Evaluation of the Financial Performance of Chosen Commercial Banks in India

Mr. Maulik Chandnani[1*], Mr. Sunny Masand[2], Mr. Ashok Prem[3]

[1,2,3]Assistant Professor-RNB Global University-Bikaner

***Corresponding Author:** Mr. Maulik Chandnani
[*]Assistant Professor-RNB Global University-Bikaner

Abstract
The present study aims to assess the financial performance of a set of Indian commercial banks from 2012/13 to 2016/17. This analysis encompasses 16 banks, with 11 from the public sector and 5 from the private sector. By utilizing financial ratios, the study compares the performance of these banks, revealing that private sector banks consistently outperform their public sector counterparts throughout the study period. Additionally, the study delves into the influence of liquidity, solvency, and efficiency on the profitability of these banks, employing panel data estimations such as Fixed Effect and Random Effect models. The empirical findings indicate that liquidity ratio and solvency ratio, as well as turnover ratio and solvency ratio, positively and significantly impact the profitability of selected public sector and private sector banks, respectively. This underscores the importance of these ratios in determining profitability.

Introduction
Solvency and liquidity are very significant for banks since its assets and loans have diverse maturities. Banks have the principal role of converting liquid depo- sit (liabilities) to illiquid assets such as loans, which makes them intrinsically vulnerable to liquidity risk. Lack of liquidity is an indicator of the liquidity crisis ina banking system and therefore liquidity management is an imperative objective for the commercial banks since illiquidity may results in insolvency and deprived financial performance. Liquidity elucidates the bank's potential to manage its short duration liability. In other words, the liquidity management shows how efficiently a bank manages its short duration requirement and invests the funds to raise theprofitability of the organization. Therefore, the optimum level of liquidity guarantees a bank to meet their short term debts and the proper management of flowcan be promised by a profitable business. Besides, the illiquidity will lead to in-solvency and bankruptcy as the liabilities surpass its assets. It is impossible forbanks to endure without making profits and there exists positive association be-tween liquidity and profitability, which implies that lower liquidity position may result in lower profitability due to greater requirement for loans, and low profit-ability would not generate sufficient cash flows, thus creating a viscous cycle. Besides, the liquidity is negatively associated with profitability of the banks be-cause of holding liquid assets tend to condense income due to the lower rates of return connected with liquid assets .
Solvency represents the association between borrowed funds and owner's funds in the capital structure of a bank. It comprises debt and common equity for financing the bank's total assets, operations and financial growth . The Capital ade-quacy norms curb the banks in their liberty of capital structure. The enforcementof capital adequacy ratio may have negative impact on the profitability of the banks. It has been stated that agency costs between managers and shareholderstend to increase when capital ratios are higher due to the discipline provided bydebt repayment on managers' behaviour However, the increased surplus en-gendered as result of healthy bank-borrower relationship and enhanced monitoring laid down by the capital adequacy norms would have positive impact onthe banks' profitability Moreover, the capital adequacy norms target at sta-bility of the banks and thereby reduce the riskiness of the assets in the portfolioof the banks.
Management of liquidity and solvency ratios are vital for the commercial banks as it associated with their performances and reputations, especially with profitability ratios. If the banks have poor liquidity conditions, the regulators will penalize them and therefore it becomes imperative for the banks to keep a sound liquidity arrangement. Healthy financial performance has become a great challenge in the modern times as banks are characterised by the technological ad- vancements, high competition for consumer deposits and altering monetary policy that augments the liquidity, solvency and the profitability of the banks. The presentstudy attempts to evaluate the financial performance of selected Indian commercial banks using the financial ratios, and also examines the impact of liquidity, solvency and efficiency on the profitability of the selected Indian commercial banks by employing the panel data estimations, *viz.* the Fixed Effect and Random Effect models. The study will throw light on financial performance of the commercial banks which will help policy makers, regulator (Reserve Bank of India), Governments and other stakeholders to devise targeted policies and regulations that will dynamically stimulate the growth and sustainability of the commercial banks in the country. The study is of great importance for academics to compare the performances of various commercial banks and efforts should be made to solve the discrepancies in performances of those banks. Besides, the studyis immense help for the management and staff of commercial banks who will gain insight into how their institutions can effectively manage their financial ratios by appropriate practices to increase their profits.

Review of Literature

Examined the performance of Bahrain's commercial banks with respect to credit (loan), liquidity and profitability positions and found that the commercialbanks are relatively less profitable and have less liquid and exposed to risk. found that the operational efficiency, asset management and bank size are positively influenced the financial performance of the Omani commercial banks. Used financial ratios for the South Africa and found that banking performance was deteriorated significantly after the global financial crisis of 2007. Studied for seven Jordanian commercial banks and found that there is a strong negativecorrelation between ROA and bank size and with operational efficiency and positive correlation between ROA and asset management ratio. Examined the financial performance of five Palestine commercial banks and found that the credit risk, asset management, bank size and operational efficiency have a positiveassociation with bank performance. Evaluated the financial performance offoreign and domestic banks in Turkey using financial ratios and found that the management effectiveness, total assets, return on equity and asset quality of do-mestic banks are better than that of foreign banks. However, foreign banks havehigher capital adequacy ratio than domestic banks.

Found no significant relationship between the bank's performance and their key explanatory variables in Bangladesh. While Analysed for commercial banks in Bangladesh and revealed that the credit risk and bank size are significant and negatively related to ROA. Applied CAMEL model and found that profitability of Kenyan banks is significantly related to capital adequacy, as- set quality and management efficiency. However, the relationship with ownership is found to be insignificant.

focused on determinants of bank profitability in India and found that the profit margins deteriorated due to increased competition and changing face ofthe Indian banking. reported that the Indian public sector banks were most efficient than the private and foreign banks in terms of cost and profit efficiencies. examined the financial performance of SBI (State Bank of India) using the investment valuation ratio, profitability ratio, management efficiency ratio, balance sheet ratio, and cash flow indicators. They suggested that SBI's excellent performance can be attributed to the adoption of modern technology, banking reforms, and good recovery mechanisms has done comparative analysis of the financial performance of Indian commercial banks and disclosed that there is no statistically significant difference in the financial performance of the public and private sector banks in India. F ound no significant difference R n the profitability of Indian commercial banks in terms of net interest margin and re-turn on assets, but have significant differences in terms of return on equity. Recently, showed significant differences among the financial performance ofcommercial banks operating in India. Besides, evaluated the financial, operational, and managerial efficiency of the selected largest scheduled commercialbanks in India with different ownership structure, such as public (State Bank ofIndia), private (ICICI Bank), and foreign bank (Standard Chartered Bank). Thefindings revealed that there was no difference statistically among these banks interms of ratios and performance of sub-parameters namely, debt/equity ratio, gross non-performing assets/total assets, income interest/total assets, and liquid assetsto total deposits during the research. However, the study showed that the foreignbank is significantly more efficient than the private and public banks in terms ofprofitable banking business and converting deposits into higher earning advances. It is clear from the existing literature that the studies pertaining to the finan- cial performance of commercial banks across the globe, especially in Indian con-text, are performed based on the ratio analysis and CAMEL ranking method. Be-sides there have been studies which proved that there has been significant difference in the performance of public and private sector banks in India.

However, the analysis has been done on the basis of aggregate financial ratios of public and private sector banks and not on the basis of individual banks.Besides, there exist only few studies in the context of India that associates the liquidity, solvency and efficiency positions of the Indian commercial banks withtheir profitability ratio. Our study attempts to evaluate the financial performanceof selected Indian commercial banks for the period from 2012/13 to 2016/17. Thestudy comprises 16 commercial banks, 11 representing public sector and 5 fromprivate sector, and the financial performance of these banks are analysed using thefinancial ratios. In addition, the study investigates the impact of liquidity, solvency and efficiency on the profitability of the selected public sector banks and private sector banks, respectively, by employing the panel data estimations.

Methodology

To examine the financial performance of selected Indian commercial banks, thefinancial ratios of respective banks were used, *viz.* the liquidity ratio, represented by the quick ratio, current ratio and loans to deposit ratio, the profitability ratio,measured by the return on asset (ROA), return on equity (ROE), price-earnings ra-tio (P/E ratio), earnings per share (EPS) and net profit margin, the turnover ra- tio, measured by the total asset turnover ratio (TATR), the solvency ratio, meas-ured by the interest coverage ratio (ICR), and the capital adequacy ratio (CAR).The detailed description on the measurement of financial ratios is provided in **Appendix**. Considering data availability, the study comprised 16 commercial banks, 11 representing public sector and 5 from private sector.

The study covers the annual data for the period from 2012/13 to 2016/17 and the necessary information for this study was obtained from http://www.moneycontrol.com/ website. The One-way ANOVA has been usedto determine whether there is any significant difference between the means offinancial ratios of public and private sector banks. Besides, the study employedthe panel data estimations, *viz.* the Fixed Effect and Random Effect models toexamine the impact of liquidity, solvency and efficiency on the profitability ofthe selected public sector banks and private sector banks, respectively. The fixedeffect model takes into the firm specific effect and the random effect model consider the time effect.

The fixed effects model is defined as:

$$\Pi_{\iota\tau} = \alpha_\iota + \beta' \Xi_{\iota\tau} + \upsilon_{\iota\tau}, \quad \iota = 1,\Lambda, N; \quad \tau = 1,\Lambda,T \qquad (1)$$

where, Π_{it} is Return on Asset (ROA) of i^{th} bank of particular banking industry group in t^{th} period; X_{it} is vector of k explanatory variables for i^{th} bank of particu- lar banking industry group in t^{th} period, □ □ is parameter to be estimated and u_{it} is error term and assumed IN (0, σ^2)are constant coefficients specific to each bank of respective industry groups. Their presence assumes that differences across the considered banks of respective banking industry groups appear by means of differences in the constant term. These individual coeffi- cients are estimated together with vector of parameters *β*.

In the random effects case, the model is defined as:

$$\Pi_{\iota\tau} = \alpha_\iota + \beta' \Xi_{\iota\tau} + \upsilon_{\iota\tau}, \quad \iota = 1,\Lambda, N; \quad \tau = 1,\Lambda, T \qquad (2)$$

In the random effects model, the α_i are treated as random variables ratherthan fixed constants. The α_i are assumed to be independent of the errors u_{it}, *i.e.*

$\alpha \sim \text{IID}(0,\sigma^2)$ and $u \sim \text{IID}(0,\sigma^2)$. The Π , β', X are defined as earlier.

Since α_i are random, the errors now are $\upsilon_{it} = \alpha_i + u_{it}$ and the presence of α_i pro-duces a correlation among the errors of the same cross-section unit though the errors from the different cross-section units are independent. Therefore, the above model is to be estimated by the generalised least squares method [24].

The Hausman specification test is employed to compare the two categories of specifications. A fixed effect model assumes differences in intercepts across groupsor time periods, whereas a random effect model explores differences in error variances. The Hausman specification test evaluates the fixed versus random ef- fects under the null hypothesis that the individual effects are uncorrelated with the other regressors in the model [25]. If correlated (H_0 is rejected), a random effect model produces biased estimators, violating one of the Gauss-Markov as- sumptions; so a fixed effect model is ideal. Under the null hypothesis, the Haus- man statistic is asymptotically distributed as chi-square with k degrees of free- dom.

The general specification of the parameters of the model is as follows:

$$\text{ROA}_{it} = \alpha_\iota + b_1\text{QR}_{it} + b_2\text{TATR}_{it} + b_3\text{ICR}_{it} + b_4\text{CAR}_{it} + u_{it} \qquad (3)$$

where, ROA represents the return on assets of the selected public and privatesector banks in India. The explanatory variables, QR, TATR, ICR and CAR denotequick ratio, total asset turnover ratio, interest coverage ratio and capital adequa- cy ratio, respectively.

Empirical Results

Table 2 shows the liquidity ratios of selected commercial banks. Among the public sector banks, majority of them are having consistent current ratio during the study period. The current ratio of IDBI is found to be the highest during the year 2016 (*i.e.* 0.13) which is significantly rose from 0.03 in 2012. The Andhra Bank and the Indian Bank are maintaining a consistent current ratio of 0.03during the time period. The current ratios of private sector banks are found tobe relatively better than the public sector banks. They are able to meet their short term obligations with their current assets. The table results show a leaps and bounds in the quick ratios of public sector banks and private sector banks during the sample period. The liquid assets of the commercial banks keep fluctuating. The ICICI shows an increasing trend, *i.e.* 10.53 to 16.31 during the years 2012 to 2016.

The ideal loans to deposit ratio of the banks should ranges between 80 and 90 percent depending on the bank's business model [26]. Among the public banks, the SBI and IDBI were able to maintain this ideal position of loans to deposit ratio. All the public banks recorded a decreasing trend during the sample period. Under the private sector banks, the Axis Bank and Yes Bank found to have good record in the case of loans to deposit ratio. In nutshell, the private sector banks maintain a better position in the loans to deposit ratio than the public sector banks.

Table 3 reports the profitability ratios of selected commercial banks. The higher return on asset (ROA) implies that the banks are earningmore money on less investment. The public sector banks maintained the highest

Table 2. Liquidity ratios of selected commercial banks.

Name of the Banks	Current Ratio					Quick Ratio					Loans to Deposit Ratio				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Public Sector Banks															
SBI	0.04	0.03	0.04	0.07	0.07	12.15	13.88	10.78	10.84	11.94	85.17	86.84	84.47	83.56	80.38
Canara Bank	0.03	0.03	0.03	0.04	0.05	23.76	23.4	22.19	25	25.72	69.51	69.95	70.55	68.66	68.38
Indian Bank	0.03	0.03	0.03	0.03	0.05	19.43	21.67	22.7	25.51	24.1	74.57	74.89	74.83	73.35	71.16
IOB	0.03	0.03	0.02	0.04	0.04	30.65	30.91	33.17	25.98	26.88	79.12	78.18	73.34	70.68	69.13
Bank of India	0.03	0.04	0.03	0.05	0.05	28.08	23.0	29.03	30.9	29.3	76.88	76.86	76.6	72.85	68.91
Bank of Baroda	0.02	0.02	0.02	0.05	0.04	23.9	24.05	20.78	18.27	19.38	71.68	69.54	69.54	68.13	65.24
PNB	0.02	0.02	0.02	0.03	0.03	22.4	25.19	24.23	28.09	28.98	78.13	78.06	76.6	75.19	70.81
Andhra Bank	0.03	0.03	0.02	0.03	0.03	36.56	33.59	28.67	29.21	23.59	79.26	77.55	78.69	77.96	72.38
UBI	0.02	0.02	0.02	0.04	0.04	31.85	30.41	28.83	36.65	35.16	11.45	10.8	10.22	10.56	11.79
IDBI	0.03	0.03	0.03	0.13	0.13	24.82	23.11	22.95	23.35	16.93	86.12	85.12	81.93	80.73	76.13
Vijaya Bank	0.03	0.03	0.03	0.05	0.06	37.98	37.18	33.80	49.9	41.03	70.90	68.35	67.11	69.78	71.01
Private Sector Banks															
Axis Bank	0.03	0.03	0.03	0.07	0.10	20.1	18.57	20.64	25.74	17.1	77.58	80.03	84.71	91.1	92.17
ICICI Bank	0.09	0.09	0.06	0.13	0.12	10.53	11.31	13.81	14.97	16.31	99.25	100.71	104.72	105.08	98.69
Kotak Bank	0.04	0.03	0.02	0.07	0.06	18.95	17.39	14.83	15.61	18.09	97.75	92.18	88.99	86.57	86.04
KVB	0.03	0.03	0.02	0.04	0.02	32.54	32.41	30.34	30.42	32.68	75.5	77.02	79.26	79.34	77.08
Yes Bank	0.07	0.08	0.06	0.08	0.10	10.18	10.4	12.25	14.02	12.08	73.2	72.71	79.33	85.64	90.53

Table 3. Profitability ratios of selected commercial banks.

Name of the Banks	Return on Assets (%)					Return on Equity (%)					Earnings Per Share (Rs.)				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Public Sector Banks															
SBI	0.9	0.61	0.64	0.44	0.39	14.26	9.2	10.2	6.89	6.69	210.06	156.76	17.55	12.98	13.43
Canara Bank	0.7	0.5	0.49	−0.51	0.19	12.57	10.1	10.21	0	3.96	64.83	54.48	58.59	−53.61	20.63
Indian Bank	0.97	0.61	0.52	0.34	0.64	15.14	10.04	8	5.27	9.72	35.8	26.07	21.62	14.81	29.27
IOB	0.23	0.21	−0.15	−1.05	−1.38	−0.55	4.19	0	0	0	6.14	6.05	−3.68	−19.86	−15.78
Bank of India	0.6	0.47	0.27	−0.99	−0.24	11.49	9.12	5.43	0	0	47.79	44.74	26.57	−83.01	−15.72
Bank of Baroda	0.81	0.68	0.47	−0.8	0.19	14.01	12.61	8.53	0	3.43	109	107	16	−23.89	6
PNB	0.99	0.6	0.5	−0.59	0.18	15.19	9.69	8.12	0	3.47	139.52	93.91	16.91	−20.82	6.45
Andhra Bank	9.98	3.04	3.9	3.06	0.96	15.27	4.98	6.34	4.91	1.53	23.04	7.67	10.82	8.6	2.56
UBI	0.69	0.47	0.46	0.33	0.12	13.75	10.03	9.71	6.65	2.36	38.93	27.99	28.05	20.42	8.08
IDBI	0.58	0.34	0.24	−0.97	−1.42	9.66	5.11	3.85	0	0	14.7	8	5.45	−21.77	−25.05
Vijaya Bank	0.52	0.30	0.30	0.26	0.48	14.29	7.37	7.41	5.84	10.25	9.41	7.64	5.11	4.44	7.57
Private Sector Banks															
Axis Bank	1.46	1.02	0.94	0.36	0.3	15.64	16.26	16.46	15.46	6.59	119.67	132.56	31	34.59	15.4
ICICI Bank	1.55	1.64	1.72	1.34	1.26	12.48	13.39	13.89	11.19	10.11	71.93	84.65	19.13	16.65	16.77
Kotak Bank	1.62	1.71	1.76	1.08	1.58	14.37	12.23	13.19	8.72	12.35	18.31	19.62	24.2	11.42	18.57

KVB	1.17	0.83	0.87	0.98	0.98	17.83	12.91	10.93	12.41	12.03	51.35	40.08	39.86	46.59	9.95
Yes Bank	1.31	1.48	1.47	1.53	1.54	22.39	22.71	17.16	18.41	15.09	36.53	44.92	49.34	60.62	78.89

It is clear that the majority of the public banks show negative netprofit margin and they are not able to convert their sales into profits. Another reason might be due to the expansion activities of these banks. The IOB and IDBI have shown a drastic decrease in the Net profit margin. The private banks experienced leaps and bounds in its profit margins. However, they are earning muchbetter than their public counterparts from its sales. The ICICI bank earned 22.76 percent net profit margin in 2014 which was the highest. Generally, the banks with high P/E ratio suggest that investors are expecting higher earnings growthin the future compared to the banks with a lower P/E. The **Table 3** shows that majority of the public sector banks has negative P/E ratio due to their negative EPS. Besides, the private banks found to have consistent P/E ratio and they arerelatively better than the public sector banks during the study period.

Conclusions

The present study attempts to evaluate the financial performance of selected In-dian commercial banks for the period from 2012/13 to 2016/17. The study com-prises 16 commercial banks, 11 representing public sector and 5 from private sec-tor, and the financial performances of these banks are analysed using the financial ratios. The liquidity ratio, represented by the current ratio and loans to de- posit ratio, are found to be relatively better in the case of private sector banks. However, the quick ratios of private and public sector banks show leaps and boundsthroughout the study period. With respect to profitability ratio, it is observed that the private banks have a better ROA, ROE, P/E ratio and EPS than the pub-lic banks. However, the private banks experienced leaps and bounds in its profitmargins and the public sector banks have maintained a steady asset turnover ratiothroughout the study period. The private banks are found to be relatively betterthan the public sector banks with respect to solvency ratio and capital adequacyratio. The study shows that the financial performances of selected private sector banksare relatively better than the public sector banks throughout the sample period.In addition, the study examines the impact of liquidity, solvency and efficiencyon the profitability of the selected Indian commercial banks by employing the panel data estimations, *viz.* the Fixed Effect and Random Effect models. The empirical results from the panel data estimations revealed that the liquidity ratioand solvency ratio, and the turnover ratio and solvency ratio are found to have positive and significant impact on the profitability of selected public sector andprivate sector banks, respectively, bearing testimony to the fact that profitabilityis a function of those ratios.

Due to immense competition, the policy changes and the operational environment in which the Indian banking system is presently operating, there has been

an increased focus on liquidity, solvency, operational efficiency and profitability among the selected private sector banks. Most of the selected public sector banks have registered a significant improvement in their asset turnover ratio and profit margins, but the selected private sector banks continue to have still better profitability, liquidity, solvency and healthy capital adequacy ratios.

Most importantly, the increasing level of non-performing assets (NPAs) is themost challenging task faced by the Indian banking system, especially public sec-tor banks, and the same need to be addressed aptly. More Debt Recovery Tribunals (DRTs) should be established and no loan waivers under any circumstances to be undertaken. Besides, the vibrant policy measures have to be implemented to enhance the operational efficiencies of the selected public sector banks to merge the large number of unremunerative or loss making branches. Branches with low productivity and excess staffing and old traditional methodsof operations have to be replaced by strategic moves to gain competitive advan-tage. It is suggested that the public sector banks should take necessary steps to enhance their liquidity and solvency position to amplify their profitability. Theprivate banks should escalate their turnover and solvency position to augment their profits.

Limitation of the Study

The analysis and derived conclusions are based on the secondary data sources for the limited period. Besides, the present study is confined to bank-specific determinants of profitability (liquidity ratio, profitability ratio, turnover ratio, solvency ratio and capital adequacy ratio) and the external factors such as gross domestic product, inflation, stock market capitalization, etc. are not taken into con- sideration. Hence there is scope for further research pertaining to the subject with the inclusion of external factors in the model. Also the study can be extended for non-banking financial companies (NBFCs).

References

1. Haralayya, Dr. Bhadrappa, E-Finance and the Financial Services Industry (MARCH 28, 2014). Available at SSRN: https://ssrn.com/abstract=3844405 or http://dx.doi.org/10.2139/ssrn.3844405
2. Basha, Jeelan and Haralayya, Dr. Bhadrappa, Performance Analysis of Financial Ratios - Indian Public Non-Life Insurance Sector (April 30, 2021). Available at SSRN: https://ssrn.com/abstract=3837465

3. Haralayya, Dr. Bhadrappa and Saini, Shrawan Kumar, An Overview on Productive Efficiency of Banks & Financial Institution (2018). International Journal of Research, Volume 05 Issue 12, April 2018, Available at SSRN: https://ssrn.com/abstract=3837503