A COMPARISON OF PUNJAB NATIONAL BANK AND HDFC: USING CAMEL MODEL

Dr.G.Santhoshi Kumari
Assistant Professor
Dadi Institute of engineering and technology
Email id: santhoshigondesi@gmail.com

Dr.P.B.Ram Kumar
Professor & HOD
Dadi Institute of Engineering and Technology
Email id: hodmba@diet.edu.in

Abstract- Due to globalization in the world market Indian banking system has transformed. In this article, an effort has been made to find out the relative performance of PNB and HDFC. The Indian banking system has been divided into public sector, private sector and foreign banks. For the objective of profitability analysis and for comparing capital adequacy we have selected samples one public and one private sector banks i.e. Punjab National Bank (PNB) and Housing Development Finance Corporation (HDFC) by applying CAMELS analysis technique. Both these banks are gain in private and public sector banks so a comparative study is made by the taking of five years (2009-2014). The main parameters of this study are capital adequacy ratios, asset quality ratios, management efficiency, earnings, and liquidity and sensitivity ratios. The study found that HDFC dominated in asset quality, management efficiency, earning quality and liquidity whereas PNB has dominated in capital adequacy and sensitivity ratios.

Key words: HDFC, capital Adequacy, Asset Quality, Managemet Efficiency,Earnings Quality, Liquidity, Sensitivity ratios, Punjab National Bank.
JEL classification numbers: G20, G21, G28, G29, C12

I. INTRODUCTION

The banking sector in India has witnessed a relentless restructuring since 1991. Performance evaluation of the banks has become pertinent within the light-weight of the growing complexities, economic downturn and political uncertainties. it's become more or less pertinent with the incidence of the financial crisis in U.S. (2008). More risk exposure volatility in the residential and worldwide market and so forth call for stringent regulation with viable supervision of the execution of the part. In this perspective, the national bank of India has chalked out numerous arrangements, contrived numerous instruments and systems and embraced various measures. CAMEL structure is a standout amongst the best measures to assess the execution of the banks.

II. LITERATURE SURVEY

Wirnkar and Tanko (2008) emphasized the importance of CAMEL model in examining the overall performance of bank. The study analsyed the importance of each component in CAMEL and interpreted the best ratios that bank regulators can adopt in assessing the efficiency of banks.

Misra and Aspal (2013) analyzed the performance of State Bank Group using CAMEL approach for the period 2009-2011. The study found that in terms of Capital Adequacy parameter State Bank of Bikaner and Jaipur (SBBJ) and State Bank of Patiala (SBP) were at the top position where as under the Liquidity parameter SBI stood on the top position and State Bank of Mysore (SBM) was on the lowest position

Pinyani et al. (2013) used CAMEL approach to compare Islamic, American and Canadian banking models for the period 2007-2010. The study found that Canadian banking system outperformed American and Islamic banking system in terms of asset quality, expenses, securities, liquidity and earnings whereas, Islamic banks have performed better than others in terms of capital adequacy and management ratios.

Deepti Tripathi and Kishore Meghani (2014) conducted a study to compare the financial performance of Axis and Kotak Mahindra bank (Private Sector banks). The CAMELS' analysis and t-test concludes that there is no significance difference between the Axis and Kotak Mahindra bank's financial performance but the Kotak Mahindra bank performance is slightly less compared with Axis Bank

III. OBJECTIVE OF THE STUDY

From the analysis of various authors on CAMEL model, it is clearly mentioned that the most famous method to know the strengths and weakness of a bank is CAMEL Model. As it a management tool the main parameters are Capital Adequacy, Asset Quality, Management Efficiency, Earnings and Liquidity in earlier. Recently it has came into existence with Sensitivity Ratios to measure the risk of a bank. The main objective of this study is to evaluate the performance of public and private sector banks .hence this paper is to make a performance evaluation so I have taken Punjab National Bank (PNB) and House Development Finance Corporation (HDFC) as these are giant banks in public and private sector in Business world report in a recent analysis.

IV. HYPOTHESIS

H0: $\mu PNB=\mu HDFC$, no significant difference between the performance of Punjab National Bank (PNB) and House Development Finance Corporation (HDFC).

V. METHODOLOGY:

The data is taken from financial reports of both the banks for last eight years ranging from 2009 to 2017. The data used for the study was entirely secondary in nature. This study is purely based on the descriptive and analytical. Almost we have used Thirty parameters for effective of research study.

VI. DISCUSSION AND ANALYSIS:

VII. CAPITAL ADEQUACY:

It represents the overall financial stability of a bank. This parameter is used to protect the depositors and to promote stability and efficiency of a bank. So RBI(Reserve Bank of India) has made it as a mandatory to maintain enough capital to absorb unexpected losses. It is required to maintain confidence of depositors and to protect the bank from bankruptcy. It also shows the ability of the management to meet the need for additional capital. In the present study following ratios have been used to measure capital adequacy.

Table 1: capital Adequacy ratio for the period 2009-2017.

	Bank	Mean	Std. Deviation	t value	p value
capital adequacy ratio	HDFC	16.6100	.54240	9.059	.000
	PNB	12.8440	.75494		
Deb-equity raio	HDFC	8.1200	.19183	-.807	.000
	PNB	13.6240	1.38424		
Proprietory ratio	HDFC	19.0540	1.41010	-2.58	.803
	PNB	19.8100	6.38636		
Interest coverage ratio	HDFC	1.5480	.07855	21.678	.000
	PNB	.4860	.07635		
Total advances to total assets ratio	HDFC	59.2460	2.35550	-5.464	.001
	PNB	74.6000	5.82579		
Government securities to total investment ratio	HDFC	79.2760	4.77065	-5.01	.630
	PNB	80.4480	2.15167		

Source: Based on data obtained from the annual reports of the respective banks

Table 1 shows that for CAR (%) mean of HDFC was higher than that of PNB. as per RBI norms indian banks should have a capital adequacy ratio of 9 percent. So both the banks are more than enough to tackle the risk.

The mean advances to total assets ratio and debt-equity ratio of PNB were higher than that of HDFC. The highest value of mean for PNB indicates its assertiveness in lending operations which created a much more profitability compared to HDFC. The mean of debt equity ratio of PNB is 13.62 and HDFC is 8.12 respectively. The mean for debt-equity ratio of PNB is higher than that of HDFC which indicates that PNB depends more on debt capital as compared to HDFC. Higher debt-equity ratio indicates less protection for creditors and depositors in the banking system. There is no much difference in case of proprietory ratio for PNB (19.81) and HDFC(19.05). Higher ratio indicates that a bank has a sufficient amount of equity to support functionality. Conversely a low ratio indicates that a bank is using too much of debt rather than equity to support operations.

Interest coverage ratio determines how easily a company can pay interest on outstanding debt. Ideal coverage ratio should be 1.5. a ratio under 1 means that the company is having problems not generating sufficient revenues to satisfy interest expenses so with this HDFC(1.54) is in a position to pay interest on outstanding debt but where as PNB (.48) If this position continues it may lead to bankruptcy.

Similarly, mean of PNB for government securities to total investment ratio is slightly higher compared to HDFC. A larger mean of value indicated that both these banks are in conservative. Both these banks are willing to have risk free securities to other investment avenues.

In order to test the significance of differences between PNB and HDFC for various capital adequacy ratios, independent samples t -test is used.

VIII. Asset Quality management:

The term asset quality and its management decides all the factors of growth and profitability of a firm. This is because, the deteriorating value of assets directly also affects other areas because the loan losses are generally written off against capital. Apart from this it also hampers profitability as the provision has to be made on Gross NPAs. So at the end of the day quality of assets jeopardizes the earning capacity of the bank. In the present study following ratios were used to judge the asset quality management system, they are Net NPA to Net Advances , gross NPA to net Advances, loan loss cover, total investment to total assets ratio.

Asset Quality	Bank	Mean	Std.dev	t value	p value
Net NPA to Net Advances	HDFC	.2320	.05891	-3.163	.013
	PNB	1.6200	.97939		
Gross NPA to Net Advances	HDFC	1.0480	.22720	-3.055	.016
	PNB	3.1900	1.55145		
Loan loss coverage ratio	HDFC	79.1580	4.06599	2.553	.034
	PNB	67.0020	9.83895		
Total investment to total assets ratio	HDFC	.2600	.01581	.492	.636
	PNB	.2560	.00894		

Table 2: Asset Quality for the period 2009-2017.

Source: Based on data obtained from the annual reports of the respective banks

Net NPA to Net advances are problematic for the banks since they depend on interest payments for income. Gross NPAs to Net Advances ratio is a measure of the quality of assets in a situation, where the management has not provided for loss on NPAs. From the above table it is clear that PNB has more non-performing assets than HDFC. The mean of net NPA to net advances and gross NPA to net advances PNB is higher than that of HDFC. . PNB bank is very efficient in getting back their NPA but where as HDFC is efficient when comparing with PNB The differences are significant enough to suggest that PNB has to change the advances strategy.

Loan loss coverage ratio is the measure that indicates the extent to which the bank has provided against the troubled part of its loan portfolio. The worst condition was found regarding provision coverage ratio as it remained far below the generally accepted standards as well as the consolidated average. HDFC bank loan loss coverage ratio was marginally higher than that of PNB i.e. HDFC is very stable in facing future losses more. The‘t’ and ‘p’ value are significantly large suggesting that HDFC is far better than PNB.

Total Investment to total assets ratio is a standard measure to know the percentage of total assets locked up in investments. Mean of HDFC is higher than that of PNB. Its indicative of better performance of HDFC'S investments. PNB has to be more conservative in investments and should diversify the investment portfolio. The difference in the't' and 'p' value is significantly large suggesting that HDFC fare better than PNB. The't' value and 'p' value suggests that there is a significant difference between PNB and HDFC in terms of asset quality. The asset quality of HDFC is inferior to PNB.

IX. MANAGEMENT EFFICIENCY:

Sound management is one of the most important factors behind Performance of any bank. Management efficiency of bank includes its administrative ability to react in diverse circumstances. The term management efficiency involves the capability of management in generating business and in maximizing profits. To analyze the possible dynamics of management efficiency affecting the financial performance of the banks, the following six ratios are calculated in the present study

Table 3: Management Efficiency for the period 2009-2017.

Management Efficiency	Bank	Mean	Std.Dev	t value	p value
Expenditure to income ratio	HDFC	.8340	.01140	-3.939	.004
	PNB	.8940	.03209		
Total advances to total deposits ratio	HDFC	80.5380	4.33370	.993	.350
	PNB	78.4880	1.58790		
Assets turnover ratio	HDFC	.1020	.00837	2.449	.040
	PNB	.0900	.00707		
Earning per employee	HDFC	7.5480	1.09113	.030	.977
	PNB	7.5260	1.22018		
Business per employee	HDFC	7.0740	1.16995	-3.900	.005
	PNB	10.8120	1.79554		

Source: Based on data obtained from the annual reports of the respective banks

Expenditure to income ratio measures the efficiency of operations. It demonstrates the amount of expenses incurred in generating income. A lower ratio means that bank is more efficient. Expenditure to income ratio of PNB (.89) & HDFC (.83) which indicates that HDFC is efficient in controlling the expenditure which also reflects that both cost containment and revenue growth improves shareholders value.

Total advances to total deposits ratio is a ratio of how much a bank lends out of the deposits it has mobilized. RBI does not stipulate a minimum or maximum level for this ratio, but a very low ratio indicates banks are not making full use of their resources. Alternatively, a high ratio indicates more reliance on deposits for lending and a likely pressure on resources. It helps in assessing banks liquidity and indicates its health. Here this case both the banks are in a high ratio could have implications at the systemic level when compared individually HDFC (80.53) is in a position to cover any unforeseen fund requirements.

Assets turnover ratio indicates the total revenue earned for every rupee of assets that bank owns.it measures the ability of a company to use its assets efficiently to generate sales. HDFC (.102) indicates that the bank is utilizing all its assets efficiently to generate sales when compared with PNB(.090)

Earning per employee ratio measures management's ability to use their employee resources effectively to create profits for the company. Higher the earning per employee is the higher the efficiency of management. From the above table it revealed that HDFC(7.54) is higher when compared with PNB(7.52)

Business per employee ratio indicates the efficiency of bank in terms of doing business with lesser number of employees. PNB(10.81) indicated that productivity of human force is more when compared with HDFC(7.07).PNB is very efficient in getting outcome with lesser number of employees even though its earning per employee ratio is less. The difference in the‘t’ value and ‘p’ value suggesting that there is a significant difference between HDFC and PNB interms of management efficiency.

X. EARNING RATIOS:

This parameter lays significance on how a bank gains its benefits. The nature of gaining is essential unequivocal variable that decides the capacity of a bank to win reliably. It fundamentally decides the gainfulness of the bank. It likewise clarifies the manageability and development in profit later on. . Following six ratios were calculated for evaluating the earning quality of banks.

Table 4: Earnings Quality for the period 2009-2017.

Earning Ratios	Bank	Mean	Std.dev	t value	p value
Return on assets	HDFC	1.5200	.17889	2550	.034
	PNB	1.1160	.30574		
Return on equity	HDFC	17.0800	2.36791	-8.53	.418
	PNB	19.7480	6.57714		
Spread ratio	HDFC	7.8700	1.14182	1.953	.087
	PNB	6.4620	1.13748		
Net interest margin	HDFC	4.0600	.11402	3.522	.008
	PNB	3.6660	.22267		
Operating profit to working fund ratio	HDFC	3.2280	.13535	6.299	.000
	PNB	2.4840	.22678		
Interest income to total income ratio	HDFC	.81800	.013038	-6.785	.000
	PNB	.88780	.018953		

Source: Based on data obtained from the annual reports of the respective banks

Return on Assets is a component of profitability which indicates banks efficiency in utilizing its assets to get net income. The mean of HDFCbank has higher utilization ratio of 1.52 compared to 1.11 of PNB. However, its net profit margin at 4.06 is higher than that of PNB at 3.66. This means that HDFC is more efficient at translating its net income into profits. Return on Equity Ratio is a key component for profitability ratio for investors which measure the profitability of shareholders investment. The higher the ROE the higher the better, So PNB (19.74) is better in utilizing the shareholders investment and also its more profitable. Spread ratio is shown as percentage of total assets. It is a key profitability ratio especially in banking unit which indicates banks core income. Spread can be simply defined as interest paid and interest earned. The average mean of spread ratio of HDFC (7.87) is higher than that of PNB(6.46) which HDFC is earning more interest .

Operating profit to working fund ratio measures how much a bank is earning from each rupee spent on its working funds. It is estimated by dividing the operating profit to working funds. The better utilization of funds will finally lead to higher operating profit. So, from the above table mean of HDFC (3.22) is higher than that of PNB (2.48) i.e, HDFC is utilizing its funds and it’s getting higher profit.

Interest income to total income ratio indicates the ability of the bank in generating income from its lending. From the above table mean of interest income to total income of PNB (.88) is higher when compared to HDFC (.81) which means that PNB is getting more interest income from their total income.
The‘t’ values and ‘p’ values shown in table confirms the fact that there is a significant difference between HDFC and PNB in the matter of earning quality.

XI. LIQUIDITY RATIOS:

Liquidity is the bank‟s capacity to meet its short term obligations as well as loan commitments. Liquidity is most important parameter especially in banking sector as banks are considered as liquidity creator in the market. Therefore, if the liquidity management of a bank is not proper, it can adversely affect the performance of the banks. Following liquidity ratios were taken for the study.

Table 5: liquidity for the period 2009-2017.

liquidity	Bank	Mean	Std.dev	t value	p value
Current ratio	HDFC	.0520	.02168	3.030	.016
	PNB	.0220	.00447		
Quick ratio	HDFC	7.3240	.90207	-19.157	.000
	PNB	22.7760	1.56177		
Liquid assets to total assets ratio	HDFC	8.981460	3.0786251	1.232	.253
	PNB	7.164000	1.1820448		
Liquid assets to total deposit ratio	HDFC	11.287820	5.0318495	1.070	.316
	PNB	8.786000	1.4128977		
Government securities to total assets ratio	HDFC	20.8460	1.83057	-2.94	.776
	PNB	21.1040	.69748		
Investment to deposits	HDFC	36.5700	1.75949	5.531	.001
	PNB	31.6320	.94325		

Source: Based on data obtained from the annual reports of the respective banks

Current ratio is an indication of banks ability to meet short-term obligations, the higher the ratio the more liquid, so here from the above table mean of HDFC(.052) is more when compared with PNB(.022) i.e. HDFC is in a position to meet its short-term obligations for the next year when compared to PNB.

The quick ratio of PNB is higher that means PNB is in a position to handle its short-term liabilitites well when compared to HDFC.

Liquid assets to total assets ratio also indicates the overall liquidity of the unit by indicating the proportion of liquid assets in total assets. From the above table it is clear that liquid assets to total deposit ratio of HDFC is higher than that of PNB. HDFC has better place than PNB incase of sudden excessive withdrawl of deposits by the investors. The low mean value for liquid assets to total deposit ratio for both the banks indicates that the banks low ability to meet the demand from depositors in a particular year. To offer higher liquidity for them, banks has to invest their funds in highly liquid form.

From the table we can also notice that government securities to total assets ratio is higher in case of PNB which indicated that the bank is conservative and relied more on government securities.

Short term investment to short term deposit ratio indicates the effectiveness of management of banks to convert their deposits into investments. The't' and 'p' values shown in the table reflects that there is a significant difference between HDFC and PNB in terms of liquidity.

XII. SENSITIVITY RATIOS:

The sensitivity of market risk is evaluated by banks through changes in interest rate, exchange rate and equity costs. The changes in these variables influences bank are earning ability. So sensitivity to market risk measures however adversely the bank is affected by such changes. Market risk is the outcome of trading and non-trading activities and exchange operation.

Table 6: sensitivity ratios for the period 2009-2017.

Sensitivity Ratios	Bank	Mean	Std.dev	t value	P value
price earnings ratio	HDFC	5.914805220	.8425941527	-5.99	.566
	PNB	6.639087080	2.5698510831		
total securities to total assets	HDFC	.792309620	1.0872896958	-2.67	.797
	PNB	.972000000	1.0444472222		

GAP Analysis	HDFC	25806.6180	9611.64358	6.004	.000
	PNB	.0000	.00000		

Source: Based on data obtained from the annual reports of the respective banks

The price earnings ratio provides a thought of what the market is willing to get the company's earning. The more the earnings the market is willing to get from the company's earnings. Reversely a low value indicates "vote of no confidence" by the market. In general high value earnings suggests investors predicts higher earnings growth within the future. In case of price earnings ratio from the above table PNB is getting high earnings from the market. PNB is marginally higher than that of HDFC.

Total securities to total assets ratio measures the risk-taking ability of a bank. the bank tendency to have more profits more ris, or less profits less risk. It also suggests a better investment opportunities. From the above table PNB (.97) is earning more profits when compared to HDFC (.79).

GAP analysis is used to make a judgment in banks earnings ability to interest rate movement is called a gap. A bank's gap over for a time period is the difference between the value of its assets that mature or reprise during the period and the value of its liabilities that mature or reprise during that period. Here mean value of HDFC is marginally higher than that of PNB which means that their interest charges have large effects on net interest income. While PNB value is less than 1 which indicates that bank is liability sensitive, and HDFC indicated that bank's assets reprise faster than liabilities. . The't' and 'p' value shown in the table reflects that there is no significant in terms on sensitivity ratios.

XIII. FINDINGS:

- Both the banks are efficient in maintaining the capital adequacy ratio of 9% so both banks are enough to tackle the risk.
- PNB is depending more on debt-equity it shows is less protection for creditors and depositors in the banking system.
- There is no much difference in case of proprietary ratio but PNB has higher ratio and it is capable of having sufficient amount of equity to support functionality.
- PNB is not in a position to pay outstanding debt if this position continues it may lead to bankruptcy.
- HDFC is efficient in utilizing the resources effectively nut where as PNB is efficient in doing business with lesser number of employees.
- Higher utilization of funds will lead to higher net interest margin so HDFC is very efficient in utilizing the funds
- As PNB is a public sector bank, it is conservative and relied more on government securities.
- HDFC is in a position to pay its short-term obligations when compared with PNB; PNB is unable to compete with it.
- In the GAP analysis the mean value of HDFC is marginally higher than that of PNB which means that their interest charges have large effects on net interest income. While PNB value is less than 1 which indicates that bank is liability sensitive, and HDFC indicated that bank's assets reprise faster than liabilities.

XIV. SUGGESTIONS:

- PNB is very inefficient in getting back their NPA when comparing with HDFC; PNB is suggesting changing the advances strategy.
- PNB has to be more conservative in investments and should diversify the investment portfolio.
- PNB has to be liability sensitive in order to improve their earning capability interms of interest income.

XV. CONCLUSION:

Housing Development Financing Corporation and Punjab national Bank were analyzed for their comparative performance using the CAMELS model. On the CAMELS Model HDFC dominated in asset quality, management efficiency, earning quality and liquidity whereas PNB has dominated in capital adequacy and sensitivity ratios which is bearing huge risk and making huge profits. There is only a minute difference while making a comparison so overall both the banks were performing well on par with each other. HDFC provides good services to their customers than the PNB that's is the reason HDFC bank is currently standing it's 1st rank among the all private banks.

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