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# Financial Analysis of Public and Private Sector Banks of India: A Comparative Study of Punjab National Bank and HDFC Bank

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## Abstract

Banking sector occupies an important role in the economic development of a nation. It is one of the fastest growing sectors in India as it is featured by a large network of bank branches, serving many kinds of financial services to its customer. Bank plays an important role to mobilize savings of general public, remittance of money and other general banking services. The performance of a bank may be evaluated for several reasons depending upon various objectives. Profit is the main motive for the continued existence of every commercial organization and profitability depicts the relationship between the absolute amounts of profit with various other factors. As compared to other business concerns, banks in general have to pay much more attention for balancing profitability and liquidity. Liquidity is required to meet the prompt demands of customers whereas profitability is required to meet the expenses of banks. Hence, the present research is an effort to measure and compare the financial performance of Punjab National Bank and HDFC Bank as both the banks are big giants in public and private sector respectively. The study focused on the growth and performance analysis of both the banks for a period of ten years, i.e. from 2006-07 to 2015-16. Quantitative analysis has been undertaken by looking at various financial ratios like management efficiency, liquidity and profitability which are the reliable indicators of a bank performance. It is found that PNB is more financially sound than HDFC Bank but in context of deposits and expenditure HDFC bank has better managing efficiency than PNB.

**Keywords:** Banking, Financial Analysis, Performance Measurement, Financial Ratios



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## Introduction

'It is not by augmenting the capital of the country, but by rendering a greater part of that capital active and productive than would otherwise be so, that the most judicious operations of banking can increase the industry of the country'. These words of Adam Smith, a renowned economist emphasis the role of banking sector in the economic development of a nation. A well developed banking system is a prerequisite condition for economic development of a modern economy. The main function of commercial banks is to accept deposit from general public in form of various deposits and then along with its own funds it advances loans to its customers. The difference in the borrowing and lending interest rate help banks in carrying out their activities (Singh et al, 2012). As the banking sector is considered an important segment of a modern economy, its efficiency is of vital importance. In order to ensure healthy financial system and an efficient economy, the performance of banks must be carefully evaluated and analyzed. The performance of a commercial bank may be evaluated for several reasons depending on personal objectives. An entity like a bank regulator helps in identifying those banks which are expressing chronic financial problems and fix these problems before the situation get out of control. Shareholders, on the other hand need to assess the banks that are deem suitable to financially invest in. Commercial banks evaluate their performance for determining their efficacy and also long term viability of management decisions or goals for taking appropriate and necessary course of action. Without a constant and routine monitoring of performance, the underlying problems may remain invisible and thus lead to financial failures down in the line. The overall objectives of the present research is to measure and compare the performance of two leading commercial banks using five groups of financial ratios that will indicate the performance developments over the period 2006-07 to 2015-16. Moreover, the study will also make a comparative assessment of the performance between two banks, one public sector i.e. Punjab National Bank with other private sector i.e. HDFC Bank.

The present study is divided into five parts. The first part provides the introductory background of the study; review of literature has been done in the second part of the study. Third section provides the detailed methodology of the research and fourth section is concerned with data analysis and interpretation. The fifth part covers the main findings, conclusion and suggestions for further research.

## Financial Performance Evaluation: A Brief Review

The words of Nassim Nicholas Taleb, 'Banking is a very treacherous business because you don't realize it is risky until it is too late. It is like calm waters that deliver huge storms'; emphasis the importance of financial analysis of banks. Financial performance evaluation is a process of synthesis and summarization of financial and operative data to get an insight into the operative activities of a business concern. It consists of comparisons for the same entity over periods of time or comparisons of different entities either of same sector or different sectors. It may be done for a variety of purposes, which may range from a simple analysis of the short term liquidity position to a comprehensive assessment of the strengths and weaknesses in various areas. It is helpful in assessing corporate excellence, operating efficiency, judging credit worthiness, forecasting bond ratings, predicting bankruptcy and market risk. There are numbers of tools and techniques available for the performance evaluation of a bank like Data Envelopment Analysis, CAMEL model and ratio analysis, etc. Financial analysis of a bank is mainly done with the help of



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different ratios which enables the management of banks to identify the causes or reasons for the changes in their advances, income, deposits, expenditure and profitability over the period of time and thus help in pinpointing the necessary direction of action required for increased deposits, income, advances and reducing the expenditure and for altering the profitability prospects of the banks in future.

## Punjab National Bank

Punjab National Bank was established on April 12, 1895 at Lahore with an authorized capital of Rs. 2 lakh and working capital of Rs 20,000. Punjab National Bank is an Indian multinational banking and financial services company and it is a state-owned corporation based in New Delhi, India. The bank has over 6,968 branches and over 9,656 ATMs across 764 cities and serves over 80 million customers. PNB has also a representative office in London, Kabul, Shanghai and Dubai. PNB also came into an alliance with Everest Bank Limited in Nepal that permits migrants to transfer funds easily between India and Everest Bank's 12 branches in Nepal. Currently, PNB owns 20 per cent shares of Everest Bank. PNB came up with PNBIL i.e. Punjab National Bank (International) in the UK, having two offices; one in London other in Southall. PNB established a representative office in Oslo, Norway and hopes to upgrade this to a branch in due course. In January 2010, PNB established a subsidiary in Bhutan. It owns 51 per cent of Druk PNB Bank, which has branches in Thimpu, Phuentsholing and Wangdue and rest 49 per cent shares are owned by local investors (*official website of Punjab National Bank*, www.pnbindia.in).

**Table 1: Financial Highlights of Punjab National Bank**

*(Rs. in crore)*

| Year | Total Business | Deposits | Advances | Total Assets | Total Employee (No.'s) | Capital | Net Profit |
|---|---|---|---|---|---|---|---|
| 2006-07 | 236456 | 139860 | 96597 | 162422 | 57316 | 10435 | 1540 |
| 2007-08 | 285959 | 166457 | 119502 | 199020 | 56025 | 12318 | 2049 |
| 2008-09 | 364464 | 209761 | 154703 | 246919 | 58205 | 14653 | 3091 |
| 2009-10 | 435931 | 249330 | 186601 | 296633 | 56928 | 17723 | 3905 |
| 2010-11 | 555005 | 312899 | 242107 | 378325 | 57020 | 21509 | 4433 |
| 2011-12 | 673363 | 379588 | 293775 | 458194 | 62127 | 27817 | 5730 |
| 2012-13 | 700356 | 391560 | 308796 | 478948 | 63292 | 32676 | 4884 |
| 2013-14 | 800666 | 451397 | 349269 | 550420 | 65541 | 35895 | 4748 |
| 2014-15 | 881913 | 501379 | 380534 | 603334 | 68290 | 39080 | 3343 |
| 2015-16 | 965377 | 553051 | 412326 | 667390 | 70801 | 38310 | 3062 |

*Source: Annual Reports of Punjab National Bank from 2006-07 to 2015-16.*

## HDFC Bank

The Housing Development Finance Corporation (HDFC) Limited was amongst the first to receive an 'in principle' approval from the Reserve Bank of India (RBI) to set up a bank in the private sector, as part of the RBI's liberalization of the Indian Banking Industry in 1994. The bank was incorporated in August



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1994, with its registered head office in Mumbai, India. HDFC Bank commenced operations as a Scheduled Commercial Bank in January 1995 with a simple mission: to be a world class Indian bank. HDFC has developed significant expertise in retail mortgage loans to different market segments and also has a large corporate client base for its housing related credit facilities. With its experience in the financial markets, a strong market reputation, large shareholder base and unique consumer franchise, HDFC was ideally positioned to promote a bank in the Indian environment. The bank is committed to maintain the highest level of ethical standards, professional integrity, corporate governance and regulatory compliance. HDFC Bank's business philosophy is based on four core values operational excellence, customer focus, product leadership and people.

The Bank at present has an enviable network of 2,544 branches spread in 1,399 cities across India. All branches are linked through an online real-time basis. Customers across 500 locations are also serviced through Telephone Banking. The Bank's expansion plans are to have a presence in all major industrial and commercial centers where its corporate customers are located as well as to build a strong retail customer base for both deposits and loan products. Being a clearing/settlement bank to various leading stock exchanges, the Bank has branches in the centers where the NSE/BSE has a strong and active member base. The Bank also has 8,913 networked ATMs across different cities (*official website of HDFC Bank*).

**Table 2 : 8 Financial Highlights of HDFC Bank**

*(Rs. in crore)*

| Year | Total Business | Total Deposits | Total Advances | Total Assets | Total Employee | Net Profit | Capital |
|---|---|---|---|---|---|---|---|
| 2006-07 | 81642 | 68298 | 46944 | 91235 | 21477 | 1141 | 6433 |
| 2007-08 | 123981 | 100769 | 63426 | 133176 | 37836 | 1590 | 11497 |
| 2008-09 | 196228 | 142811 | 98883 | 183270 | 52687 | 2245 | 15045 |
| 2009-10 | 199805 | 167404 | 125830 | 222458 | 51888 | 2949 | 21519 |
| 2010-11 | 242633 | 208586 | 159982 | 277352 | 55752 | 3926 | 25376 |
| 2011-12 | 442126 | 246706 | 195420 | 337909 | 66076 | 5167 | 29924 |
| 2012-13 | 535968 | 296247 | 239721 | 400332 | 69065 | 6726 | 36214 |
| 2013-14 | 670337 | 367337 | 303000 | 491599 | 68165 | 8478 | 43479 |
| 2014-15 | 816291 | 450796 | 365495 | 590503 | 76286 | 10216 | 62009 |
| 2015-16 | 1011018 | 546424 | 464594 | 708845 | 87555 | 12296 | 72678 |

*Source: Annual Reports of HDFC Bank from 2006-07 to 2015-16*

## Review of Literature



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Alamelu (2008) studied profitability of public sector banks of India. He discussed various problems related to declining profit margins in the Indian Public Sector Banks as compared to their private sector counterparts. It was observed that in spite of similar social obligations; almost all the private sector banks have been registering both high profits and high growth rate with respect to deposits, advances and reserves as compared to the public sector banks. Razor (2009), in his paper Profitability is measured under the deregulated environment with some financial parameters of the major four bank groups i.e. public sector banks, old private sector banks, new private sector banks and foreign banks found that profitability has declined in the deregulated environment. He emphasized to make the banking sector competitive in the deregulated environment. They should prefer non-interest income sources. Dupit, P. (2012), in his paper, made an attempt to compare the three categories of banks public, private and foreign using physical quantities of inputs and outputs, and comparing the revenue maximization efficiency of banks during 1992-2000. The findings revealed that PSBs performed significantly better than private sector banks but not differently from foreign banks. Singh and Tandon (2012), affirmed that banking Sector plays an important role in economic development of a country. Indian banking system is featured by a large network of bank branches, serving many kinds of financial services of the people. The State Bank of India, popularly known as SBI is the leading bank of public sector in India whereas ICICI Bank is second largest and leading bank of private sector in India. He compares the financial performance of SBI and ICICI Bank on the basis of ratios such as credit deposit, net profit margin etc. The period of study taken is from the year 2007-08 to 2011-12. The study found that SBI is performing well and financially sound than ICICI Bank but in context of deposits and expenditure ICICI bank has better managing efficiency than SBI. Bhatia et al (2015), stated that the banks are backbone of any economy. He further stated that public sector banks are facing stiff challenges from the private sector banks and are under tremendous pressure to cope up with the facilities provided by the multinational banks. The study was aimed at comparing public sector and private sector on the criteria of public perception, basic amenities customer centric services and there bench strength. For the purpose of the study Indore district has been selected and 50 public and private sector banks has been taken as sample. The study concluded that people are more satisfied from the private sector banks due to their better services provided by them in terms of speedy transactions, fully computerized facilities, more working hours, good investment advisory services, efficient and co-operative staff, and better approach to customer relationship management.

## Research Gap

There are number of studies have been conducted on financial performance and its evaluation of banks in India, performance comparison between public and private sector banks and other financial institutions but analysis in the case of Punjab National Bank and HDFC Bank still remains unexplored on certain parameters. The researchers try to fill this lack of evidence by extending the issue to the specific context of the banks. Therefore, the main purpose of this study is to compare and evaluate the financial performance of Punjab National Bank and HDFC Bank by observing different variables, ratios and measures, the impact of deposits and advances on the profitability, business per employee and profitability per employee of PNB and HDFC Bank for last ten years performance results in order to improve their banking services.



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## Significance of the Study

The present study is concern to evaluate the financial performance of Punjab National Bank and HDFC Bank in order to compare and improve the operations, technology and service quality of both the banks. Since the study revolves around one of the popular issues of current business scenario, the following are the expected significances of the present research:

- The study provides an insight into the evaluation process of the banking sector comparatively.
- To initiate the concerned banking organization to reassess existing practices and put a renewed emphasis on undermined ones.
- To initiate interested researchers to carry out more extensive studies in this particular area of research.
- To recognize the importance of financial performance in general and the Indian banking sector in particular and,
- To draw attention towards the financial performance, accounting ratios and contribution for correct decision making in banking sector.

## Objectives of the Study

- To make a comparison between the financial performance of PNB and HDFC Bank.
- To analyze and compare the operational efficiency of PNB and HDFC Bank.
- To identify the impact of operating efficiency on profitability of both banks.

## Hypotheses of the Study

*$H_{01}$: There is no significant impact of efficiency ratios on Return on Equity of PNB.*

*$H_{02}$: There is no significant impact of efficiency ratios on Return on Assets of PNB.*

*$H_{03}$: There is no significant impact of efficiency ratios on Return on Equity of HDFC Bank.*

*$H_{04}$: There is no significant impact of efficiency ratios on Return on Assets of HDFC Bank.*

*$H_{05}$: There is no significant difference in business per employee of PNB and HDFC Bank.*

*$H_{06}$: There is no significant difference in profit per employee of PNB and HDFC Bank.*

## Research Methodology

In the present study, an attempt has been made to measure, evaluate and compare the financial performance of PNB and HDFC Bank.

**Nature of Study:** The study is an exploratory and analytical in nature and compares the financial performance of PNB and HDFC bank.



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**Nature of Data:** The secondary data has been considered for the purpose of financial performance analysis of Punjab National Bank.

**Source of Data:** The study is based on secondary data that has been collected from annual reports of the respective banks along with magazines, journals, documents and other published information as well as through internet.

**Tenure of the Study:** The present study covers ten years period ranging from 2006-07 to 2015-16.

**Variables used for analysis:** For applying regression technique following variables taken as independent and dependent variables:

*Independent Variables – Credit Deposit Ratio, Capital Deposit Ratio, Business per Employee, Profit per employee*
*Dependent Variables –Return on Equity, Return on Assets*
**Tools used for Analysis:** For the analysis of collected secondary data following tools were used to know financial performance of PNB and HDFC Bank.

- *Credit Deposit Ratio = Advances / Total Deposit*
- *Capital to Deposits Ratio = Capital / Deposit*
- *Business per employee = Total Business / no. of employees*
- *Profit per employee = net profit / no. of employees*
- *Return on equity = Net profit / total equity *100*
- *Return on asset = Net Profit / total asset * 100*

## Data Analysis and Interpretation

This section presents the comparative analysis of financial ratios of PNB and HDFC Bank from 2006-07 to 2015-16.

## Credit Deposit Ratio

It is the ratio of how much a bank lends out of the deposits it has mobilized. It indicates how much of a bank's core funds are being used for lending, the banking main activity. Credit Deposit Ratio is the proportion of loan assets created by a bank from the deposits received. The ratio gives the first indication of health of a bank. A higher ratio indicates more reliance on deposits for lending and vice versa. A very high ratio is considered alarming, indicating pressure on resources. Adequacy ratios force banks to raise more capital. In India, credit deposit ratio of over 70 per cent indicates pressure on resources.

**Table – 1 Credit Deposit Ratio of PNB and HDFC Bank**

*(in per cent)*

| Year | PNB | HDFC |
|---|---|---|



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| | | |
|---|---|---|
| 2006-07 | 69.07 | 68.73 |
| 2007-08 | 71.79 | 62.94 |
| 2008-09 | 73.75 | 69.24 |
| 2009-10 | 74.84 | 75.17 |
| 2010-11 | 77.38 | 76.70 |
| 2011-12 | 77.39 | 79.21 |
| 2012-13 | 78.86 | 80.92 |
| 2013-14 | 77.38 | 82.49 |
| 2014-15 | 75.90 | 81.08 |
| 2015-16 | 74.55 | 85.02 |

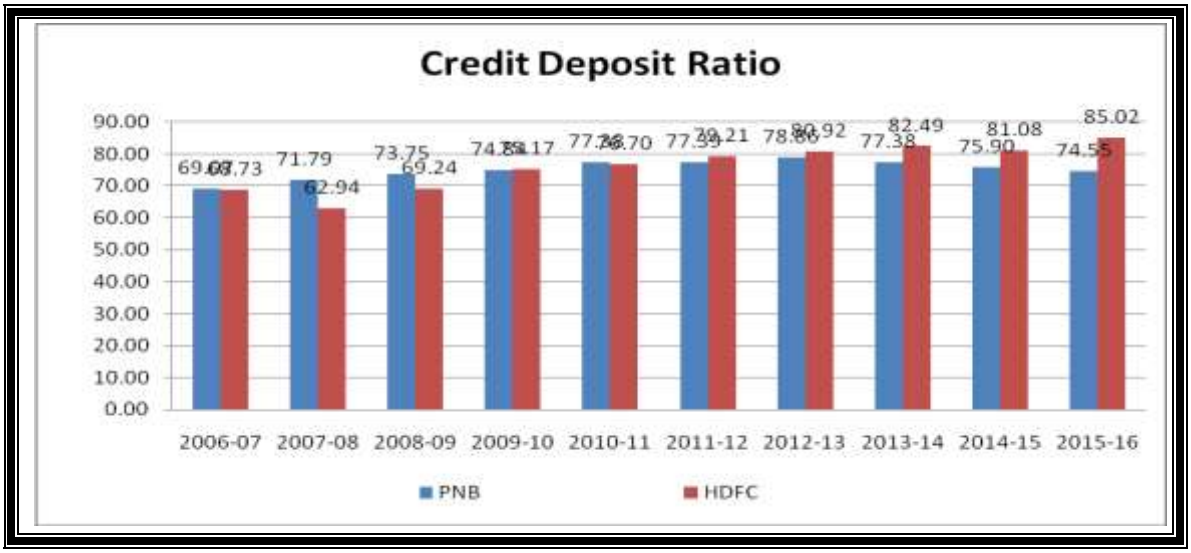
*Source: Annual Reports of PNB and HDFC Bank from 2006-07 to 2015-16*

Table 1 presents the credit deposit ratio of PNB and HDFC bank from 2006-07 to 2015-16. The credit deposit ratio of PNB was 69.07 per cent in 2006-07 which shows an increasing trend till 2012-13. Further, there was a slight decline in CDR of PNB which finally stood at 74.55 per cent in 2015-16. In case of HDFC bank, the credit deposit ratio was 68.73 per cent in 2006-07 which shows an increasing trend during the entire study period and finally reached to 85.02 per cent in 2015-16.



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**Figure - 1 Credit Deposit Ratio of PNB and HDFC Bank**




*Source: Drawn from table 1*

Graph 1 demonstrate credit deposit ratio of PNB and HDFC bank from 2006-07 to 2015-16. It is clearly evident from the graph that PNB maintains higher credit deposit ratio as compare to HDFC bank during the initial period of study whereas after 2011-12 HDFC Bank has high credit deposit ratio. To sum up credit deposit ratio of both the banks hence well, indicating they both full utilize their deposits to disburse advances.

## Capital Deposit Ratio

This is commonly used statistics for assessing bank liquidity.

**Table – 2 Capital Deposit Ratio of PNB and HDFC Bank**

*(in per cent)*

| Year | PNB | HDFC |
|---|---|---|
| 2006-07 | 7.46 | 9.42 |
| 2007-08 | 7.40 | 11.41 |
| 2008-09 | 6.99 | 10.53 |
| 2009-10 | 7.11 | 12.85 |
| 2010-11 | 6.87 | 12.17 |
| 2011-12 | 7.33 | 12.13 |
| 2012-13 | 8.35 | 12.22 |
| 2013-14 | 7.95 | 11.84 |
| 2014-15 | 7.79 | 13.76 |



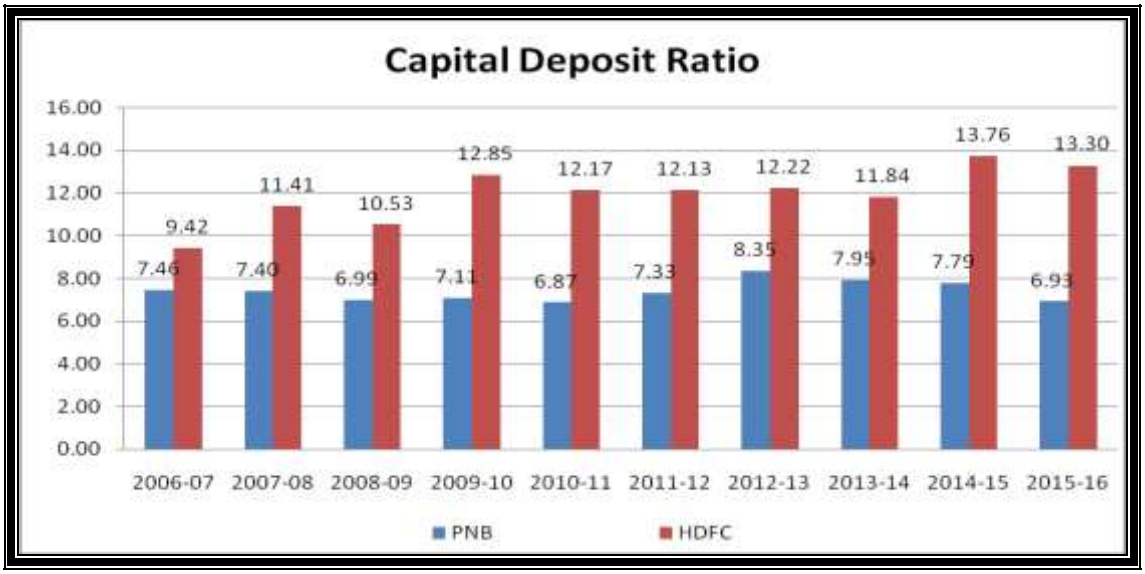
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| | | |
|---|---|---|
| 2015-16 | 6.93 | 13.30 |

*Source: Annual Reports of PNB and HDFC Bank from 2011-12 to 2015-16*

Table 2 enumerates capital deposit ratio of PNB and HDFC bank from 2006-07 to 2015-16. The capital deposit ratio of PNB was 7.46 per cent in 2006-07 which shows a normal fluctuation during the study period and finally stood at 6.93 per cent in 2015-16. In case of HDFC bank, it was 9.42 per cent in 2006-07 and shows an increasing trend till the year 2015-16 with a nominal percentage fluctuation in the year 2010-11 to 2013-14 during the study period.

**Figure - 2 Capital Deposit Ratio of PNB and HDFC Bank**




*Source: Drawn from table 2*

Graph 2 demonstrate capital deposit ratio of PNB and HDFC bank from 2006-07 to 2015-16. It is clearly evidence from the graph that HDFC Bank maintain higher rate of capital deposit ratio as compare to PNB during the entire study period indicating HDFC bank's liquidity condition is sounder than PNB.

## Business Per Employee

It is a ratio that is calculated as company's revenue divided by the current number of employees. Higher the ratio indicates higher productivity and effective use of the firm's resources.



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**Table – 3 Business per Employee of PNB and HDFC Bank**

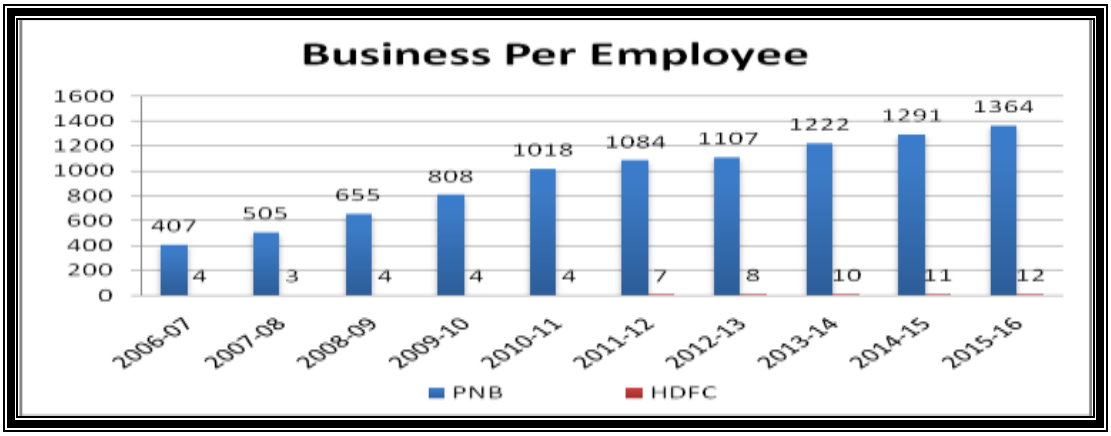
*(in per cent)*

| Year | PNB | HDFC |
|---|---|---|
| 2006-07 | 407 | 4 |
| 2007-08 | 505 | 3 |
| 2008-09 | 655 | 4 |
| 2009-10 | 808 | 4 |
| 2010-11 | 1018 | 4 |
| 2011-12 | 1084 | 7 |
| 2012-13 | 1107 | 8 |
| 2013-14 | 1222 | 10 |
| 2014-15 | 1291 | 11 |
| 2015-16 | 1364 | 12 |

*Source: Annual Reports of PNB and HDFC Bank from 2011-12 to 2015-16*

The above table shows business per employee of PNB and HDFC Bank from 2006-07 to 2015-16. The business of PNB was Rs. 407 per employee in 2006-07 which increased during the study period and finally it stood at Rs. 1364 in 2015-16. The business per employee of HDFC Bank was very much low as compare to PNB. It was only Rs. 4 in 2006-07 which increased during the study period and finally reached to Rs. 12 in 2015-16.

**Graph - 3 Business Per Employee of PNB and HDFC Bank**




*Source: Drawn from table 3*

Graph 3 demonstrates business per employee of PNB and HDFC bank from 2006-07 to 2015-16. From the figure, it is cleared that the business per employee of PNB is much higher than HDFC bank



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throughout the study period but the rate of growth of HDFC bank is much higher than PNB. BPE of PNB was Rs. 407 crore in 2006-07 whereas in HDFC bank it was only Rs. 4 crore as PNB has taken several initiatives to enhance the level of employees' motivation, commitment and productivity. The business of HDFC Bank per employee was not much as increased as compared to PNB which reached to Rs. 1364 crore at the end of the study.

## Profit per Employee

The profit per employee indicates the productivity of employees of banks. It shows the operating performance of banks. Higher the ratio indicates better operating performance of bank.

**Table – 4 Profit Per Employee of PNB and HDFC Bank**

*(in per cent)*

| Year | PNB | HDFC |
|---|---|---|
| 2006-07 | 2.68 | 0.05 |
| 2007-08 | 3.66 | 0.04 |
| 2008-09 | 5.64 | 0.04 |
| 2009-10 | 7.31 | 0.06 |
| 2010-11 | 8.34 | 0.07 |
| 2011-12 | 9.22 | 0.08 |
| 2012-13 | 7.72 | 0.10 |
| 2013-14 | 7.24 | 0.12 |
| 2014-15 | 4.90 | 0.13 |
| 2015-16 | 4.32 | 0.14 |

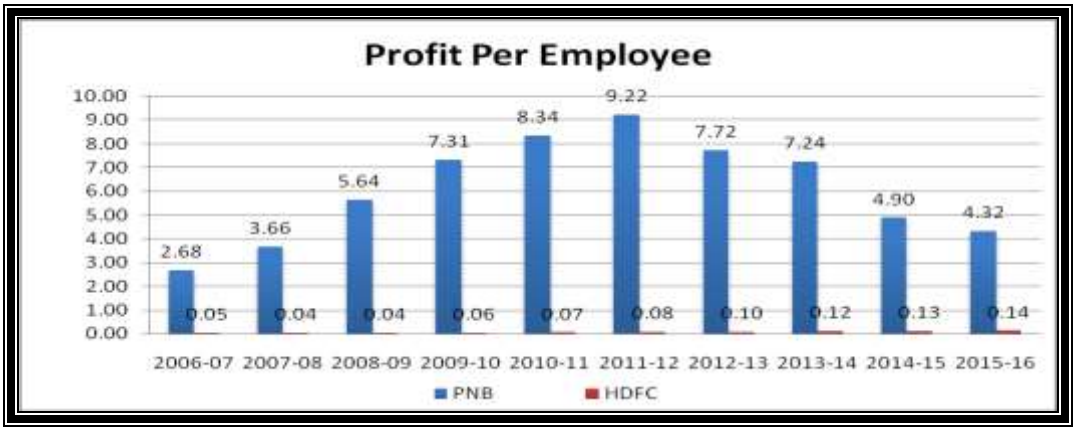
*Source: Annual Reports of PNB and HDFC Bank from 2011-12 to 2015-16*

Table 4 shows profit per employee of PNB and HDFC Bank from 2006-07 to 2015-16. The profit per employee of PNB was Rs. 2.68 in 2006-07 which stood at Rs. 9.22 in 2011-12 indicating a positive performance of PNB during the study period. Further, it registered a slowdown in profit per employee and reached to Rs. 4.32 in 2015-16. Whereas HDFC bank has shown a gradual increase in profit per employee as in 2006-07, it was only 0.04 but in year 2015-16 it increases to 0.14.



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**Graph - 4 Profit Per Employee of PNB and HDFC Bank**




*Source: Drawn from table 4*

Graph 4 demonstrate profit per employee of PNB and HDFC bank from 2006-07 to 2015-16. It is clearly evidence from the graph that PNB maintain higher profit per employee than HDFC bank during the entire study period due to PNB has high CASA ratio owing to extensive branch network.

## Return on Equity

Return on equity shows the share received by the holders of equity capital from banks earnings available after all interest and taxes. It is one of the important profitability metrics, fundamental step to gaining insight into the economic characteristics and attractiveness of a potential investment.

**Table – 5 Return on Equity of HDFC Bank**

*(in per cent)*

| Year | PNB | HDFC |
|---|---|---|
| 2006-07 | 15.19 | 17.74 |
| 2007-08 | 19.00 | 13.83 |
| 2008-09 | 23.52 | 14.92 |
| 2009-10 | 24.59 | 13.70 |
| 2010-11 | 22.13 | 15.47 |
| 2011-12 | 20.60 | 17.27 |
| 2012-13 | 14.95 | 18.57 |
| 2013-14 | 13.23 | 19.50 |
| 2014-15 | 8.55 | 16.48 |
| 2015-16 | 7.99 | 16.92 |

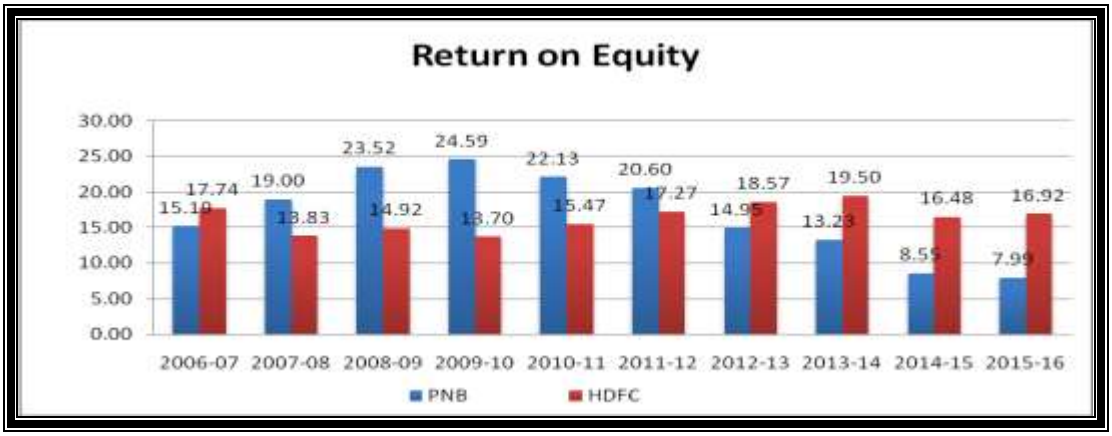
*Source: Annual Reports of PNB and HDFC Bank from 2011-12 to 2015-16*



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The above table shows the return on equity of PNB and HDFC Bank from 2006-07 to 2015-16. The return on equity of PNB was 15.19 per cent in 2006-07 which increased over the years till 2009-10 where it stood at 24.59 per cent than started decline and reached to 7.99 per cent in 2015-16. In case of HDFC Bank, the return on equity was 17.74 per cent in 2006-07 which shows a fluctuating trend during the entire study period and finally reached to only 16.92 per cent in 2015-16.

**Graph - 5 Return on Equity of PNB and HDFC Bank**




*Source: Drawn from table 5*

Graph 5 demonstrates return on equity of PNB and HDFC bank from 2006-07 to 2015-16. It is clearly evidence from the graph that PNB has higher return on equity in the initial years of the study period than HDFC bank but started decline in the later period whereas HDFC bank has shown the fluctuating trend, but has more ROE than PNB in the later period of the study.

## Return on Asset of PNB and HDFC Bank

Return on assets shows the relationship between earnings after tax and total assets of banks. Higher ROA means greater returns earned on assets deployed by the bank. This ratio measures the return on assets employed or efficiency in utilization of the assets.

**Table – 6 Return on Asset of PNB and HDFC Bank**

*(in per cent)*

| Year | PNB | HDFC |
|---|---|---|
| 2006-07 | 1.03 | 1.25 |
| 2007-08 | 1.15 | 1.19 |
| 2008-09 | 1.39 | 1.22 |
| 2009-10 | 1.44 | 1.33 |
| 2010-11 | 1.34 | 1.42 |
| 2011-12 | 1.25 | 1.53 |



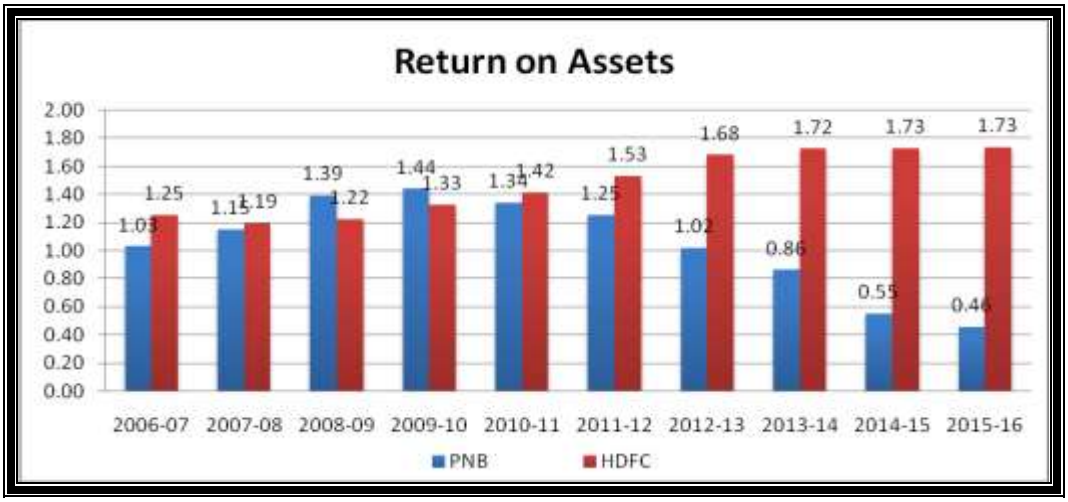
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| | | |
|---|---|---|
| 2012-13 | 1.02 | 1.68 |
| 2013-14 | 0.86 | 1.72 |
| 2014-15 | 0.55 | 1.73 |
| 2015-16 | 0.46 | 1.73 |

*Source: Annual Reports of PNB and HDFC Bank from 2011-12 to 2015-16*

Table 6 shows return on assets of PNB and HDFC Bank from 2006-07 to 2015-16. The return on assets was 1.03 per cent in 2006-07 which remains constant till 2011-12 and stood at 1.02 per cent. Further, it was declined and reached to only 0.46 per cent in 2015-16.

**Graph - 6 Return on Assets of PNB and HDFC Bank**




*Source: Drawn from table 6*

Graph 6 exhibits return on assets of PNB and HDFC bank from 2006-07 to 2015-16. The return on assets of PNB shows a fluctuating trend during the study period. It increases in the initial period than shows a slowdown in the later period due to increase in NPA. Whereas, HDFC bank has shown the increasing trend except the year 2007-08 during the study period.

Later, the ROA of HDFC maintains higher return as compare to PNB.

## Hypotheses Testing

The present study is primarily concerned with the comparative study of financial performance of two major banks representing public and private sector of India i.e. Punjab National Bank and HDFC Bank. The secondary data considered for the study consists of selected variables collected for the ten years period from 2006-07 to 2015-16. The analysis and interpretation is based on the following hypotheses:

*$H_{01}$: There is no significant impact of efficiency ratios on Return on Equity of PNB.*



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*$H_{02}$: There is no significant impact of efficiency ratios on Return on Assets of PNB.*

**Table – 7 Descriptive Statistics of PNB**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| CRDR | 75.09 | 2.98 | 10 |
| CPDR | 7.42 | 0.48 | 10 |
| ROE | 16.98 | 5.94 | 10 |
| ROA | 1.05 | 0.34 | 10 |

*Source: Annual Reports of PNB from 2011-12 to 2015-16*

The above table shows the statistical description of credit deposit ratio, capital deposit ratio, return on equity and return on assets of PNB from 2006-07 to 2015-16. The Return on equity and return on assets of PNB was 16.98 and 1.05 per cent respectively. The mean value of credit deposit ratio and capital deposit ratio was 75.09 per cent and 7.42 per cent during the study period. The standard deviation of CRDR and CPDR was 2.98 and 0.48 respectively while standard deviation of ROE and ROA was 5.94 and 0.34 for the study period.

**Table – 8 Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .441[a] | .195 | -.035 | 6.04441 |
| 1 | .328[a] | .108 | -.147 | .36361 |

*Source: Annual Reports of PNB from 2011-12 to 2015-16*

a. Predictors: (Constant), CPDR, CRDR

Table 8 shows the correlation (r) between the efficiency ratios and ROE and ROA of PNB. The coefficient of determination ($R^2$) is at 0.195 and 0.108 respectively which implies that 19.5 and 10.8 per cent of variance is explained by the relationship between these variables. Above table also examines the relationship between efficiency ratios and ROE and ROA that gives the coefficient of correlation at 0.441 and 0.328 which indicate a positive moderate degree of correlation.

**Table – 9 Coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 40.680 | 52.940 | | .768 | .467 |
| | CRDR | .249 | .716 | .125 | .348 | .738 |
| | CPDR | -5.718 | 4.402 | -.467 | -1.299 | .235 |
| 2 | (Constant) | 2.126 | 3.185 | | .667 | .526 |
| | CRDR | .010 | .043 | .084 | .223 | .830 |
| | CPDR | -.243 | .265 | -.346 | -.916 | .390 |

*Source: Annual Reports of PNB from 2011-12 to 2015-16*

*a. Dependent Variable: ROE, ROA.*



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Table 9 presents the regression analysis of efficiency ratios on profitability of Punjab National Bank from 2006-07 to 2015-16. In case of ROE, it is observed that the value of beta coefficient is .125 which signifies that for every unit change in ROE, there is a 0.125 unit's change in CRDR. On the other hand, the intercept is 0.249 which shows that if the value of ROE is zero then the value of CRDR would be affected by 0.249 units. It point towards that there is other factor that affects ROE of PNB. The significant value is 0.738 which is more than the critical value i.e. 0.05. It leads to the acceptance of the null hypothesis that there is a significant impact of CRDR on Return on Equity of PNB from 2006-07 to 2015-16. Hence the null hypothesis that there is no significant impact of credit deposit ratio on return on equity is accepted.

The value of beta coefficient of capital deposit ratio is .043 which signifies that for every unit change in CPDR, there is a 0.043 unit's change in ROE and the intercept is .010 which shows that if the value of CPDR is zero then the value of ROE would be affected by 0.010 units. It indicates that there is other factor that affects ROE of PNB. The significant value is .006 which is less than the critical value i.e. 0.05. Hence the null hypothesis that there is no significant impact of Proprietary Ratio on Return on Capital Employed is rejected.

*$H_{03}$: There is no significant impact of efficiency ratios on Return on Equity of HDFC Bank.*

*$H_{04}$: There is no significant impact of efficiency ratios on Return on Assets of HDFC Bank.*

**Table – 10 Descriptive Statistics of HDFC Bank**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| ROE | 16.4400 | 1.94600 | 10 |
| ROA | 1.4800 | 0.22504 | 10 |
| CRDR | 11.9630 | 1.28156 | 10 |
| CPDR | 76.1500 | 7.10137 | 10 |

*Source: Annual Reports of PNB from 2011-12 to 2015-16*

The above table shows the statistical description of credit deposit ratio, capital deposit ratio, return on equity and return on assets of HDFC Bank from 2006-07 to 2015-16. The Return on equity and return on assets of HDFC Bank was 16.44 per cent and 1.48 per cent with standard deviation of 1.94 and 0.23 respectively. The mean value of credit deposit ratio and capital deposit ratio of HDFC Bank was 11.96 per cent and 76.15 per cent.

**Table – 11 Model Summary of HDFC Bank**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .887[a] | .786 | .725 | 1.02066 |
| 1 | .942[a] | .887 | .854 | .08590 |

*Source: Annual Reports of PNB from 2011-12 to 2015-16*

a. Predictors: (Constant), CPDR, CRDR

a. Predictors: (Constant), CPDR, CRDR

Table 5.34 shows the correlation (r) between the efficiency ratios and ROE and ROA of HDFC Bank. The coefficient of determination ($R^2$) is at .786 and .887 respectively which implies that 78.6 and 88.7 per cent of variance is explained by the relationship between these variables. The table also examines the



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relationship between efficiency ratios and ROE and ROA that gives the coefficient of correlation at 0.887 and 0.942 which indicate a positive high degree of correlation between the two variables.

**Table – 12 Regression Analysis of HDFC Bank**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 7.351 | 3.768 | | 1.951 | .092 |
| | CRDR | -1.389 | .370 | -.915 | -3.758 | .007 |
| | CPDR | .338 | .067 | 1.232 | 5.060 | .001 |
| 2 | (Constant) | -.817 | .317 | | -2.576 | .037 |
| | CRDR | .011 | .031 | .065 | .369 | .723 |
| | CPDR | .028 | .006 | .895 | 5.052 | .001 |

*Source: Annual Reports of PNB from 2011-12 to 2015-16*

*a. Dependent Variable: ROE*

*a. Dependent Variable: ROA*

In case of ROE, it is observed that the value of beta coefficient is .915 which signifies that for every unit change in ROE, there is a 0.915 unit's change in CRDR. On the other hand, the intercept is .249 which shows that if the value of ROE is zero then the value of CRDR would be affected by 0.249 units. It point towards that there is other factor that affects ROE of PNB. The significant value is .738 which is more than the critical value i.e. 0.05. It leads to the acceptance of the null hypothesis that there is a significant impact of CRDR on Return on Equity of PNB from 2006-07 to 2015-16. Hence the null hypothesis that there is no significant impact of Credit Deposit Ratio on Return on Equity is rejected.

The value of beta coefficient of capital deposit ratio is .043 which signifies that for every unit change in CPDR, there is a 0.043 unit's change in ROE and the intercept is .010 which shows that if the value of CPDR is zero then the value of ROE would be affected by 0.010 units. It indicates that there is other factor that affects ROE of PNB. The significant value is .006 which is less than the critical value i.e. 0.05. Hence the null hypothesis that there is no significant impact of Proprietary Ratio on Return on Capital Employed is rejected.

***$H_{05}$: There is no significant difference in business per employee of PNB and HDFC Bank.***

**Table – 13 Statistical Description of Business per Employee of PNB and HDFC Bank**

| | N | Mean | Std. Deviation |
|---|---|---|---|
| PNB | 10 | 946.1000 | 334.79694 |
| HDFC | 10 | 6.7000 | 3.36815 |

*Source: Annual Reports of PNB from 2011-12 to 2015-16*

The above table presents statistical description of Business per employee of PNB and HDFC Bank from 2006-07 to 2015-16. The business per employee of PNB stood at 946 with standard deviation of 335 while the business per employee was only 6.7 in HDFC Bank with standard deviation of 3.37 during the study period.



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**Table – 14 ANOVA of Business per Employee of PNB and HDFC Bank**

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 4412361.800 | 1 | 4412361.800 | 78.722 | .000 |
| Within Groups | 1008903.000 | 18 | 56050.167 | | |
| Total | 5421264.800 | 19 | | | |

*Source: Annual Reports of PNB from 2011-12 to 2015-16*

As it has been clearly seen from table 11 that the P value of F test in ANOVA is 0.000 which is less than alpha 0.05 which shows statistically significant differences in the mean percentage of business per employee between PNB and HDFC Bank and therefore null hypothesis is rejected. It reveals that the business per employee by both the banks differs significantly. From the analysis it has been observed that PNB is more or less doing business per employee satisfactorily during the study period and a significant difference exist in business per employee between PNB and HDFC Bank.

*$H_{06}$: There is no significant difference in profit per employee of PNB and HDFC Bank.*

**Table – 15 Statistical Description of Profit per Employee of PNB and HDFC Bank**

| | N | Mean | Std. Deviation |
|---|---|---|---|
| PNB | 10 | 6.1030 | 2.17588 |
| HDFC | 10 | .0830 | .03743 |

*Source: Annual Reports of PNB from 2011-12 to 2015-16*

Table 12 shows the statistical description of profit per employee of PNB and HDFC Bank from 2006-07 to 2015-16. In case of PNB, profit per employee stood at Rs. 6.10 which is better than HDFC bank which earn only 0.08 as profit on per employee.

**Table – 16 ANOVA of PPE of PNB and HDFC Bank**

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 181.202 | 1 | 181.202 | 76.524 | .000 |
| Within Groups | 42.623 | 18 | 2.368 | | |
| Total | 223.825 | 19 | | | |

*Source: Annual Reports of PNB from 2011-12 to 2015-16*

As it has been clearly seen from table 11 that the P value of F test in ANOVA is 0.000 which is less than 0.05 which shows statistically significant differences in the mean percentage of profit per employee among PNB and HDFC Bank and thus null hypothesis is rejected. It reveals that the profit per employee by PNB and HDFC differs significantly and according. From the analysis it has been observed that PNB is comparatively better to earn profit per employee as compare to HDFC Bank during the study period and a significant difference exist in profit per employee among both the banks.

## Concluding Remarks

Bank works in dynamic environment which is affected by many uncontrollable factors. It is difficult to measure the financial performance of bank in the presence of these factors. There is an attempt made to



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evaluate and compare the financial performance of the PNB and HDFC Bank by using different parameters. From the analysis, it can be concluded that the PNB has performed well as compare to HDFC Bank on the sources of growth rate and financial efficiency. PNB plays a vital role in marketing of new type of deposits and advances schemes. However, the bank, by earning at least a nominal profit, have to serve the economy through extension of advances and safeguard the interest of its investors by providing the expected return on their investment in bank. Therefore, the bank has to re-orient its strategies in the light of own strengths and the kind of market in which it operates. Punjab National Bank is the second largest public sector bank whereas HDFC Bank is the private sector bank. The market expansion of PNB is more in comparison to HDFC Bank. PNB enter into the rural market and making more and more customers. PNB also comes up with the new services to attract new customers. Looking at the present scenario and conditions of public sector banks in India mounting NPA's, amalgamation, diminishing operating efficiency, PNB set an example for other public sector banks. But, HDFC has shown the positive sign of growth and increasing trends in various parameters, it can be gauged that in future HDFC will outperform the PNB in financial performance. By analysis of the financial performance of PNB and HDFC bank it can be concluded that the PNB is financially sound as compare to the HDFC bank. PNB is having more profitability because it enters into the industry as well as in new commercial markets. It is also regularly improving its service quality level. The HDFC bank is also a leader in the private market and it is an equal competitor of the PNB but PNB is performing better because of trustworthiness of people. The study also reveals that HDFC Bank has circulated more advances to the customers as compare to PNB which is a main reason behind the increase in bad debts of HDFC bank. The present study aimed to measure and compare the financial performance of Punjab National Bank and HDFC Bank from 2006-07 to 2015-16. Punjab National Bank is one of the major public sector banks of India which plays an important role in the development of Indian financial system.

he expected contributions of this study to the management in the field of banking is that the study may help decision makers to pay more attention on the major banking activities that will help in increasing the financial performance position and ranking of the public and private sector banks. The financial information of this study will also help the management in setting up plans and financial strategies. From an academic point of view, this research provides a new perspective in evaluating the financial performance of leading commercial banks as well as the finding of this study can be added to the present literature and it can help researchers in their future studies.

## Suggestions of the Study

From the analysis and interpretation, it may be suggested that both the banks should try to retain the talented workforce and improve customer services which contributes to the profitability goals of the banks to remain competitive in this kind of environment. The management of the banks should further try to control over their expenses and disbursement cost in order to increase the profits. The banks should focus on the risk management while expanding their business internationally. The banks should offer the products to the customers according to their needs and expectations. The banks should create a customer friendly environment to satisfy their customers and to retain them. They should have an ability to repeat and sustain such efforts in future, which are crucial in maintaining their profitability. It can be concluded that the present study will help the decision makers of Indian public and private Sector Banks and other



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categories of Banks in Indian Banking Sector to concentrate on banking activities and thereby to increase the bank ranking and profitability performance.

## Limitations of the Study

The study suffers from certain limitations and some of these are mentioned below so that finding of the study can be understood in a proper perspective. The limitations of the study are as follows:

- The present study is concerned with one public sector and one private sector bank which cannot be represent the entire banking sector and results of the study are limited to these two particular banks only. Hence, the results are not applicable to the entire banking sector.

- This study is limited to only ten year time period (2006-07 to 2015-16).

- The study is based only on secondary data which has been collected from published annual reports of banks and various relevant internet sources. The data obtained through reports is subject to window dressing and may not show the actual position of the banks.

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