

FINANCIAL PERFORMANCE ANALYSIS OF PRIVATE SECTOR BANKS OF INDIA

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Abstract

The objective of this study is to analyse the performance and the financial health of top 8 private sector banks in India. The study is conducted by performing financial ratio analysis based on profitability, debt coverage, liquidity and Asset Quality Ratio. Apart from ratio analysis, correlation analysis has been made to understand the degree of relationship between profitability and different elements of financial statements that affect the profits. Secondary data for the past 5 years has been considered for this research. Through the ratio analysis, the study concludes which bank out of the top 8, highly profitable banks, is the most suitable for investment and lending funds and what factors affect their profits the most.

Keywords: Financial Performance Analysis, Ratios, Profitability, Private Sector Banks, Correlation

I. INTRODUCTION

Profitability Analysis:

The ability to earn profits of a bank is known as profitability and it is a measure to evaluate the performance of a company. The various ratios under Profitability are:

Net Interest Spread: Net interest spread is the difference between the interest rate received from borrowers on account of loan given and the rate of interest the bank pays to the depositors. Higher the spread, more profitable is the financial institution. Vice-versa for lower Interest Spread.

Return on Assets: Return on Assets work put the earnings that are generated from invested capital (assets). Higher the number, the better it is, as it would mean that the bank is earning more on less investments.

Return On Equity: This metric reveals how effectively a corporation is generating profit from the money that investors have put into the business (by buying its stock). As per S&P 500, the acceptable ratio is 14% and below 10% is considered as poor.

Debt Coverage Analysis:

The analysis indicates what the proportion of the bank's financing asset is from debt. It is a measure to evaluate a bank's long term solvency. The following ratios under debt analysis are:

Capital Adequacy Ratio: This ratio assesses if there is enough capital to cover up bank's losses before it declares itself as insolvent and lose the depositors' money. Higher the CAR ratio, the more stable and capable a bank is to meet its obligations and liabilities.

Provision Coverage Ratio: Indicates the coverage for bad loans of a bank through provisions. Higher the ratio, the better it is for a bank as there will be lesser unexposed bad loans.

Credit Deposit Ratio: Indicates the proportion of loan-assets created by banks from the deposits received (RBI, 2015; Singh & Tandon, 2012). Standard CDR should be 80% to 85% for a Bank.

Liquidity Analysis:

Determines the bank's ability to pay off its current debts without raising external capital.

Current Ratio: Current ratio is used to evaluate an entity's short-term liquidity position. If the ratio is more than 1, it means that the bank is in a favourable situation.

Asset Quality Ratio Analysis:

The analysis is a review for evaluation of credit risk associated with a particular asset. Interest payments are done on those assets, such as for loans and investment portfolios.

Non-Performing Asset Ratio: An NPA is an asset for which the interest is overdue for over 90 days or more. The ratio understands the overall quality of a bank's loan book. Lower the ratio, the better it is as will be increasing number of defaults due to increase in NPA.

II. LITERATURE REVIEW

A. A Study on Profitability Analysis of Private Sector Banks in India

This study aims to conduct a profitability analysis of different private banks in India on the basis of a few profitability ratios extracted from the financials of the different banks chosen. The study was conducted for the period of 10 years i.e. from 2002-2012. The objectives of the research were to highlight the various profitability analysis of some selected private banks being ICICI Bank, AXIS Bank, Karur Vysya Bank and South Indian Bank and analyze overall profitability of the banks on the basis of a few factors such as the profitability ratios chosen over the time period taken up. Statistical tools were used in order to conduct the analysis. Through this research, it was concluded that there is difference among the mean value of interest spread, net profit margin, return on long term fund and return in net worth and there is no difference among the mean value of return on asset of private banks. (V., 2013)

B. A Financial Performance Comparison of Public Vs Private Banks: The Case of Commercial Banking Sector of Pakistan

The purpose of the study was to compare the financial performance of public banks and private banks of Pakistan. The period of the study was from 2006-2009. The study classifies the banks on the basis of bank size and financial ratios such as efficiency/ profitability ratios, liquidity ratios, capital/ leverage ratios and asset quality ratios. The research concludes that banks differ on the basis of different financial ratios. (Alam, Raza, & Akram, 2011)

C. Intellectual Capital and Financial Performance of Indian Banks

The motive of the study is to investigate the relationship between intellectual capital and financial performance of 65 banks of India from 1999-2008. The method of the study included the use of Value-Added Intellectual Coefficient (VAIC) to measure the value-based performance of banks. to measure the profitability and productivity of the banks, Return on Assets (ROA), Return on Equity (ROE) and Asset Turnover Ratio were used. The analysis of intellectual capital (human and structural capital) and its impact on the corporate performance has been measured using multiple regression analysis. The study indicates that the intellectual capital and the financial performance (profitability and productivity) vary amongst each other. Also, it is suggested by the study that intellectual capital is vital for banks' competitive advantage. (Mondal & Ghosh, 2012)

D. Analyzing Bank Performance – Linking RoE, RoA and RAROC: U.S. Commercial Banks: 1992-2014

The study aims to introduce a new performance scheme inspired by the Du Pont scheme for corporates. The scheme attempts to clarify the relationship between return on equity (ROE), risk-adjusted return on capital (RAROC) and return on assets (ROA). the scheme is applied by the managers, analysts and regulators in order to analyse the performances of individual bank, as well as the whole banking sector. To achieve a target of financial ratios such as ROE, RARIC and ROA, the scheme developed can be used. The performance of U.S. commercial banks in the past 23 years have been illustrated in the research article. (Klaassen & Eeghen, 2015)

E. Analyzing Soundness in Indian Banking: A CAMEL Approach

Through this study, the researchers have analysed the performance of 12 public and private sector banks of India over a period of 11 years starting from 2000-2011. This study also opted for the CAMEL Approach of financial analysis. The analysis determined the private sector banks to be on the top of the list of financial performance soundness of the 12 selected banks. Public Sector banks such as Union Bank and SBI were at the lowest rank on that list displaying a low economic and financial soundness in comparison to others. (Kumar, Harsha, Anand , & Dhruva, 2012)

III. RESEARCH DESIGN

Research Gap

From the above literature review, it can be concluded that the ratios chosen for the complete financial performance analysis are different from the previous research papers. Also, there is no specific research done using correlation analysis to be acquainted with the type of relationship it has with certain factors. Therefore, our research aims to evaluate the performance of banks on the basis of financial ratios and determine the relationship between certain factors with the profits of each bank.

Statement of Problem

Through this study, investors and creditors can understand the financial performance of a bank and act upon as per the results of this study. This study focuses on the financial factors of banks namely profitability, debt coverage, liquidity and asset quality factors and solves the problem of analysis and how one can use the results from the analysis and make their decision while investing or lending to a particular bank.

Scope

The paper includes private banks namely HDFC Bank, ICICI Bank, Yes Bank, Kotak Mahindra bank, IndusInd bank, Federal Bank, RBL Bank and City Union Bank. The banks were chosen on the basis of the recent net profit values of each bank. The top 8 banks were taken up for analysis of financial performance. The ratios considered for the study are Net Interest Spread, Return on Assets, Return on Equity, Capital Adequacy Ratio, Provision Coverage Ratio, Credit Deposit Ratio, Current Ratio and Non-Performing Asset Ratio.

Objectives

- To analyse the performance of the banks on the basis of different financial ratios.
- To compute the relationship between profitability and various factors of financial statements.

Hypothesis

Deposits:

H0: There is no significant relationship between the deposits and profitability of banks.

H1: There is a significant relationship between the deposits and profitability of banks.

Depreciation:

H0: There is no significant impact of depreciation and profitability of banks.

H1: There is a significant impact of depreciation and profitability of banks.

Non-Performing Assets:

H0: There is no relationship between the non-performing assets and profitability of banks.

H1: There is a relationship between the non-performing assets and profitability of banks.

Source of Data

The data acquired is all secondary data. The data required for the ratios was gathered from the financial statements of the banks. for the correlation analysis, the profits and the factors were also taken up from the annual reports of the past five years.

<https://www.moneycontrol.com/>

<https://www.investopedia.com/>

<https://www.goodreturns.in/>

<https://in.investing.com/>

Period of Study

The period of study is from 2013-2018 since all the ratios, profits and its factors are taken for that period only.

Tools Used for Analysis

In order to analyse the ratios, Mean and Standard Deviation analysis has been used to make the interpretations. To compute the correlation and significance level, IBM SPSS Statistics, with confidence level as 95%, is used.

IV. DATA INTERPRETATION AND ANALYSIS

Ratio Analysis:

Table 1: Interest Spread %

INTEREST SPREAD %								
YEAR	HDFC	ICICI	YES BANK	KOTAK	INDUSIND	FEDERAL	RBL	CITY UNION BANK
2013-2014	8.01	7.35	10.34	9.52	7.85	8.78	7.23	7.81
2014-2015	8.01	7.04	8.43	8.38	7.47	7.57	7.71	7.22
2015-2016	7.52	6.83	7.53	7.86	6.96	6.89	7.41	6.79
2016-2017	7.46	6.58	6.56	7.64	7.14	6.4	6.75	6.87
2017-2018	7.78	6.43	5.41	6.94	6.77	5.61	6.04	6.51
MEAN	7.756	6.846	7.654	8.068	7.238	7.05	7.028	7.04
STANDARD DEVIATION	0.26120873	0.365964	1.875134662	0.96235129	0.4284507	1.20260135	0.652931849	0.49939964

According to Table 1, Kotak Mahindra's Mean Interest spread is the highest among the 8 banks which indicates that the Bank's interest that is it is receiving is more than what they are giving to their depositors. Although, there is still a trend of decreasing interest spread in Kotak Mahindra as well. The reason for such a decline is 'decrease in yield on Average Earning Assets.'

Table 2: Return on Assets %

RETURN ON ASSETS (%)								
YEAR	HDFC	ICICI	YES BANK	KOTAK	INDUSIND	FEDERAL	RBL	CITY UNION BANK
2013-2014	1.72	1.64	1.48	1.71	1.61	1.12	0.5	1.41
2014-2015	1.73	1.72	1.47	1.76	1.64	1.21	0.76	1.42
2015-2016	1.73	1.34	1.53	1.08	1.63	0.52	0.74	1.42
2016-2017	1.68	1.26	1.54	1.58	1.6	0.72	0.91	1.48
2017-2018	1.64	0.77	1.35	1.54	1.62	0.63	1.02	1.48
MEAN	1.7	1.346	1.474	1.534	1.62	0.84	0.786	1.442
STANDARD DEVIATION	0.03937004	0.376005	0.075696763	0.26940676	0.01581139	0.30667572	0.196672316	0.034928498

According to Table 2, the ratio for Return of Assets is the highest for HDFC Bank indicating that the bank is earning more money on less investment. This ratio gives investors the idea of how effectively the bank is converting their investments into net income.

Table 3: Return on Equity %

RETURN ON EQUITY								
YEAR	HDFC	ICICI	YES BANK	KOTAK	INDUSIND	FEDERAL	RBL	CITY UNION BANK
2013-2014	19.4475111	13.32015	22.65504908	12.1927456	15.4940138	12.019907	4.8288611	17.403713
2014-2015	16.4744374	13.81762	17.13791485	13.1914726	16.8114617	12.955191	9.2396044	14.682512
2015-2016	16.8731512	10.76197	18.3404913	8.66524082	12.9008336	5.87595141	9.697503079	14.54055806
2016-2017	16.2219249	9.729333	15.01729282	12.276518	13.8446089	9.25742248	10.21640489	14.62124094
2017-2018	16.4151868	6.437642	16.37537755	10.884628	15.059131	7.13645174	9.438668217	14.19738713
MEAN	17.0864423	10.81334	17.90522512	11.442121	14.8220098	9.44898473	8.684208337	15.08908223
STANDARD DEVIATION	1.34095705	2.98472	2.916317707	1.75654123	1.50930161	3.04360788	2.186079214	1.307448789

According to Table 3, only 3 Banks among the 8 are using the shareholders' equity efficiently i.e. HDFC Bank, Yes Bank and City Union Bank. If the company's ROE is between 12-14%, then it is not satisfactory. Banks with ROE above 14% and up to 20% are considered as efficient.

Table 4: Capital Adequacy Ratio

CAPITAL ADEQUACY RATIO								
YEAR	HDFC	ICICI	YES BANK	KOTAK	INDUSIND	FEDERAL	RBL	CITY UNION BANK
2013-2014	16.07	17.7	14.4	18.83	13.83	15.14	14.64	15.01
2014-2015	16.79	17.02	15.6	17.17	12.09	15.46	13.13	16.52
2015-2016	15.53	16.64	16.5	16.34	15.5	13.93	12.94	15.58
2016-2017	14.55	17.39	17	16.77	15.31	12.39	13.72	15.83
2017-2018	14.82	18.42	18.4	18.22	15.03	14.7	15.33	16.22
MEAN	15.552	17.434	16.38	17.466	14.352	14.324	13.952	15.832
STANDARD DEVIATION	0.91396	0.67947	1.50067	1.03307	1.42166	1.22406	1.01561	0.583755086

According to Table 4, we can see that the average CAR ratio of ICICI and Kotak Mahindra Bank is comparatively higher when compared to rest of the banks which means that their risk and loss coverage ability is higher than rest of the banks. Also, the chance of depositors losing their money for these banks is low. On the other hand, the lowest CAR belongs to RBL.

Table 5: Provision Coverage Ratio

PROVISION COVERAGE RATIO								
YEAR	HDFC	ICICI	YES BANK	KOTAK	INDUSIND	FEDERAL	RBL	CITY UNION BANK
2013-2014	1.9676	0.64575	6.11782	1.01434	1.91359	0.58994	1.1065	0.798130076
2014-2015	2.09068	0.56606	3.97007	0.91453	2.31738	0.58808	1.37508	0.91870645
2015-2016	2.06412	0.52907	2.35393	0.68754	2.3879	0.5685	1.2013	0.758994492
2016-2017	1.9	0.39213	1.24219	0.71908	2.44877	0.63352	1.32934	0.719918473
2017-2018	1.75881	0.33228	1.34138	0.80355	1.78902	0.50514	1.22806	0.71887222
MEAN	1.95624	0.49306	3.00508	0.82781	2.17133	0.57704	1.24805	0.782924342
STANDARD DEVIATION	0.13415	0.12843	2.0567	0.13638	0.29908	0.04669	0.1065	0.082633297

According to Table 5, Yes Bank is the most efficient and capable of covering its bad debts. Vice-versa for ICICI Bank. For all the banks the PCR has been steadily declining over the past 5 years. But, for Yes Bank, the PCR had been very high in the year 2013-14 and has seen a massive decrease over the years and bringing the ratio in parity with the other banks. The above data shows a declining trend of the ratio which indicates that the bad loans of the banks have decreased over the years and the money needed to cover the bad debts have causally decreased as well.

Table 6: Credit Deposit Ratio

CREDIT DEPOSIT RATIO								
YEAR	HDFC	ICICI	YES BANK	KOTAK	INDUSIND	FEDERAL	RBL	CITY UNION BANK
2013-2014	81.79	100.71	72.71	92.18	86.74	74.59	81.3	74.06
2014-2015	81.71	104.72	79.33	88.99	92.02	72.55	84.62	73.9
2015-2016	83.24	105.08	85.64	86.57	94.06	72.92	86.08	76.17
2016-2017	85.64	98.69	90.53	86.04	91.77	74.32	85.99	78.38
2017-2018	84.68	92.92	97.73	87.35	92.75	78.84	88.82	82.08
MEAN	83.412	100.424	85.188	88.226	91.468	74.644	85.362	76.918
STANDARD DEVIATION	1.741341	4.988299	9.696129125	2.475183	2.788901217	2.503563	2.734871	3.413930286

According to Table 6, Credit Deposit Ratio of ICICI Bank was the highest at 100.424% whereas the lowest average ratio was of City Union Bank at 76.918%. This indicates that ICICI Bank has created more loan assets from its deposits as compared to all the other banks. Last year, the credit deposit ratio of Yes Bank was the highest at 97.73%.

Table 7: Current Ratio

CURRENT RATIO								
YEAR	HDFC	ICICI	YES BANK	KOTAK	INDUSIND	FEDERAL	RBL	CITY UNION BANK
2013-2014	0.06	0.09	0.08	0.03	0.04	0.03	0.05	0.03
2014-2015	0.04	0.06	0.06	0.02	0.05	0.03	0.03	0.03
2015-2016	0.07	0.13	0.08	0.07	0.09	0.06	0.03	0.04
2016-2017	0.06	0.12	0.08	0.06	0.07	0.05	0.04	0.04
2017-2018	0.04	0.12	0.07	0.05	0.08	0.05	0.03	0.04
MEAN	0.054	0.104	0.074	0.046	0.066	0.044	0.036	0.036
STANDARD DEVIATION	0.012	0.0257682	0.008	0.01854724	0.01854724	0.012	0.008	0.004898979

According to Table 7, the highest average current ratio belonged to ICICI Bank and the lowest average current ratio is of RBL and City Union Bank. The higher the ratio, the more liquid assets are available with the bank.

Table 8: Non-Performing Asset Ratio

NON-PERFORMING ASSET RATIO								
YEAR	HDFC	ICICI	YES BANK	KOTAK	INDUSIND	FEDERAL	RBL	CITY UNION BANK
2013-2014	0.3	0.97	0.05	1.08	0.33	0.74	0.31	1.23
2014-2015	0.2	1.61	0.12	0.92	0.31	0.73	0.27	1.3
2015-2016	0.28	2.67	0.29	1.06	0.36	1.64	0.59	1.53
2016-2017	0.33	4.89	0.81	1.26	0.39	1.28	0.64	1.71
2017-2018	0.4	4.77	0.64	0.98	0.51	1.69	0.78	1.7
MEAN	0.302	2.982	0.382	1.06	0.38	1.216	0.518	1.494
STANDARD DEVIATION	0.07294	1.79341	0.33056	0.12884	0.078740079	0.46672	0.21993	0.222328586

According to Table 8, HDFC Bank's NPA percentage of total lending has increased over the 5 years period starting 2013. Though there was an initial declining trend for a few years, it increased in the last 2 years. HDFC Bank's NPA levels are much lower when compared to other banks for 2 reasons:

- 1) They are lending more to retail sector.
- 2) Their credit evaluation method is better when compared to other banks.

Correlation Analysis:

Table 9: Correlation between deposits and profitability

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	HDFCPRO & HDFCDEPO	5	1.000	.000
Pair 2	ICICIPRO & ICICIDEPO	5	-.801	.103
Pair 3	YESPRO & YESDEPO	5	.993	.001
Pair 4	KOTAKPRO & KOTAKDEPO	5	.922	.026
Pair 5	INDUSINDPRO & INDUSINDDEPO	5	.996	.000
Pair 6	FEDERALPRO & FEDERALDEPO	5	.033	.958
Pair 7	RBLPRO & RBLDEPO	5	.996	.000
Pair 8	CITYUNIONPRO & CITYUNIONDEPO	5	.993	.001

According to Table 9, all the banks have a positive correlation between deposits and profits of banks except for ICICI Bank. The significance levels of HDFC Bank, Yes Bank, Kotak Mahindra Bank, IndusInd Bank, RBL Bank and City Union Bank is below 0.05 or 5%, so we will reject the null hypothesis and accept the alternative hypothesis i.e. there is a significant relationship between the deposits and profitability of banks. But, for, ICICI Bank and Federal Bank, the significance level is above 0.05 or 5%, so we will accept the null hypothesis i.e. there is no significant relationship between the deposits and profitability of banks.

Table 10: Correlation between depreciation and profitability

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	HDFCPRO & HDFCDEPR	5	.954	.012
Pair 2	ICICIPRO & ICICIDEPR	5	-.618	.267
Pair 3	YESPRO & YESDEPR	5	.997	.000
Pair 4	KOTAKPRO & KOTAKDEPR	5	.805	.100
Pair 5	INDUSINDPRO & INDUSINDDEPR	5	.986	.002
Pair 6	FEDERALPRO & FEDERALDEPR	5	-.300	.624
Pair 7	RBLPRO & RBLDEPR	5	.997	.000
Pair 8	CITYUNIONPRO & CITYUNIONDEPR	5	-.740	.153

According to Table 10, HDFC Bank, Yes Bank, Kotak Mahindra Bank, IndusInd Bank and RBL Bank have a positive correlation between depreciation and profits whereas ICICI Bank, Federal Bank and City Union Bank have a negative correlation between depreciation the profits. The significance level of HDFC Bank, Yes Bank, IndusInd Bank and RBL Bank are above 0.05 or 5%, so we will accept the null hypothesis i.e. there is no significant impact of depreciation and profitability of banks. But, for ICICI Bank, Kotak Mahindra Bank, Federal Bank and City Union Bank, the significance levels are below 0.05 or 5%, so we will reject the null hypothesis and accept the alternative hypothesis i.e. there is a significant impact of depreciation and profitability of banks.

Table 11: Correlation between non-performing assets and profitability

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	HDFCPRO & HDFCNPA	5	.985	.002
Pair 2	ICICIPRO & ICICINPA	5	-.709	.180
Pair 3	YESPRO & YESNPA	5	.968	.007
Pair 4	KOTAKPRO & KOTAKNPA	5	.901	.037
Pair 5	INDUSINDPRO & INDUSINDNPA	5	.989	.001
Pair 6	FEDERALPRO & FEDERALNPA	5	-.232	.708
Pair 7	RBLPRO & RBLNPA	5	.984	.002
Pair 8	CITYUNIONPRO & CITYUNIONNPA	5	.991	.001

According to Table 11, HDFC Bank, Yes Bank, Kotak Mahindra Bank, IndusInd Bank, RBL Bank, City Union Bank have a positive correlation between non-performing assets and profits whereas ICICI Bank and Federal Bank have a negative correlation. The significance level of HDFC Bank, Yes Bank, Kotak Mahindra Bank, IndusInd, RBL Bank and City Union Bank is below 0.05 or 5%, so we will reject the null hypothesis and accept the alternative hypothesis i.e. there is a relationship between the non-performing assets and profitability of banks whereas for ICICI Bank and Federal Bank the significance level is above 0.05 or 5%, we will accept the null hypothesis i.e. there is no relationship between the non-performing assets and profitability of banks

V. FINDINGS AND SUGGESTION

Findings

- As per interest spread %, it is understood that HDFC is earning the highest revenue from its interest revenue. As per 2017-18, Yes Bank has been earning the lowest interest revenue due to low interest spread.
- As per ROA, HDFC Bank has been most efficient in earning highest return/income from its assets. They have the highest ROA of 1.64 as per last year and the lowest ROA had been of Federal Bank.
- It is seen that ICICI has the highest CAR of 18.42 as per last year. From CAR it is understood that ICICI is considered most safe as they have enough capital to cover their losses. The lowest CAR belonged to Federal Bank.
- IndusInd has the highest Provision Coverage Ratio of 1.789. IndusInd has the most provision to cover its bad debts. As per Credit Deposit Ratio, Yes Bank had generated highest loan assets from its deposits last year.
- RBL & City Union have always had the lowest current ratio over the years. It means that these banks have the lowest number of liquid assets. HDFC has had the least NPA which makes it more attractive for investment purpose and whereas ICICI Bank has had a huge NPA Ratio of 4.77 last year.
- There is a significant positive correlation between deposits and profitability for 5 out of 8 private banks: HDFC, Yes Bank, RBL & City Union. There is a negative correlation between depreciation and profitability factor for banks: ICICI, Federal & City Union.

Suggestions

This study has a wide scope of future research. It has many elements and prospects to provide a detailed analysis on performance of a bank. Any balance sheet element has a direct impact on profitability of a bank, it can be both positive or negative. Future study can be done taking latest financial statements data and more banks can be considered for this study. A comparison between the performance of Indian private and public sector banks can be conducted as well.

VI. CONCLUSION

This study was conducted to understand and analyse the performance of Indian private sector banks as well as the current condition of the Indian banking system. Ratio analysis is a key factor based on which investors and lenders can make investing or borrowing decisions. Qualitative factors play a important role in understanding a bank's management system but quantitative analysis provides with exact numbers and properly evaluated data through which any investment decision can be made. A stakeholder would want to know the condition of a bank and ratio analysis helps in interpreting the financial statements of a bank and is easier to understand. Apart from that, many transactions and elements of financial books have the positive or negative impact in the profitability and stability of a bank and correlation analysis helps to understand that relationship and to what level is the relationship significant.

Bibliography

- V., B. (2013). A Study on Profitability Analysis of Private Sector Banks In India . *IOSR Journal of Business and Management*.
- Alam, H. M., Raza, A., & Akram , M. (2011). A Financial Performance Comparison of Public Vs Private Banks: The Case of Commercial Banking Sector of Pakistan. *International Journal of Business and Social Science*.
- Mondal, A., & Ghosh, S. K. (2012). Intellectual capital and financial performance of Indian banks. *Journal of Intellectual Capital*.
- Klaassen, P., & Eeghen, I. v. (2015). Analyzing Bank Performance — Linking RoE, RoA and RAROC: U.S. Commercial Banks: 1992-2014. *Journal of Financial Perspectives*,.
- Kumar, M. A., Harsha, G. S., Anand , S., & Dhruva, N. R. (2012). Analyzing Soundness in Indian Banking: A CAMEL Approach. *Research Journal of Management Sciences*.
- <https://www.investopedia.com/university/ratio-analysis/using-ratios.asp>

<https://www.moneycontrol.com/>

<https://www.investopedia.com/>