

# A comparative Analysis of liquidity, solvency and profitability of State-owned Commercial Banks (SCBs) and Private Commercial Banks (PCBs) of Bangladesh

Mohammad Main Uddin, Rabiul Islam, Md. Jamal Uddin, Md. Mostafizur Rahman & Mst. Helen Parvin

## Abstract

This study based on analysis of liquidity, solvency and profitability between state owned commercial banks (SCBs) and private commercial banks (PCBs). To obtain the empirical results secondary data is used from the annual reports of the banks. A financial statement analysis technique especially ratio analysis is applied. The analysis is shown by different tables and graphs and interpretations are made. Under this study liquidity ratios, profitability ratios and profitability ratios are drawn. After the analysis of liquidity SCBs are higher than PCBs. Under quick ratio PCBs is higher than SCBs. Cash flows from operations ratio had a fluctuating mode in all the banks from 2013-2017 but in 2017 PCBs are better than SCBs. Under solvency ratio PCBs in better position than SCBs. Under profitability ratio the gross profit margin of PCBs is higher than SCBs, in case of net profit margin it's fluctuating year to year and banks to banks. In case of earnings per share SCBs is far better than the PCBs. It is observed that the overall performance of commercial banks is comparatively better than state owned commercial banks. The main limitation of this study is small sample size that is only two state owned commercial banks and two private commercial banks are taken as sample. And the ratio analysis is conducted based on only 5 years' data. This study emphasis only quantitative variables but only quantitative variables are not adequate to build an overall measurement of financial presentation. To know the liquidity, solvency, profitability of the banks, future studies may be conducted in the same contest by comparing activities of foreign commercial banks, specialized banks and banks that have started their journey currently.

**Keywords:** Liquidity, solvency, profitability, performance, commercial bank.



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## Prelude

Banking system is reflected as the heart of an economy because of its role toward the mobilization of savings and investment as well the utilization of this country's resources. Liquidity, solvency and profitability analysis (performance and position analysis) of a bank is usually related to how well a bank can use its assets, shareholder's equity and liability, revenues and expenses. Financial performance and position analysis are a subjective measure of how well a firm can use assets from its primary mode of business and generate revenue. It is also used as a general measure of a firm's overall financial health over a given period of time and can be used to compare similar firms across the same industry. Basically, financial performance and position analysis means analysis of financial statement. A financial statement is a collection of data that is organized according to logical and consisting accounting procedure. The main purpose of financial statements is providing reliable data so that one can easily understand about financial performance and financial position. Financial statements include two basic statements a) Balance sheet b) Income statement.

- a) Balance sheet is a summary of organizations financial position on a specific date. That shows:  $\text{Total assets} = \text{Total liabilities} + \text{Owners equity}$ .
- b) Income statement is a summary of a firm's business revenues and expenses over a specific period.

Financial ratio analysis is one of the best tools of performance and position analysis of any bank. In order to determine the liquidity, solvency and profitability of between SCBs Janata Bank Ltd. (JBL), Agrani Bank Ltd. (ABL) and PCBs (Prime Bank Ltd. (PBL), Exim Bank Ltd. (EBL) ratio analysis is performed which help to make a judgment of how well the efficiency of the banks, its operation and management and how well the banks have been able to utilize its assets and earn profit. We used ratio analysis as tools for the measurement of liquidity position, asset management, profitability and debt coverage situation of the banks for performance evaluation. It measures the banks overall efficiency, performance and position. It determines of share market condition of bank. It also used to analysis the bank past and present financial performance and trend of financial position.

The primary purpose of this study is to get an idea about liquidity, solvency and profitability of SCBs and PCBs. The study mainly designed to know the financial performance and position between SCBs (JBL, ABL) and PCBs (PBL, EBL). The analysis of liquidity, solvency and profitability of the bank providing an assessment of the financial information that help to shareholders, creditors, Governments and other stakeholders. The basic objective of this study is to identify the comparison of liquidity, solvency and profitability of bank and more specifically it is tried to find the comparison between SCBs and PCBs. and also it tried to identify the liquidity, solvency and profitability of the four banks (JBL, ABL, PBL and EBL from the years 2013-2017) and interpretation of the results.

## Literature Review

Anamika, S. and AnilKumar, S (2016) analyzed bank- specific factors (bank size, profitability, cost of funding, capital adequacy) and macro-economic factors (deposits, GDP, inflation and unemployment). Findings reveal that bank ownership affects liquidity of banks. Except cost of funding and unemployment, bank size, deposits, profitability, capital adequacy, GDP and inflation significantly affect bank liquidity.

Ibrahim (2014) investigated a comparative performance evaluation of two banks in United Arab Emirates. Their studies focused that the measurement of the performance of two leading private sector commercial banks using five groups of financial ratios over the period 2004-2009 where liquidity, profitability and interest revenue of national bank of Abu Dabi is better than commercial bank of Dubai. Ionica, M. (2012) conducted a research paper to identify the factors that influence bank liquidity and result reflect the determinant is efficient liquidity management. Bhiya and Yesmin (2015) analyzed determination of bank financial performance: A comparative study between nationalized and local private commercial banks of Bangladesh. The results revealed that a significance positive relationship between capital adequacy and ROA for private commercial bank with national commercial bank. So, every financial institution needs to take qualitative variable for better financial performance and position. Marijana, Ć., Klime, P. and Sandra, P (2012) analyze the Profitability Determinants of the Macedonian Banking Sector in Changing Environment and conclude some determinants as operating expense management, solvency risk, liquidity risk, economic growth, banking system reform and concentration show significant effect on bank profitability.

Ibrahim (2015) analyzed a comparative performance evaluation between conventional and Islamic banking in United Arab Emirates. The results revealed that both banks scored high level of performance in one area than another. Dubai Islamic Bank is in a strong position compared with the Bank of Sharja in terms of overall stability. Rao (2014) scrutinized the performance of private and public sector banking system where compare the profitability risk and return and growth between SBI (public sector) and HDFC (private sector). The study focused that the deposit of SBI is more than HDFC. But does not have credit worthiness. So SBI need to develop creditworthiness. Bhandari (2010) analyzed a comparative financial performance analysis of Himalayan Bank Ltd. and Everest Bank Ltd. The results revealed that the average ratio of EBL is higher than HBL. But both banks should increase their current assets than profitability also increases. Rahman (2016) investigated financial performance analysis of scheduled commercial banks in Bangladesh. The study focused that Dutch Bangla Bank Ltd. is one of good performer bank. The study findings have discovered that maximum of the banks have revealed poor economic performance, negative economic value added (EVA) and undervalued market price per share. On the basis of the literature discussed above, this study wants to perform the analysis of liquidity, solvency and profitability between state owned commercial banks (Janata Bank Ltd. and Agrani Bank Ltd.) and commercial banks (Prime Bank Ltd. and Exim Bank Ltd.).

### **Methodology of the study**

In this study only secondary data have been used and the data have been collected from several reliable sources like annual reports of JBL, ABL, PBL and EBL. Further some books were used, articles, journals, reports and Websites regarding liquidity, solvency and profitability analysis. The instruments used to analyze the liquidity, solvency and profitability of the banks are Ratio Analysis and Trend analysis. Collected information has then processed and compiled with the aid of MS Word, Excel and related computer software. Detail analysis and interpretation have also been incorporated in the research paper. Collected data and information both from secondary sources are analyzed. I have used some techniques for the purpose of analysis. These are: Theoretical analysis, Tabular analysis and Graphical analysis.

### Comparative Analysis and Interpretation:

Name	Name of the ratio	2013	2014	2015	2016	2017
SCBs	<b>JBL</b> Net Working Capital (in million)	363055	405809	447496	498795	50541
	Current ratio	3.17	3.37	3.38	3.31	3.14
	Quick ratio	0.21:1	0.24:1	0.24:1	0.23:1	0.27:1
	Operating cost to income ratio	42%	47.7%	51%	56.5%	55%
	Cash flow from operations ratio	46.24%	10.02%	16.93%	9.14%	(13.76%)
	Debt to equity ratio	14.85	14.95	15.31	14.64	14.72
	Debt to total assets ratio	93.69%	93.73%	93.86%	93.60%	93.64%
	Equity to asset ratio	6.30%	6.26%	6.13%	6.39%	6.36%
	Interest coverage ratio	1.31	1.16	1.15	1.12	1.16
	Gross profit margin	58%	52.2%	49%	43.5%	45%
	Net profit margin	45.5%	18.6%	21.6%	11.3%	10.6%
	Return on assets	1.64%	0.61%	0.68%	0.33%	0.34%
	Return on equity	25.95%	9.70%	11.17%	5.23%	5.32%
	Earnings per share	86.82	20.02	24.48	13.63	14.27
ABL	Net Working Capital (in million)	259516	286116	340240	302658	315226
	Current ratio	2.89	2.82	2.98	2.16	2.05
	Quick ratio	0.21:1	0.23:1	0.21:1	0.14:1	0.14:1
	Operating cost to income ratio	42.98%	45.05%	56.28%	73.40%	65.02%
	Cash flow from operations ratio	23.59%	(1.01%)	6%	3%	1.26%
	Debt to equity ratio	11.53	11.56	11.69	16.09	15.52
	Debt to total assets ratio	92.01%	92.03%	92%	94%	94%
	Equity to asset ratio	7.98%	7.96%	7.87%	5.85%	6.05%
	Interest coverage ratio	1.31	1.08	0.97	0.67	1.55
	Gross profit margin	50%	48%	37%	20%	30%
	Net profit margin	48%	10%	3.40%	(32%)	28.54%
	Return on assets	2.07%	0.42%	0.12%	(1.10%)	1.03%
	Return on equity	25.97%	5.23%	1.56%	(18.90%)	16.95%
	Earnings per share	92.97	9.96	3.36	(33.35)	33.49
PCBs	<b>PBL</b> Net Working Capital (in million)	185498	182689	167375	158851	158426
	Current ratio	4.38	3.87	3.32	2.78	2.62
	Quick ratio	0.33:1	0.28:1	0.25:1	0.21:1	0.20:1
	Operating cost to income ratio	42.18%	49%	51.71%	53.75%	54%
	Cash flow from operations ratio	4.56%	3.64%	0.22%	9.93%	7.64%
	Debt to equity ratio	9.51	9.43	8.56	9.80	10.38
	Debt to total assets ratio	90.48%	90.41%	89.54%	90.74%	91.21%
	Equity to asset ratio	9.51%	9.59%	10.46%	9.26%	8.79%
	Interest coverage ratio	1.21	1.20	1.20	1.22	1.20
	Gross profit margin	58%	51%	48.2%	46.2%	46%
	Net profit margin	15.23%	18.38%	17.65%	18%	9.56%
	Return on assets	0.83%	0.87%	0.86%	0.80%	0.43%
	Return on equity	8.72%	9.13%	8.20%	8.65%	4.90%
	Earnings per share	1.98	2.18	2.11	1.18	2.13
EBL	Net Working Capital (in million)	115988	149827	162955	157638	172535
	Current ratio	2.56	2.93	2.73	2.33	2.20
	Quick ratio	0.30:1	0.37:1	0.28:1	0.27:1	0.23:1
	Operating cost to income ratio	40.21%	41%	41.50%	45.90%	46%
	Cash flow from operations ratio	0.30%	4%	11.65%	(4.09%)	3.94%
	Debt to equity ratio	8.54	9.13	9.55	10.03	11.07
	Debt to total assets ratio	89.52%	90.13%	90.52%	90.91%	91.72%
	Equity to asset ratio	10.48%	9.87%	9.47%	9.09%	8.28%
	Interest coverage ratio	1.21	1.28	1.23	1.32	1.32
	Gross profit margin	59.8%	59.7%	58.5%	54.4%	54%
	Net profit margin	22.75%	23.90%	19.11%	27.64%	29.92%
	Return on assets	0.96%	1.06%	0.79%	1.04%	0.98%
	Return on equity	9.20%	10.73%	8.30%	11.48%	11.93%
	Earnings per share	1.63	1.75	1.48	2.15	2.34

**Source: Author estimation from financial statements of annual report**

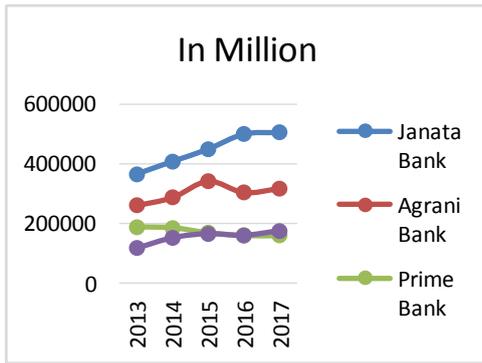


Figure 1: Net Working Capital

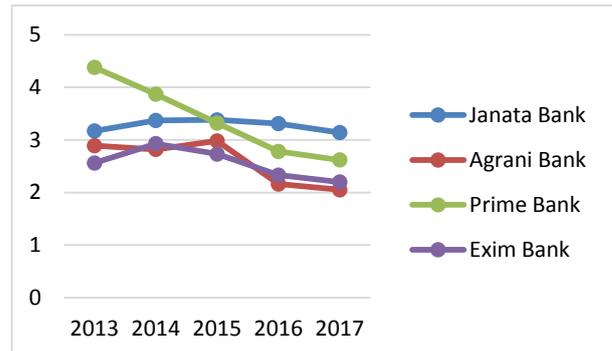


Figure 2: Current Ratio

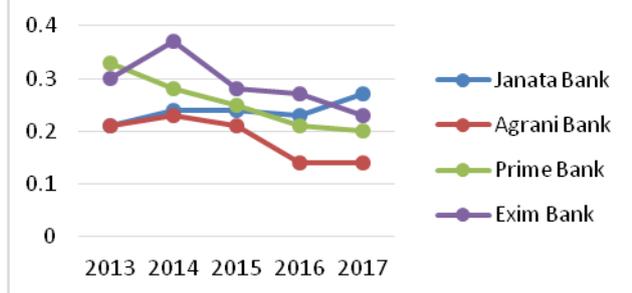


Figure 3: Quick Ratio

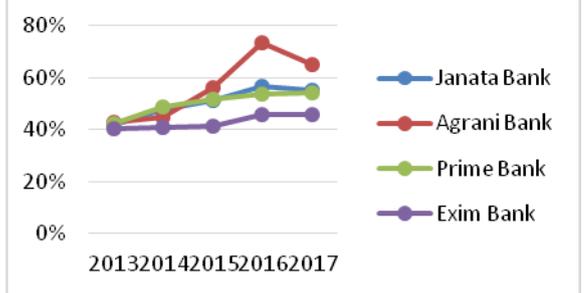


Figure 4: Operating Cost to Income Ratio

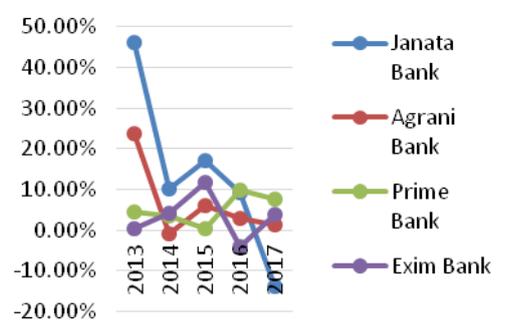


Figure 5: Cash Flows from Operations Ratio

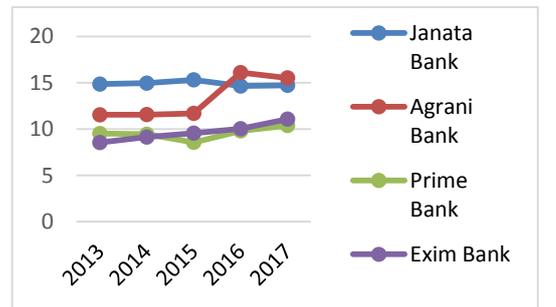


Figure 6: Debt Equity Ratio

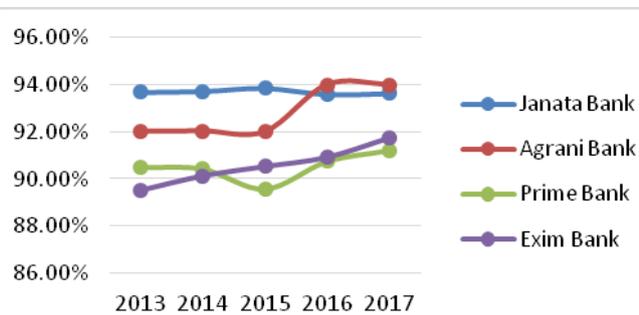


Figure 7: Debt to total Assets Ratio

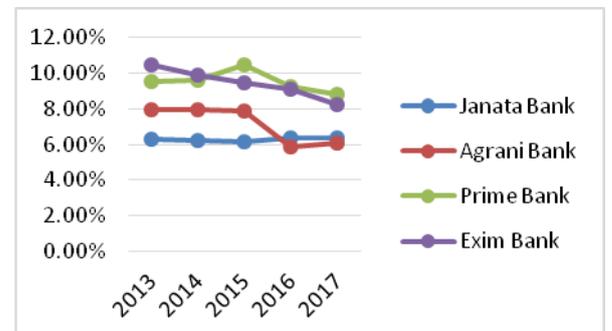


Figure 8: Equity Assets Ratio

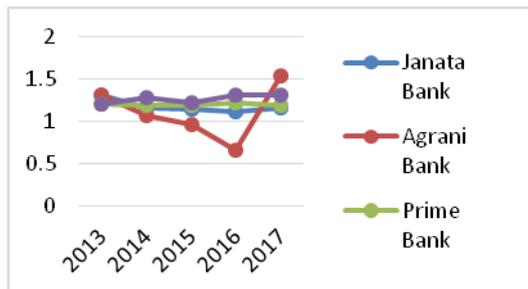


Figure 9: Interest Coverage Ratio

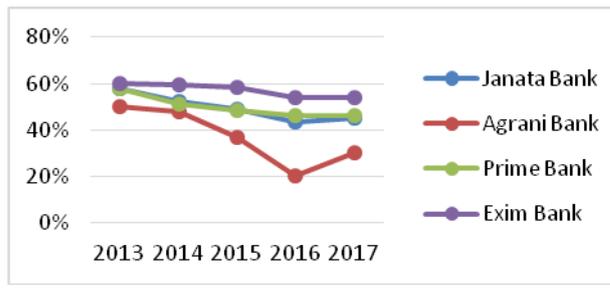


Figure 10: Gross Profit Margin

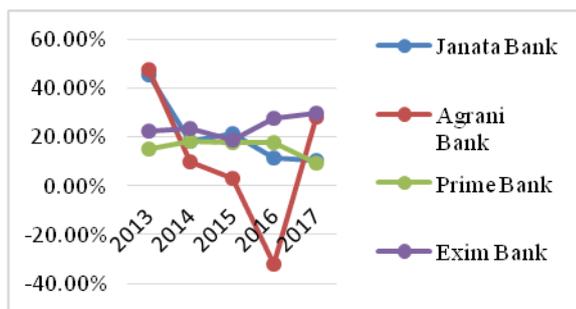


Figure 11: Net Profit Margin

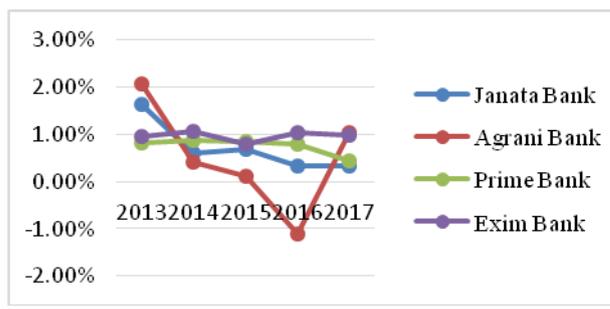


Figure 12: Return on Assets (ROA)

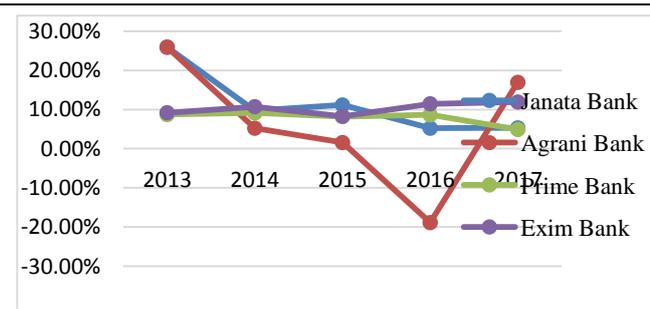


Figure 13: Return on Equity (ROE)

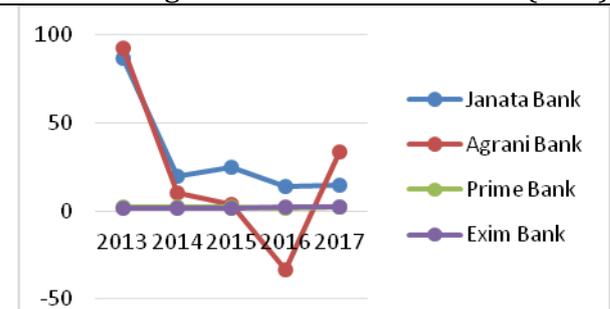


Figure 14: Earnings per Share (EPS)

**Analysis and Result Discussion**

The greater is the amount of net working capital, the greater is the liquidity of a bank. From the table and figure one it is found that the net working capital of JJBL has increased from 2013-2017 and has the best position than others. The net working capital of ABL. is comparatively lower than JBL but greater than commercial banks. So, the liquidity position of SCBs are higher than PCBs. From the table and figure two, we see that the current ratio of JBL and PBL was higher than ABL and EBL and the current ratio of all the banks is above the standard. From the analysis, we can see that the quick ratio of the four banks is below the standard though their current ratio is above the standard. In 2013-2015 the quick ratio was higher in PCBs than SCBs. The SCBs had an increasing trend of operating cost to income ratio from year 2013 to 2016 and decreased in 2017 but higher than PCBs. In 2017, the PCBs were performing better because they had lower operating cost to income ratio. So, it can be said that the PCBs are able to minimize its operating cost with higher operating efficiency during this time period.

In 2013-2016 the cash flow of JBL was higher but had a decreasing trend and in 2017 it had negative cash flows because of higher operating cost. In 2013 ABL had 23.59% cash flows from operations ratio which was good but in 2014, it had negative cash flows and in 2015-2017 cash flows were decreasing trend. The EBL had an increasing trend though had negative cash flows in 2016 that was 4.09% but in 2017 it has improved at 3.94%. Actually, the ratio had a fluctuating mode in all the banks from 2013-2017. But, in 2017 the liquidity position of PCBs is better than SCBs. From the figure we see that the PCBs had a lower debt equity ratio than SCBs in year 2013-2017. So, we can say that the debt equity ratio of PCBs is better comprising of SCBs which indicates the lower risk to the creditors and greater solvency. From the analysis, we see that the debt to total assets ratio is higher in SCBs comprising with PCBs in 2013-2017. So, the performance of PCBs is better which indicates that the cost of capital of private commercial banks is higher than SCBs. In Year 2013-2017, we can see that the equity assets ratio of PCBs is higher than SCBs. So, it can be said that the performance of PCBs is better which indicates a greater amount of total assets is funding by shareholder's equity.

The interest coverage ratio of SCBs was a decreasing trend from 2013-2016 though in 2017 the ratio had increased. The interest coverage ratio of PCBs was good and had a consistency from Year 2013-2017. From the figure we see that the gross profit margin of SCBs was in a decreasing trend from year 2013-2016 and increased in 2017 but comparatively lower than PCBs. On the other hand, the gross profit margin of PCBs was also in a decreasing trend from 2013 to 2017 but higher than SCBs. From the graph we see that in 2013 the net profit margin of SCBs were higher and after that it had decreased compared with 2013 and also negative (3.40%) in 2016 in ABL but in 2017 it had increased at 28.54%. On the other hand, the net profit margin of PCBs in 2013 was lower than SCBs but was an increasing trend and in 2017 the net profit margin of PBL decreased at 9.56%. On the basis of year 2017, the performance of ABL and EBL was better than others which indicates that net profit margin of the banks would ensure adequate returns to the owners. From the analysis, we can see that in 2013 the ROA of SCBs was higher than PCBs and after that it was decreasing mode and in 2016 it was negative in ABL but in 2017 the ROA of ABL had increased at 1.03% which was higher than others. But in 2014-2016, the ROA of PCBs was better and had a consistency though in 2017 the ROA of PBL and EBL was 0.43% and 0.98% respectively which was lower than ABL. On the basis of 2017 it can be said that the ROA of ABL and EBL was better than others which indicates that the bank utilized their assets properly. From the figure, we can see that the ROE of JBL and PBL in 2013 was so good and then in a decreasing trend and also negative in 2016 of ABL. But in 2017 the ROE of ABL was higher than others and the ROE of EBL was also good. So, the profitability of ABL and EBL was better than JBL and PBL which indicates that the owners fund has been utilized properly and the banks has earned a satisfactory return to the equity holders in 2017. The earnings per share of JBL was taka 86.82 in 2013 but after that it was decreasing and in 2017 it was 14.27 and was higher than PCBs. The EPS of ABL in 2013 was 92.97 and after that it was also decreasing and in 2016 it had negative EPS but in 2017 the EPS has increased at 33.49 which were also higher than PCBs. The EPS of PCBs was very lower comparative with SCBs. So, in case of EPS the profitability of SCBs is far better than PCBs.

## Conclusion

The study basically based on ratio analysis. The main purpose of this study was to analyze liquidity, profitability and solvency between SCBs (JBL and ABL) and PCBs (PBL and EBL)

from the year 2013 to 2017. Overall performance and position of the PCBs is comparatively better than the SCBs. To maintain the liquidity position, the banks need to take necessary steps and have to ensure the standard 2:1 for current ratio and 1:1 for quick ratio. The SCBs need to reduce their operating cost by increasing total operating income and it can be increased by enhancing interest income or reducing interest expenses. All the banks need to ensure the stability of cash flows from operations ratio and the SCBs have to increase the actual cash flows from operations. The SCBs need to reduce the debt-equity ratio for ensuring greater solvency and lower risk to the creditors. It can be reduced by increasing shareholder's equity or reducing debt capital for their financing. The SCBs also need to reduce the debt to total assets ratio which will reduce their cost of capital and it can be reduced by increasing total assets or reducing debt capital. The SCBs need to increase equity-assets ratio because of greater solvency to the creditors and it can be increased by increasing equity capital to their funding. The SCBs have to increase the coverage ratio for satisfying their creditors. The SCBs have to increase their profitability by increasing gross profit. The JBL and PBL have to increase their net profit margin for ensuring adequate return to the owners. The JBL and PBL have to increase their ROA for ensuring that they are utilizing their assets properly. The JBL and PBL also have to increase their ROE for ensuring that the owners fund has been utilized properly and the banks has earned a satisfactory return to the equity holders The PCBs need to increase their earnings per share for ensuring a greater amount of return to the shareholders.

### Future Work

This study emphasis only quantitative variables but only quantitative variables are not adequate to build an overall measurement of financial presentation. The measurement of financial performance may also depend on a broad range of qualitative elements (for example both banks have not available credit card and booth system and online system to withdraw money in case of emergency), economic and political conditions. Further work needed to make strong financial condition by taking into other financial measurement factor like mean, standard deviation and coefficient of variation etc. Again, to know the liquidity, solvency, profitability of the banks, future studies may be conducted in the same contest by comparing activities of foreign commercial banks, specialized banks and banks that have started their journey currently.

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