

CHAPTER - I

INTRODUCTION

1.1 Background of the Study

National development of any country depends upon the economic development of that country and economic development is supported by financial infrastructure of any country. Banks constitute an important role in the economic growth of a country. Banking, when properly organized, aids and facilitates the growth of trade and industry and hence of national economy. In the modern economy, banks are to be considered not as dealers in money but as the leaders of development. “Banks are not just the storehouses of the country’s wealth but are the reservoirs necessary for economic development.”

Commercial bank is the heart of the financial system. They hold the deposits of many persons, government establishments and business units. They make funds available through their lending and investing activities to borrowers, individuals, business firms, they provide large portion of the medium of exchange and they are the media through which the monetary policy is affected. These facts show that the commercial banking system of the nation is important to the functioning of the economy. Bank itself is a resource for the economic development, which maintains the self-confidence of various segments of society and extends credit to the people. In this way financial system of the country characteristically falls into three parts: the central bank, the commercial bank and the other financial institutions which also known as intermediaries.

In global prospective, joint ventures are also part of trading through partnership among nations and also a form of negotiations between various groups of industries and trader to achieve mutual exchange of goods and services for sharing comparative advantage. In other words, the joint venture is the joining of forces between two or more enterprises for the purpose of carrying out a specific operation. A country should have a favorable investment climate to attract joint venture banks.

1.2 Banking System in Nepal

Banking sector plays significant role in the economic development of a country. In Nepal, the 'Tejarath Adda' may be regarded as the father of modern banking institution and for a quite long time it tendered a good service to government servants as well as to the general public (Pant, 1975).

Nepal Bank Limited was established in 1994 BS and Rastriya Banijiya Bank was established in 2022 BS. In the context of Nepal, the path of liberalization leads to establishment of more than dozen commercial banks. Here, in Nepal, the most dramatic reforms were carried out in 1980s. The measure was allowing the foreign banks to operate as a joint venture, lifting of control on interest rate and introduction of government's securities. As a result of liberalization policy of HMG, foreign investors were attracted to invest in Nepal in joint venture especially in banking business. This initiated the establishment of Nepal Arab Bank Limited in 1984 AD, as a joint venture with Dubai Bank Limited. Following this, other banks in the same fashion were established. Establishment of commercial banks contributes significantly in the formation and mobilization of internal capital and development efforts. They furnish necessary capital needed for trade and commerce for mobilizing the dispersed savings of the individual and institutions. In the present context, the role of commercial bank has impended larger. In this connection, Nepalese economy has witnessed several changes in the financial system in the first few years or so such as, financial liberalization. HMG's deliberate policy of allowing foreign joint ventures bank to operate in Nepal is basically targeted to encourage local traditionally run commercial banks to enhance their bankable capacity through competition, efficiency, modernization, mechanization via computerization and prompt customer service.

The foreign commercial banks with full fledged banking functions in Nepal have been formed under the economy Act 2021 BS and operated under the Banijiya Bank Act 2031 BS. They have joint venture schemes between Nepalese investors and their parent banks each supplying 50 percent of the total investment. The domestic portion of investment has been shared by financial and non-financial institutions as well as private investors.

Reforms in the commercial Bank Act and Government's economic liberalization policy have encouraged foreign investors to invest in Nepal. As a result, joint venture banks are developed and promoted with foreign investment and participation of financial institutions and public.

1.3 Profile of the Concern Banks

NABIL Bank Limited, the first foreign joint venture bank of Nepal, started operations in July 1984. The promoters of share holdings pattern of NABIL as follow:

Emirate Bank International	50%
Nepal Industrial Development Cooperation	10%
Rastriya Beema Sanstan	9.6%
Security Exchange Limited	0.4%
General Public	30%

NABIL's governing board has nine members out of which five members are nominee, two are elected and two are representatives from concerned agency. NABIL was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, NABIL provides a full range of commercial banking services through its 19 points of representation across the kingdom and over 170 reputed correspondent banks across the globe. NABIL, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started in the era of modern banking with customer satisfaction measured as a focal objective while doing business. Operations of the bank including day-to-day operations and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs, credit cards, state-of-art, world-renowned software from Infosys Technologies System, Internet Banking System and Tele Banking System. It has been a leader in terms of bringing the very best international standard banking practices and services to the kingdom. NABIL bank is full service bank providing an entire range of services, starting with deposit accounts in local and foreign currency, Visa and

MasterCard denominated in rupees and dollars, Visa Electron Debit Cards, personal lending products for auto, Home and personal loans, Trade Finance products, Treasury services and Corporate Financing. The main aim is to be able to meet the entire gamut of financial requirements.

Himalayan Bank Limited was incorporated in 1992 by a few distinguished business personalities of Nepal in partnership with Employees Provident Fund and HABIBI Bank, Pakistan, one of the largest commercial banks in Pakistan. The present shareholder pattern of the Himalayan bank is as follows;

Nepalese Promoters	51%
HABIBI Bank Ltd, Pakistan	20%
Employee Provident Fund	14%
General Public	15%

It is the first commercial bank of Nepal whose maximum shares are held by the Nepalese private sector. Besides commercial banking services, the bank also offers industrial and merchant banking services. The bank has five branches in Kathmandu Valley at the following locations: Thamel, New Road, Maharajgunj, Pulchowk (Patan) and Suryavinayak. In addition, the bank also has nine other branches outside Kathmandu Valley in Banepa, Tandi, Bharatpur, Birgunj, Hetauda, Bhairahawa, Biratnagar, Pokhara and Dharan. Himalayan Bank has always been committed to providing a quality service to its valued customers with a personal touch. The Bank has adopted “Temenos Globus” software to avail comprehensive banking solution. The bank has entered into technical agreements with Visa International and MasterCard to bring in their proven technology for providing multitude of Card Services like Credit Card, Prepaid Card and Debit Card for the customers. Other products that are part of overall service package include SMS Banking, internet Banking ATMs, Himal Remit, Expanded Point of Sales (POS) networking throughout major urban centers of Nepal and so on.

1.4 Statement of the Problems

Commercial banks have been undertaking the task of financial intermediation as their core function. Collecting deposits from different section of people, the amount other wise would have remained idle or used at lesser productive purposes. Although the prime objective of the commercial banks is “profit maximization to its shareholder” yet, they have to accomplish twin objectives as well. First, providing return to capital to depositors and second, provide resources for productive purposes to entrepreneurs.

Despite of prevailing economic recession, JVBs operating in Nepal have managed to perform well in terms of their work efficiency and profitability. However, they are also facing problems in generating an adequate return on their investment and role of banking sector has been further increased for the upliftment of the country’s economy from the present condition. They must attempt to find the potential areas of profitable investment in order to get themselves and the nation away from this economic turmoil.

Though several commercial banks have been established in Nepal within a short period of time, sufficient return has not been earned and strong, stable and appropriate investment policy has not been followed. In the one hand, these banks collected huge amount of deposits where as in the other hand investment opportunities are comparatively very low. Due to less investment opportunity bank discourage deposits by reducing the interest on deposits and increase minimum shareholders’ balance. Such condition may cause highly liquid market and can impact the condition of the whole economic sector negatively.

The search for new horizon for investment has been the most challenging job for the commercial banks. In addition to above problems, the commercial banks have to face following challenges:

-) Accumulate the resources from the competitive environment to invest for the returns to maximize the shareholders wealth by protecting the assets of the depositors through complying strict directives issued by NRB.

-) Run the branches in the rural communities to improve their living standard by providing banking services in order to promote the economic situation of the country.
-) To deliver efficient services to the common people by enhancing efficiency of the staff and improving the management style of the banks.
-) To give special attention towards loan recovery as the outstanding loan amount is increasing because of incapacity of the borrower in servicing the interest and loan dues to economic recession all over the world.
-) To help the government for poverty alleviation and access to increased flow of credit and investment in the economic activities of direct benefit to the maximum number of low income people through micro and medium size loan.

Stiff competition among the commercial banks, financial companies, rural development banks and cooperative societies in short span of time has put a question mark to survival of JVB's including HBBL and NABIL. Both the selected banks need to take it seriously for betterment in performance and improvement in their productivity and better customer orientation.

The main problem into which the research is concentrated is the comparative analysis of weakness and inefficiency of HBBL and NABIL basically in terms of profitability, operating efficiency and earning risk. Following are the major problems that have been identified for the purpose of this research:

1. How well the selected joint ventures are performing relatively with reference to the financial indicators?
2. Is the status of their operating efficiency satisfactory? Which joint venture has comparatively more earning risk?
3. What is the effect of leverage on its return on equity?

1.5 Objectives of the Study

The general purpose of this study is to discuss, examine and evaluate the financial information and position of the selected Joint Venture Banks using DuPont model. The

following objectives have been considered as prime objectives of this study.

1. To observe relative financial performance (Profitability) with reference to the financial indicator of the selected banks.
2. To examine the operating efficiency and to analyze the earning risks of the selected banks
3. To observe the effect of leverage on return on equity.

1.6 Significance of the Study

The significance of the proposed study may be logically justified on followings grounds:

- a) Its significance to management: This is helpful in depth analysis into those matters as to why the performance of their bank is better than the competitor.
- b) Its significance to shareholders: The findings of the research will be of worth to the shareholders to see the financial health of two banks in comparison this justifies the rational of their investment decision.
- c) Its significance to stakeholders: Among stakeholders, mainly, the customers, financing agencies, stock exchanges and stock traders are interested in the performance of banks and the customers can identify to which bank they should go. The financial agencies can understand where their fund is more secured and stock exchanges, stock brokers and stock traders can find the relative worth of the stocks of each bank.
- d) Its significance to policy makers: It points the problem to be taken care of. The policy makers can take a lot of benefits and they can easily review the policies that has gone well and that has gone wrong. In this way this information might enables them to review the wrong policies and reinforce the better one.

1.7 Limitations of the Study

Like every research, the study has been conducted with certain limitations. The limitations of the study are as follows:

1. This study is to fulfill the partial requirement of the MBS programme and has to be conducted and submitted within in prescribed period.

2. This study is based on secondary data which are derived from financial statements and other available records
3. The study is carried out mostly on the basis of the published financial documents like balance sheet, profit and loss account, and other related journals, magazines and books, etc. These published documents have their own limitations which are the limitations of this study too.
4. The study period covers only six years.
5. The lack of sufficient resources and time is also the limitations of this study.
6. The standard of ratio analysis is considered as prescribed by financial management experts, which may or may not be applicable for the enterprises under the entire situation.

1.8 Organization of the Study

The study has been organized into five chapters each denoted to some aspects of the study of clearing and settlement system. The title of each of these chapters is as follows:

- Chapter I : Introduction
- Chapter II : Review of Literature
- Chapter III : Research Methodology
- Chapter IV : Analytical Framework
- Chapter V : Summary, Conclusions and Recommendations

Chapter 1: Introduction

It serves as an orientation for readers of the research, providing them ways they need to understand the detailed information of research.

Chapter II: Review of Literature

This chapter covers the review of literature books relating to finance and commercial banks, journals, policy documents, related thesis are reviewed and taken as basis to determine research gaps in order to fulfill the objectives of the study and to provide the solution for the problem stated above.

Chapter III: Research Methodology

This chapter describes various sequential steps that have been followed in conducting this study and materials used at each steps.

Chapter IV: Data analysis and Presentation

This chapter covers the analysis of relevant financial information, factors and data collected relating to overall financial performance of the selected JVBs. Analytical section includes presentation of data in tabular and graphical forms and analysis of Ratios.

Chapter V: Summary, Conclusion and Recommendation

This chapter covers the findings and conclusions of the study, and suggestions to the concerned organizations for the better improvement are provided on the basis of this study.

CHAPTER- II

REVIEW OF LITERATURE

A literature review is an essential part of all studies. It is a way to discover what other researchers have covered and left in the area. A critical review of the literature helps the researcher to develop a thorough understanding and insight into previous research works that relates to the present study. It is also a way to avoid investigation problems that have already been definitely answered. Thus a literature review is the process of locating, obtaining, reading and evaluating the research literature in the area of the student's interest (Pant Wolff, 1999:30).

Various studies in the field of banking have already been carried out by learned scholars, teachers, students and many others for different purposes, in books, booklets magazines and dissertations. In this chapter, the focus has been made on the review of literature relevant to the selected topic. Every study is very much based on past knowledge; the past knowledge provides foundation to the present study. This chapter helps to take adequate feedback to broaden the information based and inputs to the study, therefore this chapter has its own importance in this study. This chapter is divided into following:

1. Conceptual Review
2. Review of related Studies
 -) Review of Articles
 -) Review of Thesis
 -) Review of Legislative Provisions

2.1. Conceptual Review

2.1.1 Concept of Bank

The word bank has been derived from the Latin word 'Bancus' or from 'Bancque' which means a 'Bench' in English. The early bankers transact their business at benches in market place when a banker failed; his bench was broken up by the people. According to some, it is derived from the German word 'bank' which means a 'joint stock fund' which was

italianated into 'Banco' when the Germans were masters of a great part of Italy.

American institute of Banking defines commercial bank as “Commercial bank is a corporation which accepts demand deposits subject to check and makes short term loans to business enterprises, regardless of the scope of its other services.” The institution also laid down the four functions of commercial bank which are handlings deposits, handling payees of money, making loan and investments, creating money by extension of credit.

In this way, the commercial bank, pools together the saving of the community which means they help in the capital formation. Such savings are distributed to public in the form of credit for productive use. Generally, commercial banks finance short-term needs to trade, to industry and even to agriculture. Commercial banks of developing country finance small and cottage industries under priority sector investment scheme. The main purpose of this scheme is to uplift the backward sector of the economy. Commercial bank are controlled and regulated by central bank. In Nepal, Nepal Rastra Bank is the central bank that controls and regulate the commercial bank.

2.1.2 Functions of the Commercial Bank

Commercial Bank has various functions to perform which plays key role in growth of economy of a nation. Mr. D.R. Bhandari describes that the commercial banks have the following functions:

-) The credit (loan) function
-) The payments (transaction) function
-) The insurance (risk management) function
-) The security banking (security underwriting) function
-) The merchant banking (temporary stock investment) function
-) The thrift (saving) functions
-) The investment financial planning function
-) The real estate and community development function
-) The cash management function

The main functions performed by the commercial banks can be described as follows.

-) Accepting Deposits: Commercial bank accepts deposits in three forms, namely current deposit, saving deposit, and fixed deposit.
-) Current Deposits: Current deposit is also known as demand deposits. Under this any amount may be deposited in this account. The bank does not pay any interest on such deposits.
-) Saving Deposits: Saving deposit is one of the deposits collected from small depositors and low income depositors. The bank usually pays small interest to the depositors against their deposits. This is also called saving account.
-) Fixed Deposits: Fixed deposits are the one in which a customer is required to keep a fixed amount with bank for a specific period generally by those who do not need money for a stipulated period. The bank pays the higher interest on such deposits.
-) Advancing Loans: Commercial bank provides loans and advances from the money which it received in the form of deposits. Direct loans and advances are given to all types of persons against the security of movable and immovable properties. Banks grant loans in four forms:
 - Overdrafts
 - Direct Loans
 - Cash Credit and
 - Discounting Bills of Exchange
-) Agency Services: Commercial bank undertakes the payment of subscriptions, insurance premium, rent etc. It collects cheques, bills, dividends, interest, pensions etc. on behalf of the customers. The bank charges a small amount of commission for those services. It undertakes to buy and sell securities on behalf of its customers. Commercial bank also acts as a trustee, executor and administrator.
-) Credit Creation: Credit creation is a very important function of the commercial banks. They accept deposits and advance loans. When the bank advances loans, it opens an account to draw the money by Cheques according to his needs. By granting loans, the bank creates credit or deposit.
-) Other Functions: Other functions of the commercial banks can be explained as follows:

-) Assist in Foreign Trade: Commercial bank discounts the bills of exchange drawn by Nepalese exporters or the foreign importers and enables the exporters to receive money in the native currency. Similarly, the bank also accepts the bills drawn by foreign exporters.
-) Offers Security Brokerage Services: Many commercial banks have begun to market security brokerage services offering customers the opportunity to buy stocks, bonds and other securities without having to go to a security dealer or broker.
-) Financial Advising: Many banks offer a wide range of financial advisory services from helping in financial planning and consulting business managers.

2.1.3 Development of Commercial Banks in Nepal

Nepal's banking history had begun with the establishment of Nepal Bank Ltd. in 1937. At that time, this bank had authorized capital of Rs.10 million and paid up capital of Rs. 842 thousand. Nepal Bank Ltd. was the first commercial bank with 51% government equity. Rastriya Banijya Bank came into existence in 1966, fully government ownership with the authorized capital of Rs. 10 million and paid up capital of Rs. 2.5 million.

In 1980, the government introduced 'Financial Sector Reforms'. Nepal allowed the entry of foreign banks as joint ventures with up to a maximum of 50% equity participation. The joint venture bank was Nepal Arab Bank Ltd. It was established in 1984 and it has changed its name into NABIL Bank Ltd. Later on, the following joint ventures were established respectively.

Nepal Investment Bank Limited	1986
Standard Chartered Bank Nepal Limited	1987
Himalayan Bank Limited	1993
Nepal SBI Bank Limited	1993
Nepal Bangladesh Bank	1994
Everest Bank Limited	1994
Bank of Kathmandu	1995
Nepal Credit and Commercial Bank	1996
Lumbini Bank Ltd.	1998

Nepal Industrial and Commercial Bank Ltd.	1998
Machhapuchhre Bank Ltd.	2000
Kumari Bank Ltd.	2000
Laxmi Bank Ltd.	2001
Siddhartha Bank Ltd.	2001

Further more, the list of licensed commercial banks and their branches in Nepal by 2009 has been presented in annex.

2.1.4 Role of Joint Venture Banks in Nepal

In 1980, the government introduced 'Financial Sector Reforms'. Nepal allowed the entry of foreign banks as joint ventures with up to a maximum of 50% equity participation. A meaningful step towards financial liberalization was undertaken in the F/Y 1987/88, with the objectives of expediting the process of economic development under structural adjustments program and major reforms including liberalization of interest rate, strengthening of banking operation and a shift from direct to indirect monetary control instruments. The various roles of the joint venture banks being performed in Nepal can be classified as follows:

-) **Healthy Competition:** The induction of joint venture banks also brings the benefit of healthy competition. The competition would force the domestic banks, Nepal Bank Ltd. and Rastriya Banijiya Bank to improve their services and efficiency.
-) **Foreign Investment:** Foreign investment is one of the important aspects for the economic development of the country. When looking at the possibility of investing in Nepal, multinational companies are unfamiliar with the local rules, regulations and practice. The joint venture banks help the multinational companies to build up their confidence for investment by providing necessary information and financial support.
-) **New Banking Techniques:** Modern banking services are being provided to Nepalese financial system by new joint venture banks. New banking techniques such as tele-banking, computerization, fee based activities, hypothecation etc. scenarios are the important contributions of joint venture banks to the gradually changing commercial banking.

2.2 Review of Legislative Provisions

In this section, review of legislative framework under which the commercial banks are operating has been discussed. This legislative environment has significant impact on the commercial bank's establishment, their mobilization and utilization of resources. All the commercial banks have to conform to the legislative provisions specified in the Commercial Bank Act 2031 and the rules and regulations formulated to facilitate the smooth running of commercial banks. The commercial banks including joint venture banks are established in Nepal according to the Company Act 2021 (amended to Company Act 2053). The main purpose of JVBs is providing banking facilities to the people by facilitating tele banking services to the businessman, industrialists and other professionals and to grant loans and advances on agriculture, commerce and industrialists sectors as prescribed in the Commercial Bank Act 2031, Nepal Rastrya Bank Act 2012, and Foreign Exchange Regulation Act 2019 along with Nepalese Law.

Commercial Bank Act 2031 BS of Nepal has defined that “ A commercial bank is one which exchange money, deposits money, accepts deposits, grant loan and performs commercial banking function and which is not a bank meant for co-operative, agriculture, industries or for such specific purpose.” (Commercial Bank Act 2031 BS)

2.2.1 Investment Management Regulation

“A commercial bank formulating a written policy may decide to invest in shares and securities of an organized institution. However, such investment is restricted to 10% of paid up capital of the organization. However, the cumulative amount of such investment in all the companies in which the bank has financial interest shall be limited to 20% of the paid up capital of the bank. But the total amount of investment in share and securities of organized institution is restricted to 30% of the paid up capital of the bank.”(Directives to Commercial Banks, Directive No.8, NRB Banking Operation Department 81-82).

Likewise, commercial banks are not allowed to invest in any shares, securities, and hybrid capital instruments issued by any banks and financial institutions, licensed by

NRB. Where such investment exists prior to issuance of this directive, such investment should be brought within the restrictive limitations by the fiscal year 2060/61. But investment on rural micro finance development banks' shares are not comes under such restriction. A commercial bank is directly related to the fact that how much fund must be collected as paid up capital while being established at a certain place of the nation, how much fund is needed to expand the branch and counters, how much flexible and helpful the NRB rules are also important. But we discuss only those, which are related to investment function of commercial banks. The main provisions, established by NRB in the form of prudential norms in above relevant area are briefly discussed here under.

i) Provisions for Investment in the Deprived Sector

Some rules, which are formulated by NRB, affect the areas of credit and investment extension to the deprived sector by the commercial bank.

According to the new provision, with effect from the 3rd quarter of FY 1995/96, investment in shares of the rural development bank by CBs, which used to be counted for the priority sector lending, only is now to be included under the deprived sector lending.

According to the new provisions effective from FY 1997/98, NBL, RBB, NABIL, NGBL, NIBL are required to invest 3 percent, HBL, NSBL, NBBL, EBL, are required to invest 2 percent, Bank of Katmandu is required to invest 1.75 percent, NBCL is required to invest 0.75 percent while new commercial banks are required to invest 0.25 percent of their total loans and advances to the deprived sector.

ii) Provision for Credit to the Priority Sector

NRB requires commercial banks to extend loan and advances, amounting at least to 12 p.c. of their total outstanding credit to the priority sector. Commercial banks credit to the deprived sector is also a part of priority sector. Under priority sector, credit to agriculture, credit to the cottage and small industries and credit to service are counted commercial bank's loan to the co-operatives licensed by the NRB is also to be computed as the priority sector credit from the fiscal year 1995/96 onwards.

iii) Provision for the Investment in Productive Sector

Nepal, being a developing country needs to develop infrastructure and other primary productive sectors like agriculture, industry etc. For this, NRB has directed commercial banks to extend at least 40 p.c. of their total credit to the productive sectors. Loans to priority sector, agriculture sector, and industrial sector have to be included in productive sector investment.

Provision for the Single Borrower Credit Limit

With the objectives of lowering the risk of over concentration of bank loans to a few big borrowers and also to increase the access of small and middle size borrower to the bank loans, NRB directed CBs to set an upper limit on the amount of loan financed to an individual, firm, company or group of companies. According to this, CBs are required not to exceed the single borrower limit of 35 percent in the case of fund- based credit and 50 percent, in the case of non- fund based credit such as the letter of credit, guarantee, acceptance letter, commitment has been fixed is a proportion of capital funds of bank.

Similarly, NRB has graded six foreign joint venture banks now as the prestigious class 'A' bank, which is NABIL, NGBL, NIBL, HBL, SBI, and NBBL. These banks have been kept outside the purview of the single borrower credit limit.

Likewise, in the case of consortium financing, commercial banks are permitted to extend an additional 10 percent credit above the limit fixed by the NRB as before.

In addition, Nepal Oil Corporation, Agriculture Input Corporation and Nepal Food Corporation for their imports of petrol, diesel, kerosene, fertilizer and foodstuff respectively have been removed from the restrictions of single borrower credit limit.

iv) Provision for Minimize Liquidity Risk

Commercial banks are required monitor their liquidity risk. This is to minimize risk inherent in the activities and portfolio of the banks. According to the regulation a gap found between maturing assets and maturing liabilities is the liquidity risk. They are

monitoring their assets and liabilities on the basis of maturity period. Maturity periods such as 0-90, 91-180, 181-270, 271-365 days and above 1 year are classified for the purpose of checking.

v) Cash Reserve Requirements (CRR)

To ensure adequate liquidity in the commercial banks, to meet the depositors’ demand for cash at anytime and to inject the confidence in depositors regarding the safety of their deposited funds, commercial banks are required to have maximum CRR. In this regard, NRB has directed commercial banks to deposit minimum 8 percent of current and saving and 6 percent of fixed deposits in the NRB as primary cash reserve the commercial banks are further required to have 3 percent cash of total deposits in their own bank as secondary reserve.

vi) Loan Classification and Loss Provision

With a view to improving the quality of assets of commercial banks NRB has directed commercial banks to classify their out-standing loan and advances, investment and other assets into six categories. The classification is done in two ways. The loans of more than one lakh are to be classified as debt service charge ratio, repayment situation, financial condition of borrower, management efficiency, quality of collateral. The loans of less than one lakh have to be classified as per maturity period.

Loan Classification	Pass	Sub-standard	Doubtful	Loss
Duration	Up to 3 mts	3–6 mts	6mts—1yrs	Above1 yrs
Loan Loss provision	1%	25%	50%	100%

vii) Directives Regarding Interest Rate Spread

The interest rate spread, the difference between interest charged on loan and advances and the interest paid to the depositors, has widened significantly in the aftermath of deregulation in interest rates. This has caused lower financial intermediation. Therefore, NRB has required commercial banks to limit interest rate spread between deposit and

lending rates to a maximum extent of 5 percent. NRB has also provided commercial banks with new calculation method of interest rate spread for a certain period recently.

2.2.2 Regulatory Policy

Nepal adopted the policy of 'Economic Liberalization' and permitted Nepalese promoters in the early 1980s to operate commercial banks in joint venture with foreign banks. The reasoning behind this policy of the government is to impart opportunities to the people to encourage for saving by acquiring shares, placing money in form of deposits, to mobilize and invest the accumulated savings in the field of agriculture, trade, commerce, industry, tourism, hydro-electricity and other general utility projects, which helps to create employment and investment opportunities for the people and to generate revenue in the form of corporate tax from JVBs.

As mentioned above, banking sector has a serious responsibility of mobilizing financial resources essential for economic and social development. This sector needs to invest accumulated resources for the returns on the other hand and to protect the assets of depositors on the other. Lacking effective regulations, bad debt is mounting and the capital is eroding. Therefore, government has formulated various acts, prudential rules and regulation and directives to ensure that the NRB exercises its regulatory role to best protect the interest of the depositors at large. The related acts and polices have been reviewed under the chapter Review of Literature.

NRB as the central bank is empowered with the responsibility of regulating and supervising the commercial bank in order to protect the interest o public and to motivate them towards the developmental goal of the country.

The whole financial system of the country is strictly regulated by the Central Bank. NRB is empowered by Nepal Rastra Bank Act, Commercial Bank Act and different Regulatory Directives in order to direct and control the operation of all the commercial banks operating in Nepal. However, all commercial banks have been allowed to quote their own rate of interests for deposits, advances, commissions and other banking charges.

The main objective of Nepal Rastra Bank is the establishment of sound financial system, to maintain the stability of the banking. It ensures that the banks are operating in a sound condition, so that the interest of depositors and the general public are protected. NRB is in a better position to regulate and supervise commercial banks in an efficient manner.

Central Bank is able to evaluate the position of any particular bank through the periodic on-site and off-site inspections. Central bank can judge the true financial position of the banks through different rating systems like CAMEL which stands for:

- C : Capital Adequacy
- A : Asset Quality
- M : Management Quality
- E : Earnings
- L : Liquidity

2.3 Review of Books and Journals

2.3.1 Review of Books

Rose (2000) in his book "Commercial Bank Management" has proposed an analytical tool that can be applied to measure and evaluate the performance of the bank. When the performance of one bank is compared to another, bank size which is usually measured by total assets or total deposits becomes a critical factor. Broader gauges of profitability for banks include ratio for measuring performance returns on utilized assets and capital. There are some specific financial ratios that are used to examine the financial performances of banks. So, to examine one bank's performance with other peer bank, following ratios can be used as financial tools:

-) Return on Equity Capital (ROE)
-) Return on Assets (ROA)
-) Earnings per Share (EPS)

As a telltale indicator of a different aspect of the selected banks' operations, following break downs of equity returns and return on assets are considered to examine and analyze. Break downs of equity returns for closer analysis:

-) Net Profit Margin (NPM)
-) Asset Utilization (AU)
-) Equity Multiplier (EM)
-) Break down of return on assets for closer analysis:
 -) Net Interest Margin
 -) Non Interest Margin
 -) Special transactions affecting net income

Golin (1976) in his book "The Bank Credit Analysis Handbook" has included a chapter for Evaluating the Overall Performance of the Commercial Banks. He has stated that to begin the process of analysis, a number of key financial ratios are examined. Some of these ratios are different than those employed by credit analysts to evaluate non-financial companies, since financial institutions differ in critical way from their non-financial counterparts. Evaluating a bank's profitability requires an understanding of how banks make money and an awareness of how banks differ from non-financial institutions. As financial intermediaries, banks generally derive earnings not from commerce in manufactured goods but largely from their financial assets, their loans, securities holdings and the use of their capital to render financial services. When considering earnings and profitability, it must be remembered that the increase in absolute profits does not necessarily mean an increase in profitability. Output must always be related to inputs, whether those inputs are measured in the form of shareholder fund (equity) or the assets, mere profits is not the important element. For credit analyst, an examination of profitability concentrates on understanding differences between the subject bank and its peers, as well as comprehending changes in earnings trends. Key indication of overall profitability is ROE and ROA in the analysis of Return on Equity using DuPont Approach.

Return on Equity (ROE), is first decomposed into return on asset (ROA) and the equity multiplier (EM). Return on Assets is decomposed into net profit margin (NPM) and total asset utilization ratio (AU). Symbolically it can be expressed as:

$$\text{ROE} = (\text{ROA}) * (\text{EM})$$

$$\text{ROA} = (\text{NPM}) * (\text{AU})$$

Where,

ROE = Return on Equity

EM = Equity Multiplier

ROA = Return on Assets

NPM = Net Profit Margin

AU = Total Utilization ratio.

Baidhya (2001) on his book “Financial Market and Institutions” has defined commercial banks as those banks which pool together the savings of the community and arrange it for their productive use. They supply the financial needs of the modern of modern business by various means. They accept deposits from the public on the condition that they are repayable on demand or on short notice, they art the key players of the money market. He also stresses that the main aim of a commercial bank is to seek profit like any other business entity or firm. However what distinguishes them from other business concerns, financial as well as manufacturing business is the degree to which they have to pay much attention to balancing profitability with liquidity. (Baidhya:2056)

Sunity Shrestha, in her book “Portfolio Behavior of Commercial Banks in Nepal” says, “The commercial banks fulfill the credit needs of various service of the economy including agriculture, industry, commercial and social service sectors. The lending policy of commercial banks is based on the profit maximizing of the institution as well as the economic enhancement of country.” (Shrestha, 1995).

2.3.2 Review of Journals

Henry W. Collier, Carl B. McGowan, Jr. Junaina Muhammad in their article "Financial Analysis of Financial Institution in an Evolving Environment" has presented a model for the financial analysis of financial analysis using DuPont Model. The model was applied to AFFIN Bank Malaysia of which was one of the largest banks in Malaysia for the period from 1999 to 2005. They state that the DuPont system of financial analysis shows the impact of the Asian financial crisis on AFFIN Bank's share prices. In their research work the bank's return on equity (ROE) was decomposed into

-) Net Profit Margin (NPM)
-) Asset Utilization (AU)
-) Equity Multiplier (EM)

They state that the net profit margin allows the financial analyst to evaluate the income statements and the components of the income statement; total asset turnover allows to evaluate the left-hand side of the balance sheet (assets) and the equity multiplier allows to evaluate the right-hand side of the balance sheet (liabilities and shareholders equity). They stress that analysis of return on equity on DuPont approach provides an appropriate system for planning as well as analyzing performance of a financial institution.

Poudel (2053), in his article "Financial Statement Analysis :An Approach to Evaluate Performance " states that the balance sheet, profit and loss a/c and the accompanying notes are the most useful aspects of the bank. One has to understand the major characteristics of bank's balance sheet and profit and loss a/c. The major components of balance sheet are liabilities in the form of deposits and assets in the form of loans. On the other hand the major components of profit and loss account are interest received on loans and advances and investment and paid on deposit liabilities, the other sources of income are fee, commission, discount, and services charges. According to Mr. Poudel, the principle objectives of analyzing financial statements are to identify:

-) Liquidity
-) Profitability
-) Solvency

Most of the users of the financial statements are interested in assessing the bank's overall performance i.e. profitability which is affected by the following factors:

-) The structure of balance sheet and profit and loss account.
-) Operating efficiency and internal management system.
-) Managerial decisions taken by top management regarding interest rate, exchange rate, lending policies etc.
-) Environment changes (technology, government, competition, economy)

Shrestha (2047) in his article "*Commercial Banks Comparative Performance Evaluation*" emphasized on a proper risk management with appropriate classification of loans under performing and non-performing loan. His suggestions on risk management were as follows

-) Any customer having overdue loan of two years or more in his account should not be given other loans facilities.
-) Strong provisioning or reservations are required in restructuring portfolio relating to overdue loans.
-) All credits including overdrafts should be given a maturity date and should be subjected to revision at that date and consequently categorizes as good, substandard or doubtful loans.
-) Financial credit worthiness of the borrower must be evaluated properly before granting the loans

2.3.3 Review of Previous Thesis

Prior to this thesis, various students have carried out several thesis works regarding the various aspects of banking. Some of them are relevant for this study. So they are presented below:

Shrestha (2008) in her thesis "*Study of Financial Performance of Everest Bank Ltd with Application of DuPont Approach.*" has used DuPont approach for the financial analysis of Everest Bank Ltd. The ratios analyzed under this approach were Return on equity and Return on assets. And to view clearly the Return on equity and Return on assets were

segregated into its composite parts. ROE was broken down into net profit margin, assets utilization, equity multiplier and ROA was broken down into various variable of income statement such as interest income to total assets, interest expense to total assets, interest margin to total assets, non-interest income to total assets, employee and office expense to total assets, provision for loan loss to total assets, provision for staff bonus to total assets, provision for income tax and non interest margin to total assets. She has concluded that the overall performance of Everest Bank Limited is satisfactory and Nepal Rastra Bank has to play more active role to enhance the operation. The analysis of net profit margin of the bank is in satisfactory level. The analysis of ROA shows that the bank has a good managerial efficiency which means that the management of the bank has a very powerful capability in converting its institution's assets into net earnings. The equity multiplier of Everest Bank Limited was observed as normal state. And from the analysis of return on equity, it was drawn that the bank used more funds and gave a good return to their shareholder.

Jha (2007) in his study , "*Comparative Analysis of Financial Performance of the Selected Joint Venture Banks : A Case Study of NABIL, Nepal Indosuez Bank, Nepal Grindlays and Himalayan Bank Ltd*" concludes that it will be relevant to point out some of the important loopholes or discrepancies of these Joint Venture Banks in the economy. Loan and advances of these JVBs mostly go to the handful of big corporate houses and other small business houses that are equally capable like before, are still deprived of the required fund to start any productive business. Though JVBs are achieving the height of success, the living standard of general public hasn't even seen a marginal growth. Likewise, the financial indicators of these JVBs, which are incorporated in this study, show positive results and their growth rate, have been very healthy. But why is not the economy even near to the growth rate of the JVBs? This might be every rational person's concern these days. Hence, JVBs must try to seek potential sectors, such as manufacturing, utility service, tourism, agriculture sectors etc. At the same time, abide by the economic obligation of investing in priority and deprived sectors, so as to make profits by being instrumental in developing the country.

Bhattarai (2006) in his thesis title “*Comparatives Financial Performance of NBBL and NABIL Bank Ltd*” concludes that NABIL is performing better than NBBL in terms of Earning Per Share, Cash Dividend Per Share, Dividend Pay Out ratio, Price Earning Ratio, Market Value Per Share to Book Value Per Share. The average Operating Profit of NABIL is better than the NBBL. The study comes to the conclusion that NABIL is better to discharge its responsibility towards its shareholders than NBBL. NABIL seems relatively more concerned to come forward and participate in the task of national development by showing its liberal attitudes towards the government and being more responsive to the national priorities like branch network expansion, more employment generation and satisfactory profit earning, from shareholders’ point of view, NABIL is performing relatively better than NABIL.

Joshi (1978) in his thesis “A Study of Financial Performance of Commercial Banks” concludes that statically liquidity position of the commercial banks is satisfaction than the local joint venture banks. Loans and advances have been the main form of investment. Two third of the assets have been used for earning purpose. Profitability position of NABIL is stronger than that of other commercial banks.

Amatya (1995) in his thesis titles “*An Appraisal of Financial Position of Nepal Bank Ltd.*” concludes that Nepal Bank Ltd. is in better position in liquidity management and the bank has been successful in mobilizing deposits from the very beginning. The total deposits of the bank have increased by 17.9% during the period 1980/81 and 1989/90. Trade and commercial advances have been playing major role in the credit composition of the bank. Though the reserve of the bank has increased gradually, the reserve plays nominal role in the credit expansion control, the volume of transaction is high in all respects but the bank does not show higher profitability ratio. Actually, it shows a decreasing trend of profit.

Pradhan (1999) in his thesis paper “*A Comparative Study on the Financial Performance of Nepal Indosuez Bank Ltd (NIBL) and Nepal Grindlays Bank Ltd (NGBL)*” concludes that NGBL has been able to gain a higher market share in case of deposits as compare to

NIBL. The liquidity position is higher than NIBBL. NIBL has better utilization of resources. NIBL has maintained the ratio of cash and bank balance to total deposits, considerably higher than that of NGBL. The NIBL and NGBL are seen to be successful in aspect of foreign investment in Nepal by means of their wide international banking networks. NGBL is maintaining more amount as money at call or at short notice than that of NIBL. NIBL should utilize its risky assets and shareholders fund to gain highest profit margin and reduce its expenses for being more profitable.

Lamsal (1995) in his thesis paper “*A Comparative Financial Statement Analysis of Himalayan Bank Limited*” has concluded that liquidity ratio of both the banks are fluctuating and are not satisfactory. So the banks are suggested to keep the reasonable amount of liquidity, the bank must maintain their short term solvency position. HBL is not able to maintain proper capital adequacy position but HBL is suggested to get involve in social activities, NIBL is seen to be involved in social activities. Both the banks should open their branches in the remote areas the objective of providing cheaper banking services.

There are many researches about comparative analysis between different commercial banks. But the researcher found that there is no specific comparison between financial performance of Himalayan Ltd. and Nepal Arab Bank Ltd. done in terms of DuPont Analysis. There is a lack of broad study based on DuPont analysis that can throw light upon the financial performance of these two joint venture banks. So the topic has been chosen to support and supplement the existing literature.

Research Gaps

The research carried out by the researchers in the subject of “Comparative Analysis of Financial Performance of Commercial Banks using DuPont Model”. There are many researches about comparative analysis between different commercial banks. But the researcher found that there is no specific comparison between financial performance of Himalayan Ltd and Nepal Arab Bank Ltd done in term of DuPont Analysis.

There is a lack of broad study based on DuPont analysis that can throw light upon the financial performance of these two joint venture banks. So the topic has been chosen to support and supplement the existing literature.

CHAPTER - III

RESEARCH METHODOLOGY

The main objective of this research is the detail financial comparison between three JVBs in a micro level and to highlight the effects of the financial decisions of these banks in the economy at the macro level. This chapter will outline the methods followed in the process of analyzing the financial performance of the selected JVBs.

The following are the details of research methodology applied in the analysis.

3.1 Research Design

Since this study is based on wide range of variable and factors influencing financial decision of the JVBs, descriptive cum analytical research design will be followed.

3.2 Sources of Data

For the purpose of the study, primary as well as secondary data have been used. Primary data are based on personal inquiry, telephone conversation, meeting with stakeholders and staff of the bank.

Secondary data have been collected from the following sources.

-) Annual Reports to Shareholders (NABIL)
-) Annual Reports to Shareholders (HBL)
-) Nepal Rastra Bank Directives
-) Bank supervision annual report (NRB)
-) Quarterly Economic Bulletin Published by Nepal Rastra Bank
-) Other Publications.

3.3 Population and Sampling

Out of the nine JVBs operating in Nepal, this study focuses only at two major banks namely Nepal Arab Bank Limited (NABIL) and Himalayan Bank Limited (HBL). These JVBs have been selected out of the total population of half a dozen of commercial banks

including domestic and joint venture bank operating through out the country. The six years data are taken as sample to examine the performance.

3.4 Data Collection Procedure

The study is based on secondary data provided by NABIL and HBL. It includes the annual financial statements provided in the form of annual report. Besides that the banks supervision annual report of NRB is also used.

3.5 Method of Data Analysis

The information or data obtained from the different sources are in raw forms. From that information, direct presentation is not possible. So, it is necessary to process data and converts it into required form. After then only the data are presented for this study. This process is called data processing. For this study, only required data are taken from the secondary source (bank's publication) and presented in this study. For presentation, different tables are used. Similarly, in some cases graphical presentation is also made. As far as the computation is concerned, it has been done with the help of scientific calculator and computer software program Microsoft Excel.

3.5.1 Financial Variables, Tools and Models Used

The collected data will have no meaning if such data are not analyzed. To analyze the data in this research, the researcher has used some financial and statistical tools which are explained below.

3.5.1.1 Financial Tools

The Financial Ratios have been taken to measure the strengths and weaknesses of the selected Banks. On the basis of the relevant literatures and the research methodology mentioned above, the analysis part of the research is going to be presented. Now, in this part, financial data and information are analyzed in order to evaluate the financial performance of Joint Venture Banks selected for the study. This section is more relevant as all the findings, conclusions and recommendations of the research are based on the calculation made in this part.

All the JVBs have their own financial strengths and weaknesses in their specific field. The comparative analysis of their financial performance has been undertaken in this part with the help of the following financial tools.

3.5.1.2 Financial Variables

To examine one bank's performance over time and relative to the other bank, following indicators as indicated in Banking Supervision Annual Report of Nepal Rastra Bank (2001-2002) are taken as basic variables in this study.

-) Indicators of Financial Performance
-) Net Profit
-) Operating Profit
-) Total Income
-) Total Expenditure
-) Interest Income
-) Interest Expended
-) Interest Spread
-) Other Income
-) Operating Expenses
-) Wage Bill
-) Provisions and Contingencies
-) Provision for Loan Loss
-) Provision for Taxes
-) Other Non-operating Expenses

When the performance of one bank is compared to another bank size, it is usually measured by total assets or a total deposit which becomes a critical factor. (Peter S. Rose) Broader gauges of profitability for banks include ratios for measuring performance

returns on utilized assets and capital. (A.M Best, March 28, 2005 Analyzing Commercial Banking Operations)

There are some specific financial ratios that are used for examining the financial performances of banks. So, to examine one bank's performance over time and relative to other bank, following ratios are used in this study as financial tools to analyze.

As a telltale indicator of a different aspect of the selected banks' operations, following break downs of equity returns and return on assets are considered to examine and analyze.

Key Profitability Ratios

-) Return on Equity Capital (ROE)
-) Return on Assets (ROA)
-) Net Interest Margin
-) Net non-interest Margin
-) Net Bank Operating Margin
-) Earnings Per Share (EPS)
-) Price Earning Ratio

3.5.1.3 DuPont Model of Financial Analysis

The DuPont Model of financial analysis was designed by F. Donaldson Brown, an electrical engineer who joined the giant chemical company's Treasury Department in 1914. The DuPont System was developed to dissect a firm's financial statement so as to assess its financial condition. DuPont System of financial analysis provides a model of financial analysis for financial institutions. It helps to analysis Return on Equity. Return on Equity (ROE) is one of the most important indicators of a firm's profitability and potential growth. Two companies can have the same return on equity. Yet, one can be in a much better position than other. It merges the Income Statement and Balance Sheet into two summary measures of profitability ([www. about.com](http://www.about.com)). Return on Total Assets (ROA) and Return on Equity (ROE). It allows us to break ROE into three components.

-) As a Profit on Revenue Generated (Sales)

-) As an Efficiency of Asset use
-) Finally on Use of Leverage

By breaking it into three components, we can obtain a very detailed analysis of the financial health of the company.

Therefore, the DuPont System enables the management to look at both ROA and ROE so as to provide a clearer picture of management effectiveness.

-) If ROA is sound and debt levels are reasonable, a strong ROE is a solid signal that managers are doing a good job for generating returns from shareholders' investments
-) ROE is a "hint" that management is giving shareholders more for their money. On the other hand if ROA is low or the company is carrying a lot of debt, a high ROE can give investors a false impression about the company's fortunes

The return on equity model disaggregates performance into three components; net profit margin, total asset turnover, and the equity multiplier.

3.5.1.3.1 Break down of Return on Equity Using the DuPont Model

While Breakdown ROE using DuPont mode ROE is first decomposed into Return on Asset (ROA) and the Equity Multiplier (EM). Return on Assets is decomposed into Net Profit Margin and Total Asset Turnover.

$$ROE = (ROA) *(EM)$$

$$ROA = (NPM) *(AU)$$

To calculate the Return on Equity using the DuPont model, we have to simply multiply the three components, the Net Profit Margin, Asset Turnover, and Equity Multiplier.

$$\text{Return on Equity} = \text{Net Profit Margin} * \text{Asset Turnover} * \text{Equity Multiplier.}$$

Where,

ROE = Return On Equity

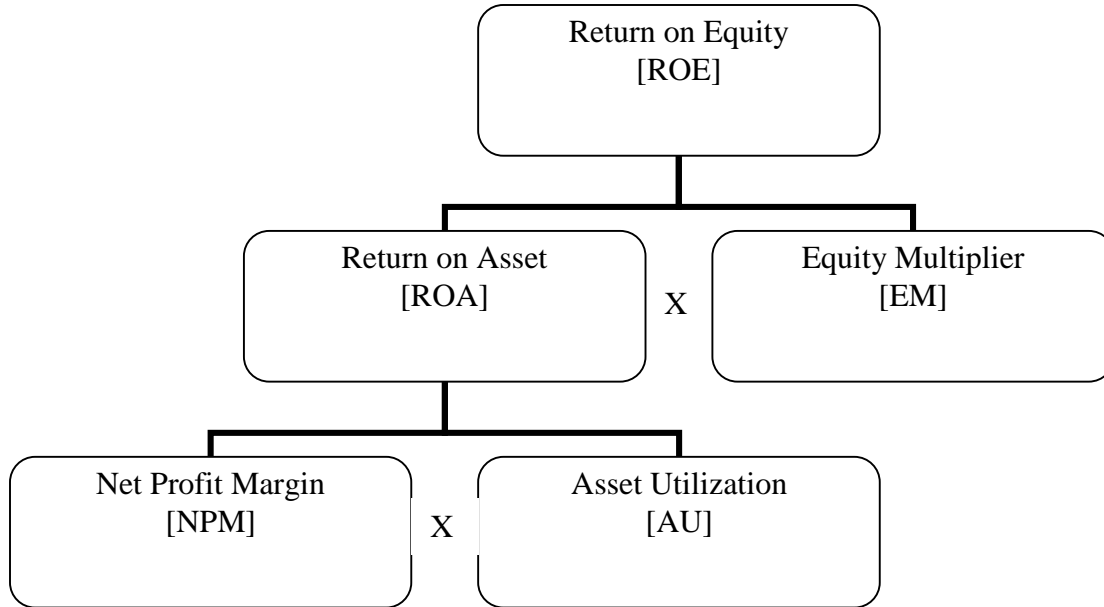
EM = Equity Multiplier

ROE=Return On Assets

NPM= Net Profit Margin

AU =Total Utilization.

DuPont model can be expressed more clearly in the form of drawing as shown below.



Return on Equity (ROE)

ROE is the rate of return flowing to the bank’s shareholders. Return on equity is computed by dividing net income by total equity capital

$$\text{Return on Equity} = \frac{\text{NIAT}}{\text{Shareholder's Equity}}$$

Return on Equity (ROE) is further broken down into following components using the DuPont Model. By examining each input individually, we can discover the sources of a company's return on equity and compare it to its competitors.

(a) Net Profit Margin (NPM)

Net Profit Margin indicates the effectiveness of expense management, cost control and service pricing policies. The profit margin allows the financial analyst to evaluate the income statement and the components of the income statement and the components of the income statement. The net profit margin is simply the after-tax profit a company

generated for each rupee of revenue. Net profit margins vary across industries, making it important to compare a potential investment against its competitors. Although the general rule of thumb is that a higher net profit margin is preferable, it is not uncommon for management to purposely lower the net profit margin in a bid to attract higher revenue. Thus, we can conclude that the bank's net profit margin reflects effectiveness of expense management, cost control and service policy. Net profit margin can be calculated as shown below.

$$\text{Net Profit Margin} = \frac{\text{Net Income after Tax}}{\text{Operating Revenue}}$$

(b) Assets Utilization Ratio (AU)

The Asset Utilization ratio is a measure of how effectively a company converts its assets into sales. It is calculated as follows.

$$\text{Asset Utilization Ratio} = \frac{\text{Operating Revenue}}{\text{Total Assets}}$$

The Asset Utilization ratio tends to be inversely related to the net profit margin i.e. higher the net profit margin, lower the asset turnover. The result is that the investor can compare companies using different models (low profit, high volume vs. high profit, low volume) and determine which one is the more attractive business. The Asset Utilization ratio is a measure of how effectively a company converts its assets into sales. The Asset Utilization ratio tends to be inversely related to the net profit margin i.e. the higher the net profit margin, the lower the Asset Utilization. Total Asset Utilization allows the financial analyst to evaluate the left hand side of the balance sheet. We can conclude that asset utilization ratio reflects portfolio management policies, especially the mix and yield on the bank's assets.

(c) Equity Multiplier (EM)

Equity multiplier is the direct measure of banks degree of financial leverage. The equity multiplier allows the financial analyst to evaluate the right hand side of the balance sheet

liabilities and owners equity. When the performance of one financial institution is compared to another, DuPont system is considered as the best model. It is possible for a company with terrible sales and margins to take on excessive debt and artificially increase its return on equity. The equity multiplier, a measure of financial leverage, allows the investor to see what portion of the return on equity is the result of debt. Thus, we can conclude that the bank's equity multiplier reflects leverage or financing policies, the source chosen to fund the bank (debt or equity). The equity multiplier is calculated as shown below.

$$\text{Equity Multiplier} = \frac{\text{Total Assets}}{\text{Shareholder's Equity}}$$

3.5.1.3.2 Further Breakdown of ROE to analysis Efficiency

Return on equity (ROE) can be slightly modified into efficiency ratios which can be very useful for diagnosing problems in four different areas of bank management.

-) Tax Management Efficiency
-) Expense Control Efficiency
-) Asset Management Efficiency
-) Fund Management Efficiency

To calculate the efficiency equation the return on equity model, we have to simply multiply Tax management efficiency; Expense control efficiency; Asset management efficiency and Fund Management Efficiency ratio as show below. When one of these four ratios drops management must reevaluate the banking organization's efficiency in that area.

$$\text{Return on Equity} = \text{Tax Management Efficiency} * \text{Expense Control Efficiency} * \text{Asset Management Efficiency} * \text{Fund Management Efficiency}$$

(a) Tax Management Efficiency Ratio

Tax Management Efficiency reflects the bank’s use of security gains or losses and other tax management tools such as buying tax exempted bonds to minimize its tax exposure.

$$\text{Tax Management Efficiency Ratio} = \frac{\text{Net Income after Tax}}{\text{Net Income before Tax}}$$

(b) Expense Control Efficiency Ratio

Expense Control Efficiency Ratio helps to measure the operating efficiency and the expense control. It indicates how many rupees of revenue survive after operating expenses are removed.

$$\text{Expense Control Efficiency Ratio} = \frac{\text{Net Income before Tax}}{\text{Total Operating Revenue}}$$

(c) Asset Management Efficiency Ratio

It is calculated by dividing Total Operating Revenue by Total Assets. It shows how efficiently the bank is utilizing its assets so as to generate the revenue. It is calculated as follows:

$$\text{Asset Management Efficiency Ratio} = \frac{\text{Total Revenue}}{\text{Total Assets}}$$

(d) Fund Management Efficiency

Fund Management Efficiency is the direct measure of banks degree of financial leverage. The Equity Multiplier, a measure of financial leverage, allows the investor to see what portion of the return on equity is the result of debt. The bank’s fund management efficiency ratio reflects leverage or financing policy. It is calculated as follows.

$$\text{Fund Management Efficiency Ratio} = \frac{\text{Assets}}{\text{Shareholder’s Equity}}$$

3.5.1.3.3 Analysis of ROA by Decomposing the Variables of Income Statement

ROA measures the banks earnings in relation to assets. It is the income generated by employing the assets of the company. It helps to measure the profitability with respect to total assets; higher the ratio, higher the profit. High ratio usually indicates efficiency in utilizing its overall resources and vice versa. Income is earned by using the assets of a business productively, more efficiently the production, more profitable the business. The rate of return on assets indicates the degree of efficiency with which the management has used the assets of the enterprise during an accounting period. Hence, ROA is further analyzed to examine the efficiency of the selected banks. The variables of income statements are divided by common denominator total assets to examine the efficiency of the selected banks as shown below.

<u>Variables</u>	<u>Notation</u>
Interest Income to TA	A
Interest Expense to TA	B
Net Interest Margin to TA	C
Non-Interest Income to TA	D
Employee and Office Expense to TA	E
Non-interest Margin to TA	F
Provision for Loan Loss to TA	G
Provision for Staff Bonus to TA	H
Provision for Tax to TA	I

ROA can be computed as:

$$C=A-B$$

$$F=D-E$$

$$K=C+F-G-H-I$$

(a) Interest Income to Total Assets

It is the main source of income for the bank and other financial institutions. It is the interest earned on loan provided to individual, corporation or other entity. It is computed by dividing Total Interest Income by Total Assets.

$$\text{Interest Income to TA} = \frac{\text{Interest Income}}{\text{Total Assets}}$$

(b) Interest Expense to TA

Interest Expenses is an expense for interest on a loan made to an individual, corporation or other entity, the ratio of interest expenses to total assets is computed so as to analyze the cost of holding the assets. It is computed by dividing Interest Expense by TA.

$$\text{Interest Expense to TA} = \frac{\text{Interest Expense}}{\text{Total Assets}}$$

(c) Net Interest Margin to TA

Interest Margin is a measurement of the difference between the [interest](#) income generated by banks or other financial institutions and the amount of interest paid out to their lenders (for example, deposits). It is expressed as a percentage of what the financial institutions are earning. It is computed by dividing Interest Expense by TA.

$$\text{Interest Expense by TA} = \frac{\text{Net Interest Margin}}{\text{Total Assets}}$$

(d) Non-interest Income to TA

Non-interest income is the revenue generated by the bank other than by interest incomes such as commissions, fee incomes and other operating activities. It is computed by dividing Interest Expense by TA.

$$\text{Interest Expense by TA} = \frac{\text{Non-interest Income}}{\text{Total Assets}}$$

(e) Employee and Office Expense to TA

Employee and Office Exp includes the cost that the bank must bear towards its employee and other costs on banks facilities Employee and Office, It is the non-interest expense and is computed by dividing Employee and Office Exp expense by total assets

$$\text{Employee and Office Expense to TA} = \frac{\text{Employee and Office Exp}}{\text{Total Assets}}$$

Total assets

(f) Non-Interest Margin to TA

Non-Interest Margin is the difference between Non-Interest Income and Non-Interest Expense. It is computed by dividing Employee and Office Expense by Total Assets

$$\text{Non-Interest Margin to TA} = \frac{\text{Non-interest Margin}}{\text{Total Assets}}$$

(g) Provision for Loan Loss to TA

Provision for loan loss is the fund created as a reserve for the bad debts. It is computed by dividing Provision for Loan Loss by TA.

$$\text{Provision for Loan Loss to TA} = \frac{\text{Provision for Loan Loss}}{\text{Total Assets}}$$

(h) Provision for Staff Bonus to TA

Provision for staff bonus is the fund created as a reserve for the providing bonus to its employees. This ratio is computed by dividing Provision for Staff Bonus by TA.

$$\text{Provision for Staff Bonus to TA} = \frac{\text{Provision for Staff Bonus}}{\text{Total Assets}}$$

(i) Provision for tax to TA.

Provision for tax is the fund created for paying the tax liabilities to the government. It is computed by dividing Provision for tax by TA.

$$\text{Provision for tax to TA} = \frac{\text{Provision for Tax}}{\text{Total Assets}}$$

3.5.1.3.4 Other Financial Indicators

The other financial indicators that are used for analyses are as follows.

(a) Earning Per Share (EPS)

The main motive of the owners for their investment is to earn handful amount of return on their investment. Therefore, they always concentrate in the bottom line of the bank, i.e. its net profit after tax. No matter the earnings are retained or distributed. Higher earning per share enhances the value of the shareholders' wealth. Higher profitability of the bank results in higher Earning per Share. Earning per Share is calculated by dividing Net Profit after Tax by Total Number of Equity Shares.

$$\text{Earnings per Share} = \frac{\text{Net Profit after Tax}}{\text{Total No of Equity Shares}}$$

(b) Market Value per Share

The Market Value per Share (MVPS) is the price the market is paying for the share.

(c) Price Earnings Ratio

The ratio reflects the price currently paid by the market for each rupee of currently reported Esp. is calculated by dividing the market value per share (MVPS) by EPS.

$$\text{Price Earning Ratio} = \frac{\text{Market Value per Share}}{\text{Earning per Share}}$$

3.5.2 Statistical Tools

In order to get the concrete results from the research, data are analyzed by using different types of tools. As per topic requirements, emphasis is given on statistical tools rather than financial tools. So, for this study the following statistical tools are being used. They are arithmetic mean, standard deviation, coefficient of variance, coefficient of correlation and trend analysis of important variables etc.

3.5.2.1 Arithmetic Mean

It is the sum of all the observations divided by the number of observations. In such a case all the items are equally important (Pant, G.D. & Chaudhary, A.K. (1999),). As

arithmetic mean is most common and popular tools for data analysis, here in this study also, arithmetic mean is used. It is computed by using following formula:

$$\text{Mean } (\bar{X}) = \frac{X}{n} \quad \text{Where } \bar{X} = \text{Mean}$$

X = Sum of all the Variable X

n = Variables involved

3.5.2.2 Standard Deviation

The standard deviation is the best tools to study fluctuation in any data. It is usually denoted by the letter sigma (σ). Karl Pearson suggested it as a widely used measure of dispersion and is defined as the positive square root of their arithmetic mean of squares of the deviation of the given observations from their arithmetic mean of a set of value. (Gupta, S.C. "Fundamental of Statistics") It can be computed by using the following formula.

$$S.D = \sqrt{\frac{1}{n} \sum f_x (x - \bar{x})^2}$$

Greater the magnitude of standard deviation, higher will be the fluctuation and vice versa.

3.5.2.3 Correlation and Regression Analysis

Correlation and Regression analysis are the techniques of studying how the variations in one series are related to variations in another series. Measurement of the degree of relationship between two or more variables is called correlation analysis and using the relationship between known and unknown variable to estimate the unknown one is termed as regression analysis.

3.5.2.4 Coefficient of Correlation

By this statistical tool, the degree of relationship between two variables is identified. In other words, this tool is used to describe the degree to which one variable is linearly related to other variables. Two or more variables are said to be correlated if change in the value of one variable appears to be linked with the change in the other variables. The

correlation analysis refers to the closeness of the relationship between the variables. Sharma, P.K. and Chaudhary, A.K. (2000), Correlation may be positive or negative and ranges from -1 to +1. Simple correlation between interest rate and deposit amount, interest rate and credit or lending amount and interest rate (both deposit rate and lending rate) and inflation is computed in this thesis. For example, let's say that the correlation between interest rate and inflation is positive. It indicates that when inflation increases, interest rate also increases in the same direction and vice versa. For our study the following reference is used (Pant, G.D. and Chaudhary A.K. (2053))”

-)] Correlation may be positive or negative and ranges from -1 to +1. When $r = +1$, there is positive perfect correlation; when $r = -1$, there is perfect negative correlation; when $r = 0$, there is no correlation and when $r < 0.5$ then there is low degree of correlation.
-)] When ‘r’ lies between 0.7 to 0.999 (or -0.7 to -0.999), there is high degree of positive (or negative) correlation.
-)] When ‘r’ lie between 0.5 to 0.699, there is a moderate degree of correlation.

The simple correlation coefficient, r, is calculated by using the following formula.

$$\text{Simple Correlation Coefficient (r)} = \frac{n\sum X_1 X_2 - \sum X_1 \sum X_2}{\sqrt{n\sum X_1^2 - (\sum X_1)^2} \sqrt{n\sum X_2^2 - (\sum X_2)^2}}$$

Alternately,

$$r = \frac{\text{Cov}(X_1, X_2)}{\sqrt{\text{Var}X_1 \text{Var}X_2}}$$

Where,

$$\text{Covariance (X}_1, \text{X}_2) = \frac{1}{n} \sum (X_1 - \bar{X}_1)(X_2 - \bar{X}_2)$$

n = Total number of observations.

X₁ and X₂ = two variables, correlation between them are calculated.

Two variables are said to have correlation when they are so related that the change in the value of one variable is accompanied by the change in other. In this section, an effort has

been made and various statistical tools (Karl Pearson's coefficient of correlation, probable error) are used so as to find the relationship between the following variables of HBL and NABIL.

-) Correlation analysis of EM and ROA
-) Correlation analysis of NPM and EM
-) Correlation analysis of NPM and ROE
-) Correlation analysis of AU and ROA
-) Correlation analysis of EM and ROE

3.5.2.5 Regression Analysis

To examine the relationship between EM and ROE for HBL and NABIL correlation and regression analysis is done. In this analysis ROE is the dependent variable (Y), and EM is the independent variable.

Equity Multiplier is the direct measure of banks degree of financial leverage. The equity multiplier, allows the investor to see what portion of the return on equity is the result of debt. Theoretically, there should exist a positive relationship between ROE and EM because higher the leverage, higher should be the ROE.

To develop a statistical model so as to study the regression between the two variables X (EM) and Y (ROE), theoretical statement is created. "ROE is the function of EM."

Symbolically it can be presented as;

$$ROE = f(EM)$$

Least square method is used to examine the relationship between the variables.

According to the principal of least squares, a simple regression line where dependent variable Y (ROE) on X (EM) is

$$Y(ROE) = a + b(EM)$$

$$Y = a + b x$$

Here:

$$Y = ROE$$

$$X = EM$$

a = y-intercept

b = slope of the regression line which is also known as regression coefficient.

3.5.2.6 Trend Analysis

A series from a set of statistical data arranged in accordance with their time of occurrence is said to be a time series. The analysis of a variable's past value changes to determine if a trend exists. And if so, what is the trend indicates. Trend analysis is based on the idea - what has happened in the past gives analyst an idea of what will happen in the future.

The following trend analysis has been done in the study.

-) Trend value of ROE of HBL and NABIL
-) Trend value of ROA of HBL and NABIL

3.5.2.7 Test of hypothesis

To test the significant relationship between EM and ROE t-test has been performed and accordingly null hypothesis and alternative hypothesis has been formulated.

The null hypothesis: There is no significant relationship between EM and ROE

Ho: $\rho = 0$

The alternative hypothesis: There is significant relationship between EM and ROE

H₁: $\rho \neq 0$

$$t_b = X \frac{b}{S_b}$$

Using 5% level of significant and 4 degree of freedom; t-test has been performed.

CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

This chapter deals with the presentation, analysis and interpretation of statistics, evidence and facts to clarify the research work. The data are analyzed using financial and statistically tools. The analyzed data and results are presented clearly and simultaneously using graphs. Lastly, each result is interpreted in topics and sub topics. This chapter has four parts.

The first part deals with analysis of ROE using DuPont as well as efficiency ratio approach. Under DuPont approach the ROE is broken down into three components Net profit margin, Asset utilization ratio, and Equity multiplier. Likewise under efficiency ratio approach ROE is decomposed into Tax management efficiency ratio, Expense control efficiency ratio, Asset management efficiency ratio and Fund Management efficiency ratio. The second part deals with the analysis of Return on assets (ROA). It is broken down into Net profit margin (NPM), Assets utilization (AU) using DuPont approach. Likewise, ROA is further analyzed to examine the efficiency of both the banks. The variables of income statements are divided by common denominator total assets. By examining each input individually, we can discover the sources of a company's ROE and ROA and compare it to its competitor. The third part deals with the analysis of other financial indicators such as EPS, MVPS and PE ratios. The fourth part deals with analysis of descriptive statistics, correlation and regression analysis, trend analysis and test of hypothesis and finally the last part deals with the major findings of the study.

4.1 Analysis of Return on Equity (ROE)

It measures return on investment targeting on ordinary share holders. It specifically aims at measuring the return the shareholders expects from their investment in share. It measures the rate of return earned by the shareholders. A high degree reflects a strong financial structure of the company. A relatively low equity ratio reflects a more speculative situation.

4.1.1 Analysis of Composition of Return on Equity (ROE) using the DuPont Model

There are three components in the calculation of return on equity (ROE) using the traditional DuPont model; the [net profit margin](#), [asset turnover](#), and the equity multiplier. By examining each input individually, we can discover the sources of a company's return on equity and compare it to its competitors. Break down of return on equity for closer analysis:

Net profit margin (NPM)

Asset Utilization (AU)

Equity multiplier (EM)

Calculation of Return on Equity

Return on equity (ROE) is first decomposed into return on asset (ROA) and the equity multiplier,(EM). Return on assets is further decomposed into net profit margin and total asset utilization. Symbolically it can be expressed as shown below:

$$ROE = (ROA) *(EM)$$

$$ROA= (NPM) *(AU)$$

To calculate the return on equity using the DuPont model, we have to simply multiply the three components; Net profit margin, Asset turnover and Equity multiplier.

$$ROE = NPM * AU * EM$$

Where,

ROE = Return on Equity

EM = Equity Multiplier

ROA = Return on Assets

NPM = Net Profit Margin

AU = Asset Utilization.

4.1.1.1 Analysis of the Data Required for DuPont Analysis

The basic data's required to perform DuPont analysis has been extracted from the balance sheet and income statements of the concern banks. Table 4.1 shows the Net Profit

margin (NPM), Total Operating Revenue (TOR), Total Assets (TA), Total Equity (TE), HBL with percentage relative of the selected banks.

Table 4.1

**Net Profit (NP), Total Operating Revenue (TOR), Total Assets (TA), and Total Equity (TE),
HBL with percentage relative (Rs in Million)**

Yr	NP		TOR		TA		TE	
	HBL	NABIL	HBL	NABIL	HBL	NABIL	HBL	NABIL
2003/04	263054 (100)	455311 (100)	1024776 (100)	1050706 (100)	24762025 (100)	16745486 (100)	1324166 (100)	1481682 (100)
2004/05	308275 (117)	518637 (114)	1195922 (117)	1194899 (114)	27844694 (113)	17186330 (103)	1541747 (117)	1657638 (112)
2005/06	457458 (174)	635263 (139)	1393535 (136)	1359513 (129)	29460389 (119)	22329971 (133)	1766176 (134)	1874994 (127)
2006/07	491823 (187)	673960 (148)	1393362 (136)	1480158 (141)	33519142 (135)	27253393 (163)	2146499 (163)	2057049 (139)
2007/08	635869 (242)	746468 (164)	1597495 (156)	1670427 (159)	36175532 (146)	37132759 (222)	2512992 (190)	2437199 (165)
2008/09	752835 (287)	1031053 (226)	1988048 (194)	2220983 (211)	39320323 (159)	43867398 (262)	3119881 (236)	3130241 (211)

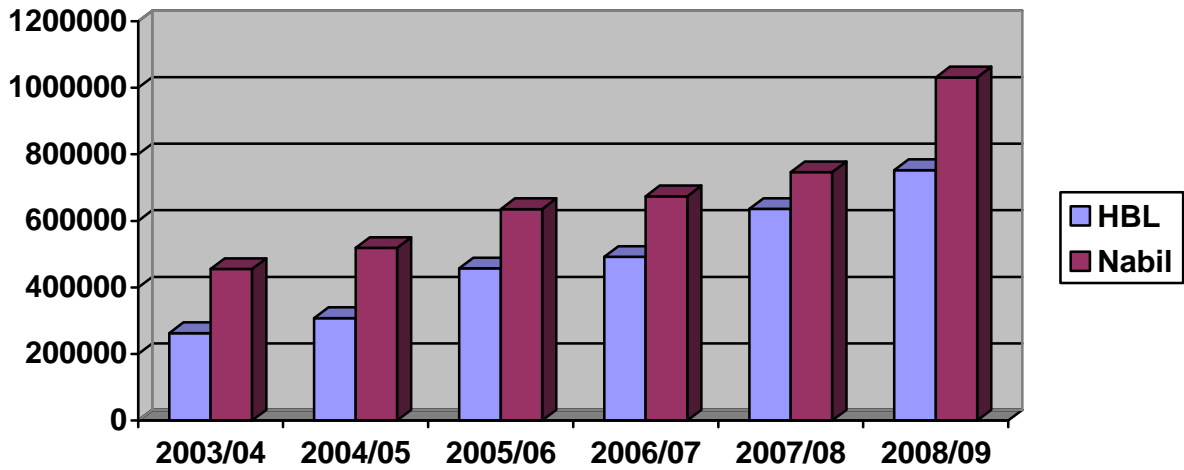
Source: Annual Bank supervision report and financial statement of HBL and NABIL

Note: Figure in the parentheses is percentage relative Year 2003/04 is considered as a base year.

4.1.1.1.1 Net Profit (NP)

The time series data presented in table 4.1 shows that the NP of HBL increased by 17% in the year 2004/05 as compared to its base year 2003/04. However in the subsequent year the figure shows an increasing trend. An increment by 187% is observed by the end of year 2008/09. The NP of NABIL also shows an increasing trend, an increment of 126% in 2008/09 relative to the base year 2003/04 has been observed. The time series data clearly shows that NABIL is in better position as compared to HBL as far as NP is concerned.

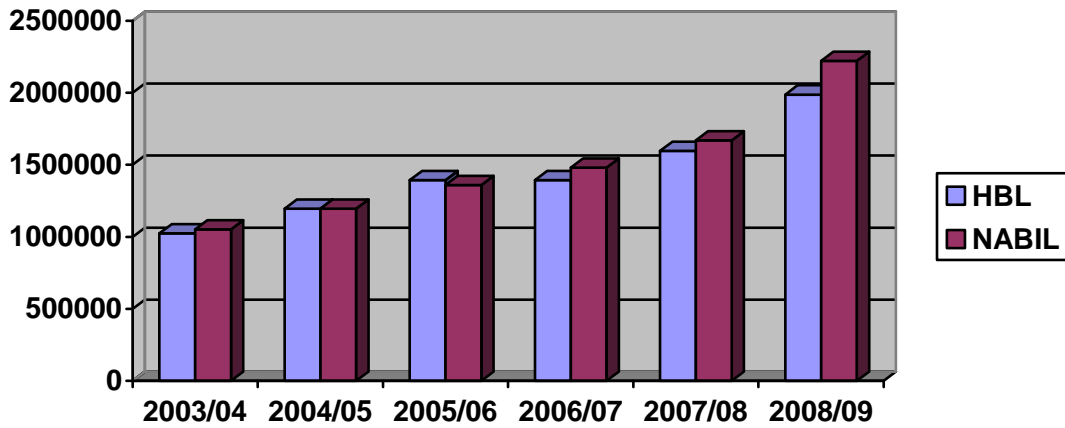
Figure 4.1



4.1.1.1.2 Total Operating Revenue (TOR)

As indicated in the table, the TOR of HBL is in increasing trend an increment of 94% in the year 2008/09 is observed as compared to its base year 2003/04. On the other hand an increment by 111% in the year 2008/09 is observed as compared to its base year 2003/04 in case of NABIL. Hence, from the above analysis we can conclude that NABIL is in better position as far as TOR is concerned.

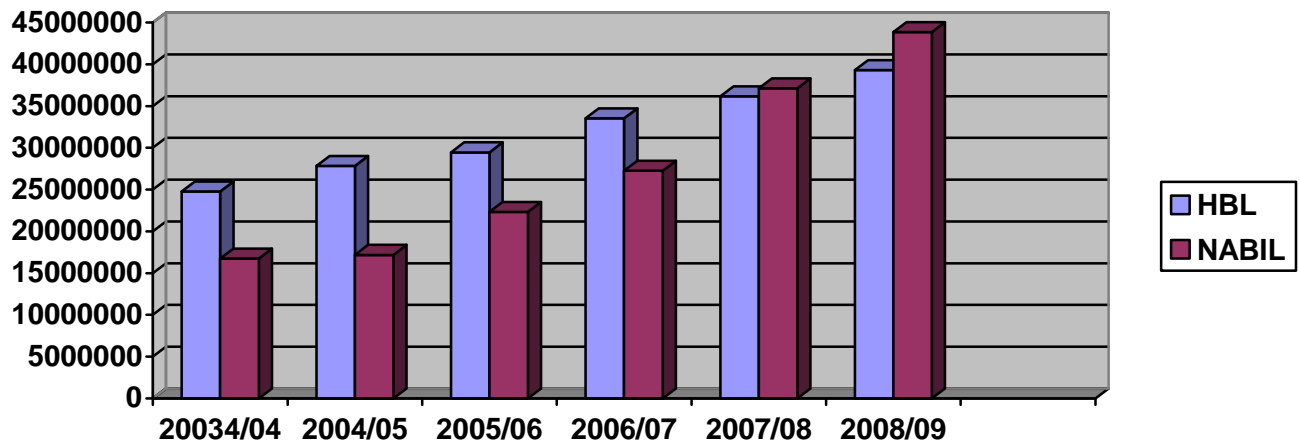
Figure 4.2



4.1.1.1.3 Total assets (TA)

The time series data presented in Table 4.1 shows that the HBL has an increasing trend. It rises by 59% in the year 2008/09 relative to the year 2003/04. On the other hand TA of NABIL increased by 3% in the year 2004/05. However it gradually increased by 162% in 2008/09 with respect to its base year 2003/04. Thus, NABIL is in better position in terms of TA also.

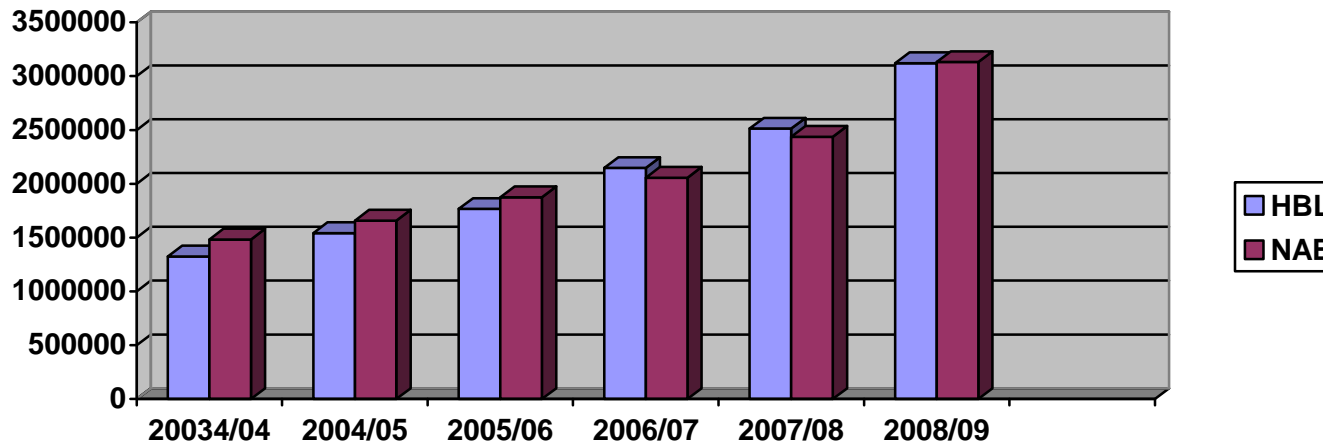
Figure 4.3



4.1.1.1.4. Total equity (TE)

Table 4.1 clearly shows that the TA of both the banks is in an increasing trend. By the end of the year 2008/09, the TE of HBL increased by 136 % where as incase of NABIL it increased by 111 % with respect to its base year 2003/04. HBL has higher shareholder equity capital than NABIL.

Figure 4.4



4.1.1.2 Analysis of ROE Using DuPont Model

The three components that are used in the calculation of return on equity using the DuPont model are presented in the table 4.2 by examining each input individually. We can discover the sources of a company's return on equity and compare it to its competitors. ROE is broken down into Net Profit Margin (NPM), Asset Utilization (AU) And Equity Multiplier (EM) for closer analysis.

Table 4.2
Net profit Margin (PM), Asset utilization (AU) and Equity Multiplier (EM) and Return on Equity (ROE) along with Percentage Relative.

yr	NPM (%)		AU (%)		EM(Times)		ROE (%)	
	HBL	NABIL	HBL	NABIL	HBL	NABI	HBL	NABIL
2003/04	25.67% (100)	43.33% (100)	4.14% (100)	6.27% (100)	18.70 (100)	11.30 (100)	19.87% (100)	30.73% (100)
2004/05	25.78% (104)	43.40% (101)	4.36% (112)	6.95% (110)	17.78 (74)	10.37 (99)	20.00% (101)	31.29% (132)
2005/06	32.83% (128)	46.73% (108)	4.73% (121)	6.09% (97)	16.68 (69)	11.91 (105)	25.90% (130)	33.88% (143)
2006/07	35.30% (138)	45.53% (105)	4.16% (106)	5.43% (86)	15.62 (65)	13.25 (117)	22.91% (115)	32.76% (138)
2007/08	39.80% (155)	44.69% (103)	4.41% (107)	4.42% (70)	14.39 (77)	15.23 (135)	25.30% (128)	30.63% (99)
2008/09	37.86% (148)	46.42% (107)	5.06% (122)	5.06% (80)	12.61 (67)	14.01 (124)	24.13% (121)	32.94% (107)

Source: Annual Bank supervision report 2009 and financial statement of HBL and NABIL

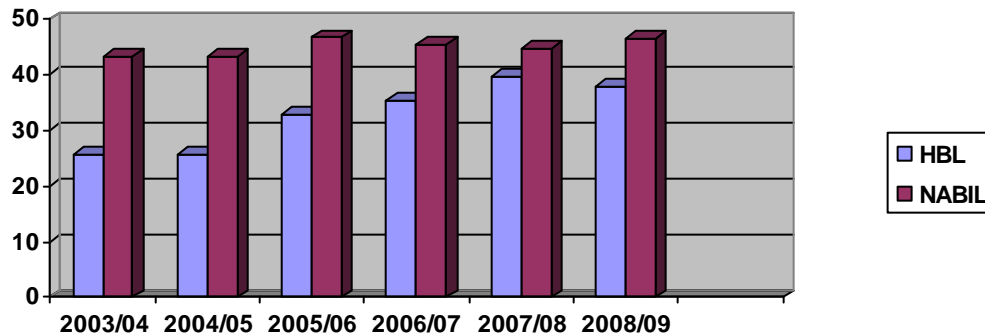
Note: Figure in the parentheses is percentage relative Year 2003/04 is considered as a base year

4.1.1.2.1 Net Profit Margin (NPM)

NPM indicates the effectiveness of expense management, cost control and service pricing policies. The NPM is simply the after tax profit a company generated for each rupee of revenue. The highest PM ratio of HBL has been observed in 2007/08 with 39.80% and relatively lowest ratio is observed in the year 2003/04 with 25.67%. The NPM increased to 0.43% in the years 2004/05 and then shows a gradual increment in the subsequent year 2007/08. However, in the year 2006/07 and 2007/08 an increment by 40% and 56% respectively as compared to its base year 2003/04 has been observed. Table 4.2 clearly demonstrates that NPM ratio of NABIL is in increasing trend. The

highest NPM ratio of 46.73 % has been observed in the year 2005/06 and a percentage relative of clearly shows that NABIL has maintained its NPM in a satisfactory level.

Figure 4.5

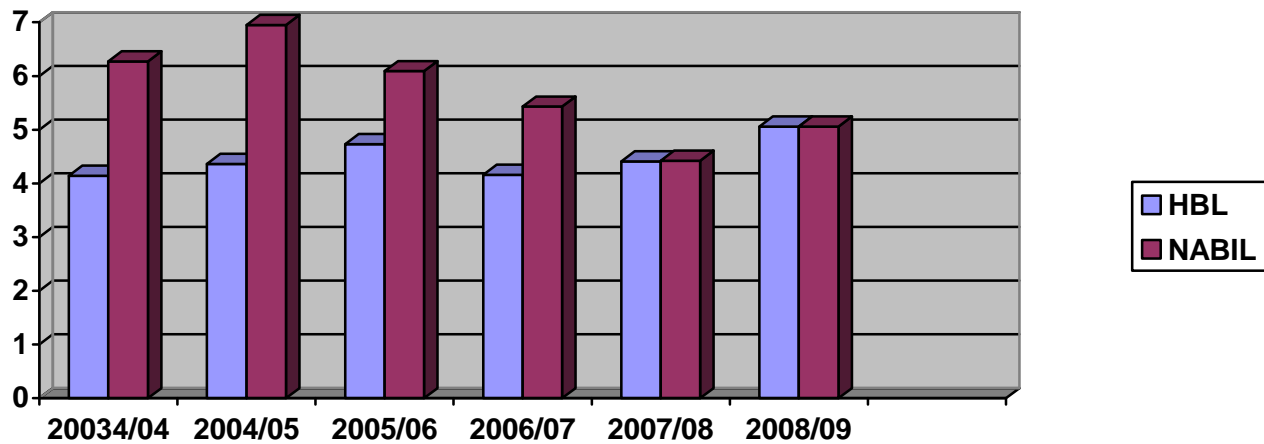


4.1.1.2.2 The Asset Utilization (AU)

The asset utilization ratio is a measure of how effectively a company converts its assets into sales. The asset utilization ratio tends to be inversely related to the net profit margin i.e. higher the net profit margin, lower the asset utilization ratio will be. The asset utilization ratio is a measure of how effectively a bank converts its assets into revenue. Asset utilization ratio reflects the portfolio management policies, especially the mix and yield on the bank's assets. HBL shows the fluctuating trend of AU. It has ranged from the lowest of 3.81 % to the highest of 5.06 % in 2003/04 and 2008/09 respectively. Table 4.2 clearly demonstrates that AU ratio decreased in the year 2006/07 but a gradual increment has been observed till the year 2008/09. However, in the year 2006/07 it decreased to 4.16%. It clearly indicates that AU ratio is showing the fluctuating trend but is not so highly fluctuating. Hence, we can conclude that AU of HBL is quite satisfactory. On the other hand AU of NABIL shows an increasing trend. It decreased from 6.27% to 4.42% from the year 2003/04 to 2007/08 and then again increased to 5.06% by the year 2008/09. The asset utilization ratio shown above reveals that NABIL is effectively

converting its assets in generating the revenue. However the decreased value of AU in the year 2007/08 shows that it must more carefully allocate its assets in high yielding loans and investment. As presented in the table 4.2 higher ratio of 6.95% is observed in the year 2004/05. Relatively low ratio of 4.42% has been observed in the year 2007/08. It has been observed from the table that the ratio is in fluctuating position but is in a slight increasing trend. The ratio 6.27% to 5.06% from the year 2003/04 to 2008/09. A percentage relative of also justifies the above mention fact. The asset utilization ratio shown in the table 4.2 reveals that NABIL is effectively converting its assets in generating the revenue. However the decreased value of AU in the year 2007/08 shows that it must more carefully allocate its assets in high yielding loans and investment.

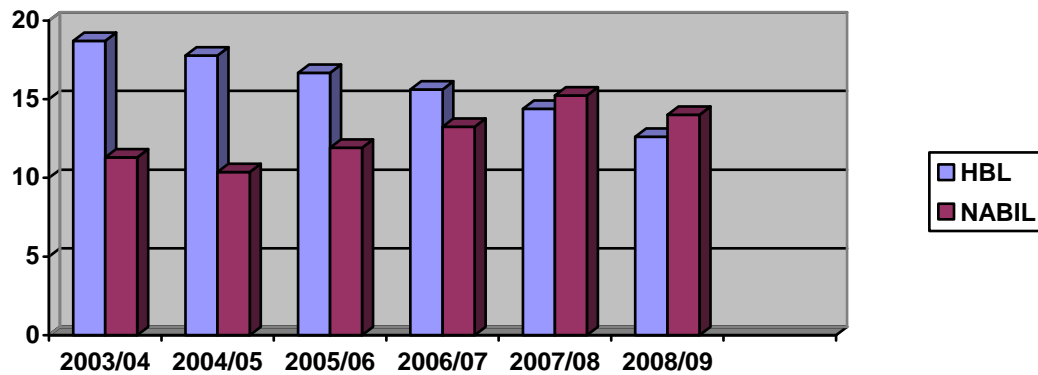
Figure 4.6



4.1.1.2.3 Equity Multiplier

Equity multiplier is the direct measure of banks degree of financial leverage. The equity multiplier, a measure of financial leverage, allows the investor to see what portion of the return on equity is the result of debt. Thus, we can conclude that the bank’s equity multiplier reflects leverage or financing polices; the source chosen to fund the bank (debt or equity). Normally an average of more than 15% is considered as satisfactory. Larger the multiplier, more exposed to failure risk, is banks. However, larger the multiplier, greater the bank’s potential for high return for it stockholders. EM of HBL shows a decreasing trend. It has a highest of 16.68% and a lowest of 12.61% in the year 2005/06 and 2008/09 respectively. Percentage relative is observed which clearly indicates that EM ratio is in decreasing trend and things are negative. The EM of NABIL also shows a increasing trend . It had a highest ratio in 2007/08 with 15.23% and the lowest of 11.30% in the year 2003/04. From the year 2003/04 to 2008/09, the ratio shows a gradual down and increment trend from 11.30% to14.01% then the ratio increases to 11.91% and 13.25% in the subsequent year 2005/06 and 2006/07 respectively.

Figure 4.7

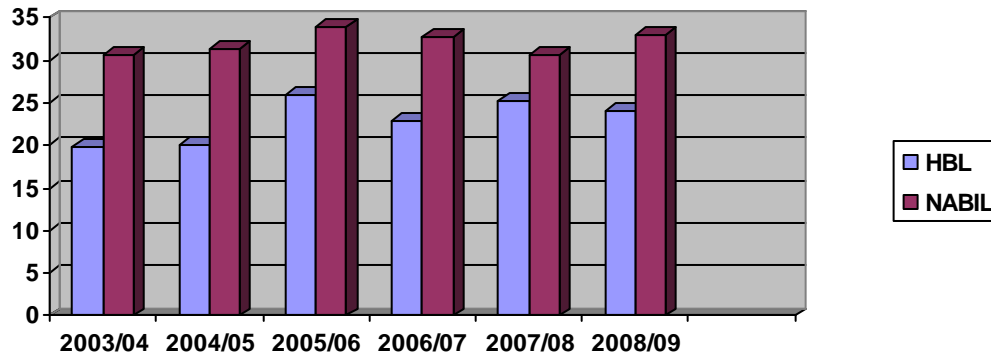


4.1.1.2.4 Return on equity (ROE)

It measures return on investment targeting on ordinary share holders. It specifically aims at measuring the return the shareholders expects from their investment in share. A high degree reflects a strong financial structure of the company. A relatively low equity ratio reflects a more speculative situation. As presented in the table 4.2 highest ratio of ROE of HBL has been observed to be 25.90% in the year 2005/06. It has been observed 19.87% in the year 2003/04 but it shows a gradual increase and the ratio decreases to a lowest of 19.87% and 25.90% respectively and again increase. Again, the ratio starts to increase to 25.90% in the year 2005/06 and then again decreases to 22.91% in the year 2006/07. A percentage relative of clearly indicates that the things are not so satisfactory. Hence, we can conclude that the ROE of HBL is in fluctuating position but is showing a decreasing trend. Similarly, the table 4.2 shows that NABIL has an encouraging ROE. The highest ratio of 33.88 % is observed in the year 2005/06 and relatively lower ratio of 30.63% has been observed in the year 2007/08. A percentage relative of clearly indicates that the ROE of NABIL is in fluctuating position but is showing an increasing trend. Thus, from the above analysis we can conclude that ROE of NABIL is quite satisfactory as compared to HBL.

Figure 4.8

ROE



Conclusion

A careful examination of the figures of HBL in the table 4.2 reveals that a decline in ROE was due to decline in PM. However, with the gradually increment in PM, ROE also surges up from 19.87% to 25.90% from the year 2003/04 to 2005/06 respectively. Although NPM was increased to 39.80% in the year 2007/08 yet, ROE decreases to 37.86%. The main reason behind was the decrement in later two ratios, AU and EM. Hence we can conclude that the prime factor behind the change in ROE of HBL is PM ratio and the other secondary factors are AU and EM. The net profit margin is simply the after tax profit a company generated for each rupee of revenue. The general rule of thumb is that a higher net profit margin is preferable, NPM vary across industries making it important to compare a potential investment against its competitors. To bring increment in ROE, PM plays an important role. Thus, HBL must concentrate more in increasing its NPM. It indicates that HBL is not so effective in expense management, cost control and service pricing policies.

On the other hand a closer analysis shows that the change in ROE of NABIL results from significant change in PM, AU and EM. The PM surges up causing an increase in ROE although PM shows an increasing trend yet, a decrease in AU from 4.14 % to 5.06% has been observed. It clearly indicates that the PM is the strong deterrent to build up significant ROE. As far as EM is concerned, it also shows the decreasing trend. NABIL must concentrate in maintaining optimum level of EM for that it must allocate its assets to the higher yielding loans and investments while avoiding excessive risk. Normally, an average of more than 15% is considered as satisfactory. Larger the multiplier, the greater the bank's potential for high return for its stockholders. Thus, from the above analysis we can conclude that the NABIL must evaluate its leverage or financing policy and try to increase its EM.

4.1.3 Further Breakdown of ROE so as to analysis Efficiency

Return on equity, ROE can be slightly modified into efficiency equation which can be very useful for diagnosing problems in four different areas of bank management; Tax Management Efficiency, Expense Control Efficiency, Asset Management Efficiency, and Fund Management Efficiency. To calculate the efficiency ratio; the return on equity (ROE) model, we have to simply multiply Tax Management Efficiency, Expense Control Efficiency, Asset Management Efficiency and Fund Management Efficiency Ratio. When one of these four ratios drops, management must reevaluate the banking organization's efficiency in that area. The table 4.3 exhibits ROE, the efficiency model in which return on equity is decomposed into four components; TME, ECE, AME, and FME.

Table 4.3

Breakdown of ROE into TME, ECE, AME and FME along with Percentage Relative

Yr	TME		ECE		AME		FME(X)		ROE	
	HBL	NABIL	HBL	NABIL	HBL	NABIL	HBL	NABIL	HBL	NABIL
2003/04	62.55%	69.29%	41.04%	62.54%	4.14%	6.27%	18.78%	11.30%	19.87%	30.73%
	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
2004/05	59.00%	68.57%	43.69%	63.29%	4.29%	6.95%	17.88%	10.37%	20.00%	31.29%

	(93)	(98)	(105)	(101)	(103)	(110)	(95)	(92)	(101)	(132)
2005/06	68.03%	70.74%	48.25%	66.05%	4.73%	6.09%	16.68%	11.91%	25.90%	33.88%
	(109)	(101)	(117)	(105)	(114)	(99)	(88)	(105)	(130)	(143)
2006/07	68.56%	68.18%	51.49%	66.78%	4.16%	5.43%	15.62%	13.25%	22.91%	32.76%
	(110)	(98)	(124)	(106)	(101)	(86)	(83)	(117)	(115)	(138)
2007/08	67.02%	67.73%	59.39%	67.22%	4.42%	5.43%	14.39%	15.23%	25.30%	30.63%
	(108)	(98)	(144)	(108)	(106)	(86)	(76)	(135)	(128)	(99)
2008/09	70.58%	68.55%	53.65%	65.19%	5.06%	4.50%	12.60%	14.01%	24.13%	32.94%
	(113)	(99)	(129)	(105)	(122)	(72)	(67)	(123)	(121)	(107)

Source: Annual Bank supervision report 2009 and financial statement of HBL and NABIL

Note: Figure in the parentheses is percentage relative Year 2003/04 is considered as a base year

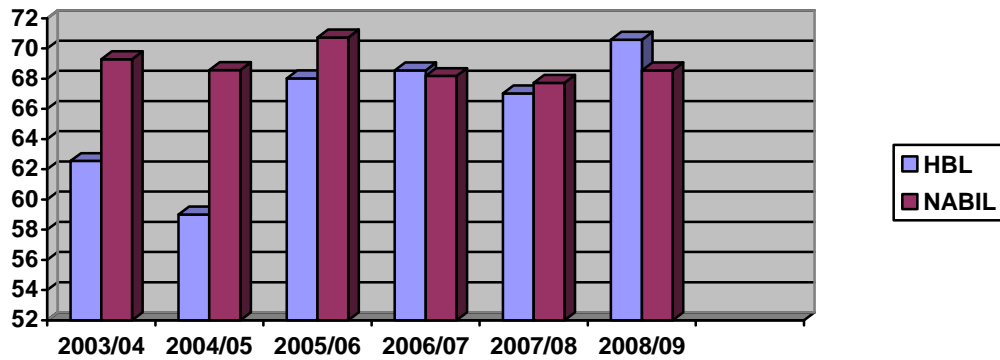
4.1.3.1 Tax Management Efficiency

Tax management efficiency reflects the bank's use of security gains or losses and other tax-management tools such as buying tax exempted bonds to minimize its tax exposure.

$$\text{Tax Management Efficiency Ratio} = \frac{\text{Net Income after Tax}}{\text{Net Income before Tax}}$$

In case of HBL, it ranges from the highest of 70.58% to lowest of 62.55% in the year 2008/09 and 2003/04 respectively. A percentage relative of shows that the ratios are fluctuating. However, in the last two year 2007/08 and 2008/09, the TME ratios are 67.02% and 70.58% which seems to be quite encouraging. It shows that HBL's tax expose was not so efficient in the beginning but was somehow being monitored and controlled in the last two years i.e. 2007/08 and 2008/09. On the other hand NABIL shows a fluctuating but rising trend. Highest ratio of 70.74% has been observed in the year 2005/06 and relatively lower ratio of 67.73% has been observed in the year 2007/08. A percentage relative of shows that things are positive. NABIL has well managed its tax in an efficient way and things are quite satisfactory.

Figure 4.9



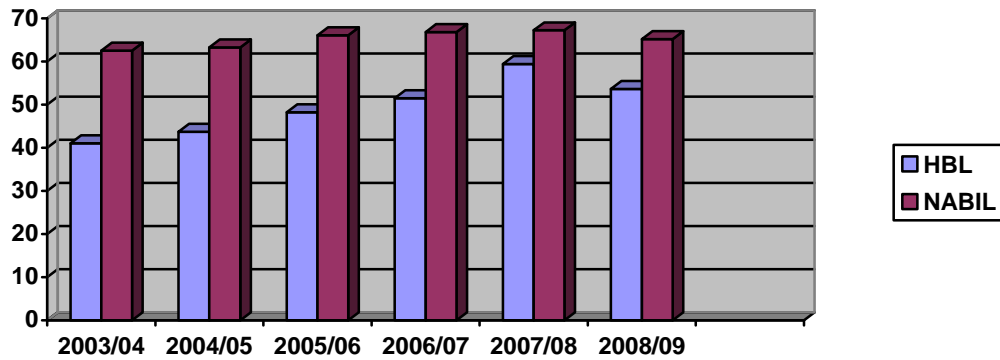
4.1.3.2 Expense Control Efficiency Ratio

Expense control efficiency ratio helps to measure the operating efficiency and the expense control. It indicates how many rupees of revenue survive after operating expenses are removed.

$$\text{Expense Control Efficiency Ratio} = \frac{\text{Net Income before Tax}}{\text{Total Operating Revenue}}$$

The HBL shows the increasing trend with the highest ratio of 59.39% in 2007/08 and lowest of 41.04% in 2003/04. The ratio increased from 41.04% to 59.39% from the year 2003/04 to 2007/08 and then it decreased to 53.65% by the year 2008/09. A percentage relative of shows a rising trend. Although ECE ratio of HBL was not so sound in the beginning yet it shows satisfactory control in its expenses in the last three year but this year again it is decrease which is remarkable one. Similarly, NABIL shows quite encouraging figures. It ranges from the highest of 67.22% to lowest of 62.54% in the year 2007/08 and 2003/04 respectively. Percentage relative of shows that the EME of NABIL is following the rising trend and things are encouraging. It indicates that in comparison to HBL, NABIL has for better control over its expense.

Figure 5.0



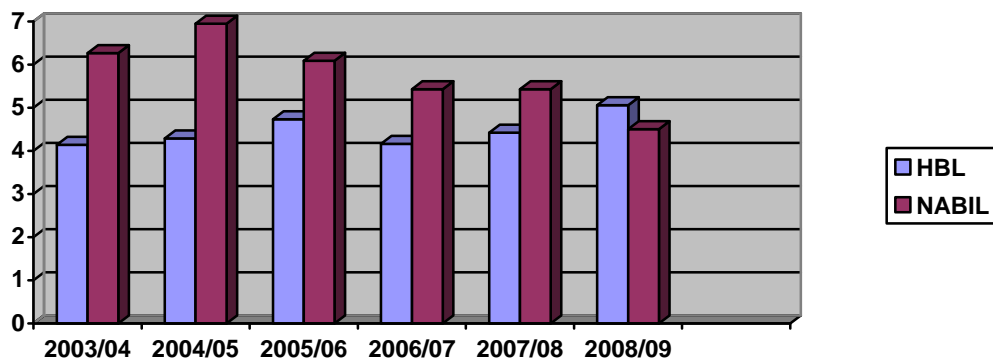
4.1.3.3 Asset Management Efficiency Ratio

It is calculated by dividing Total operating Revenue by total assets. It shows how efficiently the bank is utilizing its assets so as to generate the revenue. It is calculate as follows.

$$\text{Asset management efficiency ratio} = \frac{\text{Total Revenue}}{\text{Total Assets}}$$

The AME ratio of the selected bank is shown in the table 4.3. HBL shows an increasing trend. It has ranged from the highest of 5.06% and lowest of 4.14%. It is observed in the year 2008/09 and 2003/04 respectively. A percentage relative of shows that things are quite satisfactory. It indicates that assets are well utilized by HBL to generate the revenue. In case of NABIL the highest ratio of 6.95% has been observed in the year 2004/05 and relatively poor performance of 4.50% has been observed in the year 2008/09. The ratios gradually increased from 5.43% to 4.50% from the year 2006/07 to 2008/09 and then gradually decreased to 5.43% by the year 2006/07. A percentage relative of shows that things are not satisfactory. NABIL has well managed its assets in an efficient way but however in the last three years a decrease in percentage relative shows that NABIL must more carefully utilize its assets.

Figure 5.1



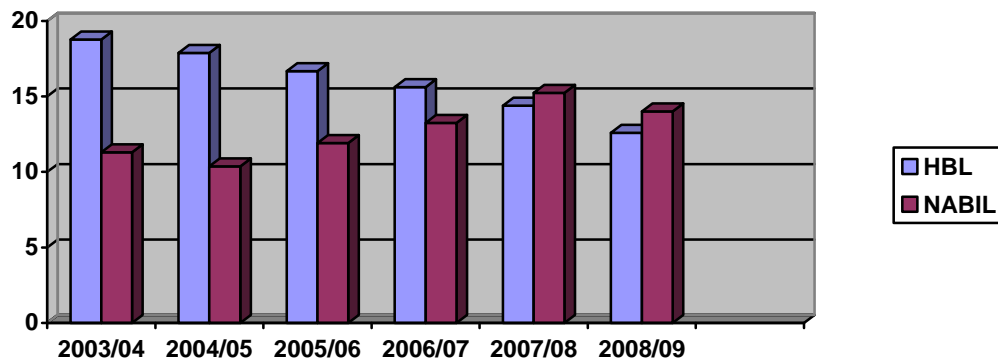
4.1.3.4 Fund Management Efficiency

Fund management efficiency is the measure of financial leverage of the bank. Fund Management efficiency is the direct measure of banks degree of financial leverage. Measure of financial leverage, allows the investor to see what portion of the return on equity is the result of debt. Bank's fund management efficiency ratio reflects leverage or financing policies; the source chosen to fund the bank (debt or equity). The equity multiplier is calculated as follows.

$$\text{Fund management efficiency ratio} = \frac{\text{Assets}}{\text{Shareholder's Equity}}$$

FME of HBL shows a decreasing trend, it has a highest of 18.78% and a lowest of 12.60% in the year 2003/04 and 2008/09 respectively. Percentage relative for the fiscal year 2003/04 to 2008/09 is observed which clearly indicates that ratio is in decreasing trend and things are negative. Thus HBL must concentrate in maintaining appropriate fund management policy. The FME ratio of NABIL also shows a increasing trend an decrease in last two yrs. It had a highest ratio in 2007/08 with 15.23% and the lowest of 10.37% in the year 2004/05. From the year 2003/04 to 2008/09 the ratio shows a gradual down trend from 15.23% to 10.37%.The ratio increases to 15.23% from 13.25% in the subsequent year 2006/07 and 2007/08 respectively. Percentage relative of clearly justifies the above mention fact. Normally, an average of more than 15% is considered as satisfactory. Larger the multiplier, the more exposed to failure risk are the banks. However, the larger the multiplier, the greater the bank's potential for high return for it stockholders.

Figure 5.2

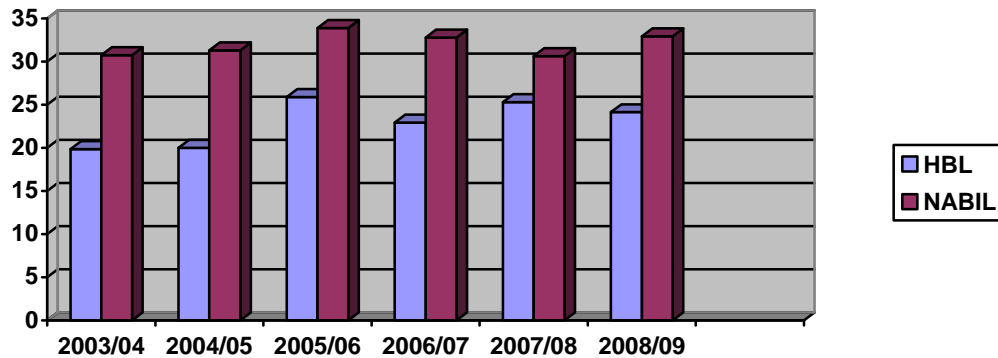


4.1.3.5 Return on Equity (ROE)

It measures return on investment targeting on ordinary share holders. It specifically aims at measuring the return the shareholders expects from their investment in share. A high degree reflects a strong financial structure of the company. A relatively low equity ratio reflects a more speculative situation. The final row

of the table consolidates the result as ROE. The highest ROE is observed to be 33.88%. It has been observed in the year 2005/06 but with gradual downtrend ROE decreases to the lowest of 19.87% and 20.00% in two year 2003/04 and 2004/05 respectively, it is due to lower ECE and FME ratio but again with the increment of these two ratio the ROE starts to increase to 25.90% in 2005/06 and again decreases to 22.91% in the year 2006/07. Thus we can conclude that the ROE of HBL is in fluctuating position but in a decreasing trend. Similarly, the table shows that NABIL has encouraging ROE. The highest of 33.88 % is observed in the year 2005/06 and relatively lower ratio of 30.63% is observed in the year 2003/04 where 32.94% obtained in the year 2008/09. Although NPM and AU shows satisfactory level yet relatively lower FME has been observed, this is the reason behind lower ROE. ROE of NABIL is in fluctuating position but is in an increasing trend. Thus from the above analysis we can conclude that ROE of NABIL is quite satisfactory as compared to HBL.

Figure 5.3



4.2 Analysis of ROA

ROA measures a company's earnings in relation to assets, it is the income generated by employing the assets of the company. It helps to measure the profitability with respect to total assets, Higher the ratio, higher the profit. High ratio usually indicates efficiency in utilizing its overall resources and vice versa.

4.2.1 Analysis of Composition of ROA Using the DuPont Model

In DuPont analysis, ROA is equal to total asset utilization ratio multiplied by net profit margin.

$$\text{Return on Assets} = (\text{Asset Utilization ratio}) \times (\text{Net Profit Margin})$$

We can break this equation further down into

In case of financial institution, the above equation can be modified as follows:

$$\text{ROA} = ((\text{Operating Revenue}) / (\text{Assets})) * ((\text{Net Profits}) / (\text{Operating Revenue}))$$

Table 4.4
Breakdown of ROA into NPM and AU Using DuPont Model

Yr.	NPM (%)		AU (%)		ROA%	
	HBL	NABIL	HBL	NABIL	HBL	NABIL
2003/04	25.67%	43.33%	4.14%	6.27%	1.06%	2.72%
	(100)	(100)	(100)	(100)	(100)	(100)
2004/05	25.78%	43.40%	4.36%	6.95%	1.12%	3.02%
	(104)	(101)	(112)	(110)	(106)	(111)
2005/06	32.83%	46.73%	4.73%	6.09%	1.55%	2.84%
	(128)	(108)	(121)	(97)	(146)	(104)
2006/07	35.30%	45.53%	4.16%	5.43%	1.47%	2.47%
	(138)	(105)	(106)	(86)	(138)	(91)
2007/08	39.80%	44.69%	4.41%	4.42%	1.76%	2.06%
	(155)	(103)	(107)	(70)	(166)	(75)
2008/09	37.86%	46.42%	5.06%	5.06%	1.92%	2.62%
	(148)	(107)	(122)	(80)	(181)	(96)

Source:
Bank

Annual

supervision report 2009 and financial statement of HBL and NABIL

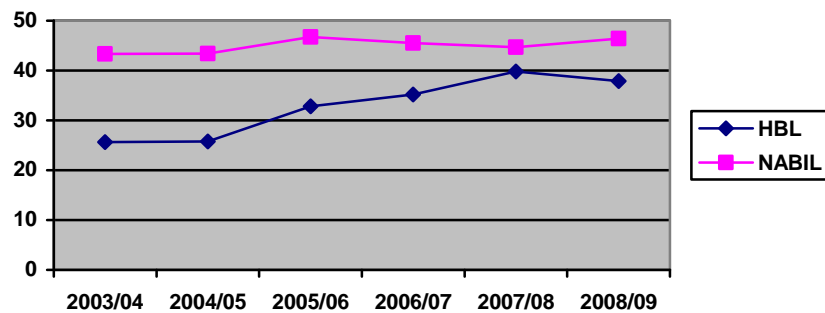
Note: Figure in the parentheses is percentage relative Year 2003/04 is considered as a base year.

Table 4.4 shows the Breakdown of Return on Assets (ROA) using DuPont Analysis into Net Profit Margin (NPM); Assets Utilization (AU) ; with percentage relative of HBL and NABIL.

4.2.1.1 Net Profit Margin (NPM)

Net profit margin indicates the effectiveness of expense management, cost control and service pricing policies. The net profit margin is simply the after-tax profit a company generated for each rupee of revenue. The highest PM ratio of HBL has been observed 39.80% in 2007/08 and relatively lowest ratio is observed 25.68% in the year 2003/04. The PM increased to 39.80% in the years 2007/08 and then shows a gradual decrease in the subsequent year 2008/09 but is not so satisfactory. However till the year 2007/08, there is an increment compared to its base year 2003/04. A percentage relative justifies the fact. Table 4.4 clearly demonstrates that NPM ratio of NABIL is in increasing trend. The highest NPM ratio of 46.73% has been observed in the year 2005/06 and relatively lowest ratio of 43.33% in 2003/04. A percentage relative clearly shows that NABIL has maintained its NPM in a satisfactory level.

Figure 5.4

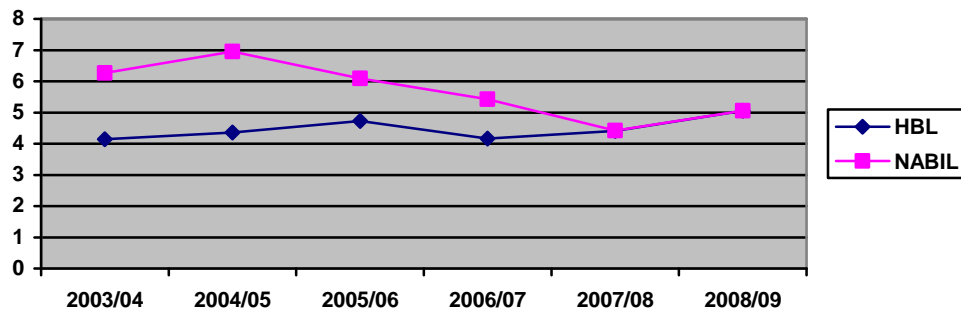


4.2.1.2 The Asset Utilization Ratio (AU)

The asset utilization ratio is a measure of how effectively a company converts its assets in generating the revenue. The asset utilization ratio tends to be inversely related to the net profit margin i.e. higher the net profit margin, lower the asset utilization ratio will be. The asset utilization ratio is a measure of how effectively a bank converts its assets into revenue. Asset utilization ratio reflects the portfolio management policies, especially the mix and yield on the bank's assets. HBL shows the fluctuating trend of AU. It has ranged from the lowest of 4.14 % to the highest of 5.06 % in 2003/04 and 2008/09 respectively. Table 4.2 clearly demonstrates that AU ratio decreased in the year 2006/07 but a gradual increment has been observed till the year 2008/09. However, in the year 2006/07 it decreased to 4.16%. Percentage relative has been observed. It clearly indicates that AU ratio is showing the fluctuating trend but is not so highly fluctuating. Hence, we can conclude that AU of HBL is quite satisfactory. On the other hand AU of NABIL shows an increasing trend. It increased from 6.27% to 6.95% from the year 2003/04 to 2004/05 and then again decreased to 4.42% by the year 2007/08. The asset utilization ratio shown above reveals that NABIL is effectively converting its assets in generating the revenue. However the decreased value of AU in the year 2006/07 shows that it must more carefully allocate its assets in high yielding loans and investment. As

presented in the table 4.2 higher ratio of 6.95% is observed in the year 2004/05. Relatively low ratio of 4.42% has been observed in the year 2007/08. It has been observed from the table that the ratio is in fluctuating position but is in a decreasing trend. The ratio decreased from 6.95% to 4.42% from the year 2004/05 to 2007/08 and then increased from 4.42% to 5.06% in 2007/08 to 2008/09. A percentage relative also justifies the above mention fact. The asset utilization ratio shown in the table 4.2 reveals that NABIL is effectively converting its assets in generating the revenue. However the decreased value of AU in the year 2007/08 shows that it must more carefully allocate its assets in high yielding loans and investment.

Figure 5.5

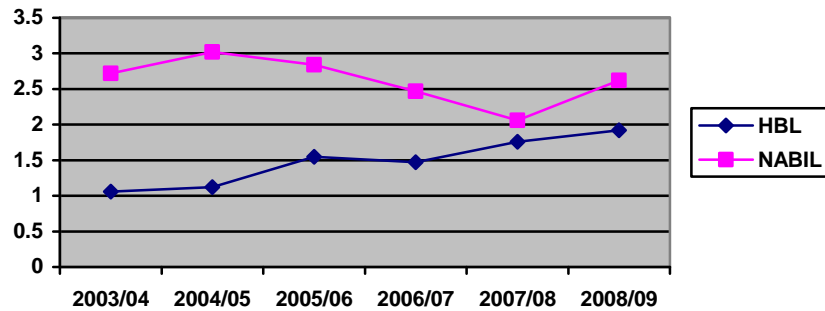


4.2.1.3 Return on Assets (ROA)

The highest ratio of ROA of HBL is 1.92%. It has been observed in the year 2005/06. Relatively low ratio of 1.06% has been observed in the year 2003/04. The ratio increased from 1.06% to 1.92% in the year 2003/04. The ratio started to increase as 1.06%, 1.12%, 1.55%, 1.47%, 1.76% and 1.92% respectively from 2003/04 to 2008/09 and then in the subsequent years, the ratio started to decline till 1.47% by the time it reached the year 2006/07. Percentage relative for the fiscal years 2003/04 to 2008/09 also demonstrates clearly that the ratios are fluctuating but is in an increasing trend. Although things are not so satisfactory yet an increment by 1.76% and 1.92% in the last two years 2007/08 and 2008/09 shows that HBL has somehow managed to bring a steady growth in ROA. The above analysis shows that the ROA fluctuates due to change in AU and NPM. Although AU ratio is in increasing trend yet, PM ratio shows a increasing as well fluctuating trend. To build ROA, NPM has growing contributions over the years whereas a contribution of AU seems decreasing. Similarly, ROA of NABIL shows an increasing trend. It has the highest ratio of 3.02% in the years 2004/05 and lowest of 2.06% in the year 2007/08. The ratio fluctuates from 2.72% to 2.62% from the year 2003/04 to 2008/09 and then with gradual down trend, the ratio decreased to 2.06% by the year 2007/08. A percentage relative has been observed from the fiscal years 2003/04 to 2008/09. It also clearly indicates that the ratio is quite satisfactory. The highest ROA is 3.02%. It has been observed in the year 2004/05 then a gradual downtrend is seen. The table clearly shows that AU

is the factor behind it. Although PM does not show a sharp decline yet AU does, decrement in AU from 6.95% to 4.42% clearly justifies the fact. Thus, we can conclude that AU plays a vital role in building a strong ROA. NABIL must concentrate more in allocating its assets to the higher yielding loans and investments so as to bring increment in AU.

Figure 5.6



4.2.2 Analysis of ROA by Decomposing the Variables of Income Statement

ROA measures a company's earnings in relation to assets. It is the income generated by employing the assets of the company. It helps to measure the profitability with respect to total assets; higher the ratio, higher the profit. High ratio usually indicates efficiency in utilizing its overall resources and vice versa. Income is earned by using the assets of a business productively, more efficiently the production, more profitable the business. The rate of return on assets indicates the degree of efficiency with which the management has used the assets of the enterprise during an accounting period. Hence, ROA is further analyzed to examine the efficiency of the selected banks. The variables of income statements are divided by common denominator total assets to examine the efficiency of the selected banks as shown below.

<u>Variables</u>	<u>Notation</u>
Interest Income to TA	A
Interest Expense to TA	B
Net Interest Margin to TA	C
Non-Interest Income to TA	D
Employee and Office Expense to TA	E

Non-interest Margin to TA	F
Provision for Loan Loss to TA	G
Provision for Staff Bonus to TA	H
Provision for Tax to TA	I

ROA can be computed as:

$$C=A-B$$

$$F=D-E$$

$$K=C+F-G-H-I$$

Table 4.5
Variables of Income Statements against the Common Denominator, Total
Assets

Ratio	Bank	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Interest income to TA	HBL	5.03% (100)	5.28% (105)	5.52% (109)	5.30% (105)	5.42% (108)	5.96% (118)
	NABIL	5.98% (100)	6.26% (105)	5.87% (99)	5.83% (97)	4.28% (72)	4.51% (75)
Interest expense to TA	HBL	1.99% (100)	2.05% (103)	2.20% (111)	2.29% (115)	2.27% (114)	2.38% (120)
	NABIL	1.69% (100)	1.43% (85)	1.60% (95)	2.04% (121)	1.50% (89)	1.73% (102)
Net Interest Margin to TA	HBL	3.05% (100)	3.23% (106)	3.32% (109)	3.01% (98)	3.15% (103)	3.58% (117)
	NABIL	4.29% (100)	4.84% (107)	4.27% (99)	3.79% (85)	2.78% (75)	2.78% (75)
Non-interest inc to TA	HBL	1.09% (100)	1.14% (105)	1.41% (129)	1.15% (108)	1.26% 106	1.48% (139)
	NABIL	2.17% (100)	2.67% (123)	2.53% (120)	2.25% (109)	1.21% (55)	1.03% (47)
Employee and Office Exp to TA	HBL	1.47% (100)	1.66% (113)	1.92% (125)	1.83% (120)	1.76% (115)	1.93% (128)
	NABIL	1.98% (100)	2.28% (122)	1.80% (91)	1.57% (85)	1.15% (59)	1.10% (44)
Non-Interest Margin to TA	HBL	-0.38% (100)	-0.53% (139)	-0.50% (135)	-0.68% (150)	-0.49% (133)	-0.45% (130)
	NABIL	0.003% (100)	-0.12% (59)	0.02% (166)	0.07% (238)	-0.09% (232)	-0.07% (225)
Provision for Loan Loss to TA	HBL	0.80% (100)	0.20% (25)	0.49% (61)	0.27% (34)	-0.36% (45)	0.05% (8)
	NABIL	0.49% (100)	0.05% (10)	0.02% (5)	0.05% (6)	0.03% (6)	0.03% (6)
Provision for staff Bonus to TA	HBL	0.19% (100)	0.21% (110)	0.23% (115)	0.21% (110)	0.26% (120)	0.27% (122)
	NABIL	0.43% (100)	0.49% (110)	0.40% (90)	0.37% (86)	0.27% (65)	0.25% (60)
Provision for	HBL	0.64%	0.78%	0.73%	0.67%	0.86%	0.87%

tax to TA		(100)	(122)	(110)	(105)	(130)	(131)
	NABIL	1.20%	1.39%	1.18%	1.18%	0.87%	0.78%
ROA		(100)	(120)	(116)	(116)	(73)	(65)
	HBL	1.06%	1.12%	1.55%	1.47%	1.76	2.01
		(100)	(106)	(146)	(140)	(175)	(189)
	NABIL	2.72%	3.02%	2.84%	2.47%	1.92	2.35
		(100)	(111)	(104)	(91)	(71)	(87)

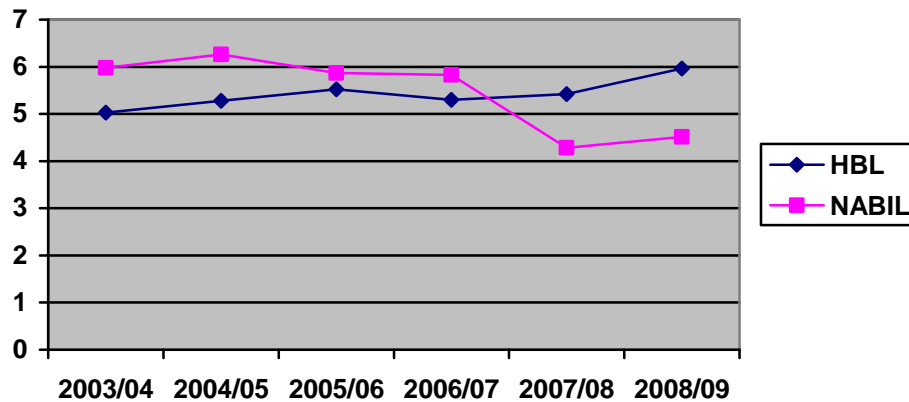
Source: Annual Bank supervision report 2009 and financial statement of HBL and NABIL

Note: Figure in the parentheses is percentage relative Year 2003/04 is considered as a base year

4.2.2.1 Interest Income to Total Assets

As presented in the table, the ratio for HBL ranges from highest of 5.96% to the lowest of 5.03% in the year 2008/09 and 2003/04 respectively. The ratio are in increasing trend till 2005/06 and again started to increase up to 5.96% in the year 2008/09 but again fell to 5.30% in the year 2006/07. A percentage relative also justifies the fact that the ratio is in down and increase by the end trend. Similarly, on the other hand incase of NABIL, the highest ratio of 6.26% is observed in the year 2004/05 and the lowest of 4.28% in the year 2004/05. A percentage relative clearly indicates that the ratios are in downtrend.

Figure 5.7

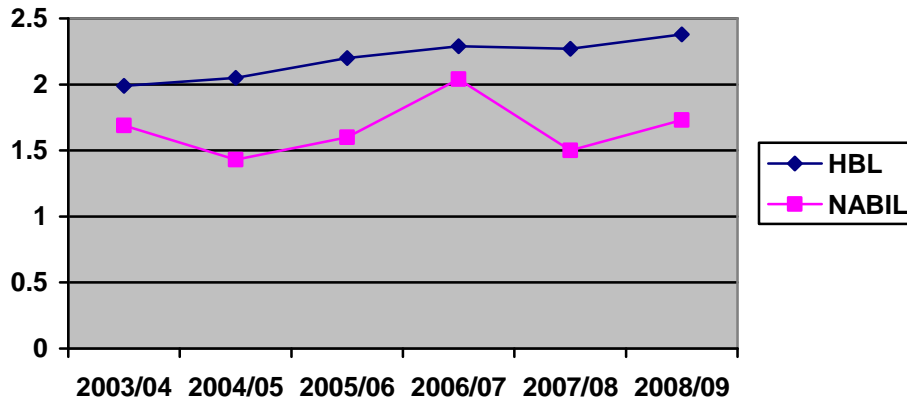


4.2.2.2 Interest Expense to Total Assets

An interest expense is an expense for interest on a loan made to an individual, corporation or other entity. The ratio of interest expenses to total assets is computed so as to analyze the cost of holding the assets. As shown in the table, the ratios of HBL are in increasing trend where of Nabil is in fluctuate trend. HBL has the highest ratio of 2.38% in the year 2003809 and lowest of 1.99 % by the year 2003/04 and then gradually increased to 2.29% by the end of 2006/07. A percentage relative also justifies the fact that the ratios are quite consistent. HBL has the ratio almost around 2.38% over the study period. It must try to decrease the interest expenses so as to bring increment in Net Interest margin. Similarly, NABIL also has the ratio of interest expenses to total assets in between 2.04% to 1.43%. The highest ratio of 2.04% has been observed in the year 2006/07 and the lower of 1.43% in the year 2003/04 then the ratio slightly increased in the subsequent years and reached to 1.73% by the end of the study period 2008/09. A percentage relative also justifies the fact. As interest expenses deals with the cost, the decreasing figures are the good indicators that things are positive. Both the banks must

try to decrease the ratio so that they can cover their cost of holding the assets. But the HBL indication is quite increasing which is negative indicator.

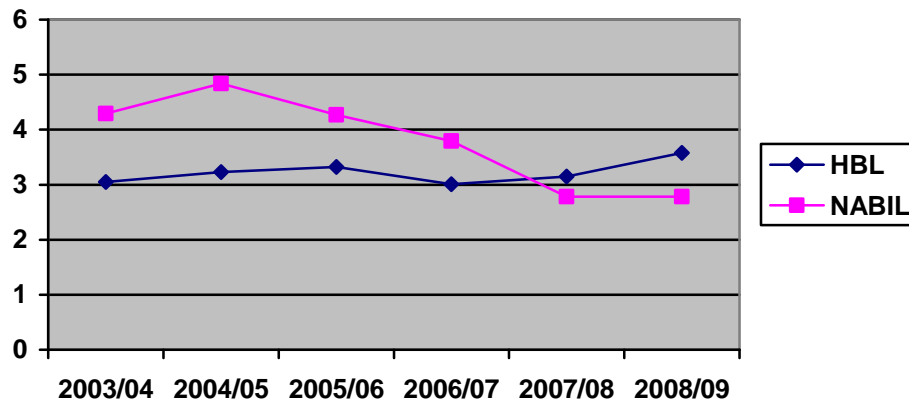
Figure 5.8



4.2.2.3 Net interest margin to total assets

Interest margin is a measurement of the difference between the [interest](#) income generated by banks or other financial institutions and the amount of interest paid out to their lenders (for example, deposits). It is expressed as a percentage of what the financial institutions are earning. As presented in the table, the highest ratio of Interest margin to total assets is 3.58% and the lower of 3.01% has been observed in the year 2008/09 and 2006/07 respectively for HBL. It has been observed that the ratio gradually increased to 3.32% by the year 2005/06 and then again decreased to 3.01% i.e. 2006/07 and again in the last year increase to 3.58% of the study period 2008/09. Percentage relative of 100,106,109, 89, and 102 shows that it is in fluctuating trend and the situation is not quite satisfactory. Similarly NABIL also shows an increasing trend. It ranges from the highest of 4.84% and lowest of 2.78% in the year 2007/08 and 2008/09. A percentage relative of 107, 99, 85, 75 and 75 shows that it is in decreasing trend till 2008/09. Thus we can conclude that both the banks have not satisfactory Interest margin to total asset ratio.

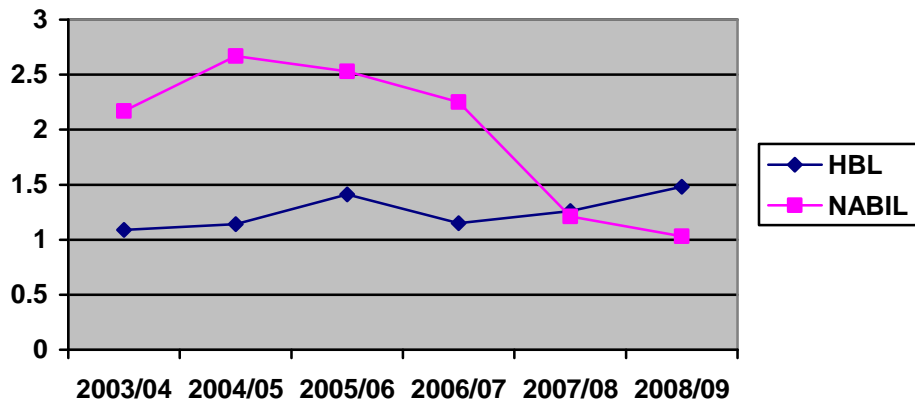
Figure 5.9



4.2.2.4 Non-interest income to TA

Non-interest income is the revenue generated by the bank other than by interest incomes such as commissions, fee incomes and other operating activities. The table clearly demonstrates that the Non-interest income to TA ratio of HBL ranges from the highest and the lowest of 1.48% and lowest of 1.09% in the year 2008/09 and 2003/04 respectively. A percentage relative of 105, 129, 108, 106 and 139 shows that things are not so encouraging. On the other hand NABIL also shows an increasing trend. The highest ratio of 2.67% is observed in the year 2004/05 and the lowest, of 1.03% in the year 2008/09. A percentage relative of 123, 120, 109, 55 and 47 shows that it is in decreasing trend. Thus we can conclude that HBL is in better position than Nabil as far as non-interest income to TA is concern.

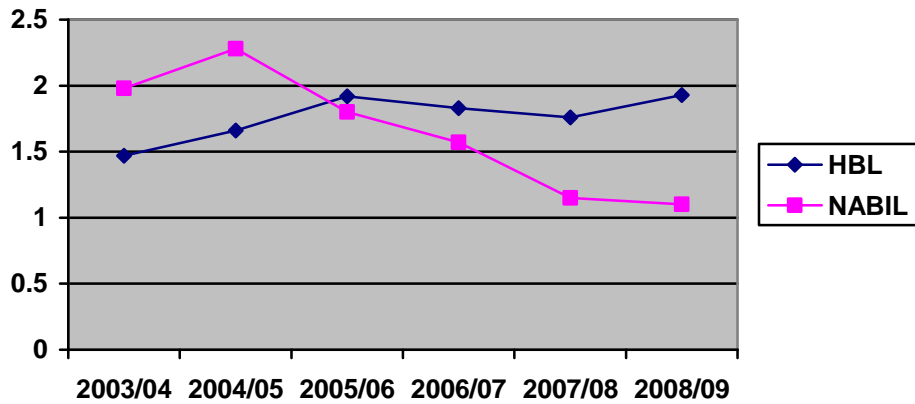
Figure 6.0



4.2.2.5 Employee and Office Expense to TA

Employee and Office Expense include the cost that the bank must bear towards its employee and other costs on banks facilities. Employee and Office Expense to TA ratio of HBL range from highest of 1.93% and lowest of 1.47%. A percentage relative of 113,125,120,115 and 128 shows that it is in increasing trend. Similarly NABIL has the highest ratio of 2.28% and lowest of 1.10%, the ratio. Percentage relative 122, 91, 85, 59 and 44 shows that Nabil banks must concentrate more in controlling its employee and office expense cost then HBL.

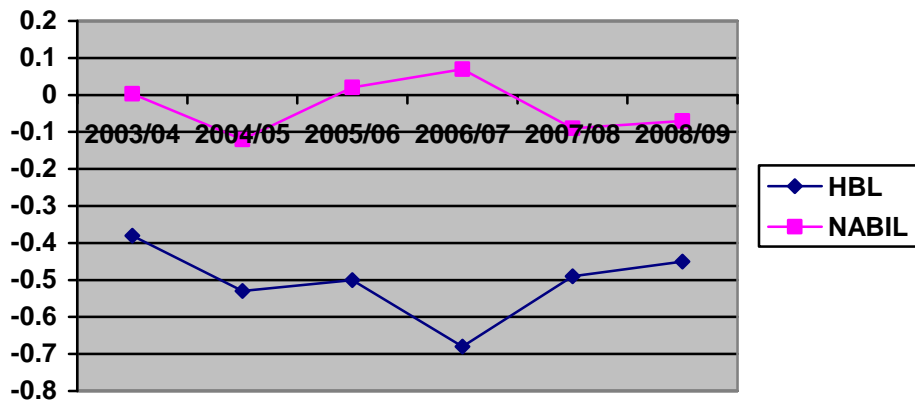
Figure 6.1



4.2.2.6 Non-interest Margin to TA

Non-interest margin is the difference between non-interest income and non-interest expense. The table clearly demonstrates that the Non-interest Margin to TA ratio of both HBL is in negative ratio through out the study period. It ranges from the highest and the lowest of -0.38% and lowest of -0.68% in the year 2003/04 and 2006/07 respectively. Similarly NABIL also shows a negative ratio in the year 2004/05 and 2007/08 and 2008/09 as well. The highest ratio of 0.07 has been observed in the year 2006/07 and the lowest of -0.12% in the year 2004/05 respectively.

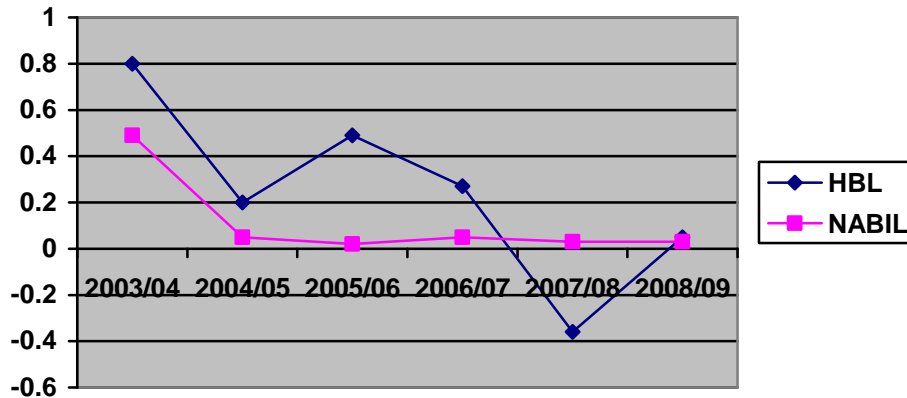
Figure 6.2



4.2.2.6 Provision for Loan Loss to TA

The above Table clearly shows that the ratio of Provision for Loan Loss to TA of HBL is in fluctuating position but it is in a decreasing trend. The highest ratio of 0.80% and lowest ratio of -0.36% has been observed in the year 2003/04 and 2007/08 respectively, similarly the percentage relative of 25, 61, 34, 45 and 8 shows that the ratios are satisfactory of HBL. On the other hand NABIL has the highest ratio of 0.49% and lowest ratio of 0.02% in the year 2003/04 and 2005/06 respectively. The ratio decreases to 0.03% in the year 2008/09 then increases to 0.49% in the year 2003/04 but in the subsequent years it gradually decreases and reaches to -0.36% by the year 2006/07. Percentage relative of 25, 61, 34, 45 and 8 clearly demonstrates that the ratios are fluctuating and are in a decreasing trend.

Figure 6.3

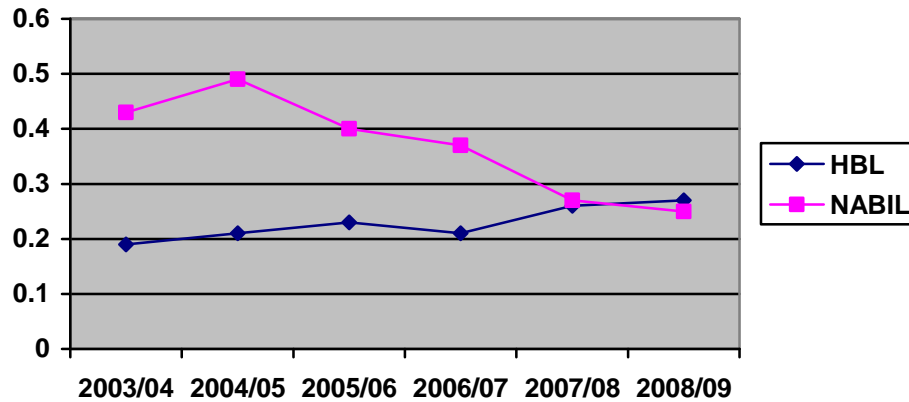


4.2.2.7 Provision for staff bonus to TA

The highest ratio of Provision for staff bonus to TA of HBL has been observed as 0.27% in the year 2008/09. Likewise lowest ratio of 0.19% is observed in the year 2003/04. Percentage relative of 110, 115, 110, 120 and 122 indicates that the ratios are in increasing trend. Similarly NABIL has the highest ratio of 0.49% in 2004/05. Likewise

lowest ratio of 0.25% is observed in the year 2008/09. A percentage 110, 90, 86, 65 and 60 clearly demonstrates that the ratios are in decreasing trend.

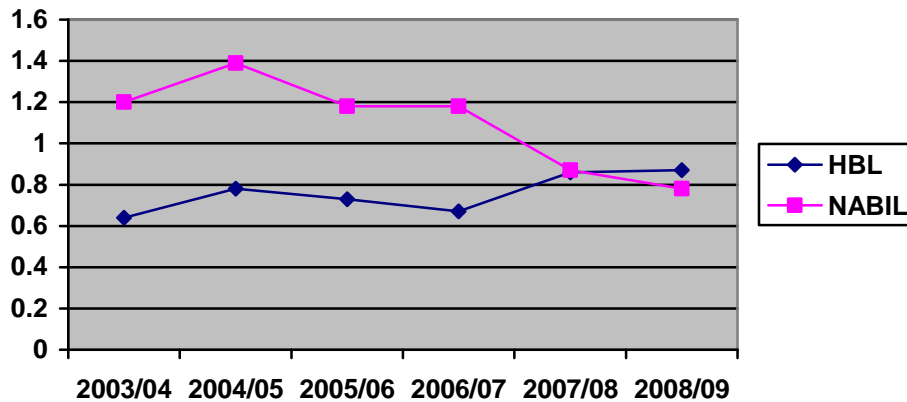
Figure 6.4



4.2.2.8 Provision for Tax to TA

The highest ratio of Provision for tax to TA is 0.87%. It has been observed in the year 2008/09. Relatively lower ratio of 0.64% has been seen in the year 2003/04. Percentage relative of 106, 146, 140, 175 and 189 shows that the ratios are quite consistent and things are quite satisfactory. On the other hand NABIL has the highest Provision for tax to TA ratio of 2.84% in the year 2005/06. Lowest ratio of 1.92% has been observed in the year 2007/08. Percentage relative of 111,104, 91, 71 and 87 shows that the ratios are not satisfactory.

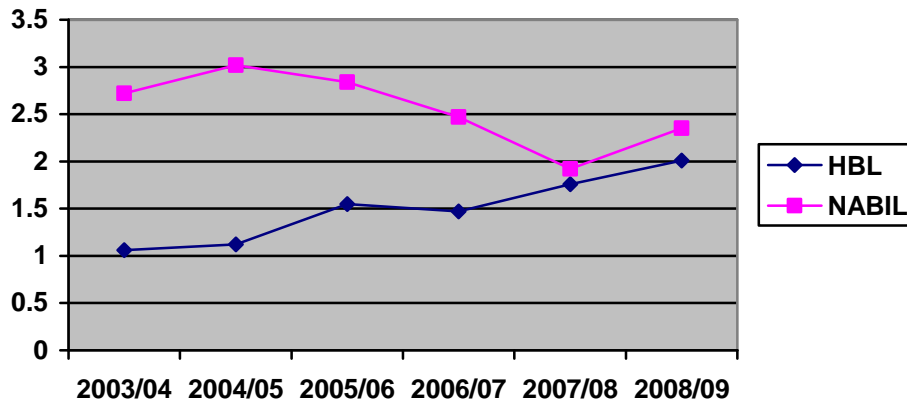
Figure 6.5



4.2.2.9 Return on Assets

The highest ratio of ROA of HBL is 1.92%. It has been observed in the year 2005/06. Relatively low ratio of 1.06% has been observed in the year 2003/04. The ratio increased from 1.06% to 1.92% in the year 2003/04. The ratio started to increase as 1.06%, 1.12%, 1.55%, 1.47%, 1.76% and 1.92% respectively from 2003/04 to 2008/09 and then in the subsequent years, the ratio started to decline till 1.47% by the time it reached the year 2006/07. Percentage relative for the fiscal years 2003/04 to 2008/09 also demonstrates clearly that the ratios are fluctuating but is in an increasing trend. Although things are not so satisfactory yet an increment by 1.76% and 1.92% in the last two years 2007/08 and 2008/09 shows that HBL has somehow managed to bring a steady growth in ROA. The above analysis shows that the ROA fluctuates due to change in AU and NPM. Although AU ratio is in increasing trend yet, PM ratio shows a increasing as well fluctuating trend. To build ROA, NPM has growing contributions over the years whereas a contribution of AU seems decreasing. Similarly, ROA of NABIL shows an increasing trend. It has the highest ratio of 3.02% in the years 2004/05 and lowest of 2.06% in the year 2007/08. The ratio fluctuates from 2.72% to 2.62% from the year 2003/04 to 2008/09 and then with gradual down trend, the ratio decreased to 2.06% by the year 2007/08. A percentage relative has been observed from the fiscal years 2003/04 to 2008/09. It also clearly indicates that the ratio is quite satisfactory. The highest ROA is 3.02%. It has been observed in the year 2004/05 then a gradual downtrend is seen. The table clearly shows that AU is the factor behind it. Although PM does not show a sharp decline yet AU does, decrement in AU from 6.95% to 4.42% clearly justifies the fact. Thus, we can conclude that AU plays a vital role in building a strong ROA. NABIL must concentrate more in allocating its assets to the higher yielding loans and investments so as to bring increment in AU. The reason behind this decrement is due to low interest margin to TA. Besides this much disturbance to build a strong ROA is caused by a negative non-interest margin to TA.

Figure 6.6



4.3 Other Financial Indicators

Apart from the above calculated ratios, earning per share, Market value per share and PE has been analyzed to evaluate the financial performance of the selected banks. The table 4.6 shows the EPS, MVPS and PE ratio of the selected bank.

Table 4.6

Earning per share(EPS) ,Market value per share (MVPS)and Price earning ratio(PE)

Yr.	EPS (Rs)		MVPS (Rs)		PE (Time)	
	HBL	NABIL	HBL	NABIL	HBL	NABIL
2003/04	49.05 (100)	92.61 (100)	840 (100)	1000 (100)	17.12 (100)	10.8 (100)
2004/05	47.91 (96)	105.49 (115)	920 (109)	1505 (215)	19.2 (112)	14.27 (140)
2005/06	59.24 (120)	129.21 (140)	1100 (120)	2240 (320)	18.57 (111)	17.34 (160)
2006/07	60.66 (122)	137.08 (148)	1740 (207)	5050 (721)	28.69 (165)	36.84 (341)
2007/08	62.73 (125)	108.30 (117)	2600 (309)	4500 (450)	41.45 (242)	41.67 (410)
2008/09	61.90 (123)	106.76 (115)	1800 (214)	3500 (350)	29.08 (170)	33.02 (330)

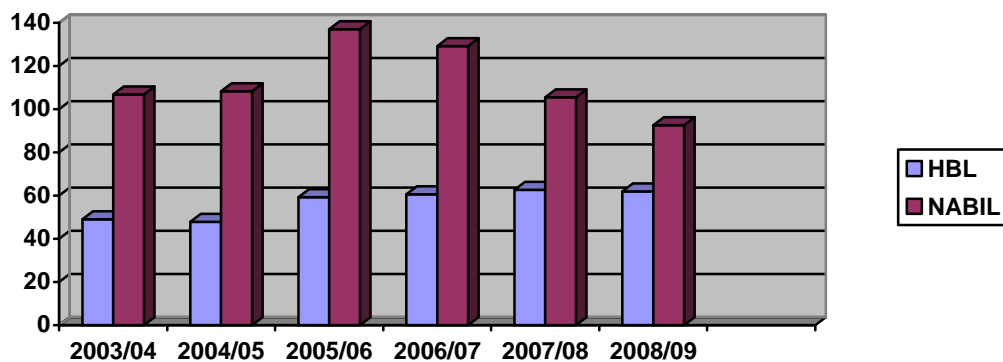
Source: Annual Bank supervision report 2009 and financial statement of HBL and NABIL

Note: Figure in the parentheses is percentage relative Year 2003/04 is considered as a base year

4.3.1 Earning Per Share (EPS)

The main motive of the owners for their investment is to earn handful amount of return on their investment. Therefore, they always concentrate in the bottom line of the bank, i.e. its net profit after tax. No matter the earnings are retained or distributed. Higher earning per share enhances the value of the shareholders' wealth. Higher profitability of the bank results in higher earning per share. The EPS of HBL is observed to be quite fluctuating, as presented in the table. The highest earning of Rs 62.73 is observed in the year 2007/08 and relatively lowest EPS of Rs 47.91 is observed in the year 2004/05. The percentage relative also reveals that the EPS are not so encouraging. In case of NABIL the highest EPS of Rs 137.08 is observed in the year 2006/07 and lowest of Rs 92.61 in the year 2003/04. NABIL shows an encouraging figure, the percentage relative also reveals that its EPS is in rising trend but down from 2007/08.

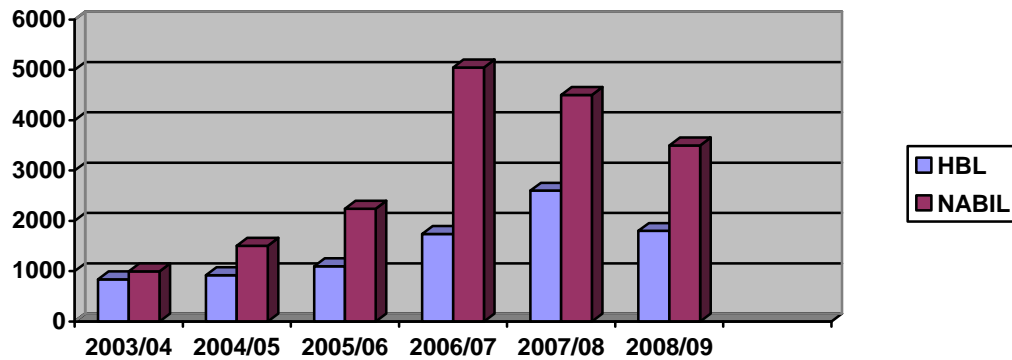
Figure 6.7



4.3.2 Market Value per Share

The market value per share (MVPS) is the price the market is paying for the share. The MVPS of HBL is observed, not so high till 2004/05 but in the subsequent years it shows a gradual decrease. However, in case of a NABIL the market value increases from Rs 1000 to Rs 5050 from the year 2003/04 to 2006/07. Hence the above analysis shows that NABIL has relatively higher MVPS than HBL.

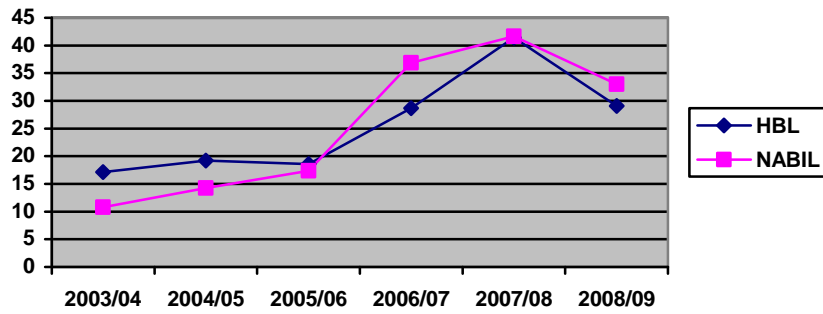
Figure 6.8



4.3.3 Price Earnings Ratio

The ratio reflects the price currently paid by the market for each rupee of currently reported. Price earning ratio (PER) is calculated by dividing the market value per share (MVPS) by EPS. The table 4.6 shows that the PER of both the banks are quite satisfactory. The PE of HBL increases from 17.12 times to 41.45 times from the year 2003/04 to 2007/08. Similarly in case of NABIL it increases from 10.8 times to 41.67 times.

Figure 6.9



4.4 Analysis of Descriptive Statistics

In order to get the concrete results from this research, data are analyzed by using different types of tools. As per requirements here, emphasis is given on statistical tools. So, for the study statistical tools such as arithmetic mean, maximum and minimum value, standard deviation, coefficient of variation, coefficient of correlation, and trend analysis of important variables have been used.

4.4.1 Analysis of Descriptive Statistics of variables used in DuPont analysis

Table 4.5 shows the descriptive statistics of the values of the variables used for DuPont analysis. The statistics are presented in the table for six years data from the year 2003/04 to year 2008/09. Mean standard deviation (SD), coefficient of variance (CV), maximum and minimum values of the ratios are also presented in the table.

Table 4.7
Analysis of descriptive statistics of variables used in DuPont analysis

Yr	NPM		AU		ROA		EM		ROE	
	HBL	NABIL	HBL	NABIL	HBL	NABIL	HBL	NABIL	HBL	NABIL
Mean	32.88	45.02	4.19	6.05	1.50	2.52	15.96	12.67	23.01	32.03
SD	5.24	1.20	0.33	0.58	0.25	0.52	3.26	1.81	3.26	1.50

CV	0.16	0.03	7.90	9.65	20.58	20.69	17	13.98	14.65	11.73
Min	25.67	46.73	3.91	6.95	1.55	3.02	24.09	15.38	27.39	33.88
Max	39.80	43.33	4.73	5.38	0.91	1.54	15.62	10.37	19.87	23.69

HBL: The mean value of PM and AU is observed to be 28.74 and 4.19 respectively. Return on Assets (ROA) is obtained by multiplying Net Profit Margin (NPM) and Asset Utilization ratio (AU). Hence, the mean value of 2.52% for ROA is obtained by multiply the mean value of PM and AU. Table 4.3 clearly indicates that the NPM plays a vital role in bringing increment in ROA of HBL. The mean value of PM is nearly seven times more than that of AU. Similarly, (ROE) Return on Equity is obtained by multiplying net profit margin (NPM) and Asset utilization ratio (AU). The mean value of ROE is 22.67. The mean value of EM is 19.14, which of course has a major contribution in uplifting the value of ROE of HBL.

Much variation is seen in NPM. The Standard deviation (SD) and coefficient of variation (CV) of 4.51 and 15.71 are seen respectively. The minimum and maximum value of 23.85 % and 35.30% also justifies the fact. This represents the state of earning risk of HBL. In the same way, EM and ROE also shows much variation. The SD of EM and ROE are found to be 3.26 and 3.32 respectively. Similarly, CV is observed to be 0.17 and 14.65 respectively. This indicates that the distribution is less consistent and is more volatile. It also justifies the fact that HBL is exposing to earning risk. On the other hand, AU and ROA show less variability. SD of 0.33 and 0.25 is observed. Similarly, CV of 7.90 and 20.58 also justifies the fact that the distribution is more consistent. Thus, earning risk in terms of ROA and AU is relatively less than other components of ROE i.e. NPM, EM and ROE

NABIL: The mean value of NPM of NABIL is observed to be 41.42. Similarly, AU has the mean of 6.05. ROA is obtained by combining NPM and AU. The mean value of AU and ROA are 6.05 and 2.52 respectively. NPM plays a significant role in bringing increment in ROA. The mean value of NPM is six times more than AU. Likewise, ROA is multiplied with EM to obtain ROE. The mean value of EM and ROE is 12.47 and

30.67 respectively. EM is the measure of financial leverage and is found to be relatively less contributing than that of HBL in building a strong ROE. Thus, NABIL must concentrate more in uplifting EM so as to increase the ROE.

Yr.	TME (%)	ECE (%)	AME (%)	FME(times)
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NPM and ROE of NABIL also shows much variability. The Standard deviation (SD) and coefficient of variation (CV) of 6.58 and 15.90 are seen respectively for NPM. The minimum and maximum value of 46.73 and 28.63 has been observed for the study period. This represents the state of earning risk of HBL. Similarly, ROE also shows much variation. Maximum and minimum value of 33.88 and 23.69 is seen. The SD and CV of 3.6 and 11.73 also clearly indicate the fact that the distribution is less consistent and are more volatile. It also justifies the fact that NABIL is exposing to earning risk. On the other hand, AU, ROA and EM show less variability. CV of AU, ROA and EM are 9.65, 20.69 and 13.98 respectively. This indicates the fact that they are relatively less exposed to earning risk than NPM and ROE. Thus, from the above analysis we can conclude that although NABIL has higher NPM, yet its ratios are relatively less consistent than that of HBL. NABIL has high earning risk than HBL.

4.4.2 Analysis of Descriptive Statistics of Break-down of ROE

Table 4.6 shows the descriptive statistics of the break-down of ROE for closer analysis. The statistics are presented in the table for six years data from the year 2003/04 to year 2008/09. Mean standard deviation (SD), coefficient of variance (CV), maximum and minimum values of the ratios are also presented in the table.

Table 4.8

Analysis of Descriptive Statistics of Efficiency ratio

	HBL	NABIL	HBL	NABIL	HBL	NABL	HBL	NABIL
Mean	63.17	68.51	43.32	59.11	4.18	6.17	19.88	14.50
SD	4.38	1.67	3.07	9.14	0.36	0.56	3.06	3.75
CV	6.94	2.44	7.09	15.46	8.68	9.07	0.15	0.26
Minimum	58.92	66.32	40.48	43.15	3.81	5.38	16.68	11.03
Maximum	68.03	70.74	48.25	66.05	4.73	6.95	24.09	20.54

HBL: The mean value of TME, ECE, AME and FME is observed to be 63.17, 43.32, 4.18 and 19.88 respectively. ROE is obtained by multiplying all the components TME, ECE, AME and FME. Highest mean value of 63.17 has been observed in TME and lowest of 4.18 has been observed in FME. It clearly indicates that TME ratio plays a vital role in building the strong ROE. Much variation has been observed in AME. It has a C.V of 8.68%, minimum and maximum value of 3.81 and 4.73 also justifies the fact. This represents a state of earning risk. Likewise much variation has been observed in ECE and TME; they have a C.V of 7.09 and 6.94 respectively. It also indicates a state of high earning risk. However more consistency has been observed in FME.

NABIL: The Mean value of TME, ECE, AME and FME is observed to be 68.51, 59.11, 6.17 and 14.50 respectively. The highest mean value of 68.51 has been observed in TME and lowest of 6.17 has been observed in FME. It clearly indicates that TME ratio plays a vital role in building the strong ROE. Much variation has been observed in ECE .It has a C.V of 15.46% and a maximum and a minimum value of 43.15 and 66.05 respectively. This represents a state of earning risk. Likewise relatively more consistency has been observed in FME .It has a C.V of 0.26.

4.4.3 Descriptive statistic of variables of income statement under the common denominator ROA

Descriptive statistic of entire variables of income statement under the common denominator ROA has been analyzed and shown in Table 4.9.

Table 4.9
Variables of income statement under the common denominator ROA

Ratio	Banks	Mean	SD	CV	Max	Min
Interest income to TA	HBL					
	NABIL	6.07%	0.22%	0.036	6.35%	5.83%
Interest expense to TA	HBL	2.28%	0.29%	0.127	2.80%	1.99%
	NABIL	1.88%	0.42%	0.225	2.62%	1.43%
Interest Margin to TA	HBL	3.22%	0.23%	0.078	3.58%	3.01%
	NABIL	4.19%	0.40%	0.096	4.84%	3.73%
Non-interest inc to TA	HBL	1.26%	0.13%	0.111	1.48%	1.09%
	NABIL	2.18%	0.40%	0.183	2.67%	1.65%
Employee / Office Expense to TA	HBL	1.57%	0.28%	0.181	1.92%	1.24%
	NABIL	1.92%	0.32%	0.165	2.28%	1.57%
Non-Interest Margin to TA	HBL	-0.40%	0.21%	0.532	-0.09%	-0.68%
	NABIL	-0.06%	0.17%	2.950	0.07%	-0.36%
Provision for Loan Loss to TA	HBL	0.24%	0.29%	0.510	0.80%	-0.36%
	NABIL	0.20%	0.19%	0.939	0.49%	0.02%
Provision for staff Bonus to TA	HBL	0.23%	0.02%	0.106	0.27%	0.19%
	NABIL	0.43%	0.05%	0.121	0.49%	0.37%
Provision for tax to TA	HBL	0.67%	0.08%	0.121	0.78%	0.55%
	NABIL	1.22%	0.09%	0.072	1.39%	1.15%

HBL: The mean value of Interest Margin to Total Assets is observed to be 3.02%. It is the excess of interest income to total assets over interest expenses to total assets. The mean ratio of Interest income to TA is 5.30%, whereas the interest expenses to TA is 2.28%. Interest income is nearly 2.5 times more than interest expenses. It sounds pretty good. Similarly, non interest Margin to TA has a mean of -0.40%. It is a negative figure.

It is the excess of non-interest income to TA over non-interest expenses to TA. The negative ratio indicates that HBL has higher non-interest expenses than its non-interest earnings. To build a sound ROA only, net interest margin seems to play a vital role, besides non-interest margin other mean values 0.57% 0.20% and 0.67% of Provision for Loan Loss to TA, Provision for staff Bonus to TA, Provision for tax to TA respectively are deducted from net interest margin.

In comparison to interest income to TA ratio interest expenses to TA ratio seem to be much volatile. Coefficient of variation of interest income to TA is 0.039 whereas the interest expenses to TA are 0.127. The interest margin to TA has Coefficient of variation of 0.076, It seems quite consistent than non-interest margin to TA ratio. Much variability has been seen in Non-interest Margin to TA ratio. It has a coefficient of variation of 0.532 which of course is much higher than other components mention in the above table. Provision for Loan Loss to TA is another volatile ratio. Coefficient of variation of 0.51 also justifies the fact. Other components such as provision for Loan loss to TA, provision for staff Bonus to TA, provision for tax to TA seems to be relatively less volatile.

NABIL: The mean value of interest margin to total assets is 4.19%. It is the excess of interest income to total assets over interest expenses to total assets. The mean ratio of Interest income to TA is 6.07% whereas the interest expenses to TA is 1.88% it is nearly 3.5 times more than interest expenses to TA .Interest-margin to TA has a mean value of 3.02% which is the excess of Interest income to TA ratio over non-interest income. The Non-interest margin to TA has a mean of -0.06%. It is a negative figure. It is the excess of non-interest income to TA ratio over non-interest expenses to TA ratio. The negative figure indicates that NABIL also has higher non-interest expenses than its non-interest earnings. It clearly shows that much burden is given to interest margin by other variables of the income statement. Mean ratio of other variables such as Provision for Loan Loss to TA, Provision for staff Bonus to TA, Provision for tax to TA respectively are 0.20%, 0.43%, 1.22% respectively.

Much variability has been seen in Non-interest Margin to TA ratio. It has a coefficient of variation of 2.95 which of course is much higher than other components mentioned in the above table. Similarly, in comparison to interest income to TA ratio interest expenses to TA ratio seems to be much volatile. Coefficient of variation of interest income to TA is 0.036 whereas the interest expenses to TA are 0.22. The net interest margin to TA has Coefficient of variation of 0.076. It seems quite consistent than non-interest margin to TA ratio, Provision for Loan Loss to TA is another volatile ratio. It ranges from highest and lowest of 0.49% to 0.02%. Coefficient of variation ratio of 0.121 also justifies the fact. Other components such as provision for loan loss to TA, provision for staff bonus to TA, provision for tax to TA seems to be relatively less volatile.

4.4.4 Descriptive statistics of EPS, MVPS and PER

Table 4.7 shows the descriptive statistics of the values of the variables EPS, MVPS and PER of the selected banks. The statistics are presented in the table 4.7 for six years data from the year 2003/04 to 2008/09. Mean Standard deviation (SD), coefficient of variance (CV), maximum and the minimum values of the variables are also presented in the table.

Table 5.0
Descriptive statistic of EPS, MVPS and PER

Yr	EPS (Rs)		MVPS (Rs)		PER (Times)	
	HBL	NABIL	HBL	NABIL	HBL	NABIL
Mean	54.43	100.72	1072.67	1872.50	19.51	16.78
SD	6.20	30.16	342.00	1660.43	4.61	10.26

CV	0.11	0.30	0.32	0.89	0.24	0.61
Maximum	60.66	137.08	1740.00	5050.00	28.69	36.84
Minimum	47.91	55.25	836.00	700.00	16.59	8.74

HBL: The mean value EPS and MVPS is observed to be 54.43 and PER which is the ratio of EPS to MVPS has a mean value of 19.51 Much variation has been observed in MVPS, the maximum and the minimum value of 5050 and minimum value of Rs 700 and the CV of 0.32 also justifies the fact. EPS which has the CV of 0.11 shows more consistency.

NABIL: Relatively higher mean value of 100.72 has been observed for EPS. Similarly, MVPS and PER has the mean value of 1872.50 and 16.78 respectively. However, much inconsistency has been observed in EPS and MVPS. The CV of 0.89 of MVPS indicates much variation in MVPS. Similarly, much deviation has been observed in EPS. The maximum and the minimum value of 5050 and 700 and the CV of 0.30 also justify the fact. Hence, from the above analysis we can conclude that NABIL has higher mean value of EPS and MVPS than HBL but as far as consistency is concerned, HBL shows much consistency.

4.4.5 Correlation and Regression analysis

Correlation and Regression analysis are the techniques of studying how the variations in one series are related to variations in another series. Measurement of the degree of relationship between two or more variables is called correlation analysis and using the relationship between known and unknown variable to estimate the unknown one is termed as regression analysis.

Correlation analysis

Two variables are said to have correlation when they are so related that the change in the value of one variable is accompanied by the change in other. In this section, an effort has been made and various statistical tools (correlation analysis, probable error) are used so as to find the relationship between the following variables of HBL and NABIL.

-) Correlation analysis of EM and ROA
-) Correlation analysis of NPM and EM
-) Correlation analysis of NPM and ROE
-) Correlation analysis of AU and ROA
-) Correlation analysis of EM and ROE

For studying the degree of correlation between the two variables Karl Pearson's correlation coefficient is used and to check it's significant, PE is used.

4.4.5.1 Correlation analysis of EM and ROA

The main objective of computing the "r" between ROA and EM is to find out whether they are related to each other or not. Table 4.8 shows that the coefficient of correlation is 0.939. It proves that there is a positive relationship between EM and ROA. On the other hand probable error Multiplied by 6 (6 x P.Er) is 0.195 in the review period. Since $r > 6 \text{ P.Er}$ it is significant and there is a positive correlation between EM and ROA of HBL. So there is a strong relationship between EM and ROA of HBL i.e. increase in EM will brings increase in ROA and vice versa. It shows high degree of relationship between EM and ROA. Similarly, coefficient of correlation of NABIL is 0.899. It is a positive but probable error multiplied by 6 (6 x P.Er) is 0.316 in the review period. Since $r < 6 \text{ P.E}$ it is insignificant and there is no correlation between EM and ROA of NABIL.

Table 5.1
Correlation analysis of EM and ROA of HBL and NABIL

Bank	Variable X)	Variable (Y)	r	6 *P.Er	Remark
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HBL	ROA	EM	0.939	0.195	$r > 6PE$
NABIL	ROA	NPM	0.899	0.316	$r > 6PE$

4.4.5.2 Correlation analysis of NPM and EM

The main objective of computing the "r" between NPM and EM is to find out whether they are related to each other or not. Table 4.9 shows coefficient of correlation of NPM and EM of HBL is -0.55. It is a negative and probable error multiplied by 6 ($6 \times P.Er$) is 1.16 in the study period. Since $r < 6P.e$, it is insignificant and there is no correlation between NPM and EM of HBL. Similarly, coefficient of correlation of NPM and EM of NABIL is -0.76. It is also negative and probable error multiplied by 6 ($6 \times P.Er$) is 0.70 in the study period. Since $r < 6P.e$, it is insignificant and there is no correlation between NPM and EM of NABIL.

Table 5.2
Correlation analysis of NPM and EM of HBL and NABIL

Bank	Variable X)	Variable (Y)	r	r ²	6 *P.Er	Remark
HBL	NPM	EM	-0.55	0.30	1.16	$r < 6P.e$
NABIL	NPM	EM	-0.76	0.12	0.70	$r < 6P.e$

4.4.5.3 Correlation analysis of NPM and ROE

The main objective of computing the "r" between NPM and ROE is to find out whether they are related to each other or not. Table 5.0 shows coefficient of correlation of ROE and EM of HBL is 0.22. It is a positive and probable error multiplied by 6 ($6 \times P.Er$) is

1.57 in the study period. Since $r < 6P.Er$, it is insignificant and there is no correlation between ROE and NPM of HBL. On the other hand coefficient of correlation of ROE and EM of NABIL is -0.69. It is negative and probable error multiplied by 6 ($6 \times P.Er$) is 0.86 in the study period. Since $r < 6P.Er$, it is insignificant and there is no correlation between ROE and EM of NABIL.

Table 5.3
Correlation analysis of ROE and NPM

Bank	Variable(X)	Variable (Y)	r	P.Er	6*P.Er	Remark
HBL	ROE	EM	0.22	0.26	1.57	$r < 6P.e$
NABIL	ROE	EM	-0.69	0.14	0.86	$r < 6P.e$

4.4.5.4 Correlation analysis of AU and ROA

The main objective of computing the “r” between AU and ROA is to find out whether they are related to each other or not. Table 6.1 shows that coefficient of correlation of ROA and AU of HBL is 0.73, it is a positive and probable error multiplied by 6 ($6 \times P.Er$) is 0.76. Since $r < 6P.Er$, it is insignificant and there is no correlation between AU and ROA of HBL. On the other hand table 5.0 shows that the coefficient of correlation of NABIL is 0.79. It proves that there is a positive relationship between EM and ROA similarly probable error Multiplied by 6 ($6 \times P.Er$) is 0.63 in the study period. Since $r > 6P.e$, it is significant and there is a positive correlation between ROA and AU of NABIL. So there is a strong relationship between them i.e. increase in AU will brings increase in ROA and vice versa.

Table 5.4
Correlation analysis of ROA and AU

	Variable(X)	Variable (Y)	r	P.Er	6*P.Er	Remark
HBL	ROA	AU	0.73	0.13	0.76	$r < 6P.e$
NABIL	ROA	AU	0.79	0.11	0.63	$r > 6P.e$

4.4.6 Regression analysis of EM and ROE:

To examine the relationship between EM and ROE for HBL and NABIL correlation and regression analysis is done. In this analysis ROE is the dependent variable (Y), and EM is the independent variable. Equity multiplier is the direct measure of banks degree of financial leverage. The equity multiplier, allows the investor to see what portion of the return on equity is the result of debt. Theoretically there should exist a positive relationship between ROE and EM because higher the leverage higher would be the ROE.

Table 5.5
Financial leverage measured as EM and ROE

Yr	Financial Leverage EM (Times)		Return on Equity ROE (%)	
	HBL	NABIL	HBL	NABIL
2003/04	18.7 (100)	11.30 (100)	19.87% (100)	30.73% (100)
2004/05	17.78 (74)	10.37 (67)	20.00% (101)	31.29% (112)
2005/06	16.68 (69)	11.91 (103)	25.90% (130)	33.88% (133)
2006/07	15.62 (65)	13.25 (109)	22.91% (115)	32.76% (128)
2007/08	14.39 (77)	15.23 (135)	25.30% (134)	30.63% (99)
2008/09	12.61 (67)	14.01 (115)	24.13% (121)	32.94% (107)

To develop a statistical model so as to study the regression between the two variables X (EM) and Y (ROE) , the theoretical statement is created “the ROE is the function of EM.
“

Symbolically it can be presented as:

$$ROE=f(EM)$$

Least square method is used to examine the relationship between the variables.

According to the principal of least squares, a simple regression line where dependent variable Y (ROE) on X (EM) is

$$Y= a + b x$$

$$\text{I.e. } ROE = a + b (EM)$$

Here:

$$Y = ROE$$

$$X=EM$$

a=y-intercept

b=slope of the regression line which is also known as regression coefficient.

Similarly for studying the degree of Correlation between the two variables X (EM) and Y (ROE) Karl Pearson’s correlation coefficient is used.

Table 5.2 shows the Equity multiplier (EM) and Return on Equity (ROE) of HBL and NABIL .

Table 5.5 exhibits a regression and corresponding statistic from the data presented in table 6.3.The table shows the coefficient of correlation and regressions so as to measure the sensitivity of financial leverage on return on equity of the selected bank.

Bank	Dependent Variable	Independent Variable	Y Intercept	Regression Coefficient	Correlation Coefficient	Coefficient of Determination	t-test
	y	x	a	b	R	r ²	t
HBL	ROE	EM	14.33	0.217	0.22	0.047	3.357

NABIL	ROE	EM	48.50	-1.43	-0.70	0.479	1.920
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Table 5.6

Coefficient of Correlation and Regression of HBL and NABIL

Regression Analysis: As presented in the table Y i.e. ROE, intercept of a is computed as 14.33 for HBL .It simply represents the average value of ROE when EM is equal to 0 (fixed).The coefficient of regression which is also known as the (slope) growth rate of EM of HBL is 0.217. It indicates that for each yearly increment in EM, the ROE is expected to increase by 21.7 %.

Similarly the second row represents for NABIL, it has a y-intercept of 48.50, it represents the average value of ROE of NABIL when its EM is equal to 0 (fixed).The coefficient of regression ROE on EM is -1.43, and it shows that for each yearly increment in EM its ROE decreases by 1.43.

Correlation Analysis: The above calculation shows correlation coefficient (r) between EM and ROE .In this analysis ROE is the dependent variable (Y),and EM is the independent variable., the table shows that the correlation coefficient of HBL is 0.2172 ,it is positive i.e. ROE also increases with the increment of EM ,Similarly second row shows that the correlation coefficient of NABIL is -0.6925, it shows the negative relationship i.e. when EM increases ROE decreases .

4.4.7 Test of hypothesis

To test the significant relationship between EM and ROE t-test has been performed and accordingly null hypothesis and alternative hypothesis has been formulated

The null hypothesis: There is no significant (linear) relationship between EM and ROE

Ho: $s = 0$

The alternative hypothesis: There is significant (linear) relationship between EM and ROE

$$H_1: \rho \neq 0$$

$$t_b = \frac{b}{S_b}$$

Using 5% level of significant and 4 degree of freedom, t-test has been performed and both the calculated as well as tabulated value of t for both the banks has been presented in the table below.

Table 5.7
Calculated value of t and tabulated value of t

Bank	Calculated t	Tabulated t
HBL	3.35	2.776
NABIL	-1.920	2.776

Since the calculated value of 't' is greater than tabulated value, null hypothesis is rejected and the alternative hypothesis is accepted. Thus it proves that there exists a significant relationship between EM and ROE of HBL.

On the other hand, for NABIL calculated value of "t" is less than tabulated value. So, null hypothesis is accepted. It indicates that the result is statically insignificant. Thus we can conclude that there is no significant relationship between EM and ROE of NABIL.

3.4.8 Trend Analysis

A series from a set of statistical data arranged in accordance with their time of occurrence is said to be a time series. The analysis of a variable's past value changes to determine if a trend exists and if so, what the trend indicates. Trend analysis is based on the idea that what has happened in the past gives analyst an idea of what will happen in the future, following trend analysis has been done in the study.

3.4.8.1 Trend value of ROE of HBL and NABIL

An effort has been made to analyze the trend of ROE of HBL and NABIL based on their six years data i.e. from the year 2003 to 2009. Trend value obtained is deducted from the corresponding original value so as to measure short term fluctuation and is shown in the third column. Yearly fluctuation in the table shows whether the trend is met by the bank in different year or not. In the year 2003, the trend is met.

Table 5.8
Trend analysis of ROE of HBL and NABIL

HBL				NABIL		
Year	ROE	Trend value	Yearly Fluctuation	ROE	Trend value	Yearly Fluctuation
Yr.	Y	Yc	Y-Yc	Y	Yc	Y-Yc
2003	19.87	22.73	4.40	23.69	26.92	-3.23
2004	20.00	22.61	-2.91	31.67	28.42	3.25
2005	25.90	22.48	-2.86	30.73	29.92	0.81
2006	22.91	22.35	-2.61	31.29	31.42	-0.13
2007	25.30	30.63	3.42	33.88	32.92	0.96
2008	24.13	32.94	0.56	32.76	34.42	-1.66

ROE of HBL is in decreasing trend. It gradually fluctuates from 19.87 to 25.90 from the year 2003 to 2008 respectively. A negative short term fluctuation has been observed in the year 2006 and 2008. On the other hand, NABIL shows an increasing trend. It increased from 22.35 to 32.94 from the year 2003 to 2008 respectively. In case of NABIL also, a negative short term fluctuation has been observed in the year 2004, 2005 and 2006 respectively.

Figure 7.0

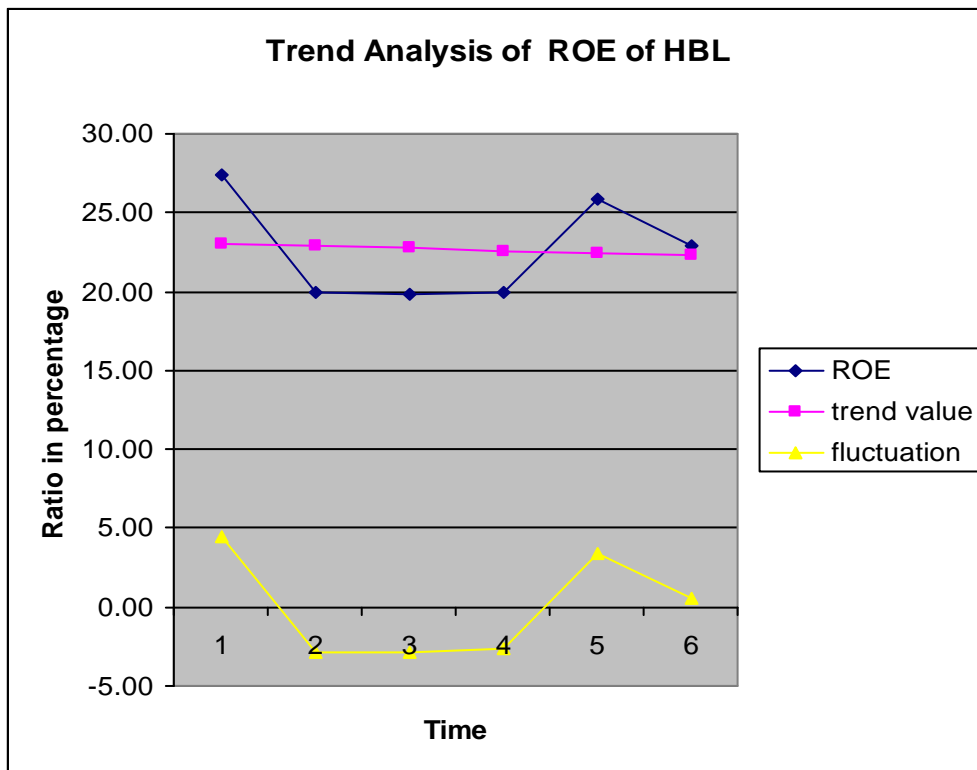
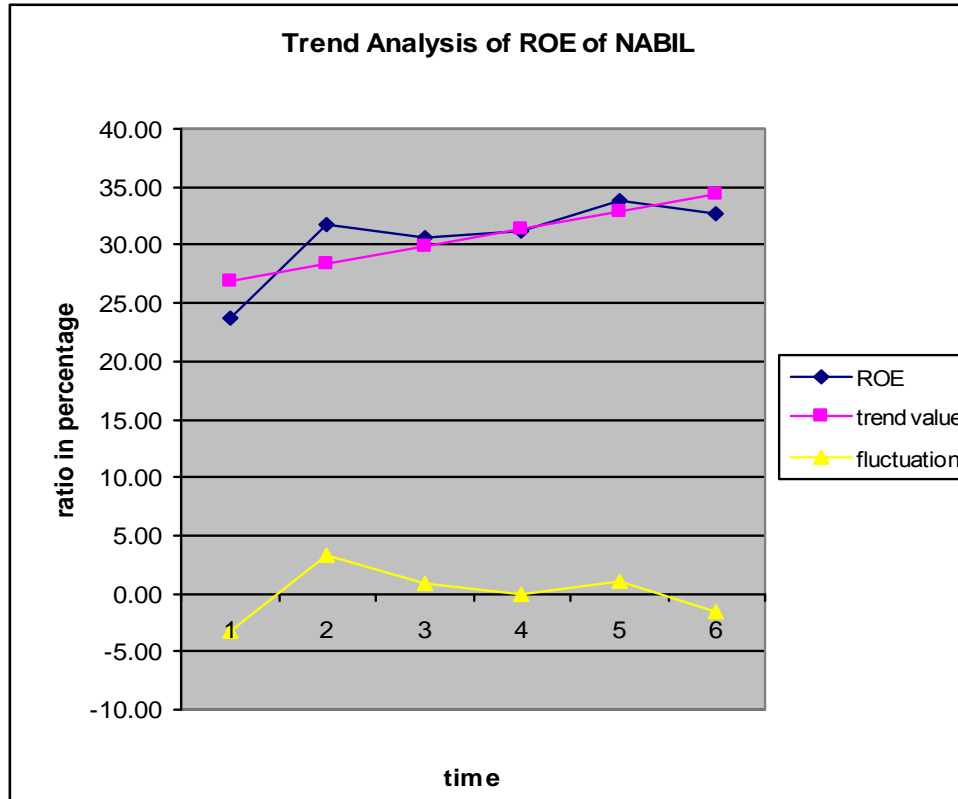


Figure 7.1



3.4.8.2 Trend Analysis of ROA of HBL and NABIL

Here, an effort has been made to compute the trend value of ROA of HBL and NABIL for the fiscal year 2003 to 2008. ROA of HBL is in increasing trend. An increment from 1.06 to 2.01 has been observed from the year 2003 to 2008 respectively. However, a negative yearly fluctuation has been observed in almost all the years of the study period. In case of NABIL an increment from 2.72 to 3.02 has been observed from the year 2003 to 2004 respectively and negative short term fluctuation has been observed in the year 2006 and 2008 respectively.

Table 5.9
Trend analysis of ROA of HBL and NABIL

HBL				NABIL		
Year	ROA	Trend Value	Fluctuation	ROA	Trend value	Fluctuation
2003	1.06	0.95	-0.75	2.72	2.09	-0.55
2004	1.12	1.05	-1.19	3.02	2.26	0.25
2005	1.55	1.16	-1.25	2.84	2.43	0.29
2006	1.47	1.26	-1.40	2.47	2.60	0.42
2007	1.76	1.36	-1.17	1.92	2.77	0.07
2008	2.01	1.47	-1.46	2.35	2.94	-0.47

Figure 7.2

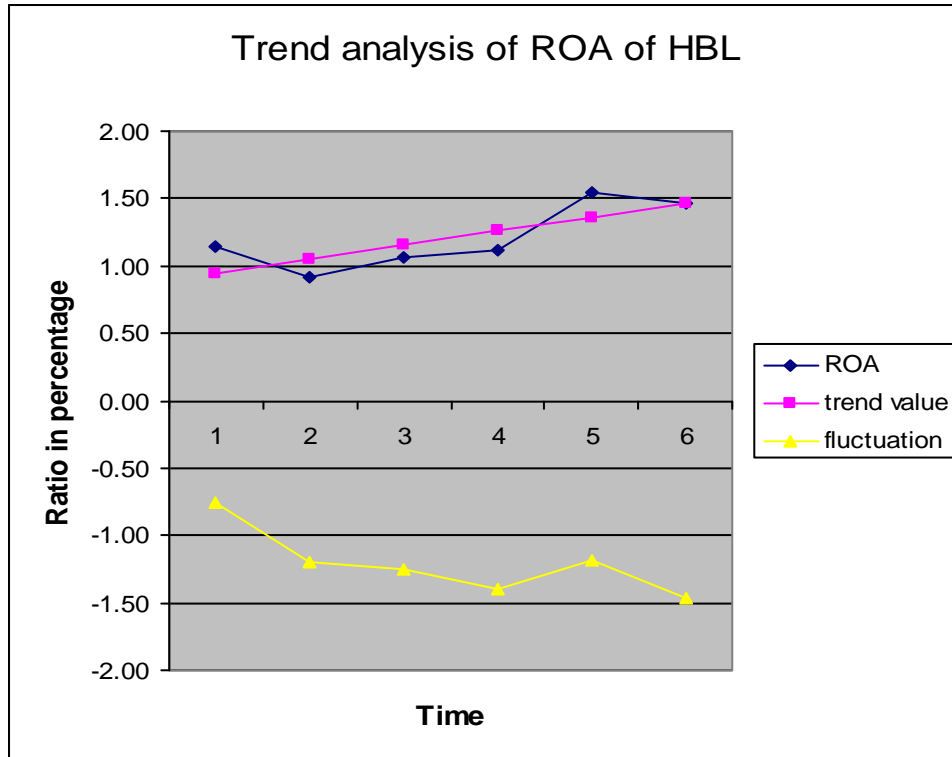
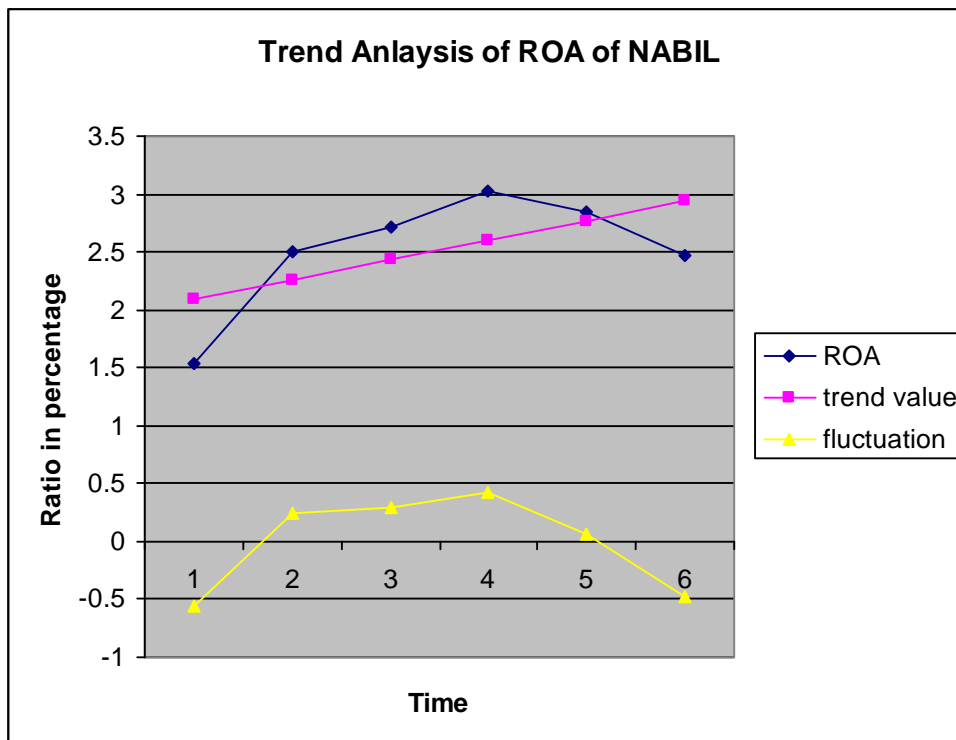


Figure 7.3



Trend Analysis of ROA and ROE has been done from the fiscal year 2003 to 2014. Here an effort has been made to forecast the trend value of ROA and ROE of HBL for the next six years. The table clearly demonstrates that ROA of HBL and NABIL will be 3.96% and 2.09% respectively. Similarly ROE of HBL and NABIL will be 21.60% and 43.43 % respectively provided other things remaining the same.

Table 6.0

The table below shows the Trend analysis of ROA and ROE of HBL and NABIL

Year	ROA		ROE	
	HBL	NABIL	HBL	NABIL
2003	2.09	0.95	22.99	26.92
2004	2.26	1.05	22.86	28.42
2005	2.43	1.16	22.73	29.92
2006	2.60	1.26	22.61	31.42
2007	2.77	1.36	22.48	32.92
2008	2.94	1.47	22.35	34.42
2009	3.11	1.57	22.23	35.92
2010	3.28	1.68	22.10	37.43
2011	3.45	1.78	21.98	38.93
2012	3.62	1.88	21.85	40.43
2014	3.79	1.99	21.72	41.93
2015	3.96	2.09	21.60	43.43

3.5 Finding

The main findings of the study that are derived on the basis of financial data analysis of all the selected banks are presented below:

Net profit margin

HBL has a mean and CV of 16% and 3% respectively. NPM of HBL was observed to be in a decreasing trend till the years 2006/07. Then it shows a gradual increment in the subsequent year 2007/08 and 2008/09 but is not as satisfactory as that of NABIL. The NABIL has a mean value of 45.02% and CV of 3%. It shows a rising trend and the figures are quite encouraging. Hence we can conclude that NABIL is relatively in better position than HBL and it shows that NABIL is more efficient in controlling expense and maintaining appropriate servicing policy.

Asset utilization ratio

HBL shows fluctuating but an increasing trend of AU. The mean value of 4.19% and CV of AU ratio of HBL are 4.19% and 7.90% respectively. On the other hand NABIL has a mean and CV of 6.05% and 9.65% respectively. This indicates that the ratios are more or less consistent during the study period .Hence we can conclude that NABIL'S yield on assets are more than HBL but higher CV indicates that the ratios are less consistent . Thus HBL must more efficiently utilize its assets so as to generate more revenue. Portfolio management policies, especially the mix and yield on the bank's assets must be reviewed.

Equity multiplier

Both the banks show a decreasing trend of Equity multiplier. HBL has a mean value and CV of 19.14% and 17% respectively. Similarly NABIL has the mean and CV of 12.47% and 13.98% respectively. Hence from our analysis we can state that HBL has relatively higher EM than NABIL but as far as consistency is concerned NABIL seems to be more consistent. The equity multiplier, a measure of financial leverage of both the banks are in decreasing trend so both the banks should try to formulate a sound leverage or financing polices; the source chosen to fund the bank (debt or equity).

Return on equity

HBL shows a decreasing trend of ROE. It has the mean value and CV of 22.67% and 14.65% respectively. On the other hand ROE of NABIL shows an increasing trend. It has the mean and CV of 30.67% and 11.73 % respectively. The analysis shows that NABIL has encouraging ROE and the ratios are comparatively more consistent. High ROE reflects strong financial structure of NABIL and relatively low equity ratio reflects more speculative situation so HBL must concentrate more in uplifting the ROE.

Return on Assets:

The ROA of HBL has a mean value of 1.21% and 20.58% respectively. Similarly NABIL has a mean of 2.25% and CV of 20.69% respectively. NABIL has a higher mean than HBL and as far as consistency is concerned both the bank seems to be more or less in the same state. Thus from the analysis we can conclude that NABIL has encouraging ROA.

Interest income to TA

Both HBL as well as NABIL show a decreasing trend of interest income to TA ratio. The mean value of 6.07% and CV of 0.036 i.e. 36% has been observed for NABIL whereas for HBL it is observed to be 5.30% and CV of 0.039% respectively. Low CV indicates that both the ratios are consistent. Both the banks are unable to generate the satisfactory level of revenue.

Interest expense to TA

Interest expense to total assets ratio of both the banks shows a down trend It shows that expense for interest on a loan made to an individual, corporation or other entity is decreasing every year. The mean value of interest expense to total assets ratio is observed to be 2.28% with CV of 0.29 i.e. 29% whereas of NABIL, it is observed to be 1.88% with a CV of 0.42 i.e. 42%. Low CV of HBL indicates that the ratios are consistent.

Interest Margin to TA

The mean value and CV of Interest Margin to TA of NABIL is observed to be 4.19% and 0.096 i.e. 9.6% respectively. Similarly HBL has a mean and CV of 3.02 and 0.076 i.e. 7.6% respectively. The ratios are encouraging. It plays a vital role in uplifting the ROA and ROE. Both the banks are maintaining satisfactory level of NPM. Low CV indicates that both the ratios are consistent.

Non-interest income to TA

Non-interest income to TA ratio of HBL was observed to be highest of 1.48% and lowest of 1.09% in the year 2008/09 and 2003/04 respectively. A percentage relative of 105, 129, 108, 106 and 139 shows that things are not so encouraging but satisfied level in the year 2008/09. On the other hand NABIL also shows a decreasing trend. The highest ratio of 2.67% is observed in the year 2004/05 and the lowest of 1.03% in the year 2008/09. A percentage relative of 122,91,85,59 and 44 shows that it is in decreasing trend. Thus we can conclude that NABIL is in not better position than HBL as far as non-interest income to TA is concern..

Employee and Office Exp to TA

It is the non-interest expense to TA ratio. HBL shows an increasing trend. It shows that that the overhead cost of HBL is in an uncontrolled state. The mean value of 1.57% and CV of 0.28 i.e. 28% show that the ratios are consistent. The NABIL also shows a fluctuating non-interest expense to TA ratio it has the mean value of 2.18% with a CV of 0.40 i.e. 40%. Low CV of HBL indicates that its ratios are consistent.

Non-interest Margin to TA

Non-interest Margin to TA of both the banks is not so encouraging. HBL shows a negative trend and throughout the study period all the ratios are negative. Similarly NABIL also has negative ratios in most of the years. The ratios are highly fluctuating in both the banks. The mean value of -0.40% is observed with a CV of 0.532. Similarly NABIL has a mean value of -0.06% and a CV of 2.95, higher C.V indicates inconsistency. Hence the above analysis indicates that both the banks are unable to generate satisfactory level of revenue from non-interest activities such as fees and commissions and other gains, etc .As far as consistency is concern HBL shows much consistency.

Provision for Loan Loss to TA

The ratios are fluctuating but in a decreasing trend in both the banks. The percentage relative reveals the fact. The mean value of HBL is observed to be 0.57% whereas of NABIL is 0.20%. Similarly, CV of HBL is found to be 0.510 i.e. 51% whereas of NABIL is 0.939 i.e. 93.3%. Hence ratios of HBL seem to be more consistent.

Provision for staff Bonus to TA

The ratios are fluctuating in case of HBL. It is showing an increasing trend whereas in NABIL it is in a decreasing trend. The percentage relative also reveal the fact. The mean value of HBL is observed to be 0.20% whereas of NABIL is 0.43%. Similarly CV of HBL is found to be 0.106 i.e. 10.6% whereas of NABIL is 0.121 i.e. 12.1%. Hence ratios of NABIL seem to be much higher and the ratios of both the banks are more or less consistent.

Provision for tax to TA

The mean value of Provision for tax to TA of HBL is observed to be 0.67% with the CV of 0.121 i.e. 12.1%. Similarly, NABIL has a mean and CV of 1.22% and 0.072 i.e. 7.2%

respectively. It shows that the expense made for tax by HBL is not so consistent as compared to that of NABIL.

Earning Per Share (EPS)

The EPS of HBL is observed to be quite fluctuating. The percentage relative also reveals that the EPS are not so encouraging till the year 2004/05. However, in the subsequent years, it shows encouraging figures. HBL and NABIL have a mean value of 54 and 100.72 respectively. NABIL has much higher EPS than HBL. The percentage relative also reveals that its EPS is in rising trend but much variation has been observed. CV of 30 % justifies the fact. HBL has much consistent EPS. It has a C.V of just 11%.

Market value per share (MVPS)

The analysis shows that NABIL has relatively higher MVPS mean value of 1072.50 and 1872.50 that has been observed for HBL and NABIL respectively. HBL has a CV of 0.032 i.e. 32% whereas NABIL has 0.082 i.e. 89%. A higher CV of NABIL reveals inconsistent in its MPVS.

Price earnings ratio (PER)

The analysis shows that the PER of both the banks are quite satisfactory. HBL and NABIL have the mean value of 19.51% and 16.78% respectively. Higher CV of 0.061 i.e. 61% of NABIL indicates higher degree of inconsistency in its PE ratio.

Correlation analysis

Correlation analysis between the following variables was performed.

-) **Correlation analysis of EM and ROA:** It has been observed that the coefficient of correlation between EM and ROA of HBL is 0.939. There is strong relationship between EM and ROA i.e. increase in EM will bring increase in ROA and vice versa. It shows high degree of relationship between EM and ROA. On the other hand, the analysis shows that there is no correlation between EM and ROA of NABIL.
-) **Correlation analysis of EM and ROE:** It has been observed that correlation coefficient of HBL is 0.2172. It shows that there is a positive relationship between EM and ROE. It indicates that ROE increases with the increment of EM on the contrary the negative correlation coefficient of NABIL shows a negative relationship i.e. when EM increases ROE decreases.
-) **Correlation analysis of NPM and EM:** There is no correlation between ROE and NPM of both HBL as well as NABIL.
-) **Correlation analysis of AU and ROA.** There is no correlation between AU and ROA of HBL. On the other hand, there is a positive correlation between ROA and AU of NABIL, i.e. increase in AU brings increase in ROA and vice versa
-) **Correlation analysis of NPM and ROE :** There is no correlation between ROE and NPM of both the selected banks.

Regression analysis of Financial leverages (EM) and return on equity (ROE)

The regression analysis shows that there is a positive relationship between return on equity (ROE) and financial leverage (EM), i.e. the dependent variable ROE increases with the increment of independent variable EM. Regression analysis indicates that for each yearly increment in EM, the ROE is expected to increase by 21.7 %. On the other hand, in case of NABIL there is negative relationship between the dependent variable return on equity (ROE) and independent variable financial leverage (EM) i.e. when EM increases ROE decreases.

Test of hypothesis

To test the significant relationship between EM and ROE, t-test has been performed. It has been observed that there exists a significant (linear) relationship between EM and ROE of HBL. On the contrary, in case of NABIL there is no significant (linear) relationship between EM and ROE of NABIL.

Trend analysis

The following trend analysis has been done in the study.

-) **Trend value of ROE of HBL and NABIL:** ROE of HBL is in decreasing trend. It gradually decreased from 22.99 % to 22.35% in the years 2003 to 2009 respectively. On the other hand NABIL shows an increasing trend. It increased from 26.69% to 34.42 % in the years 2003 to 2009 respectively .The trend value projected for ROE of HBL and NABIL will be 21.60% and 43.43 % respectively by the year 2015, provided other things remaining constant.
-) **Trend value of ROA of HBL and NABIL:** ROA of HBL is in increasing trend. An increment from 1.14% to 1.47% has been observed from the year 2003 to 2009 respectively. In case of NABIL an increment from 2.09 % to 2.94 % has been observed from the year 2003 to 2009 respectively. The trend value projected for ROA of HBL and NABIL will be 3.96% and 2.09% respectively by the year 2015, provided other things remaining the same .

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CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter consists of mainly three parts; summary, conclusion and recommendation. Here, the result of the research is summed up suggestion and recommendations are based on the result and experience. Recommendation is made for improving the present situation of the concerned parties as well as for further research.

5.1 Summary

Basically, the entire research work focuses on the “Comparative Analysis of Financial Performance of Two Joint Venture Banks: HBL and NABIL” by taking six years data from the year 2003/04 to 2008/09. The study is mainly based on secondary sources. All data are taken from concerned banks annual report, literature publication, balance sheet, profit and loss account, previous thesis report, different websites, related books and booklets, journals and articles. After collecting data from different sources, it is analyzed by using financial and statistical tools. Findings are drawn by applying various financial tools. DuPont analysis has been done to analysis the overall profitability position of the selected banks. Similarly, statistical tools viz. mean, standard deviation, coefficient of variation, coefficient of correlation and least square trend has been applied.

An attempt has been made to fulfill the objectives of the research work. All secondary data are compiled, processed and tabulated as per necessity and figures, diagrams, different types of chart are also used. This study suffers from different limitations; it considers two banks only and time and resource are the constraints of the study. Therefore, the study may not be generalized in all cases and accuracy depends upon the data collected and provided by the organization.

5.2 Conclusion

Certain findings based on the analysis dealt in analytical chapters are summarized below:

NPM of HBL was observed to be in a increasing trend till the years 2004/05 and then it shows a gradual increment in the subsequent year 2005/06 till 2007/08 and is more as satisfactory as that of NABIL. NABIL shows a rising trend and the figures are quite encouraging. We can conclude that NABIL is relatively in better position than HBL and it indicates that it is more efficient in controlling expense and maintaining appropriate service policy.

Assets utilization ratio of HBL is relatively more consistent during the study period although NABIL's yield on assets is more than HBL yet; higher CV indicates that it is less consistent.

Equity multiplier of both banks shows a decreasing trend, from our analysis we can state that HBL has relatively higher EM than NABIL but as far as consistency is concerned NABIL seems to be more consistent. The equity multiplier; a measure of financial leverage of both the banks are in decreasing trend. So both banks should try to formulate a sound leverage or financing policies; the source chosen to fund the bank (debt or equity).

The trend of ROE of the both bank is fluctuating. On the other hand NABIL shows an increasing trend. It has the mean and CV of 11.73.% and 32.03 % respectively. The analysis shows that NABIL has encouraging ROE and the ratios are comparatively more consistent. High ROE reflects strong financial structure of NABIL and relatively low equity ratio reflects more speculative situation so HBL must concentrate more in uplifting the ROE.

NABIL has higher ROA than HBL but as far as consistency is concerned both bank seems to be more or less in the same state. From the analysis we can conclude that NABIL has encouraging ROA.

Both the banks show a decreasing trend of interest income to TA ratio. Low CV indicates that there ratios are consistent. However both the banks must try to increase the interest income, the analysis shows that they are unable to generate the satisfactory level of revenue.

Interest expense to total assets ratio of both the banks shows a down trend. It shows that expense for interest on a loan made to an individual, corporation or other entity is decreasing every year. HBL shows relatively more consistency than NABIL.

The Interest Margin to TA ratios of both the banks is encouraging. It plays a vital role in uplifting the ROA and ROE. Both the banks are maintaining satisfactory level of NPM. Low CV indicates that both the ratios are consistent.

Non-interest income to TA of HBL banks is not so encouraging it shows a negative trend. On the other hand NABIL has a sound Non-interest income to TA ratio. It shows an increasing trend. The ratios are comparatively higher than HBL but show much inconsistency.

Employee and Office Expense to TA which is also known as the non-interest expense to TA ratio, HBL shows an increasing trend. It shows that that the overhead cost of HBL is in an uncontrolled state. The NABIL also shows a fluctuating but increasing non-interest expense to TA ratio. Low CV of HBL indicates that its ratios are consistent.

Non-interest Margin to TA of both banks is not so encouraging. HBL shows a negative trend and throughout the study period all the ratios are negative. Similarly NABIL also has negative ratios in most of the years. The ratios are highly fluctuating in both the banks. Analysis indicates that both banks are unable to generate satisfactory level of revenue from non-interest activities such as fees and commissions and other gains etc.

Provision for Loan Loss to TA ratios is fluctuating but in a decreasing trend in both banks. Ratios of HBL seem to be relatively more consistent than NABIL. Provisions for staff Bonus to TA ratios are fluctuating but in case of HBL it is in an increasing trend whereas in NABIL it is in a decreasing trend. NABIL relatively much higher ratios and as far as consistency is concern both the banks show more or less same level of consistency.

Provision for tax to TA ratio shows that the expense made for tax by HBL is not so consistent as compared to that of NABIL.

The EPS of HBL is observed to be quite fluctuating. The percentage relative also reveals that the EPS were not so encouraging till the year 2004/05. However in the subsequent years it shows encouraging figures. NABIL has comparatively much higher EPS than HBL. The percentage relative also reveals that its EPS is in rising trend but much variation has been observed. HBL has relatively much consistent EPS than NABIL.

Market value per share of NABIL is relatively much higher than HBL but higher CV reveals inconsistent.

Correlation and regression analysis shows the following results:

There is a strong correlation between EM and ROA i.e. increase in EM will bring increase in ROA and vice versa. It shows high degree of relationship between EM and ROA on the other hand the analysis shows that there is no correlation between EM and ROA of NABIL.

There is a positive relationship between EM and ROE. It indicates that ROE increases with the increment of EM on the contrary the negative correlation coefficient of NABIL shows a negative relationship i.e. when EM increases ROE decreases.

There is no correlation between AU and ROA of HBL. On the other hand there is a positive correlation between ROA and AU of NABIL, i.e. increase in AU will bring increase in ROA and vice versa.

There is no correlation between ROE and NPM of both HBL as well as NABIL.

There is no correlation between ROE and NPM of both the selected banks.

The regression analysis shows that there is a positive relationship between return on equity (ROE) and financial leverage (EM), i.e. the dependent variable ROE increases with the increment of independent variable. Regression analysis indicates that for each yearly increment in EM. The ROE is expected to increase by 25.90%. On the other hand in case of NABIL, there is negative relationship between the dependent variable return on equity (ROE) and independent variable financial leverage (EM) i.e. when EM increases ROE decreases.

In case of testing the significant relationship between EM and ROE, t-test was performed. It has been observed that there exists a significant relationship between EM and ROE of

HBL. On the contrary, in case of NABIL there is no significant relationship between EM and ROE of NABIL.

Trend analysis of ROE of HBL shows a decreasing trend. It gradually decreases from 19.87 % to 25.90% in the years 2003 to 2005 respectively. On the other hand NABIL shows an increasing trend. It increased from 30.37.% to 33.88% in the years 2004 to 2006 respectively then again decrease to 30.63 but again increase to 32.94%. Trend analysis of ROA of both HBL as well as NABIL is in increasing trend. An increment from 1.06% to 2.01% has been observed from the year 2003 to 2009 respectively. In case of NABIL, an increment from 2.72% to 1.90% % has been observed from the year 2003 to 2009 respectively. NABIL's ROA is not satisfactory result as compared to HBL

5.3 Recommendation

Based on the above findings and conclusions, certain recommendation can be made here so that the concerned authorities, future researchers, academicians, and bankers can get some insights on the present conditions on above topics. It is considered that this research will be fruitful for them to improve the present condition as well as for further research. The major recommendations of this study are as follows:

-) Profit is the foundation for survival of commercial banks. They should be able to earn sufficient profit to build up the confidence among the shareholders, customer and its staffs. So both the banks are recommended to use its resources in high profit potential sector. HBL's profitability position is lower than that of NABIL. So it is strongly recommended to utilise risky assets and shareholders funds to generate high profit margin.
-) In a long term business both bank should be concern with the shareholder's wealth maximization and not merely focus on short term profit maximization.
-) Although NABIL has higher profitability ratios than HBL yet, much inconsistency has been observed. NABIL has relatively higher earning risk than HBL. So it is recommended to maintain a stability and consistency in its earning.
-) Non-interest margin of both banks are observed to be negative. So they must focus more in increasing the spread between non-interest income and non-interest expense. Income generation activities like issuance of pay order, traveler's cheques, document sent for collection, remittance (fund transfer) also can help greatly to increase operating income. Both the banks are suggested to reduce the operating expenses so as to maximize the non-interest margin.

- J HBL must try to increase its asset utilization ratio (AU). It must efficiently utilize its assets so as to generate more revenue. Portfolio management policies, especially the mix and yield must be reviewed..
- J The equity multiplier, a measure of financial leverage of both the banks is in a decreasing trend. So, both the banks should try to formulate a sound leverage and financing policies; the source chosen to fund the bank (debt or equity).
- J Motivating the employees through various ways such as sending them on training program, access to information of the required queries, appropriate manpower planning. “The right man for right place policy” can reduce unnecessary operating expenses and increase the operating efficiency of the bank. It is suggested to both the banks that they should use well-trained manpower.
- J For attracting the customers, both the banks should try to implement different attractive programs, facilities and technologies like ATM, credit cards, 365 days banking services, evening counter in all its branches, so as to provide prompt services to its valuable customers.
- J Both banks should not be centered within urban areas only ignoring the social responsibilities. They must try to expand their branches in remote areas as well. They are also suggested to involve themselves in social responsibilities by investing a part of their profit.
- J From the experience of collecting the secondary data, it is suggested that NRB should pay special attention to publish detail information on a timely manner. The untimely publication of such information may cause a negative impact on the efficiency of those whose workings are based on this information. Sample institutions are also suggested to include their kindly requested for the co-operation and sincere support to the research students in providing the data.
- J As this research is made by highlighting only the key profitability ratios, further research has been suggested.

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Net Profit Margin			
YEAR	Net Profit	Operating Revenues	Ratio
2003/04	263054	1024776	25.67
2004/05	308275	1195922	25.78
2005/06	457458	1393535	32.83
2006/07	491824	1393362	35.30
2007/08	635869	1597495	39.80
2008/09	752835	1988048	37.86

Appendix – 1

Calculation of NPM of HBL

Calculation of NPM of Nabil

$$\text{Net Profit Margin} = \frac{\text{Net Income after Tax}}{\text{Operating Revenue}}$$

Net Profit Margin			
YEAR	Net Profit	Operating Revenues	Ratio
2003/04	455311	1050706	43.33
2004/05	518637	1194899	43.40
2005/06	635263	1359513	46.73
2006/07	673960	1480158	45.53
2007/08	746468	1670427	44.69
2008/09	1031053	2220983	46.42

Operating Revenue

Net Profit Margin of the NABIL bank has been calculated by using the same technique.

Appendix – 2

Calculation of Mean, Standard Deviation and Co-efficient of Variation of NPM of HBL

Fiscal Year	HBL Bank	Nabil Bank		
	X ₁	X ₂	(X ₁ -X ₁) ²	(X ₂ -X ₂) ²
2003/04	25.67%	43.33	51.98	2.86
2004/05	25.78%	43.40	50.41	2.62
2005/06	32.83%	46.73	0.0025	2.92
2006/07	35.30%	45.53	5.86	0.26
2007/08	39.80	44.69	47.89	0.11
2008/09	37.86	46.42	8.94	1.96
	X ₁ =197.24%	X ₁ ² =270.1%	(X ₁ ZX ₁) ² = 165.08	(X ₂ ZX ₂) ² = = 8.73

Where,

X₁ = Net Profit Margin of NABIL Bank

X₂ = Net Profit Margin of HBL Bank

Calculation of Mean Ratio of NABIL Bank Current Ratio

$$\text{Mean } \bar{(X_1)} = \frac{X_1}{N} = \frac{197.24}{6} = 32.87\%$$

$$\text{Mean } \bar{(X_1)} = \frac{X_1}{N} = \frac{270.1}{6} = 45.02\%$$

Calculation of Standard Deviation of Current Ratio

$$\begin{aligned}
 \text{S.D.} &= \sqrt{\frac{(X_1 \sum X_1)^2}{N} - \frac{(X_2 \sum X_2)^2}{N}} \\
 &= \sqrt{\frac{165.08}{6} - \frac{8.73^2}{6}} \\
 &= 5.24
 \end{aligned}$$

Calculation of Coefficient of Variation (C.V.)

$$\begin{aligned}
 \text{CV} &= \frac{\dagger}{X} | 100 \% \\
 &= \frac{5.24}{32.88} | 100 \\
 &= 0.16
 \end{aligned}$$

Calculation of Mean, Std. Deviation and coefficient of variation of all other ratios are calculated accordingly.

Appendix –3

Calculation of trend values of ROE of HBL

Fiscal Year	Ratio (Y)	X = t– 2005.5	X ²	XY	Yc = a +bx	Y-Yc
2003	19.87	-2.50	6.25	-49.68	20.57	-0.7
2004	20	-1.50	2.25	-30.00	21.55	-1.55
2005	25.90	-0.50	0.25	-12.95	22.57	3.37
2006	22.91	0.50	0.25	11.46	23.51	-0.6
2007	25.30	1.50	2.25	37.95	24.49	0.81
2008	24.13	2.50	6.25	60.36	25.47	-1.34
Total	y = 136.0 2	X X0	x ² X 17.5	xy X 17.10	138.12	0.01

Here, let the straight line trend equation Yc = a + bx

Where, Y = Annual Ratio in Percentage

Now,

$$a = \frac{Y}{N} = \frac{136}{5} = 22.67$$

$$b = \frac{XY}{X^2} = \frac{-2.21}{17.5} = -0.12629$$

Projected Trend Value of ROE of HBL for Next Six Year		
Fiscal Year (t)	X = t-20011.5	Yc = a + bx
2009	-2.5	22.23
2010	-1.5	22.10
2011	-0.5	21.98
2012	0.5	21.85
2013	1.5	21.72
2014	2.5	21.60

Trend Value of NABIL is calculated similarly.

Appendix – 4

Calculation of Co-efficient of Correlation between NPM and EM of HBL Bank

FY	NPM (X)	EM(Y)	x ²	y ²	xy
2003/04	25.67	18.70	658.9489	349.69	480.029
2004/05	25.78	17.78	664.6084	316.1284	458.3684
2005/06	32.83	16.68	1077.809	278.2224	547.6044
2006/07	35.3	15.62	1246.09	243.9844	551.386
2007/08	39.80	14.39	1584.04	267.07	572.72
2008/09	37.87	12.61	1434.14	159.01	477.54
Total	X = 197.25	Y = 95.78	x ² = 6665.64	y ² = 1797.32	xy = 3087.65
Mean	32.88	15.96			

Now,

$$\text{Co-efficient of Correlation (r)} = \frac{N \cdot \sum xy - \sum x \cdot \sum y}{\sqrt{N \sum x^2 - (\sum x)^2} \sqrt{N \sum y^2 - (\sum y)^2}}$$

$$= \frac{6 | 3087.65 | 197.25 | 95.78}{\sqrt{6 | 6665.64 | 197.25^2} \sqrt{6 | 1797.32 | 95.78^2}}$$

$$= -0.277$$

$$r^2 = 0.30$$

$$\text{Probable Error (P.Er)} = 0.6745 \frac{1 Z r^2}{n}$$

$$= 0.6745 \frac{1 Z 0.277}{6}$$

$$= 0.15$$

Coefficients of correlation of NABIL, is calculated similarly

Appendix – 5

Regression analysis of EM and ROE of NABIL Bank

<u>Year</u> (yr)	<u>X</u> EM	<u>Y</u> ROE	XY	X ²	Y ²	(x- <u>X</u>)	(Y- <u>Y</u>)	(x- <u>y</u>) ²	(Y- <u>Y</u>) ²
2003/04	11.3	30.73	347	128	944	-1.37	-1.31	1.88	1.88
2004/05	10.37	31.29	324	108	979	-2.3	-0.75	5.29	5.29
2005/06	11.91	33.88	404	142	1,148	-0.76	1.84	0.58	0.56
2006/07	13.25	32.76	434	176	1,073	0.58	0.72	0.34	3.39
2007/08	15.23	30.63	466.19	231.95	938.20	2.56	-1.41	6.56	0.52
2008/09	14.01	32.94	461.49	196.28	1085.04	1.34	0.9	1.80	1.30
	X = 76.07	Y X 192.23	xy = 24.37	X² X 980.87	Y² X 6167.71	(0)	0	16.45	13.35

To develop a statistical model so as to study the regression between the two variables X (EM) and Y (ROE), theoretical statement is created. "ROE is the function of EM."

Symbolically it can be presented as;

$$ROE = f(EM)$$

$$Y(ROE) = a + b(EM)$$

$$Y = a + b x$$

Here:

$$Y = ROE$$

$$X = EM$$

a = y-intercept

b = slope of the regression line which is also known as regression coefficient.

Calculation of Standard Deviation

$$s_x = \sqrt{\frac{\sum (X - \bar{X})^2}{n}} = 1.81$$

$$s_y = \sqrt{\frac{\sum (Y - \bar{Y})^2}{n}} = 1.50$$

YEAR	Total Assets	Total Equity	Ratio	Mean	S.D	C.V
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Calculation of slope, intercept and regression equation

$$b = \frac{\sum XY - \frac{\sum X \sum Y}{n}}{\sum X^2 - \frac{(\sum X)^2}{n}} = 0.01$$

Now the equation of line of regression of y on x is

$$a = \frac{\sum Y - b \sum X}{n} = 48.50$$

$$Y_c = 48.50 - 0.01x$$

Regression analysis of EM and ROE of HBL Bank is calculated similarly

2003/04	24762025	1324166	18.70	15.98	3.26	17
2004/05	27844694	1541747	17.88			
2005/06	29460389	1766176	16.68			
2006/07	33519142	2146499	15.62			
2007/08	36175532	2512992	14.39			
2008/09	39320323	3119881	12.61			

$$\text{Equity Multiplier} = \frac{\text{Total Assets}}{\text{Shareholder's Equity}}$$

Equity Multiplier of the NABIL bank has been calculated by using the same method.

Appendix: 6

Calculation of Equity Multiplier of HBL

Appendix: 7

Calculation of Return on Equity Ratio of HBL

YEAR	Net Profit	Total Equity	Ratio	mean	S.D	C.V
2003/04	263054	1324166	19.87	23.01	3.26	14.65
2004/05	308275	1541747	20.00			
2005/06	457458	1766176	25.90			
2006/07	491824	2146499	22.91			
2007/08	635869	2512992	25.30			
2008/09	752835	3119881	24.13			

$$\text{Return on Equity} = \frac{\text{NIAT}}{\text{Shareholder's Equity}}$$

Return on Equity of the NABIL bank has been calculated by using the same method.

Appendix: 8

YEAR	Net Income After Tax	Total Assets	Ratio	Mean	S.D	C.V	Calculation of Return on Assets of HBL
2003/04	263054	24762025	1.06	1.50	0.25	20.58	
2004/05	308275	27844694	1.12				
2005/06	457458	29460389	1.55				
2006/07	491824	33519142	1.47				
2007/08	635869	36175532	1.76				

2008/09	752835	39320323	2.01			
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YEAR	Interest Income	Total Assets	Ratio	Mean	S.D	C.V
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$$\text{Return on Asset} = \frac{\text{NIAT}}{\text{Total Assets}}$$

Return on Assets of the NABIL bank has been calculated by using the same technique

Appendix: 9
Calculation of Interest Income to Total Assets Ratio of HBL

2003/04	1245895	24762025	5.03	5.40	0.21	0.039
2004/05	1446469	27844694	5.19			
2005/06	1626474	29460389	5.52			
2006/07	1775583	33519142	5.30			
2007/08	1963647	36175532	5.42			
2008/09	2342198	39320322	5.96			

Interest Income

$$\text{Interest Income to TA} = \frac{\text{Interest Income}}{\text{Total Assets}}$$

Interest Income to Total Assets ratio of the NABIL bank has been calculated by using the same method.

Appendix: 10

Calculation of Interest Expenses to Total Assets Ratio of HBL

Interest Expense

$$\text{Interest Expense to TA} = \frac{\text{Interest Expense}}{\text{Total Assets}}$$

YEAR	Interest Expenses	Total Assets	Ratio	Mean	S.D	C.V
2003/04	491543	24762025	1.99	2.19	0.29	0.127
2004/05	561964	27844694	2.02			
2005/06	648842	29460389	2.20			
2006/07	767412	33519142	2.29			
2007/08	823745	36175532	2.27			
2008/09	934778	39320322	2.38			

Total Assets

Interest Expenses to Total Assets Ratio of the NABIL bank has been calculated by using the same method.

Appendix: 11

Calculation of Interest Margin to Total Assets Ratio of HBL

YEAR	Interest Spread	Total Assets	Ratio	Mean	S.D	C.V
2003/04	754352	24762025	3.05	3.22	0.23	0.076
2004/05	884504	27844694	3.23			
2005/06	977632	29460389	3.32			
2006/07	1008172	33519142	3.01			
2007/08	1139902	36175532	3.15			
2008/09	1407420	39320322	3.58			

Net Interest Margin

$$\text{Interest Margin to TA} = \frac{\text{Net Interest Margin}}{\text{Total Assets}}$$

Interest Margin to Total Assets Ratio of the NABIL bank has been calculated by using the same method.

Appendix: 12

Calculation of Non-Interest income to Total Assets Ratio of HBL

YEAR	Non Interest Income	Total Assets	Ratio	Mean	S.D	C.V
2003/04	270425	24762025	1.09	1.26	0.13	0.111
2004/05	311417	27844694	1.14			
2005/06	415902	29460389	1.41			
2006/07	385192	33519142	1.15			
2007/08	457593	36175532	1.26			
2008/09	5806278	39320322	1.48			

n-interest Income

$$\text{Non-Interest Expense by TA} = \frac{\text{n-interest Income}}{\text{Total Assets}}$$

Non-Interest income to Total Assets Ratio of the NABIL bank has been calculated by using the same method.

Appendix: 13

Calculation of Provision for Loan Loss to Total Assets	YEAR	Provision for Loan Loss	Total Assets	Ratio	Mean	S.D	C.V
	2003/04	197214	24762025	0.80	0.24	0.29	0.510
	2004/05	55709	27844694	0.20			
	2005/06	145154	29460389	0.49			
	2006/07	90689	33519142	0.27			
	2007/08	58432	36175532	-0.36			
	2008/09	68806	39320322	0.05			

Ratio of HBL

$$\text{Provision for Loan Loss to TA} = \frac{\text{Provision for Loan Loss}}{\text{Total Assets}}$$

Provision for Loan Loss to Total Assets Ratio of the NABIL bank has been calculated by using the same method

Appendix: 14
Calculation of Provision for Staff Bonus to Total Assets Ratio of HBL

Provision for Staff Bonus

$$\text{Provision for Staff Bonus to TA} = \frac{\text{-----}}{\text{Total Assets}}$$

Provision for Staff Bonus Loss to Total Assets Ratio of the NABIL bank has been calculated by using the same method.

YEAR	Provision for Staff Bonus	Total Assets	Ratio	Mean	S.D	C.V
2003/04	46730	24762025	0.19	0.23	0.02	0.106
2004/05	58060	27844694	0.21			
2005/06	67240	29460389	0.23			
2006/07	71741	33519142	0.21			
2007/08	94884	36175532	0.26			
2008/09	106661	39320322	0.27			