917	Adjusted R^2:0.481	F-Value: 6.337**	P-Value: .022	DW: 1.571
Source: Authors' calculations *,** indicates the significance at 1% and 5% level of significance respectively					

Table 0.3 presents the regression analysis of model I. In this model, return on assets is considered as a dependent variable. In this model, Interest on loan (P-value 0.01) and Credit to deposit ratio (P-value 0.003) showed a positive significant relationship with ROA. Interest income to total income ratio and Interest expenses to deposit ratio on the other hand had a negative significant relation with ROA. EPS was not significant for this model. The value of adjusted R^2 is 0.481 which means that approximately 48.1% of variation on ROA is explained by its independent variables. The P-Value from ANOVA table is less than 0.05 (i.e. 0.22), which shows that there is a significant relation between the dependent and independent variables. Thus, the model I can summarily be presented as follows:

Model I: ROA=0.122-0.116IITI+0.034IITL-1.031IETD+0.066CDR

Table 0.4: Model II, Dependent variable-ROE

Predictors	Coefficients	Std. Error	t-statistics	Collinearity Diagnostics	
				Tolerance	VIF
(Constant)	7.127	1.353	5.266*		
IITI	-7.119	1.568	-4.541*	0.516	1.937
IITL	-0.995	0.325	-3.061**	0.292	3.425
IETD	15.546	10.697	1.453	0.106	9.43
EPS	1.428	0.07	20.445*	0.618	1.618
CDR	-1.107	0.488	-2.268***	0.07	14.25
Model Summary	R^2: 0.989	Adjusted R^2:0.981	F-Value: 112.743*	P-Value: 0.000	DW: 2.826
Source: Authors' calculations *,**, *** indicate the significance at 1%, 5% and 10% level of significance respectively.					

Table 0.4 presents the regression analysis of second Model where ROE is considered as a dependent variable. In this model, out of five independent variables, interest income to total income ratio, Interest on loan ratio and EPS were found to be significant. EPS was found to be strong positively significant with ROE. However, interest income to total income ratio and Interest on loan ratio was negatively significant with ROE. The value of adjusted R^2 is 0.981, which means that approximately 98.1% of variation on ROE is explained by its independent variables. The P-Value from ANOVA table is less than 0.05, which shows a significant relation between the dependent and independent variables. Thus, the model II can summarily be presented as follows:

Model II: ROE=7.127-7.119IITI-0.995IITL+1.428EPS-1.107CDR

Table 0.5: Model 3, Dependent Variable-NIM

Predictors	Coefficients	Std. Error	t-statistics	Collinearity Statistics	
				Tolerance	VIF
(Constant)	0.047	0.022	2.145***		
IITI	-0.045	0.025	-1.793	0.516	1.937
IITL	0.035	0.005	6.746*	0.292	3.425
IETD	-0.577	0.173	-3.337**	0.106	9.43
EPS	0.005	0.001	4.336*	0.618	1.618
CDR	0.059	0.008	7.508*	0.07	14.25
Model Summary	R^2: 0.968	Adjusted R^2:0.942	F-Value: 36.732*	P-Value: 0.000	DW: 1.219
Source: Authors' calculations *,**, *** indicate the significance at 1%, 5% and 10% level of significance respectively.					

Table 0.5 presents the regression analysis of third model in which net interest margin is considered as a dependent variable. In this model, it can be seen that Interest on loan, Interest expenses to deposit, EPS and Credit to deposit ratio has shown a significant relation with NIM. However, Interest expenses to deposit ratio shared negative significant relation

with NIM. The value of adjusted R^2 is 0.942, which means that approximately 94.2% of variation on NIM is explained by its independent variables. The P-Value from ANOVA table is less than 0.05, which shows a significant relation between the dependent and independent variables. Thus, the model III can summarily be presented as follows:

Model III: NIM=0.047+0.035IITL-0.577IETD+0.005EPS+0.059CDR

Hypothesis testing

In model I, out of five independent variables, the coefficient of EPS (0.87) was not significantly different form 0 (p-value<0.05). Thus, it can be stated that EPS does not have significant relation with ROA. Therefore, we do not reject the null hypothesis and state that EPS has no significant relation with the profitability of BNBL measured by ROA. For the remaining independent variables, since the p-values are less than 0.05, we reject the null hypothesis and state that Interest income to total income ratio, Interest on loan, Interest expenses to deposit ratio and Credit to deposit ratio have a significant relation with the profitability of BNBL measured by ROA. However, Interest income to total income has a negative bearing on ROA.

In model II, out of five independent variables, the coefficient of Interest expenses to deposit (0.196) and Credit to deposit ratio (0.64) were not significantly different from 0 (p-value<0.05). Thus, it can be stated that Interest expenses to deposit and Credit to deposit ratio do not have significant relation with ROE. Thus, we do not reject null hypothesis and state that Interest expenses to deposit and Credit to deposit ratio has no significant relation with the profitability of BNBL measured by ROE. For the remaining independent variables, since the significant values are less than 0.05, we do reject the null hypothesis and state that Interest income to total income ratio, Interest on loan and EPS have a significant relation with the profitability of BNBL, measured by ROE. However, Interest income to total income and Interest on loan has a negative bearing on ROE.

In model III, out of five independent variables, the coefficient of Interest income to total income (0.123) was not significantly different form 0 (p-value<0.05). Thus, it can be stated that Interest income to total income does not have significant relation with NIM. Thus, we do not reject null hypothesis and state that Interest income to total income has no significant relation with the profitability of BNBL measured by NIM. For the remaining independent variables, since the significant values are less than 0.05, we reject the null hypothesis and state that Interest expenses to deposit and Credit to deposit ratio, Interest on loan and EPS have a significant relation with the profitability of BNBL, measured by NIM. However, Interest expenses to deposit have a negative bearing on NIM.

Concluding Remarks

The economic performance of any country is partly determined by how its banking sector operates. The performance of banks is further determined by various variables which help in increasing the profitability of the bank. We tested three models for assessing the profitability of banks in Bhutan taking three dependent variables (ROA, ROE and NIM) and five independent variables (Interest income to total income, Interest on loan, Interest expenses to deposit, EPS and Credit to deposit ratio) using multivariate linear regression analysis.

The first model (taking ROA as dependent variable) met the 'BLUE' (Best Linear Unbiased Estimator) properties of multivariate regression analysis. This implies that the financial performance of Banks in Bhutan using ROA as a dependent variable and Interest income to

total income, Interest on loan, Interest expenses to deposit, EPS and Credit to deposit ratio as independent variables is found to be best model. However, other two models taking ROE and NIM as dependent variable are also statistically significant but, model I gives the best results. This finding is in line with that of Bhatia, Mahajan, & Chander (2012) and Samad, (2015). To check the problem of autocorrelation in residuals, Durbin Watson statistic was used. The value of this statistic is considered better when it is between 1.5-2.5 and in our study, the value of Durbin Watson statistic for the residuals of ROA model was 1.571. it indicates that there is no problem of auto correlation and model is best.

Therefore, it can be concluded that the key determinants of financial performance of Banks in Bhutan are Interest income to total income, Interest income to loans & advances, Interest expenses to total deposit and Credit to deposit ratio. The policy makers should have a monitoring of these variables in order to ensure the sound financial performance (measured by ROA) for the Banks in Bhutan.

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