Assessing Financial Performance of Mobile Banking Services Organization in Bangladesh

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ABSTRACT

Mobile banking service organization are operating business activities in Bangladesh for an era. The study aims to evaluate the financial performance of mobile banking services organization in Bangladesh experiencing the bKash limited. Financial ratio analysis and DuPont analysis have been used to assess the financial performance of the organization on the basis of secondary data. Financial ratio analysis covers liquidity, solvency, activity, and profitability ratio. DuPont analysis comprises return on equity (ROE) and return on assets (ROA). The study also compares the financial performance of bKash limited between the first four years and the last four years. F statistics are used to test the hypothesis. The findings in liquidity and solvency ratios reveal that the organization is in a decent position to settle the debt. The activity and profitability ratio finds that assets turnover and net profit margin were dissatisfactory. DuPont analysis shows that the organization was inefficient in operating activities and asset utilization. The study finds that there is no significant difference in financial performance between the first and last four years. The study concludes that the management of bKash limited should focus on improving the efficiency in operational activities and asset utilization for enhancing profit and maintaining a healthy financial position.

Keywords: Activity, DuPont Analysis, Liquidity, Profitability, Solvency.

I. INTRODUCTION

Mobile banking services are important tools of financial inclusion in the area of financial sectors. It plays a crucial role in the economy for the sustainable development of financial sectors in Bangladesh. Financial and non-financial organizations are now providing banking services to unbanked customers through cell phones. The survival of these organizations in today’s competitive era depends more on their financial performance. Financial statements are treated as yardsticks for determining the financial condition of the organization as well as evidence of carrying out the business operations in future periods (Prabowo & Korsakul, 2020). A healthy financial structure signifies an organization’s financial viability as well as stability. Financial stability is associated with the ability to generate profit, increase the amount of invested capital and the capacity to repay the short and long-term debt of an organization (Myskova & Hajek, 2017).

Financial performance is an organization’s overall financial health during a stipulated period of time. Analysis of financial performance is the way of assessing the financial and operational characteristics of an organization from accounting and financial statements. The aim of such analysis is to measure the efficiency, effectness, and performance of an organization, as reflected in financial records and reports (Megaladevi, 2015). The stakeholders like management, shareholders, investors, policy makers, and other parties require to know the overall financial performance of the organization for a loan, investment, financing, and granting credit.

Mobile banking services have been started at the beginning of 2011 in Bangladesh as a separate product of banks to provide comparative benefits to the customers (Financial Stability Report, 2020). Subsequently, non-banking organizations and bank led separate institutions to start mobile banking services operations with the permission of the central bank of Bangladesh. bKash limited is, BRAC bank led, mobile banking service organization which holds the leading position in the market. The service tenor of bKash limited almost reached an era. bKash limited is passing through ups and downs during its operation period. So, it is necessary to assess the financial performance of bKash limited. That’s why the study attempts to assess the financial performance of bKash limited for a period of 08 (eight) years from 2013 to 2020 through financial ratio analysis and DuPont analysis. The study also aims to investigate the organization’s comparative financial performance between first four years and last four years during the study period. Financial ratio analyses assess the ability of organization to meet the current obligation, operating efficiency, effectiveness of financial decisions and its performance (Nataraja, Chilale, & Ganesh, 2018). DuPont analysis measures the operating efficiency as well as asset management capacity of organization which improves future profitability and the return to shareholders (Doorasamy, 2016; Shahnia & Endri, 2020).
II. REVIEW OF RELATED LITERATURE

Rinaldo and Endri (2020) examine the financial performance of plantation companies in Indonesia by using financial ratios consisting of profitability, liquidity, solvency, and activity. The study finds that the solvency ratio i.e., debt asset ratio and the debt-equity ratio was high whereas the profitability performance fluctuated during the study period. On the other hand, the liquidity and activity ratio shows that the companies have enough liquid assets to meet the short-term debt. In another study, Firdaus and Endri (2020) used this set of accounting ratios to analyze the financial statement of Indonesian bank BUKU IV. Prabowo and Korsakul (2020) also use similar types of financial ratios along with DuPont analysis to investigate the financial performance of mining companies in Indonesia for five years from 2013 to 2017. The study results that profitability ratio, solvency ratio, liquidity ratio, activity ratio, and DuPont analysis fluctuated in all the mining companies throughout the study period. On the basis of DuPont analysis, the suggestion given in the paper is to improve asset management as it generates operating profit for the organization.

Nataraja et al. (2018) investigated the financial performance of selected commercial banks in India through multiple regression analysis. In the study, return on assets, return on equity, bank size, operational efficiency, credit risk, debt ratio, and asset management were the determinants of financial performance analysis. The paper results that all the determinants had a significant impact on the financial performance of the banks.

Srinivasan and Britto (2017) perform a comparative analysis of the financial performance of private and public sector banks in India by using financial ratios. The study examines the effect of liquidity, solvency, and efficiency on the profitability performance of banks by applying panel data regression analysis. The panel data analysis presents that liquidity, solvency, and efficiency have a positive effect on the profitability of banks. The study reveals that private banks are comparatively better position in respect of solvency and capital adequacy ratios the public banks. The paper suggests that public sector banks should take significant steps to increase their solvency and liquidity position for enhancing profitability and the private sector banks should improve operating efficiency and liquidity to extend their profit.

Megaladevi (2015) conducted a study on the financial performance evaluation of a selected paper company for a period of ten years. The study evaluates financial performance in terms of liquidity, solvency, financial efficiency, and profitability through the ratio analysis. Linear multiple regression, t test, and descriptive statistics were used in the study. The findings show that the liquidity position of the company was so strong but the trend of financial stability was downward during the study period.

Hawaldar, Lokesh, Kumar, Pinto, and Sison (2017) evaluate the financial performance of commercial banks in the Kingdom of Bahrain from the year 2001 to 2015 through ratio analysis on the basis of capital adequacy, profitability, leverage, liquidity, and operating efficiency of the bank. The study reveals that banks’ performance was satisfactory in respect of profitability and operating efficiency, as well as capital adequacy, were correlated with profitability.

Mustafa and Taqi (2017) clarify that the performance of an organization relies on a few factors viz., managerial effectiveness, operating efficiency, customer satisfaction, service quality, and profitability. The study investigates the performance of Punjab national banks by regression analysis. The study shows that profitability was influenced strongly and negatively by advances and deposits of the bank. The empirical result presents that the financial efficiency and growth rate of the bank were well but the profitability performance was poor during the study period. The paper highlighted that banks are the key players in the financial market which also have a huge contribution to the financial system of an economy.

Widyastuti (2019) measures the effect of liquidity, activity, and leverage on the financial performance and value of Food and Beverage Companies enlisted in the Indonesian stock exchange. The study proves that activity and leverage have no significant impact on the financial performance and value of the company. The findings of the study result that liquidity has a significant and positive effect on financial performance and that financial performance is significantly related to firm value. Nugraha, Sulastrri, Nugraha, Puspitasari, and Putra (2020) find that leverage and liquidity simultaneously have no impact on the company’s financial performance. The study recommends that companies may earn more profit if they can manage long-term debt efficiently.

III. RESEARCH GAP

From the review of related literature, it is intimated that most of the paper focused on analyzing or evaluating the financial performance of core banks either private or public commercial banks. Mobile banking services organization is a separate entity or in some cases a subsidiary of a core banking organization. Mobile banking services organizations were highlighted in the various studies in customers’ perspectives rather than focusing on organizations’ financial performances like operating efficiency, management efficiency, solvency, liquidity, or profitability. Very few studies assessed a little part of financial performance like profitability analysis, but not assessed the overall financial performance of mobile banking services organizations. The current study aims to fill this gap and assess the financial performance of mobile banking services organization in Bangladesh.

IV. RESEARCH QUESTIONS

The prime question of the study is to assess the financial performance of mobile banking services organization in Bangladesh particularly of bKash limited during the period 2013 to 2020. Other few specific questions of the study are as follows:

i. What are the liquidity, solvency, activity and profitability performance of bKash Limited during the study period?

ii. Is there any difference of financial performance of bKash Limited between first four years and last four years of the study period?
V. RESEARCH OBJECTIVES

The prime aim of the study is to assess the financial performance of mobile banking services organizations in Bangladesh with special reference to bKash Limited for a period of eight years from 2013 to 2020. The following specific objectives are taken under consideration for the study:

i. to investigate the liquidity, solvency, activity, and profitability performance of bKash Limited for the study period;

ii. to evaluate the operating efficiency and asset management quality of bKash Limited throughout the study period by DuPont analysis; and

iii. to compare the financial performance of bKash Limited between the first four years and the last four years of the study period.

VI. HYPOTHESIS OF THE STUDY

H0: There is no significant difference in the financial performance of bKash Limited between the first and the last four years of the study period.

VII. METHODOLOGY

The study is quantitative and empirical in nature. The purposive sampling technique is used for the study. There are fifteen (15) mobile banking services providers in Bangladesh out of which bKash Limited is selected on a convenient sampling basis. The study is basically based on secondary data collected from published annual reports of BRAC Bank Limited, published literature, articles, journals, and banks’ websites.

The study covers a period of eight operational years from 2013 to 2020. The study periods have been divided into two sample units for comparing financial performance between the first four years i.e., 2013 to 2016 (Sample I), and the last four years i.e., from 2017 to 2020 (Sample II).

Collected data has been analyzed by using different statistical tools such as Descriptive statistics i.e., Mean, Standard Deviation, and Coefficient of Variation (CV); and F statistics for testing the hypothesis. DuPont analysis on the basis of ROA (Return on Assets) and ROE (Return on Equity) and relevant financial ratios like Liquidity ratio (Net Working Capital and Current Ratio); Solvency ratio (Debt Asset Ratio and Debt Equity Ratio); Activity ratio (Total Asset Turnover Ratio and Working Capital Turnover Ratio); and Profitability ratio (Gross Profit Margin and Net Profit Margin) have been used to examine the financial performance of bKash Limited.

VIII. RESULTS

A. Financial Ratio Analysis

The financial performance of bKash limited has been assessed by using the following four relevant accounting ratios i.e., liquidity ratio, solvency ratio, activity ratio, and profitability ratio.

1) Liquidity Ratio

A liquidity ratio is an important tool for measuring the financial performance of an organization. It indicates the efficiency of working capital management and the strength of the payment of the short-term debt by the availability of the short-term resources of the organization. The liquidity ratio includes net working capital and current ratio. Networking capital is calculated by subtracting current liabilities from current assets. The current ratio is determined by dividing current assets by current liabilities.

| Year  | Net Working Capital (NWC) (Amount in Million) | Current Ratio (CR) |
|-------|---------------------------------------------|-------------------|
| 2013  | 635.10                                      | 114.20            |
| 2014  | 1,636.16                                    | 121.76            |
| 2015  | 1,590.16                                    | 113.07            |
| 2016  | 1,756.98                                    | 109.12            |
| 2017  | 1,932.48                                    | 107.82            |
| 2018  | 8,910.35                                    | 127.72            |
| 2019  | 7,618.38                                    | 119.54            |
| 2020  | 5,820.55                                    | 111.31            |
| Average | 3,737.52                                      | 115.57            |
| S.D.  | 2,999.81                                    | 6.42              |
| C.V   | 80.26                                        | 5.56              |
| F Cal | 34.37                                        | 2.83              |
| F Tab | 9.28                                         | 9.28              |

Source: Author calculation based on financial data.

2) Solvency Ratio

The solvency ratio is another key determinant of assessing the financial performance of an organization. It indicates how an organization manages assets and capital with debt. It is measured by two tools here firstly Debt Asset Ratio (DAR) and secondly Debt Equity Ratio (DER). DAR is determined by dividing total debt by total assets and multiplied by 100. Similarly, DER is calculated hereby by dividing total debt by total equity and then multiplied by 100.

| Year  | Debt Asset Ratio (DAR) | Debt Equity Ratio (DER) |
|-------|------------------------|------------------------|
| 2013  | 82.06                  | 457.36                 |
| 2014  | 78.84                  | 372.65                 |
| 2015  | 84.44                  | 542.49                 |
| 2016  | 88.22                  | 749.09                 |
| 2017  | 88.96                  | 805.45                 |
| 2018  | 75.04                  | 300.57                 |
| 2019  | 79.55                  | 388.96                 |
| 2020  | 84.89                  | 561.90                 |
| Average | 82.75                  | 522.31                 |
| S.D.  | 4.49                   | 168.50                 |
| C.V   | 5.43                   | 32.26                  |
| F Cal | 2.37                   | 1.90                   |
| F Tab | 9.28                   | 9.28                   |

Source: Author calculation based on financial data.

3) Activity Ratio

Activity ratio is another determinant of assessing the financial performance of any organization. It consists of the total assets turnover ratio and working capital turnover ratio. The total asset turnover ratio is calculated by dividing revenue by total assets. And the working capital turnover ratio is calculated by dividing revenue by working capital.
The DuPont analysis includes return on equity (ROE) and return on assets (ROA). ROE shows how much profits are earned from the shareholders’ funding and ROA represents how much return is earned by the organization from the total assets with efficient management.

### 4) Profitability Ratio

The most important criteria for measuring the financial performance of an organization are the measurement of profitability performance. Profitability performance is measured here by the gross profit margin (GPM) ratio and net profit margin (NPM) ratio. GPM is calculated by dividing gross profit by revenue and then multiplied by 100. NPM is calculated by dividing net profit by total income and then multiplying by 100.

| Year | Gross Profit Margin (GPM) | Net Profit Margin (NPM) |
|------|---------------------------|------------------------|
| 2013 | 11.12                     | (5.64)                 |
| 2014 | 16.72                     | 2.95                   |
| 2015 | 18.35                     | 2.47                   |
| 2016 | 19.21                     | 2.91                   |
| 2017 | 26.48                     | 3.12                   |
| 2018 | 27.14                     | 1.04                   |
| 2019 | 21.94                     | (2.83)                 |
| 2020 | 27.34                     | (2.86)                 |
| Average | 21.04                     | 0.15                   |
| S.D. | 5.42                      | 3.20                   |
| C.V  | 25.76                     | 2.203.01               |
| F Cal| 2.04                      | 2.02                   |
| F Tab| 9.28                      | 9.28                   |

Source: Author calculation based on financial data.

### B. DuPont Analysis

DuPont analysis is used to measure the performance of an organization’s asset management and operating efficiency. The DuPont analysis includes return on equity (ROE) and return on assets (ROA). ROE shows how much profits are earned from the shareholders’ funding and ROA represents how much return is earned by the organization from the total assets with efficient management.

### IX. Discussion

Table I shows that the liquidity ratio consists of net working capital and current ratio. The first measures of liquidity performance are the networking capital of the organization. The average net working capital during the study period is 3,737.52 million whereas the minimum is 635.10 million and the maximum is 8,910.35 million for the years 2013 and 2018, respectively. The position of net working capital from the year 2013 to 2017 was very low but subsequently increased at a massive rate. It depicts that the organization improves in operational activities and succeeds in rising operational funds which might be invested in the future for more earnings. The standard deviation and coefficient of variation are 2,999.81 and 80.26, respectively which implies the efficiency in the management of current assets and current liabilities.

Hypothesis result: The table value of F for 3 d.f. at 5% level of significance is 9.28. The calculated value is 34.37 which is higher than the table value. Therefore, the null hypothesis is rejected. So, there is a significant difference in networking capital between the two sample periods.

The second measures of liquidity performance of bKash limited are the current ratio (CR). The results in the current ratio show that it fluctuates throughout the study period. The minimum and maximum ratios are 107.82 & 127.72 for the years 2017 & 2018 respectively, whereas the average ratio is 115.57. The current ratio for the years 2016 and 2017 was comparatively lower than the remaining years. The standard deviation of 6.42 and C.V 5.56 implies that the organization is in a good position to pay current liabilities by its available assets.

Hypothesis result: The calculated value (2.83) of F for 3 d.f. at 5% level of significance is lower than the table value (9.28). It means the null hypothesis is accepted. Thus, there is no significant difference in the current ratio between the sample periods.

Table II firstly shows the results in the calculation of debt assets ratio (DAR). The maximum and minimum ratio is 75.04 & 88.96 for the year 2017 and 2018 respectively. The average ratio is 75.04 & 88.96 for the year 2017 and 2018 respectively, whereas the average ratio is 115.57. The current ratio for the years 2016 and 2017 was comparatively lower than the remaining years. The standard deviation of 6.42 and C.V 5.56 implies that the organization is in a good position to pay current liabilities by its available assets.

Hypothesis result: The calculated value (2.83) of F for 3 d.f. at 5% level of significance is lower than the table value (9.28). It means the null hypothesis is accepted. Thus, there is no significant difference in the current ratio between the sample periods.

Table II firstly shows the results in the calculation of debt assets ratio (DAR). The maximum and minimum ratio is 75.04 & 88.96 for the year 2017 and 2018 respectively. The average ratio is 82.75 which indicates the organization highly depends on debt financing. Higher DAR means a greater risk to the organization in operation. The S.D and C.V are 4.49 and 5.43 showing that debt and assets are both inconsistent during the study period.

Hypothesis result: The calculated value (2.37) of F at a 5% level of significance is lower than the table value (9.28) which means the null hypothesis is accepted and there is no significant difference in DAR for the sample periods.
The second ratio shows the result in debt-equity ratio (DER). DER represents the organizations’ ability to settle a long-term debt. The average ratio in DER is 522.31, S.D and C.V is 168.50 & 32.26 respectively. DER has fluctuated during the study period; in some years the rate was much higher compared to others. The higher result in DER presents the organization depends more on debt funding than equity funding. It means the organization has to pay more interest to the debtor which minimizes the profit.

Hypothesis result: F calculated value is 1.90 and table value is 9.28 is calculated value is lower than the table value. So, the null hypothesis is accepted. There is no significant difference in DER between the sample periods.

Table III represents the activity ratio of bKash limited for the study period. The first activity ratio represents the total asset turnover ratio (TATR). Results in TATR show that the ratio is gradually decreasing from the year 2014 to 2020 with the exception in 2017. In the first five years, the total assets turnover ratio was higher than the rest of the years. Higher TATR means greater revenue and lower TATR means lesser revenue from the utilization of the organization’s assets. The average TATR is 0.52 times and the results in TATR from 2018 to 2020 were consecutively below average and in decreasing trend. The standard deviation and coefficient of variation were 0.08 and 15.46 implying the inconsistency in generating revenue from total assets. Total assets turnover was in decreasing trend, that is the revenue-generating capacity from the utilization of assets were fallen throughout the study period.

Hypothesis result: The calculated value of F for 3 d.f. at 5% level of significance is 11.30 which is higher than the table value (9.28). Therefore, the null hypothesis is rejected. So, there is a significant difference in total assets turnover of bKash limited between the first four years and the last four years.

The second activity ratio shows the working capital turnover ratio (WCCTR). Results in WCCTR indicate ups and downs during the study period. The minimum ratio was in 2018 (2.16) and the maximum ratio was in 2017 (8.03). Whereas the average ratio was 4.72, the standard deviation and coefficient of variation were 1.89 and 39.99 respectively. It represents that the revenue earning capacity of the organization was consistent during the study period by effective and efficient working capital management.

Hypothesis result: The calculated value (3.60) is less than the table value (9.28) at a 5% level of significance. So, the null hypothesis is accepted. That is, there is a significant difference in working capital turnover between the first and last four years of the study period.

Table IV shows the results of profitability ratios firstly the gross profit margin ratio and secondly the net profit margin ratio. Results in GPM represent that the gross profit percentage was good and consistent throughout the study period. The average gross profit margin was 21.04% whereas the minimum was 11.12% and the maximum was 27.34% in the years 2013 and 2020, respectively. The gross profit margin trends are raising upward without exception in 2019. The carrying S.D and C.V was 5.42 and 25.76 showing the consistency of gross profit and revenue during the study period.

Hypothesis result: The F table value (9.28) is higher than the calculated value (2.02) for 3 d.f at a 5% level of significance indicating that the null hypothesis is accepted. So there is no significant difference in the gross profit margin of bKash limited for the sample periods.

The second ratio results in the profitability ratio are net profit margin indicates that the percentage of net profit over total income was negative in the year 2013, 2019, and 2020 at -5.64%, -2.83% & -2.86%, respectively. The highest NPM was in 2017 (3.12%) followed by 2014 to 2016 with an increasing trend. The standard deviation and coefficient of variation were 3.20 and 15.30 implying the inconsistency of the net profit margin during the study period.

Hypothesis result: The calculated value of F at a 5% level of significance is 2.02 whereas the table value is 9.28 which means the null hypothesis is accepted. So there is no significant difference in the net profit-earning capacity of bKash limited during the sample periods.

From the calculation in Table V, the results in ROE show greater ups and downs during the study period. The highest and lowest ROE is 15.84% & -21.00% for the years 2017 and 2013, respectively. Financial leverage and assets turnover were simultaneously positive and consistent during the period whereas the profit margin was stable from the year 2014 to 2018 but negative in 2019 & 2020 which largely affected ROE during this year. The organization fails to perform operating activities effectively and efficiently during these years resulting in negative ROE.

The highest ROA was in 2014 @1.98% but afterward sloped down to the following years with a negative percentage at the end. The results clearly show that the organization could not show the efficiency and effectiveness in asset management. The organization fails to generate profit by utilizing assets during the study period.

X. CONCLUSION AND RECOMMENDATION

Mobile banking service organizations are operating business activities for an era. This organization contributes to the economy by value-adding in financial sectors. It also mobilizes resources for the mainstream financial systems through the collection of funds from unbanked people in Bangladesh. However, the study aims to assess the financial performance of mobile banking services organizations, particularly the bKash limited for the latest eight years i.e., from 2013 to 2020. Financial ratio analysis and DuPont analysis have been used to assess the financial performance of the organization. The results in liquidity and solvency ratios reveal that the organization is financially in a strong position to settle the short and long-term debt from the available resources. The results in activity ratio find that the total assets turnover was in negative growth which proves the inefficiency of assets management. On the contrary, working capital turnover represents that the revenue earning capacity of the organization was consistent during the study period for effective and efficient working capital management. The findings in profitability ratio results that the gross profit margin was satisfactory but the net profit margin was unsatisfactory due to the negative profit margin in last recent years of the study period. DuPont analysis reveals that the organization failed to prove the operating efficiency as well
as asset management quality. The study recommends that the organization should concentrate on improving the effectiveness and efficiency of operational activities as well as assets utilization for raising the profitability and profit margin. There is a further research scope to add more parameters in ratio analysis and compare the financial performance between banking and non-banking mobile service organization in Bangladesh.

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