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Impact of Cash Management on Bank Financial Performance: A Study on some selected Commercial Banks in Bangladesh

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Abstract: *Commercial banks ensure their short-term solvency through handling cash management issue precisely. Financial performance of commercial banks may be manipulated through check and balance in cash management. The prime aim of this research is to check out the effect of cash management on financial performance of commercial banks in Bangladesh. Tobin's Q is the proxy of financial performance of commercial banks in Bangladesh that also explained variable in current study. Cash flows from operating activities to total assets , cash flows from investing activities to total assets, cash flows from financing activities to total assets positively and year ended cash balance to total assets are explanatory variables which are the proxy of cash management of commercial banks in Bangladesh. Besides this, size, age and leverage of commercial banks are also incorporated as control variables in present study. E-views 12 is used for analyzing the collected data. Result outline that value of the R Square (R^2) is 0.3983 which means explanatory variables able to explain 39.83% variation of commercial banks performance (Tobin's Q) in Bangladesh. Cash flows from financing activities to total assets positively (0.045964) and year ended cash balance to total assets (0.361641) negatively impact on commercial banks performance in Bangladesh to what end are empirically noteworthy at 5% and 1% level successively. So researcher suggests that commercial banks in Bangladesh should prudently manage cash for uplifting their financial performance.*

Keywords: Cash Management, Financial Performance, Total Assets, Equity, Tobin's Q.

INTRODUCTION

Banks play crucial role as a middleman in channelizing accumulated funds as a lender to different parts of the economy. In any country the banking industry serves as the foundation of the financial system. In raising economies where there is scarce of the financial resources to contribute to economic progress and advancement may be able to get credit from the banking sector (Imran & Nishat, 2013; & Tariq *et al.*, 2021). Literature has emphasized the significance of banks performance to financial upliftment and economic growth in a country (Levine, 1997). It is well known in the literature that cash management is crucial to the financial performance of contemporary banking institutions. In bankers view point, cash management refers to a firm's capacity to devote its available funds effectively in order to pay operating charges, make investments, and return to common stockholders and maintaining enough reserves. Through producing sufficient cash flow, a firm is able to fulfill its ordinary operating expenses and avoid incurring debt. The firm gains greater control over its operations as a result. If the commercial banks are not capable to generate enough cash to cover its expenses, it may be difficult for it to carry out its regular operations, including effective maintenance of bank services, the purchase of necessary tools and equipment for banking operations. Due to insufficient cash management commercial banks cannot provide loans to its clients as per their requirement, have poor budgetary control as well as not able to maintain an efficient accounting system. Besides theses due to inefficient cash management commercial banks may face liquidation, merger, or even winding up. As it pertains to the everyday operations, preservation, and expansion of the business, cash is essential for every corporation. The achievement of this growth, strength, and financial performance relies heavily on a proper cash management. Determining the extent of a bank's liquidity, therefore, requires the implementation of appropriate cash management practices. In addition to guaranteeing proper liquidity and a successful portfolio, the major goal of keeping cash on hand is to satisfy an organization's ongoing financial needs. Commercial banks along with deposit-collecting financial firms should try to maintain required amount of cash and cash equivalent assets for fulfilling the liquidity demands of depositors, creditors, stockholders along with other claimants. This is feasible if a bank adopts the permitted financial performance criteria necessary to control the ratio of operational cash to overall financial performance over a specific time period or operating cash to total assets. Due to their inability to pay their financial responsibilities, businesses encounter difficulties in conducting their operations on a global scale. Cash collection, cash monitoring, and its application in investing operations rely heavily on cash management techniques. Every firm is expected to maintain a certain proportion of its assets in liquid form with the intension of managing its regular transaction demands. As Ibe (2013) concurs, one of the most notable corporate objectives of a company that seeks to ensure safety and avoid bankruptcy is the management of optimal liquidity.

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Every firm has its own method for financing its short term operations, but the amount of liquidity affects the success of these businesses and those becomes a worry for organizations. According to Olagunju *et al.* (2012) profitability together with liquidity are potent indices of up to the mark performance of all profit making organizations. However, the liquidity indicator is more significant for a banking organization since depositors are concerned about the bank's ability to meet their withdrawal needs when necessary. In addition to ensuring an ideal amount of liquidity, the shareholders of a banking financial institution are also concerned with maximizing profits. A bank must be prepared for sudden withdrawal requests from depositors by keeping a sufficient level of liquidity to cover its obligations and other short-term expenses. Despite the fact that liquidity is a short-term concept, it remains an objective of the organization for the duration of its existence. According to Al Nimer *et al.* (2015), a company's capability to satisfy present commitments can be used to evaluate its ability to generate cash. Even though a business has a positive net income at the conclusion of each accounting period, it may declare bankruptcy if it is not equipped to pay its interim creditors.

Rationales of the Study

Due to the complexity and dynamism of the economy, there has been an increase in worry regarding the performance together with position of commercial banks in Bangladesh. It has been observed that cash flow management has a noticeable effect on how well banking institutions work and how the national economy functioning. For the long-run survival commercial banks should manage their cash prudently. Recently it is observed that number of local commercial unable properly manage their cash that have negative impact on their financial performance. As per researcher information there is no survey in the context of Bangladesh that sort out the influence of cash management on commercial banks financial performance where it is computed by Tobin's Q. So through the present study, researcher can fill the knowledge gap in the literature by learning how cash flow management may impact banking organizations' performance in Bangladesh. The results of this survey will also serve as an invaluable resource for students, organizations, and other interested parties who might want to conduct a related study. The study's recommendations would give banks more knowledge about the necessity of switching from antiquated planning techniques to more methodical and scientific planning of their liquidity control. Additionally, it will make recommendations for potential actions that might be taken to encourage improved banking institution performance.

LITERATURE REVIEW

Cash management is a crucial task for commercial banks for enhancing their financial performance. This statement is true for banking industry in Bangladesh. Some relevant literature on cash management and Banks financial performance are outlines below:

Ali *et al.* (2021) examine the alliance between cash management along with the financial performance of commercial banks in Nigeria. Researchers were found that cash flows of financing activities positively impact on financial performance of Nigerian banks which is statistically significant. Results outlined that holding cash significantly adverse effect on financial performance of sample Nigerian banks. Alslehat & AI-Nimer (2017) analyzed the tie up between cash flow management together with the financial efficiency of Jordanian insurance companies. In Jordan, there were twenty-three insurance businesses in the population from 2009 to 2013. The research that net cash flows from operational and investment activities had positive effect on financial performance (return on assets) of insurance companies in Jordan. Tariverdi *et al.* (2014) assessed the four division model of cash flow statement in relation to the operating efficiency of Tehran Stock Exchange listed enterprises. This study covered 5 years data from 2007 to 20211. The ex post facto study method was selected. Pearson correlation was employed to analyze the data. The analysis divulged a positive link between cash flows from investments and returns on assets as well as return on equity. It also discovered a negative link among cash flows from interest paid on financing and return on assets and return on equity, but none between financing cash flows and investment cash flows and return on assets as well as return on common equity. Liman & Mohammed (2018) investigate the relationship among operating cash flow on corporate financial performance over a decade for listed conglomerates in Nigeria (2005 to 2014). Using descriptive statistics, correlation analysis, and regressions, the variance in financial performance caused by the variable in operating cash flow was determined. The time series and cross-sectional characteristics of the data required the use of panel data regression. The findings demonstrated a positive and negligible link among Cash Flow from Operating Activities (CFO) and financial performance when it is computed by ROA, but an optimistic and substantial link at the time financial performance is computed by ROE for listed aggregate firms in Nigeria. Bourke (1989) uncovered evidence of a tie up between liquid assets along with bank profitability in his assessment of the performance of banks in twelve countries throughout Europ, North America along with Australia. It would be expected that illiquid assets would have a higher liquidity premium and, consequently, a higher rate of return. Nangih *et al.* (2020) investigate the alliance between cash management along with the financial performance of an assortment of oil and gas firms listed on the Nigerian Stock Exchange. In the oil and gas business, cash flows derive from operating together with investing activities exhibited an adverse and inconsequential link with profitability, whereas cash flows from financing operations had an indisputable and substantial relationship with firm performance. Alictal

(2013) examines the association between several earnings and cash flow indices of corporate performance and stock return in Iran. From 2003 to 2011, they employed simple and multiple regressions to assess the data for a period of successive years. The study indicated that firm performance and cash flow have a substantial negative correlation; the study also reveals that cash flow has a negative correlation with company performance. The cash flow ratio was used by Armen Staphanyan (2013) to evaluate the top US airlines. This data indicates that airlines are experiencing liquidity issues. It is challenging for U.S. airlines to generate enough cash to maximize the correlation between liquidity management and profit.

From the above literature it is observed that there is no significant study in the context of banking industry of Bangladesh where financial performance is measured by Tobin's Q. Beside this, there is no study on impact of cash management on financial performance of commercial banks in Bangladesh where financial performance is assessed by Tobin's Q. So to the present study is the researcher initiative to make up existing literature gap in banking industry of Bangladesh.

METHODOLOGY OF THE STUDY

Population and Sample Size

Present study focuses on banking industry of Bangladesh. From DSE listed 33 commercial banks researchers purposively select 25 as a sample in present study.

Study Period

Current study incorporates six (6) years data of sample commercial banks from 2016 to 2021.

Variables

In this study explained variable is the financial performance of selected commercial banks which is measured by Tobin's Q (Wong & Hooy, 2018). Tobin's Q equal to market value of the bank's equity plus book value of bank's liabilities divided by bank's total assets. Tobin's Q is extensively employed in the literature to compute the financial performance of politically linked organisations (Hillman & Dalziel, 2003; & Mitchell & Joseph, 2010). As the directors of sample banks are politically connected so Tobin's Q is employed for assessing the financial performance of studied commercial in this study. Cash flow from operating activities to total asset, cash flow from investing activities to total asset, cash flow from financing activities to total asset and ending cash balance to total assets are the explanatory variables in this study (Ali *et al.*, 2021; Nangih *et al.*, 2020; Liman & Mohammed, 2018; Alslehat & AI-Nimer ,2017; Tariverdi *et al.*, 2014; & Alictal, 2013). Besides this, size, age and leverage of commercial banks are considered as control variables in ongoing study.

Tools to Analyze Data

Collected balance panel data are analyzed through E-views 12.

Model Specification

Bank's financial performance (Tobin's Q) = β_0 + $\beta_1 OCFTA$ + $\beta_2 ICFTA$ + $\beta_3 FCFTA$ + $\beta_4 ECTA$ + $\beta_5 SIZA$ + $\beta_6 AGE$ + β_7Leverage + ε

Here,

OCFTA= Cash flows from operating activities to total assets

ICFTA=Cash flows from investing activities to total assets

FCFTA=Cash flows from financing activities to total assets

ECTA=Year ended cash balance to total assets

Size = Natural logarithm of Banks total assets

Age = Natural logarithm of the number of years since incorporation of the bank

Leverage = Total liability/ Total assets

Hypothesis

H1: Cash flows drive from different activities to total assets positively impact on financial performance of commercial banks in Bangladesh.

H2: Year ended cash balance to total assets also positively impact on commercial banks in Bangladesh.

ANALYSIS AND DISCUSSION

Descriptive Statistics

The descriptive statistics help to explain the behavior of the observations. That is, descriptive statistics ensure whether collected data are normally distributed or not.

Table 1: Descriptive Statistics

Variables	Observations	Mean	Std. Dev.	Min	Max
Tobin's Q	150	0.972504	0.070855	0.376866	1.089795
OCFTA	150	0.016299	0.032456	-0.0542	0.203588
ICFTA	150	-0.01113	0.021373	-0.09677	0.048726
FCFTA	150	0.006739	0.034805	-0.14831	0.36544
ECTA	150	0.120542	0.049764	0.049995	0.382033
Ln age	150	3.239221	0.317791	2.70805	4.04305
Ln asset	150	26.42387	0.666893	21.60891	28.12369
Leverage	150	0.917029	0.076998	0.296353	0.998362

Sources: Researcher own estimation

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The mean value of Tobin's Q is 0.972504 which indicates sample commercial banks are undervalued firms. That is, market value of studied commercial banks is lower than replacement cost. It is also remarked that standard deviation of Tobin's Q is 0.070855 that refers lower deviations among observations of sample commercial banks in Bangladesh. Average value of the cash flow from operating activities to total asset is 0.016299 along with standard deviation is 0.032456. From above table it is also noticed that mean values of ICFTA, FCFTA and ECTA are -0.01113, 0.006739 and 0.120542 respectively along with standard deviations are 0.021373, 0.034805 and 0.120542 consecutively. So at last is concluded that values of the descriptive statistics of studied variables revealed that there are normally distributed.

Correlation

The results of correlation analysis are displayed in the following table:

Table 2: Results of Correlation Analysis

	Tobin's Q	OCFTA	ICFTA	FCFTA	ECTA	Size	Age	Leverage
Tobin's Q	1							
OCFTA	0.0381	1						
ICFTA	-0.1263	-0.3745*	1					
FCFTA	0.0158	-0.3687*	0.0235	1				
ECTA	0.0667	0.2897*	0.2187*	0.2568*	1			
Size	-0.0543	-0.1201	-0.0837	-0.3198*	-0.4115*	1		
Age	-0.0287	0.009	0.0576	0.0422	0.0907	0.1094	1	
Leverage	0.8117*	0.0039	-0.0311	-0.0126	0.0816	-0.0652	-0.0687	1

*Significance at 5% level

Source: Researcher's own estimation

Results of the correlation analysis outlined that Tobin's Q which is the proxy of sample commercial banks has positive tie up with OCFTA, FCFTA and ECTA. At the same time Tobin's Q has adverse relationship along with ICFTA, Size, age and leverage. From above table it is noticed that the correlation among explanatory and control variables are lies between -0.4115 to 0.2897 which refers there is poor relationship among independent and control variables. Considering above correlation values of explanatory and control variables there is no autocorrelation in identified explanatory and control variables which is vital for running multiple regression models.

Multicollinearity Test

The variance inflation factor (VIF) is measured before running multiple regression models for ensuring no multicollinearity issue among the independent variables in developed model in a particular study. As multicollinearity decreases the statistical significance of the independent variables but it does not affect the model's explanatory power.

Table 3: Results of VIF

Variables	VIF	1/VIF
OCFTA	2.14	0.466608
ICFTA	1.81	0.553483
FCFTA	1.74	0.575109
ECTA	1.56	0.640559
Ln asset	1.36	0.732884
Ln age	1.05	0.953515
Leverage	1.03	0.953515
Mean	1.53	0.973819

Source: Researcher own estimation

From above table it is observed that VIF value of the variables lies between 1.03 to 2.14 as well as average VIF value is 1.53. As per Gujarati, 2003, if VIF value of any independent variables is less than 3 then it is estimated there is no multicollinearity problems among independent variables in multiple regression model. As VIF values of all the independent variables are less than 3 so it is said that multicollinearity problem is absent in explanatory variables in develop model in present study.

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Regression Results

Table 4: Results of Multiple Regression Analysis

Variables	Coefficients	Std. Error	t-Statistic	Prob.
C	0.050345	0.014279	3.525742	0.0017
OCFTA	-0.024815	0.019155	-1.295476	0.2075
ICFTA	-0.078131	0.054698	-1.428415	0.1661
FCFTA	0.045964	0.019236	2.389506	0.0251*
ECTA	-0.361641	0.052987	-6.825077	0.000*
Ln asset	-0.016867	0.002817	-5.988215	0.000
Ln age	-0.032946	0.009793	-3.364282	0.0026
Leverage	0.515286	0.046875	10.99276	0.000
R Square	0.398314			

Source: Author's computations using E-views 12*significance at 5% level

Regression result revealed that value of the R Square (R^2) is 0.3983 which means explanatory variables able to explain 39.83% variation of commercial banks performance (Tobin's Q) in Bangladesh. Though cash flows from operating activities to total assets (-0.024815) and cash flows from investing activities to total assets (-0.078131) negatively impact on financial performance of commercial banks but these are not statistically significant. Again cash flows from financing activities to total assets positively (0.045964) and year ended cash balance to total assets (0.361641) negatively impact on commercial banks performance in Bangladesh which are statistically significant at 5% and 1% level respectively. From that it is said that formulated hypothesis is partially true. It is also remarked that selected commercial banks financial performance positively affected by all the control variables (Size, age, Leverage) that are statistically significant at 1% level. The findings of this study is consistent with different studies of various scholars such as Ali *et al.* (2021); Nangih *et al.* (2020); Liman & Mohammed (2018); Alslehat & AI-Nimer (2017); Tariverdi *et al.* (2014); & Alictal (2013).

Policy Implications

The finding of this study is very fruitful for banking industry in Bangladesh. Because banks able to properly concentrate on the cash management to enhance their financial Performance. Besides this, Bangladesh bank able to instruct subordinate commercial banks to prudently manage cash so that they can smoothly operate their banking activities sustainably.

Further Study

In future any researcher may extend this study through including more data, variables and increasing the sample size.

CONCLUSIONS

Commercial banks are blood of financial system of a developing country like Bangladesh. Bangladesh economy will collapse due to bankruptcy of commercial banks. If commercial banks unable to treat their cash management prudently they become insolvent within short span of time. So cash management is vital issues of sustainably enhance the financial performance of commercial banks in Bangladesh. Researcher undertakes present study to show the impact of cash management on financial performance of selected commercial banks in Bangladesh where Tobin's Q is the proxy of financial performance. Cash flows from operating activities to total assets, cash flows from investing activities to total assets, cash flows from financing activities to total assets positively and year ended cash balance to total assets are explanatory variables which are the proxy of cash management of commercial banks in Bangladesh. Besides this, size, age and leverage of commercial banks are also incorporated as control variables in present study. Current survey covers 6 years balance panel data of sample (25) commercial banks in Bangladesh from 2016 to 2021. E-views 12 is used for analyzing the collected data. Result outline that value of the R Square (R^2) is 0.3983 which means explanatory variables able to explain 39.83% variation of commercial banks performance (Tobin's Q) in Bangladesh. Cash flows from financing activities to total assets positively (0.045964) and year ended cash balance to total assets (0.361641) negatively impact on commercial banks performance in Bangladesh which are statistically significant at 5% and 1% level respectively. So researcher suggests that commercial banks in Bangladesh should prudently manage cash for uplifting their financial performance.

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