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PROFITABILITY DETERMINANTS OF INDIAN BANKS – AN EMPIRICAL STUDY

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Abstract: *The development of any nation is the result of the financial soundness of different sectors such as banking, insurance, healthcare and hygiene. The Banking system and the Financial Institutions play very significant role in the economy. An efficient banking system must cater to the needs of high end investors by making available high amounts of capital for big projects in the industrial, infrastructure and service sectors and also supply credit to the medium and small ventures for new investment and expansion of the existing units. However, there are certain factors that govern the functioning of a bank and its operations like Stage of business cycle in the economy, Political stability, Competition due to domestic and foreign players, Regulations by the regulator, The Reserve Bank of India, Interest rate fluctuations, etc. This study focuses on few internal factors and the regulations of the RBI. The most important factor that is studied in this paper is Profit. Hence in this study, we have taken the base of a few ratios that help in determining how more profits can be generated for a bank. It thus gives the means by which a bank can generate profits and thus excel in comparison to its competitors.*

Key words: *Profitability Determinants, Profitability Parameters, Factors Affecting Profitability, Profitability Variables*

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INTRODCUTION

Banking system and the Financial Institutions play very significant role in the economy. First and foremost is in the form of catering to the need of credit for all the sections of society. An efficient banking system must cater to the needs of high end investors by making available high amounts of capital for big projects in the industrial, infrastructure and service sectors. At the same time, the medium and small ventures must also have credit available to them for new investment and expansion of the existing units. Rural sector in a country like India can grow only if cheaper credit is available to the farmers for their short and medium term needs. The banks and the financial institutions also cater to another important need of the society i.e. mopping up small savings at reasonable rates with several options. The common man has the option to park his savings under a few alternatives, including the small savings schemes introduced by the government from time to time and in bank deposits in the form of savings accounts, recurring deposits and time deposits. Another option is to invest in the stocks or mutual funds.

In addition to the above traditional role, the banks and the financial institutions also perform certain new-age functions which could not be thought of a couple of decades ago. The facility of internet banking enables a consumer to access and operate his bank account without actually visiting the bank premises. The facility of ATMs and the credit/debit cards has revolutionized the choices available with the customers. The banks also serve as alternative gateways for making payments on account of income tax and online payment of various bills like the telephone, electricity and tax. The bank customers can also invest their funds in various stocks or mutual funds straight from their bank accounts. In the modern day economy, where people have no time to make these payments by standing in queue, the service provided by the banks is commendable.

On the other hand, to survive and grow in the current era of cut-throat competition is the biggest challenge to any economy. The impacts of external environment play a major role in influencing the functioning of any economy. The progress of a nation is an outcome of the financial soundness of different sectors such as banking, insurance, healthcare and hygiene. Amongst these, banking is the most important sector that directly influences the financial health of the economy. About 35% of the total income of Indian citizens is reserved as savings. A bank is a financial intermediary that takes deposits from these savings of the citizens at a certain rate and makes it available to the productive sectors of the economy at a different rate. Thus, a bank is an intermediary that governs the flow and rate of flow of money in the economy. The efficiency of banks operations can be taken as a litmus test to understand the functioning of the economy.

However, there are certain factors that govern the functioning of a bank and its operations. The external factors affecting a bank could be: Stage of business cycle in the economy, Political stability, Competition due to domestic and foreign players, Regulations by the regulator, The Reserve Bank of India, Interest rate fluctuations, etc.

In this study, we are focusing on few internal factors and the regulations of the RBI. The most important factor that is studied in this paper is PROFIT. Profit is the oxygen that governs or less, all the activities of a bank. The two main functions of a bank, i.e. taking deposits and making advances, run around the prime motive to generate profits. Hence in this study, we have taken the base of a few ratios that help in determining the how more profits can be generated for a bank. It thus gives the means by which a bank can generate profits and thus excel in comparison to its competitors.

REVIEW OF LITERATURE

Pradeep K. Keshari and M. Thomas Paul (1994) revealed that foreign banks are 1% less efficient as compared to domestic banks but the technical efficiency was higher in foreign banks. And also high profit in foreign banks is due to its operational characteristics.

David B. Humphrey and Lawrence B in the year Feb, 1997 suggested that large banks are relied on changing output prices and input prices are used to mitigate or reverse the negative effects of deregulation on profits. Also, the interest rates of 1980 increased the costs and declined the profits of banks.

The authors Mark W. Nichols and Jill M. Hendrickson in the year sep 1997 revealed that higher asset to capital ratios, more permissible security and loan investment activity, higher deposit interest ceilings, branch banking rights, and lower required reserve ratios all contributed to the higher returns on equity in the Canadian banking system.

The study profitability & marketability of top 55 us companies performed by Lawrence M. Seiford and Joe Zhu in the year 1999 .The results suggested that larger banks perform better on profitability and smaller banks perform better in terms of marketability.

Andreas Soteriou and Stavros A. Zenios in the year 1999 indicated that that a superior insight can be obtained if simultaneous analysis of operation, service quality and profit is done than taking each as separately.

The author, T T Ram Mohan has studied suggested that the regulatory norms of Reserve Bank of India have played an important role in protecting the banking crisis in the country.

The author Saumitra Chaudhuri in the year 2002 showed that Public Sector Banks are facing triple jeopardy of losing market share, the profitability is being squeezed and balance sheets are not strong but the main problematic factor is the nature of their ownership and not clear goals and priorities.

The authors Tanvir Ahmed and Waseem Ahmad revealed that commercial banks can improve their performance by increasing their deposits and enhancing price of intermediate output they produce and also technical efficiency can be increased by decreasing payable bills.

The authors Ghulam Ali Bhatti and Haroon Hussain revealed that market concentration determines the profitability in banks.

NEED FOR STUDY

Profit is the oxygen that governs all the activities of a bank. The performance of a bank is determined by two aspects- profitability and liquidity. Unlike other industries, making profits is not the sole reason for banking. For this reason, many studies have been done in the area of profitability but still a lot remains to be explored in the aspect 'profitability' that governs liquidity. This study hence focuses on the analysis done with a view to understand profitability and its determinant Also the literature review consist of various research done on profitability, thus making it a base for our study.

For this study we have taken the following profit parameters and based on these variables the analysis will be done. The variables are as follows:

1. Total deposits to total liabilities
2. Cash to deposits
3. Total Debt to Equity
4. Employee cost to total expenses
5. % Growth in net profits
6. Capital Adequacy ratio

7. Yield on advances
8. Growth rate of Advances.
9. PAT/ Total income (dependent)

OBJECTIVES:

- To ascertain which factors affect the profitability of Indian Banks.
- To understand their behavior in profitability determinants of banks.
- To analyze the extent to which the factors impact the profitability of Banks.
- To develop better understanding about the profitability determinants in banks.

Table 1: Variables Considered During The Course Of The Study

SR. NO.	NAME OF THE RATIO.	FORMULA OF THE RATIO.
1.	Total deposits to total liabilities.	Total deposits/total liabilities.
2.	Cash to deposits	Cash/deposits.
3.	Employee cost to total expenses	Employee cost/total expenses.
4.	% growth in net profits	(Net profits in year X- net profits in year X-1)/ net profits in year X-1.
5.	Total debt to equity	Total debt/ shareholder's equity+ reserves & surplus.
6.	Capital adequacy ratio	(Tier one capital+ Tier two capital)/ risk weighted asset
7.	Yield on advances	Net profits/ total advances made.
8.	Growth rate of advances	(Advances in year X- advances in year X-1)/ advances in year X.
9.	PAT/ T. income	Profit after tax/ total income.(dependent variable)

HYPOTHESIS:

1. Ho: total deposit to total liabilities does not affect profitability.
2. Ho: Cash to deposits does not affect profitability.
3. Ho: Employee cost to total expenses does not affect profitability.
4. Ho: % growth in net profits does not affect profitability.
5. Ho: Capital adequacy ratio does not affect profitability.
6. Ho: Total debt to equity does not affect profitability.
7. Ho: Yield on advances does not affect profitability.
8. Ho: Growth rate of advances does not affect profitability.

RESEARCH TYPE

The type of research is analytical.

As we are studying the data which is already available and trying to learn the impact of several factors on one variable, it would be an analytical research and whatever result we get will be in absolute measurable terms and thus it is also a quantitative research.

RESEARCH DESIGN:

Type of sampling:

- For secondary data-The type of sampling is Judgmental Sampling.
- For primary data- The type of sampling is Non-Random Convenience Sampling wherein the questionnaire was filled by the employees that were easy to access. No other consideration other than personal convenience was taken while doing the survey.

Sampling size:

- For secondary data- A total of 38 Indian banks listed on NSE/BSE were taken for understanding the profitability determinants.
- For primary data- 100 Questionnaires filled by the Banks' employees.

METHODS OF DATA COLLECTION:

- For secondary data:

Internal source- Financial reports of Indian banks consisting of balance sheets and profit & loss accounts

External source- Financial journals relating to the recent research done in the field of banking, some journals and books were also used for the purpose of secondary data collection.

- For primary data- The survey has done using a well designed questionnaire that consisted of: 4 demographic variables, 9 questions related to various parameters of profitability and one open ended question that asked about an additional perspective of the employees of the bank towards profitability.

BOUNDARY OF RESEARCH:

This research/project focuses on the Indian listed banks (listed on BSE/NSE) of the Indian banking sector.

The data collected for secondary research is of the past 10 years in order to obtain a more clear observation about the impact on banking industry post liberalization.

TECHNIQUES OF THE RESEARCH:

- For secondary research: Multiple Regressions has been used as the main technique in scrutinizing the data collected for secondary research. The tests applied to the data are:
  - ANOVA test.
  - Multi-co linearity test.
  - Descriptive statistics.
- For primary data: For understanding the perception of banks' employees, primary survey is analyzed using LIKERT scale and thereafter using bar chart and pie charts.

DATA ANALYSIS

- **SECONDARY DATA ANALYSIS**

This section throws light on the analysis carried out using multiple regression and other tests on the nine variables in order to arrive at the determinants of profitability. The major test carried out consisted of:

1. As mentioned in the table below, the beta for ratio TOTAL DEPOSITS TO TOTAL LIABILITIES is 0.129 and the significance level is 0.032. This means that TDTL ratio impacts the profitability in a significant and positive manner. Hence the null hypothesis is rejected.
2. As mentioned in the table below, the beta for ratio CASH TO DEPOSITS is 0.049 and the significance level is 0.388. This means that CD ratio is irrelevant to the profitability Hence the null hypothesis is accepted.
3. As can be seen from the table below, the beta for ratio EMPLOYEE COST TO TOTAL EXPENSES is -0.136 and the significance level is 0.064. This means that ECTE ratio impact the profitability in a significant manner and positive manner. Hence the null hypothesis is rejected. Also the ECTE is inversely related to profitability, thus we need to reduce ECTE to increase profitability.
4. As mentioned in the table below, the beta for ratio GROWTH IN NET PROFITS is 0.034 and the significance level is 0.563. This means that GNP ratio does not impact

the profitability in a positive manner and is irrelevant to the profitability. Hence the null hypothesis is accepted.

5. As mentioned in the table below, the beta for ratio TOTAL DEBT TO EQUITY is 0.083 and the significance level is 0.229. This means that DTE ratio does not impact the profitability and is irrelevant to the profitability. Hence the null hypothesis is accepted.
6. As mentioned in the table below, the beta for ratio YIELD ON ADVANCES is 1.015 and the significance level is 0.000. This means that YOA ratio impacts the profitability in the most significant and positive manner. This ratio can be said to be the most powerful determinant of profitability. Hence the null hypothesis is rejected.
7. As mentioned in the table below, the beta for ratio GROWTH RATE OF ADVANCES is -0.004 and the significance level is 0.951. This means that GRA ratio does not impact the profitability in a significant manner. Hence the null hypothesis is accepted. As it has a negative beta it is inversely related to profitability.
8. The table indicates that the CAPITAL ADEQUACY RATIO has a negative beta and 0.797 significance level. This suggests that it is not an important determinant of profitability. The CAR ratio indicates the mandatory conditions to be followed by the banks to maintain liquidity. With the analysis, we can say that CAR ratio doesn't affect the profitability and hence the null hypothesis is accepted. Also the CAR is inversely related to profitability, thus we need to reduce CAR to increase profitability

(Table No: 3) MULTIPLE REGRESSIONS

VARIABLES	Directions	Standardized Coefficients	t	Significance
		Beta		
(Constant)			-.433	.668
TDTL	+	.129	2.254	.032
CD	+	.049	.876	.388
ECTE	-	-.136	-1.924	.064
GNP	+	.034	.585	.563
DTE	+	.083	1.228	.229
YOA	+	1.015	14.924	.000
GRA	-	-.004	-.062	.951
CAR	-	-.018	-.260	.797

- Independent variables= TDTL, CD, ECTE, GNP, DTE, YOA, GRA, CAR.
- Dependent variable= PAT to Total income.
- N= 38.
- Adjusted R square=0.922.

The table no Matrix of correlation coefficient suggests that values of coefficient are not more than ±0.7. This suggests that there is no concern of multi co-linearity amongst the independent variable.

(Table No: 4) MULTI CO-LINEARITY

		TDTL	CD	ECTE	GNP	DTE	YOA	GRA	CAR
Pearson Correlation	TDTL	1.000	-.356	.418	.088	.226	-.243	-.319	-.317
	CD	-.356	1.000	-.358	.075	-.097	-.046	-.037	-.052
	ECTE	.418	-.358	1.000	.382	.560	-.106	-.212	-.283
	GNP	.088	.075	.382	1.000	.073	.295	.169	-.056
	DTE	.226	-.097	.560	.073	1.000	-.411	-.389	-.565
	YOA	-.243	-.046	-.106	.295	-.411	1.000	.482	.623
	GRA	-.319	-.037	-.212	.169	-.389	.482	1.000	.375
	CAR	-.317	-.052	-.283	-.056	-.565	.623	.375	1.000

- The emerging multiple regression equation for the analysis is as under:

PATTI= 0.129(TDTL) +0.049(CD) - 0.136(ECTE) +0.034(GNP) +0.083(DTE) +1.015(YOA) -0.004(GRA) -0.018(CAR)

The analysis carried out using multiple regressions an adjusted r square of 0.922. This means that the given set of independent variables can explain 92.2% of the variations in PROFIT AFTER TAX TO TOTAL INCOME. The independent set of variables taken would suffice the results by suggesting that the impact on profits is due to these variables to an extent of 92.2%. For learning the remaining 7.80% variations some other variables may be responsible.

The descriptive statistics are shown in the table that consists of mean, standard deviation. The predictive values of the above stated regression equation will be higher in the situations where the data pattern resembles to the descriptive statistics as obtained by the variable of our study. The results of this study can thus be applied to the situations where the value of descriptive statistics is similar to the ones mentioned in the table.

(Table No: 5) DESCRIPTIVE STATISTICS

	PATTI	TDTL	CD	ECTE	GNP	DTE	YOA	GRA	CAR
Mean	.0938	.8428	.0768	.1419	-.0456	17.2709	.0164	.2492	11.9278
Std	.04396	.17327	.02428	.04439	2.12963	4.95215	.00864	.13427	1.92256

(Table No: 6) ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.067	8	.008	55.679	.000[a]
	Residual	.004	29	.000		
	Total	.071	37			

a. Independent variable: (Constant), CAR, CD, GNP, GRA, TDTL, DTE, YOA, ECTE

b. Dependent Variable: PATTI

From the above table of ANOVA we can interpret that F=55.679 and significance level is 0.000 which shows that all the regression coefficients are non zero.

- Thus from the above analysis done we can interpret from the ratios taken the most important or the relevant ratios are Total deposits to total liabilities , Employee cost to total expenses and Yield on Advances. While the other ratios like Capital adequacy ratio, Growth rate of advances, cash to deposits, total debt to equity, growth in net profits are irrelevant and has no impact on profits.

PRIMARY ANALYSIS

This chapter focuses on the study carried out by the primary survey done with the help of a questionnaire. This study has been done to know the perception of bank managers about profitability determinants and also to know that which parameters have major impact on profitability.

The below mentioned table shows us about the manager's opinion about different parameters:

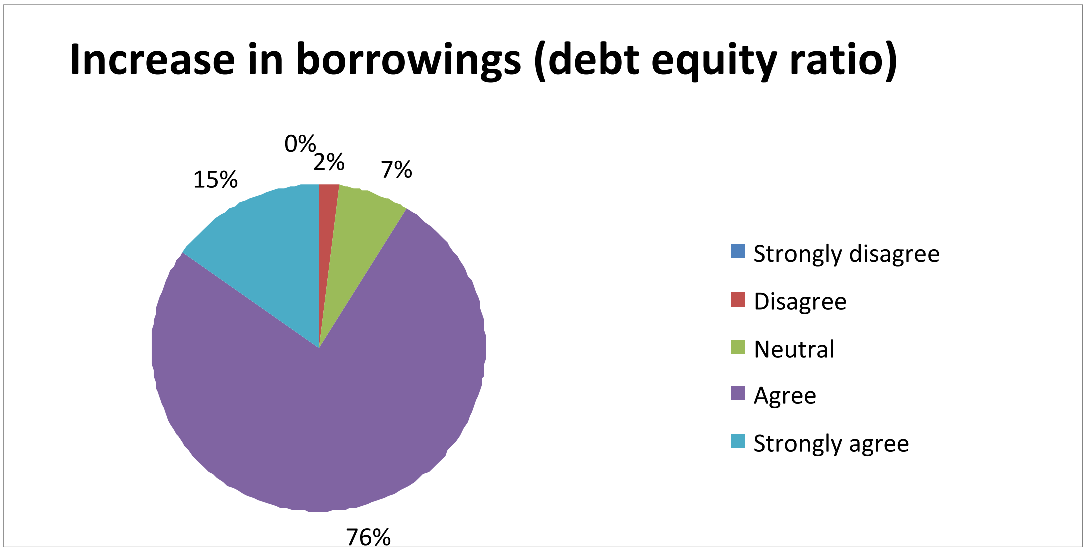
	PROFIT PARAMETERS	SCALE				
		Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	**Increase in borrowings (debt equity ratio)**	0	2	7	76	15
2	**Shareholder's Equity ratio**	2	43	27	23	5
3	**% Increase in deposits ratio**	0	4	7	62	27

4	**Capital adequacy ratio**	0	0	13	55	32
5	**Interest income**	1	2	6	66	25
6	**Return on Investment**	0	4	9	60	27
7	**Yield on Advances**	0	2	6	64	28
8	**Return on Asset**	0	6	15	62	17

The manager's perceptions are shown in form of PIE chart.

• The below Pie chart shows the Profit parameter **Increase in borrowings (Chart No: 2)** with respect to Debt equity ratio. As we can see that 76% of managers agree that increase in borrowing impacts the profitability. Also 15 % strongly agree that impacts the profitability. Thus overall 91% of bank managers have a perception that Increase in borrowing is an important determinant of profitability.

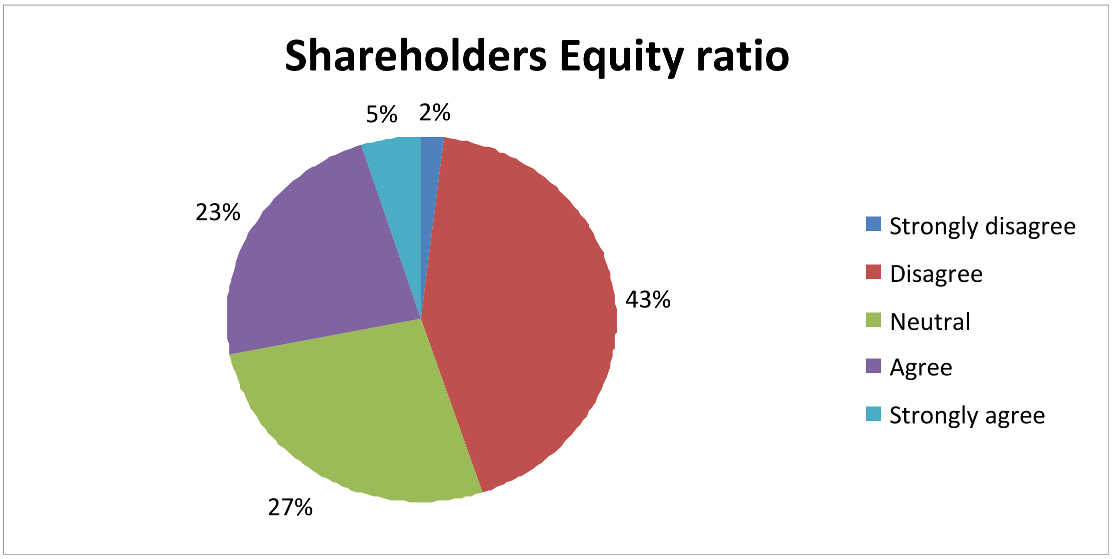
(Chart No: 2) Increase in borrowings



Thus the above analysis done shows what the managers perceive about the profitability and what according to them is an important profitability determinant. Thus the above analysis is done to know the perception of bank managers that actually work with these or some other ratio practically in banks.

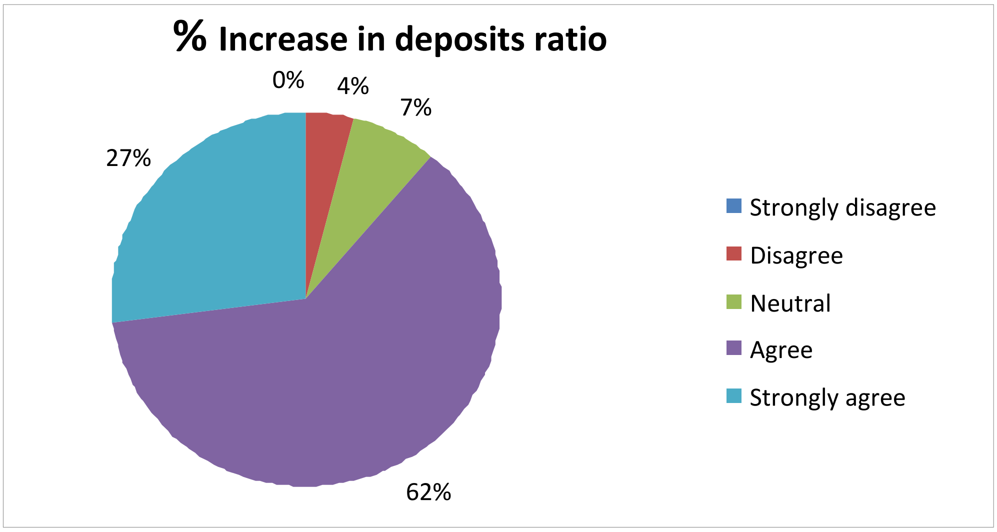
• The below Pie chart shows the Profit parameter **Shareholder's Equity (Chart No: 3)**. Here 43 % of bank managers disagree that this parameter does not effect or impact profitability and only 23 % agree that it impacts profitability. So according to the bank manager's perception Shareholder's equity does not impact profitability.

(Chart No: 3) Shareholders Equity ratio



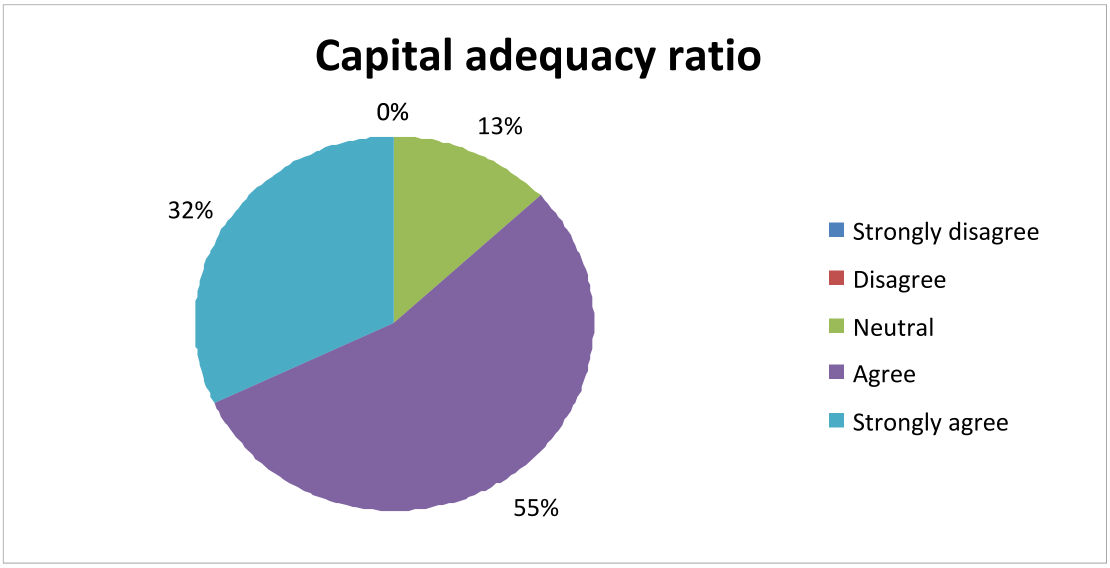
- The below Pie chart shows the Profit parameter **% increase in Deposits ratio (Chart No: 4)**. As we can see that 62 % of managers agree that this is an important profit determinant, along with 27 % strongly agreeing to it. Thus overall 89 % managers agree that this ratio is an important determinant of profitability.

(Chart No: 4) %Increase in deposits ratio



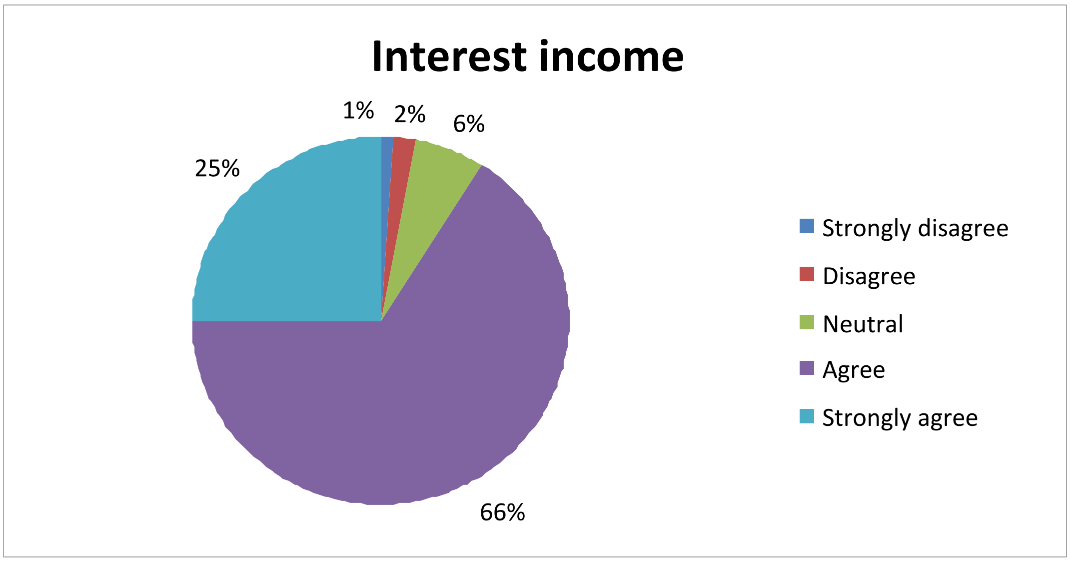
- The below Pie chart shows the Profit parameter **Capital adequacy ratio (Chart No: 5).** The pie chart shows that 55% of managers agree that CAR is an important ratio for the determinant of profitability, also 32 % strongly agree to it. Thus a total of 87 % of managers perceive that CAR is important determinant of profitability.

(Chart No: 5) Capital Adequacy ratio



• The below Pie chart shows the Profit parameter **Interest income (Chart No: 6).** The above chart shows that 66% of bank managers agree that this ratio is important for profitability along with 25 % strongly agreeing to it. Thus according to the bank managers perception this ratio is important determinant of profitability as they overall 91% agree with this.

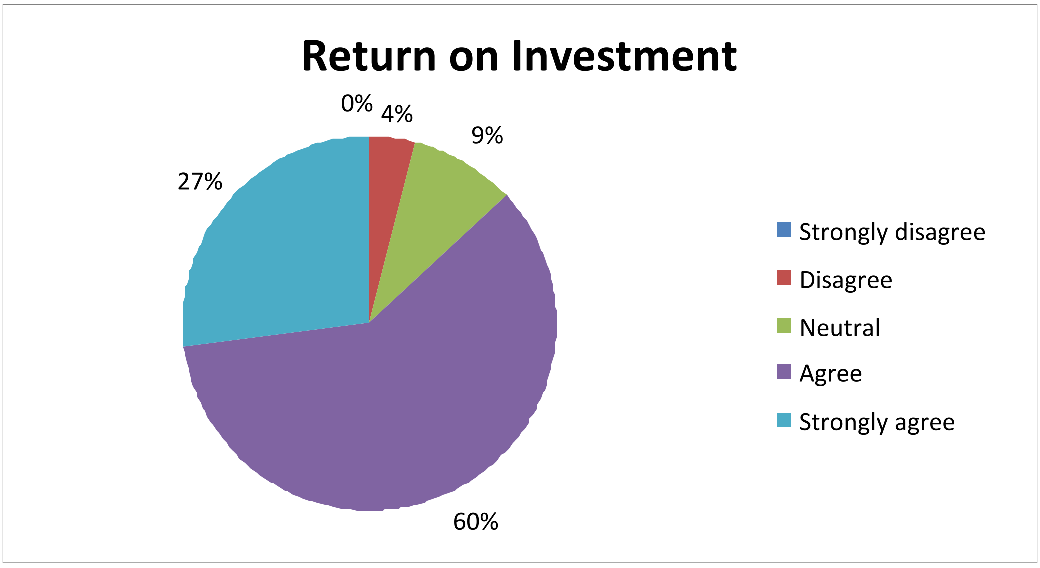
(Chart No: 6) Interest Income



• The above Pie chart shows the Profit parameter **Return on investment (Chart No: 7)**. 60 % of bank managers agree that this ratio effects profitability in a positive manner. Also 27%

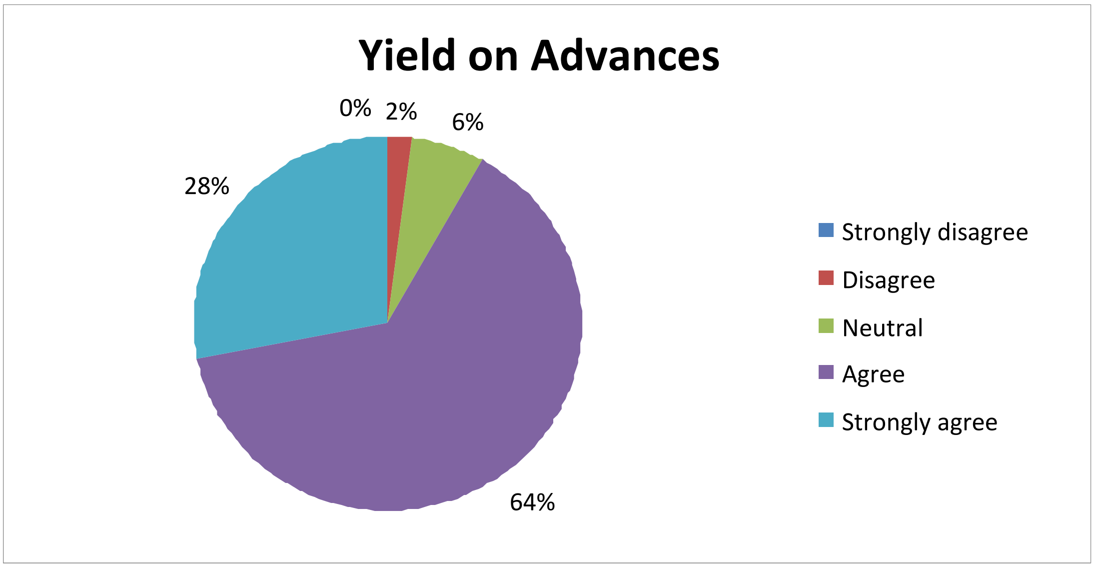
strongly agree to it. Thus the bank managers perception interpret that they overall 87 % agree that this is an important determinant of profitability.

(Chart No: 7) Return on Investment



• The below Pie chart shows the Profit parameter **Yield on Advances (Chart No: 8).** 64% of bank managers agree that this ratio impact profitability in a positive manner along with 28 % strongly agreeing to it. Thus a total of 92 % bank managers agree that this is the most important ratio for profitability.

(Chart No: 8) Yield on Advances



• The below Pie chart shows the Profit parameter **Return on Asset (Chart No : 9).** As we can see 62 % of bank managers agree that this ratio impacts the profitability. Also 17 % strongly

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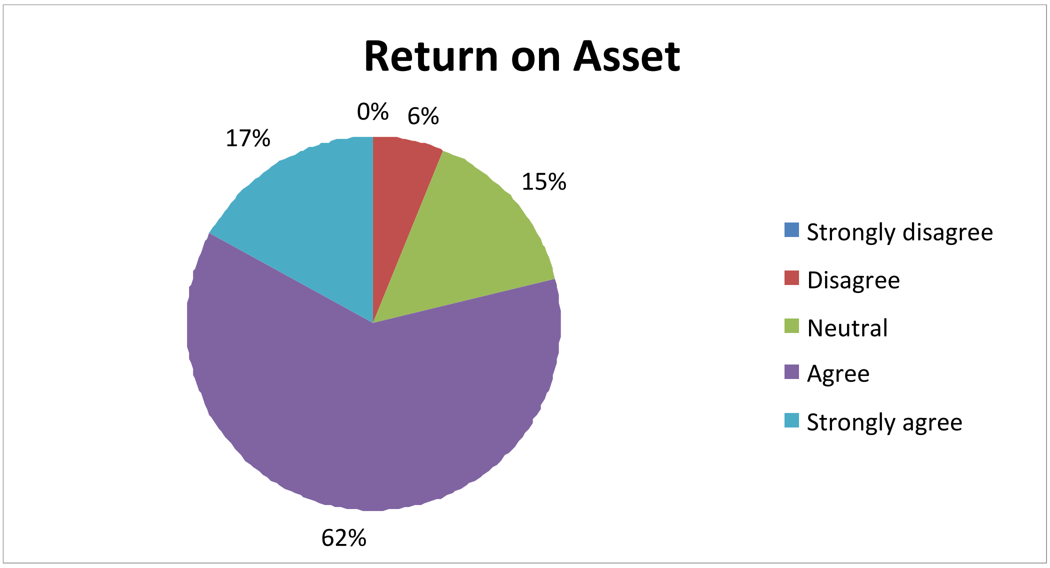
agreeing to it. Thus overall 79% of bank managers perceive that this is an important profitability determinant.

(Chart No : 9) Return on Asset



Thus, the above analysis done shows what the managers perceive about the profitability and what according to them is an important profitability determinant. Thus the above analysis is done to know the perception of bank managers that actually work with these or some other ratio practically in banks.

(Table No: 8) Ratings given by Managers

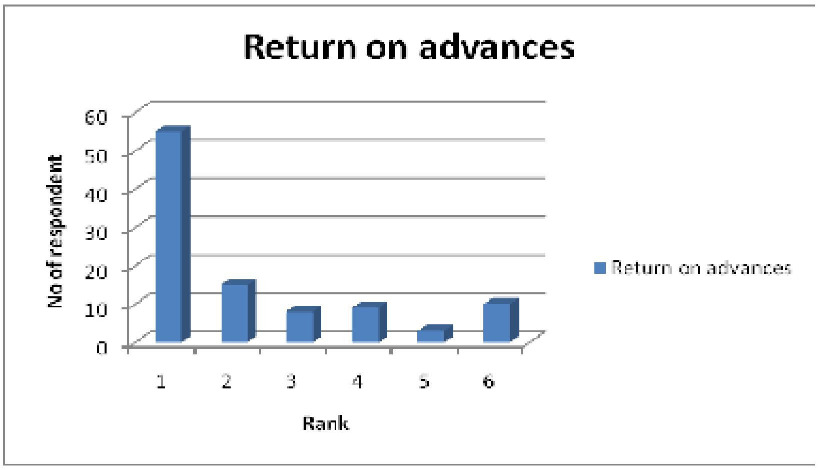
Parameter		Rating					
1	**Return on advances**	55	15	8	9	3	10
2	**RBI norms**	12	8	10	9	12	49
3	**Capital structure of bank**	7	11	19	22	32	9
4	**Asset held by a bank**	11	30	18	20	12	9
5	**Liability by a bank**	6	17	28	30	13	6
6	**Investment of a bank**	12	19	25	17	17	10

The above table shows the ranks given by the bank manager to the ratios. In the primary survey questionnaire this question was added to know the perception of bank manager, that according to them which ratio is more important and give ranking to then according to their preference. The managers were asked to rank the ratio given in table from 1 to 6 in the decreasing order of their impact on profits in banks.

Below are the charts showing the ranks given to a particular ratio by the bank managers.

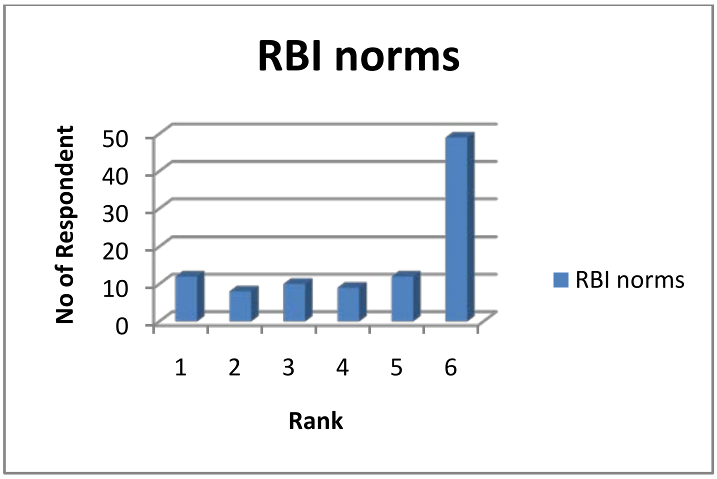
1. The first ratio taken is **return on advances (Chart No: 10)**. The above chart shows that 55 managers out of the total sample of 100 have ranked this ratio 1st. Thus the managers perceive that this ratio is the most important in terms of profitability.

(Chart No: 10) Return On Advances



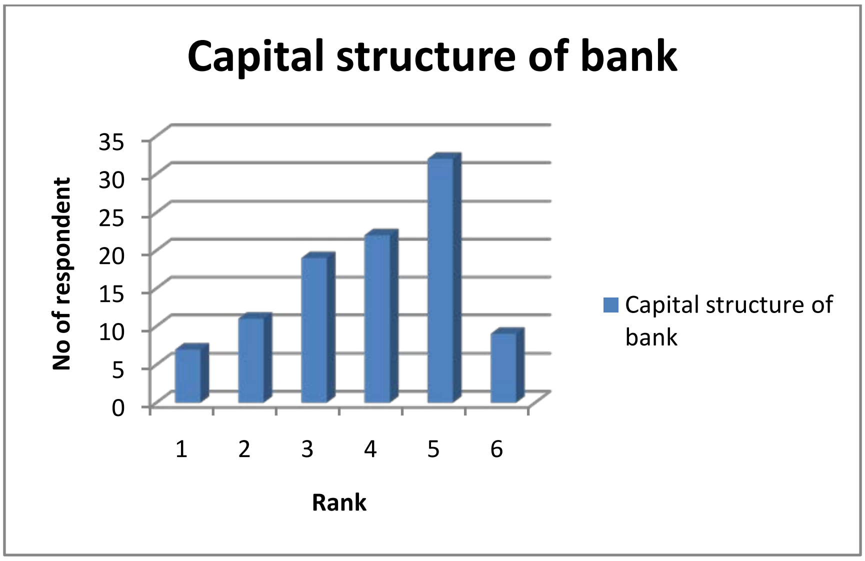
2. The second ratio taken is **RBI norms (Chart No: 11)**. From the above chart we can interpret those 49 managers out of 100 ranked this parameter 6th. Thus we can interpret that managers perceive that this ratio is least important determinant of profitability as it does not majorly impact profitability.

(Chart No: 11) RBI norms



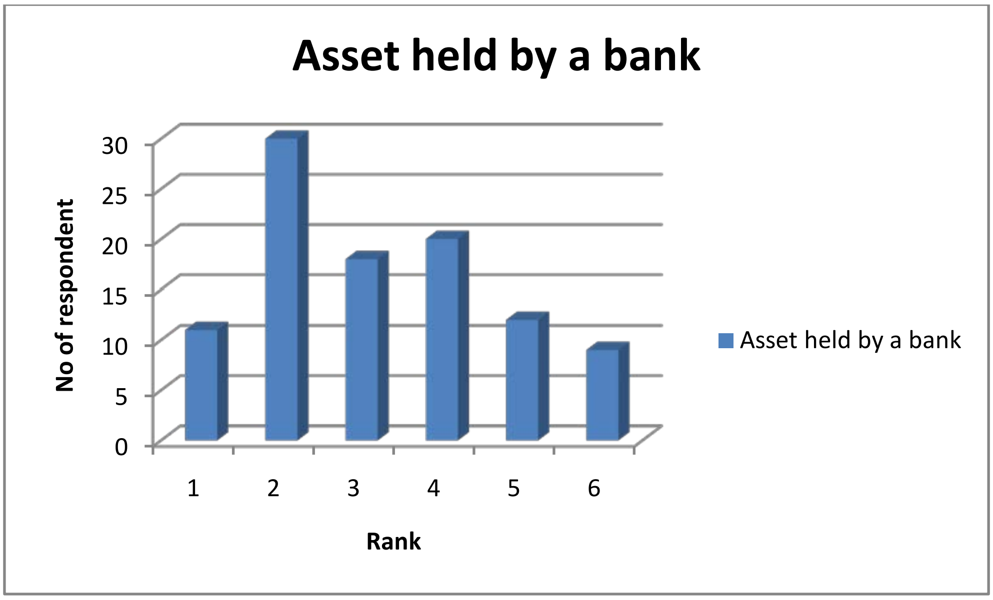
3. The third ratio taken is **Capital structure of banks (Chart No: 12)**. The above chart shows that majority of 32 managers have ranked this parameter 5th. Thus we can interpret that managers does not think that this ratio has a major impact in profitability. This ratio has less impact on profitability as compared to other ratio in the table according to the bank managers.

(Chart No: 12) Capital Structure of Bank



4. The fourth ratio taken is **Asset held by bank (Chart No: 13).** From the above chart we can see that the majority of managers have ranked this parameter 2^{nd}. Thus we can say that managers perceive that this parameter is important relating to the profitability as they have ranked this parameter 2^{nd}.

(Chart No: 13) Asset held by bank

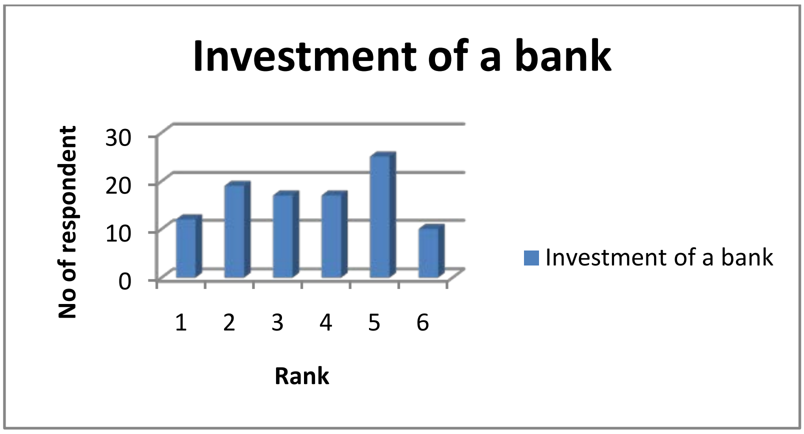


5. The fifth parameter taken is **Liability of a bank (Chart No: 14)**. A majority of 30 managers out of the sample of 100 have given this parameter 4^{th} rank. Thus the managers perceive that this ratio is not the most important determinant of profitability

(Chart No: 14) Liability by a bank

6. The last and the sixth parameter taken is **Investment of banks (Chart No: 15)**. A majority of 25 managers out of 100 has given this parameter 3rd rank. Thus we can say that the managers consider this ratio less important that impacts the profitability.

(Chart No: 15) Investment of a bank



Thus we can summarize this analysis by saying that the managers perceive that Return on advances is the most important determinant of profitability as they have ranked this parameter 1st among other parameters. And also they have ranked RBI norms last i.e. the 6th rank. Thus the managers perceive that RBI norms have less impact on profitability.

OTHER PARAMETERS

Also the managers have given their opinion that there are other parameters that can be taken into consideration with respect to profitability. Thus from this question we can know what are the other parameters bank manager's think is important. The other parameters suggested by them are NPA management, Reduce in administrative expenses, increase the output of staff, bad debts, loss suffering due to frauds, sentiments and brand image of the banks, income on foreign exchange business, treasury income, RBI and government lending policies, investment strategy, volatility of markets, operating cost, ancillary business etc.

COMPARISON BETWEEN PRIMARY & SECONDARY ANALYSIS

This portion of the study gives us the comparison between the empirical evidences generated from the secondary data as against the perception of the bank managers which is generated by the primary survey. Hence this portion throws light on the how bank manager's perception differs or is in line with the actual scenario prevailing in the bank. After this comparison we can give useful recommendation to the banks which will help them understand profitability better.

Parameter 1: Debt to equity ratio with reference to the increase in borrowings.

As can be seen from the secondary and primary analysis, there is an alignment or no alignment with results generated through empirical analysis and primary survey. As our result of secondary data shows the ratio Total Debt To Equity is irrelevant and does not impact profitability. But from the primary survey it can be deduced that even 91% (out of which 15 % of managers strongly agree with this) of bank managers agree that Debt equity ratio is important.. Thus we can interpret that the perception of bank managers does not comply with the empirical evidence.

Debt to equity ratio with reference to the Shareholder's equity.

The primary analysis shows that the bank managers disagree with Shareholder's equity being a strong determinant contributing to profits while the same can also be deduced from the secondary results.

Parameter 2: % increase in deposits.

From the primary survey we can see that 89% of managers agree with this ratio being an important factor to determine profit, while this is in sharp contrast to the results generated by secondary data. Thus the perception of bank managers does not comply with the empirical evidence.

Parameter 3: Capital adequacy ratio

The secondary analysis indicates that the CAPITAL ADEQUACY RATIO is irrelevant to the profitability. This suggests that it is not an important determinant of profitability. But the primary survey shows 87 % of bank manager agree that CAR is an important determinants of profitability. Thus the perception of bank managers does not comply with the empirical evidence.

Parameter 4: Interest Income

From the primary survey we can see that 91% of managers agree with this ratio being an important factor to determine profit, while this is in sharp contrast to the results generated by secondary data. Thus the perception of bank managers does not comply with the empirical evidence.

Parameter 5: Return on Investment

From the primary survey we can see that 87% of managers agree with this ratio being an important factor to determine profit, but this is in sharp contrast to the results generated by secondary data. While considering the important ratios for the secondary analysis this ratio did not come out as a relevant determinant thus the perception of bank managers does not comply with the empirical evidence.

Parameter 6: Yield on advances.

From the secondary analysis the beta for ratio YIELD ON ADVANCES is 1.015 and the significance level is 0.000. This means that YOA ratio impacts the profitability in the most significant and positive manner. Also through primary analysis we can see that similar results were obtained with 92 % of bank managers agreeing with the same. This ratio can be said to be the most powerful determinant of profitability.

Parameter 7: Return on Asset.

From the primary survey we can see that 79% of managers agree with this ratio being an important factor to determine profit, while this is in sharp contrast to the results generated by secondary data. Thus the perception of bank managers does not comply with the empirical evidence.

FINDINGS & RECOMMENDATIONS

The following are some of the findings that can be deduced from the analysis contained in the previous chapter. The secondary analysis was done using tests such as F-test, regression, multi- co linearity and descriptive statistics was also calculated. The results showed that the factors that are crucial to determine PAT/Total income are as follows:

- The most critical determinant that helps to increase profits is Yield On Advances. This ratio which is measured using the profits with the base of advances has come out to be the most critical determinant of profitability. The analysis suggests that with 100% confidence level, the results of Yield on advances being a positive profitability determinant can be justified. As supported by primary survey, the bank managers also perceive YOA as an important determinant. Hence in order to drive profits, the bank managers must thus focus heavily on increasing this ratio. Hence YOA can be said to be a fore-driver and hence the most powerful determinant of profitability.

- The second most important ratio which has emerged to be a profitability determinant is Total deposits to total liabilities (TDTL). The empirical evidences suggest that this ratio also has a direct relation with the profits generated by a bank. However, this ratio is not supported by similar results through primary analysis. This suggests an attention of bank managers towards this ratio in order to improve their profits.
- The other ratio which impacts profits in a substantial manner is Employee Cost to Total Expenses (ECTE). However this ratio has an inverse relation with the profits. A decrease in this ratio will help an improvement in profits of a bank.
- Other ratios such as Capital adequacy Ratio, Growth in net profits, Cash to deposits, Debt to equity ratio have been proved to be irrelevant by secondary analysis. But the same has not been supported by survey results.

However the study done by primary analysis suggests that some other ratios such as return on asset, return on investment, interest income, increase in deposits, increase in borrowings and capital adequacy ratio have come up as the important determinants of profitability. Also it can be seen from the open ended question of the survey that there are some other parameters as well that managers perceive to be the determinants of profitability.

This suggests that mangers must give attention to the more relevant factors that will help them drive their profits. However, the reasons for some ratios not impacting profits may be a controversial one and which needs to be explores further.

CONCLUSION

This study has been done on Indian banks using a 10 years' data that suggests some most important conclusions that can be applied to the practical banking world. The empirical evidences suggest that factors such as Yield on advances, Total deposits to total liabilities and Employee cost to total expenses turned out to be most important. The results suggest that:

1. The most important ratio through primary & secondary analysis is yield on advances (YOA).
2. An important ratio as per secondary analysis is total deposits to total liabilities (TDTL).
3. An important parameter as per primary analysis is interest income earned by the bank and also total debt to equity ratio.

However further study incorporating more variables and entities from different countries may be carried out to develop better understanding of the factors influencing the profitability of banks.

FUTURE DIRECTION OF THE RESEARCH

The study has been done on Indian banking sector using the data (financial reports) of the past 10 years. However there are certain points that define the future direction of this research.

- The study has been done using a specific definition of profits i.e. Profit After Tax to Total Income. However profits can be defined in some other manner also that may give different results. Also, the study has been done using a certain set of independent variables. There could be some more factors that can be looked into in a different scenario.
- The other direction for further study is that it can be conducted considering a different economical environment other than the Indian economy. In that case, a global study considering different parameters can be performed
- Some qualitative factors such as service quality, customer relations, and satisfaction of the employees may be considered by a separate study. A comprehensive study that considers both qualitative and quantitative factors may also be taken up.

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ANNEXURE

Ratios Used During The Course Of The Study

Sr. No.	Ratio.	Name Of The Ratio.	Formula Of The Ratio.
1.	TDTL	Total deposits to total liabilities.	Total deposits/total liabilities.
2.	CD	Cash to deposits	Cash/deposits.
3.	ECTE	Employee cost to total expenses	Employee cost/total expenses.
4.	GNP	% growth in net profits	(Net profits in year X- net profits in year X-1)/ net profits in year X-1.
5.	TDTE	Total debt to equity	Total debt/ shareholder's equity+ reserves & surplus.
6.	CAR	Capital adequacy ratio	(Tier one capital+ Tier two capital)/ risk weighted asset
7.	YOA	Yield on advances	Net profits/ total advances made.
8.	GRA	Growth rate of advances	(Advances in year X- advances in year X-1)/ advances in year X.
9.	PATTI	PAT/ T. income	Profit after tax/ total income.

List of Banks

- **PUBLIC BANKS**

    1) Bank of India (BOI).
    2) Punjab National Bank (PNB).
    3) Indian Bank.
    4) Bank of Baroda
    5) Central Bank.
    6) Dena Bank
    7) Andhra Bank
    8) Allahabad Bank

9) Bank of Maharashtra
10) Canara Bank
11) Corporation Bank
12) Indian overseas Bank
13) Oriental Bank of Commerce
14) Syndicate Bank
15) UCO Bank
16) Union Bank
17) Vijaya Bank
18) State Bank of Bikaner
19) State Bank of Travancore
20) State Bank of Mysore
21) IDBI Bank.
22) State Bank of India

- **Private Banks**

1) ICICI Bank.
2) Federal Bank
3) Bank of Rajasthan (BOR).
4) Axis Bank.
5) Karnataka Bank.
6) Karur Vysya Bank.
7) Kotak Mahindra Bank
8) ING Vysya Bank
9) Development Credit Bank.
10) Federal Bank.
11) Dhanalakshmi Bank.
12) South Indian Bank.
13) Jammu and Kashmir Bank
14) Indusind Bank
15) City Union Bank
16) Lakshmi Vilas Bank