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EFFECT OF NET INCOME ON TOTAL ASSETS OF FINANCIAL ORGANIGATIONS

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ABSTRACT

The study attempts to show effect of net income on the assets of financial organizations and presents the variability of the variables of return on investment (ROI). The study also shows the relationship between income and investment and the effect of the income on the accounting equation, total asset =liabilities + proprietorship of financial organizations. Data of annual report of banks are used in this study and statistical measures such as standard deviation (SD), correlation coefficient, coefficient of determination, coefficient of variation (CV) etc are used to analyse the data. The study reveals most financial organizations' total assets that show the growing behaviors in successive time periods and the net income that explains the variation of total asset. Finally, it is characterized that the ROIs of 9 sampled banks fluctuates narrowly but ROIs of one bank highly fluctuate in the successive periods that indicates 90% financial organizations' ROIs less volatile. Coefficient of correlation (r) between the net income and total asset is positive in 90% financial organisations. The study also reveals that assets have impact on the growth of financial organisations.

Key words: bank, growth factor, net income, return on investment, total asset

INTRODUCTION

Financial organizations emphasis to expand the net income to magnify investment. The expansion of investment indicates expansion of total asset. Banks are in a business to receive deposits or liabilities and to issue debt securities on the one hand and create or invest in assets on the other hand (Fama, 1980). Assessing accurately the return on relationship investment remains unclear yet the technological developments, give an outstanding value and facilitation to the efforts of measuring and managing relationships (Gummesson, 2004). Banks' profitability is of utmost concern in modern economy, ROI measures the amount of profit earned relative to the firm's level of investment in total assets. Asset management is applicable to any organization's balance sheet subject is without doubt of greatest interest to depository institution, non-bank financial corporations and multinational corporations, total return optimization employs tools to determine the optimal mix of asset (Marshall and Bansal, 2003). Rural households prefer to change their asset portfolio in response to the weather related and health related income and examines the effects of the income shocks on the saving decision of the rural households shocks (Sharma, 2010). Although impact of the management of banks' asset and liability on their profitability has been studied by a number of researchers (Hester and Zoellner, 1966; Kwast and Rose, 1982 Vasiliou, 1996 etc.), the issue of banks' profitability in developing countries has received scant attention. As there are contradictory studies (Short, 1979; Bourke, 1989; Molyneux and Thornton, 1992; Demirgnuc and Huizinga, 1998 and Athanasoglou, 2008) considering the asset-liability and profitability relationship of the public and private banks, the researchers examines the situation of these two categories of banks- source of bank specific data was bankscope. The sustainable growth rate of the organisation is the maximum rate of growth in sales that can be achieved, given the organization's profitability, asset utilization (Higgins and Robert, 1977). The traditional statistical cost accounting (SCA) model was expanded by Kwast and Rose (1982) including market structure and macro economic variables. Ratios do not make decisions but will provide information from which decisions may be made (Gill, 1994). (Berger, 1995) examines the relationship between the return on equity and the capital asset ratio for a sample of US banks for the 1983-1992 time periods. He shows that the return of equity and capital to asset ratio tend to be positively related and states that the importance of the insurance-growth nexus is growing due to the increasing share of the insurance sector in the aggregate financial sector in almost every developing and developed country (Haiss and Sumegi, 2006).

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This study reveals that the net income of the financial organizations expand the capital that is owner's equity that increases the total assets subject to constant liabilities. The total asset of financial organizations shows the increasing trend in the next years. Objectives of the study are-

(i) to find out whether net come have impact in changing in total asset as the income of then financial organizations is not totally distributed as dividend, (ii) to understand whether the increment of net income have on total assets of financial organizations and the large volume of total assets help expand business of financial organizations and (iii) to find out the relationship between net income and total assets financial organizations and to expose the effect of net income on total assets financial organizations as the increment of net income increases the owner's equity that have impact on total assets of accounting equation.

MATERIALS AND METHODS

Collection of data: The research was descriptive in nature. To conduct the study data were collected from secondary sources of 10 different scheduled banks of Bangladesh for the periods from 2006 to 2010 considering the variables of ROI namely total asset and net income. Table 1 showed the data of annual report of ten banks. These numerical data of this study were taken round figures rather than point figures.

Tools: The study used the calculated ROIs of 10 banks. Statistical measures such as diagram, curve, standard deviation (SD), coefficient of correlation (r), coefficient of variation (CV), coefficient of determination etc. were used in data analysis in this study and Lt of ρ indicated lower limit and Ut of ρ indicated upper limit correlation in the population.

Procedures: The variables of ROI were net income and total asset in this study. Total asset was the dependable variable and net income was the independent variable. Return on investment (ROI) is to net income or profit after tax (PAT) to total assets. That is –

$$\text{ROI} = \frac{\text{Net income}}{\text{Total asset}}$$

Using this equation, ROIs of ten banks for five different years were calculated shown in table 2. Then the calculated ROIs were analysed using the statistical measures. Net income and total assets of ten banks in five years was graphically presented in the figure 1 and 2 respectively. P. E. r was calculated by the formula: $[.6745 \times (1\text{-}r^2)]/\sqrt{N}$, and ρ by the formula: r+ P. E. r, where ρ denotes correlation in population. And SD was calculated by the formula: $\sigma = \sqrt{[\sum (X_i - X)\ 2/\ N]}$ and CV was calculated by the by the formula: CV= SD/ X.

RESULTS AND DISCUSSION

Total asset of financial organizations was increased by the net income subject to constant liabilities of the financial organizations. In the study, ROI determined the amount of net income earned relative to the bank's level of investment in total assets. Net income expanded total assets that helped to grow the financial organizations. In the table 1, it had been presented the net income and total assets of ten banks of five years and table 1 showed that for the period from 2006 to 2010 successively, out of ten banks, the total assets of two banks increased with the increase of net income and the total assets of six banks increased with increase and decrease of net income and the total asset of two banks decreased with increase of net income that showed net income had impact on the change of total assets. The table 1 also represented that the total of Eastern bank decreased from 46624 million to 1540 million in 2009. This bank showed the more variability. Table 2 showed ROIs of ten banks of five years and the ROIs that had been calculated by using the data of table 1 by applying the equation 1. Greater the amount of standard deviation resulted in greater amount of variation. The large CV indicated the more variable or conversely less consistent of variables and the less CV indicated the less variable or conversely more consistent of variables. The ROIs of Eastern bank presented in table 2, showed the more inconsistent than that of other nine banks. That is table 2 showed that the ROIs of nine banks fluctuated narrowly but ROIs of one bank (Eastern bank) highly fluctuated in the successive periods that indicated 90% financial organizations' ROIs were less volatile. The correlation between net income and total asset of nine banks was positive and other one's was negative. The study predicted that 90% financial organizations held positive correlation between the variables of ROIs. Table 3 had the SD, CV of ten banks, measured on ROIs using the table 2. Table 3 showed that the CV of Eastern bank was the most variable out of ten banks that indicated the least consistent and the mean and SD of ROIs of Eastern bank was highest over these ten banks. Due to high CV, investors could feel more risky to invest. Table 4 represented the coefficient of correlation (r) and coefficient of determination (r^2) between the variables net income and total asset of ten banks for five years and showed that the net income and total assets positively correlated and the variation of 62.35%, 68.48%, 62.11%, 6379% and 54.82% of total asset for the year 2006, 2007, 2008, 2009 and 2010 respectively were explained by corresponding net incomes of them. The table 4 also showed the probable error 8.03%, 6.72%, 8.08%, 7.72% and 9.63% the year 2006, 2007, 2008, 2009 and 2010

Table 1. Net income and total asset of ten banks for five different years (Figure in Millions)

Name of Bank	Years / Items	2006	2007	2008	2009	2010
Prime Bank Limited	Net income	1052	1401	1232	2784	3003
	Total Asset	60899	79588	110437	124984	152797
AB Bank Limited	Net income	532	1903	2301	3363	3696
	Total Asset	47989	63550	84054	106912	134003
Bank Asia Limited	Net income	476	726	686	1327	1930
	Total Asset	30478	38428	53371	68663	105198
Eastern Bank Limited	Net income	1134	1284	180	1455	2425
	Total Asset	35971	42579	46624	1540	5672
Primer Bank Limited	Net income	369	79	651	1088	1772
	Total Asset	27170	32573	38723	47343	68240
BASIC Bank Limited	Net income	292	283	550	649	661
	Total Asset	29388	38725	46652	45308	61579
Agrani Bank Limited	Net income	194	316	265	136	352
	Total Asset	15,408	18,628	18,732	21,406	26485
Trust Bank Limited	Net income	263	239	463	610	1275
	Total Asset	21198	30382	38476	54207	58206
Shahjalal Islamic Bank Limited	Net income	463	647	818	1071	2072
	Total Asset	21343	28347	45217	58921	78800
Mutual Trust Bank Limited.	Net income	478	211	305	988	821
	Total Asset	26218	32182	38965	52775	58246

Source: Annual Reports's data from 2006-2010 of Prime Bank , AB Bank, Bank Asia, Eastern Bank, Primer Bank, BASIC Bank, Agrani Bank, Trust Bank, Shahjalal Islamic Bank, and Mutual Trust Bank Limited.

Table 2. Return on investment of ten banks for five different years

Name of Bank	Years / Ratio	2006	2007	2008	2009	2010
Prime Bank	ROI	1.73%	1.76%	1.12%	2.23%	1.97%
AB Bank	ROI	1.11%	2.99%	2.74%	3.15%	2.76%
Bank Asia	ROI	1.56%	1.89%	1.29%	1.93%	1.83%
Eastern Bank	ROI	3.15%	3.02%	0.37%	94.48%	42.75%
Primer Bank	ROI	1.36%	0.24%	1.68%	2.30%	2.60%
BASIC Bank	ROI	0.99%	0.73%	1.18%	1.43%	1.07%
Agrani Bank	ROI	1.26%	1.70%	1.41%	0.64%	1.33%
Trust Bank	ROI	1.24%	0.79%	1.20%	1.13%	2.19%
Shahjalal Islamic Bank	ROI	2.17%	2.28%	1.81%	1.82%	2.63%
Mutual Trust	ROI	1.82%	0.66%	0.78%	1.87%	1.41%

Source: Annual Reports's data from 2006-2010 of Prime Bank , AB Bank, Bank Asia, Eastern Bank, Primer Bank, BASIC Bank, Agrani Bank, Trust Bank, Shahjalal Islamic Bank, and Mutual Trust Bank Limited.

Table 3. Mean standard deviation and correlation of variation of return on investment

Name of the Banks	Mean ($\bar{X}_{ROI}$)	SD (σ_{ROI})	(CV_{ROI})
Prime Bank	0.01762	.003676	20.86%
AB Bank	0.0255	.002327	9.13%
Bank Asia	0.017	.002423	14.25%
Eastern Bank	0.28754	.364397	126.73%
Primer Bank	0.01636	.008243	50.39%
BASIC Bank	0.0108	.002294	21.24%
Agrani Bank	0.01268	.003479	27.44%
Trust Bank	0.0131	.004678	35.71%
Shahjalal Islamic Bank	0.02142	.003072	14.34%
Mutual Trust	0.01308	.005074	38.79%

Source: Annual Reports's data from 2006-2010 of Prime Bank , AB Bank, Bank Asia, Eastern Bank, Primer Bank, BASIC Bank, Agrani Bank, Trust Bank, Shahjalal Islamic Bank, and Mutual Trust Bank Limited.

Table 4. Coefficient of correlation (r) and coefficient of determination (r^2) between the variables net income and total asset

	Year	2006	2007	2008	2009	2010
10(ten) Banks	r :	0.7896	0.8275	0.7881	0.7987	0.7404
	r^2:	0.6235	0.6848	0.6211	0.6379	0.5482
	P.E.r	0.0803	0.0672	0.0808	0.0772	0.0963

Source: Annual Reports's data from 2006-2010 of Prime Bank , AB Bank, Bank Asia, Eastern Bank, Primer Bank, BASIC Bank, Agrani Bank, Trust Bank, Shahjalal Islamic Bank, and Mutual Trust Bank Limited.

Table 5. Coefficient of correlation (r) and coefficient of determination (r^2) between the variables net income and total asset basis on five years (2006-2010) of ten banks

Bank	Prime Bank	AB Bank	Bank Asia	Eastern Bank	Primer Bank	BASIC Bank	Agrani Bank	Trust Bank	Shaj. I. Bank	Mut.T. Bank
r :	0.8688	0.9568	0.9728	-0.7573	0.9569	0.8323	0.4434	0.8513	0.9466	0.7939
r^2:	0.7548	0.9155	0.9463	0.5735	0.9157	0.6927	0.1966	0.7247	0.8961	0.6303
P.E.r	0.0739	0.0255	0.0162	0.1287	0.0254	0.0927	0.2423	0.0830	0.0313	0.1115
Ltofρ	0.7949	0.9313	0.9566	-0.886	0.9315	0.7396	0.2011	0.7683	0.9153	0.6824
Utofρ	0.9427	0.9823	0.989	-0.6286	0.9823	0.925	0.6857	0.9343	0.9779	0.9054

Source: Annual Reports's data from 2006-2010 of Prime Bank , AB Bank, Bank Asia, Eastern Bank, Primer Bank, BASIC Bank, Agrani Bank, Trust Bank, Shahjalal Islamic Bank, and Mutual Trust Bank Limited.

respectively in statistical measurement. Table 5 represented that the coefficient of correlation (r) and coefficient of determination (r^2) between the variables net income and total asset, basis on five years (2006-2010), often banks individually in where the variables: net income and total assets of nine banks were positively correlated and the correlation between the variables: net income and total assets of one bank (Eastern bank) was negative. Eastern bank had the negative population correlation also in where other nine banks had positive. The study forecasted that 10% financial organization maintained the negative correlation of coefficient between variables of ROI. Table 5 also showed that the variation of 75.48%, 91.55%, 94.63%, 57.35% ,91.57% , 69.27% 19.66%, 72.47% 89.61% and 63.03% of total assets of Prime bank, AB bank, Bank Asia, Eastern bank, Primer bank, BASIC bank, Agrani bank ,Trust bank, Shajalal Islamic bank and Mutual trust bank respectively were explained by

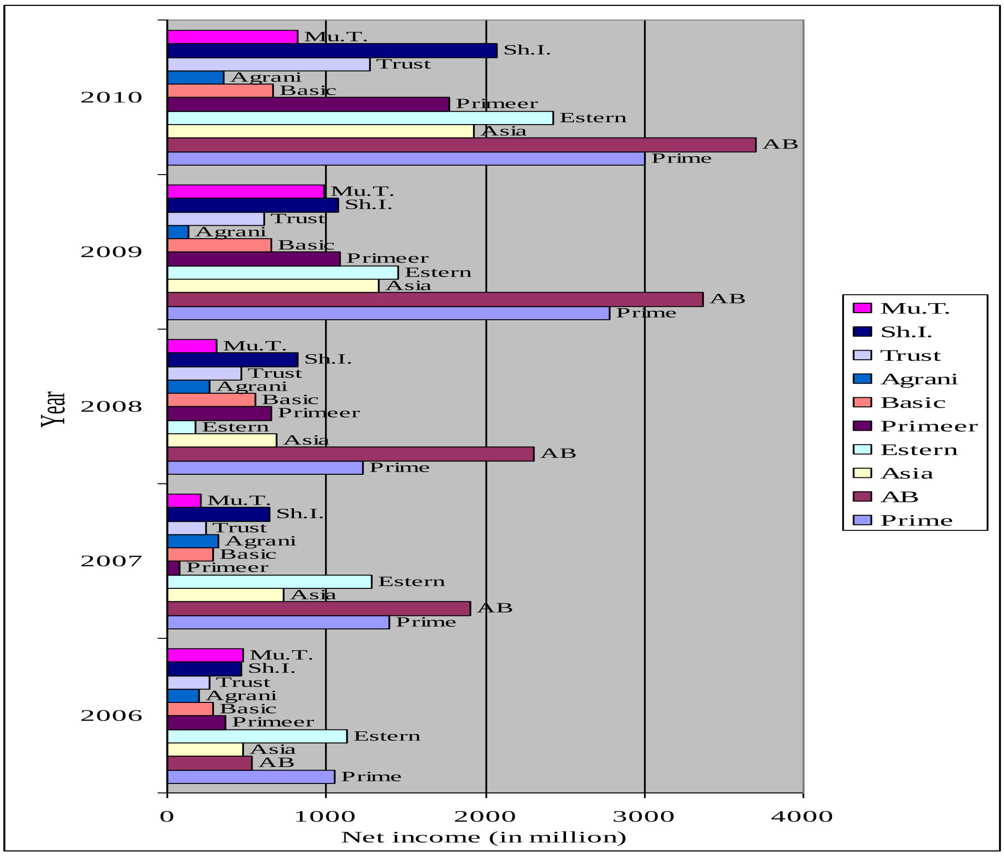
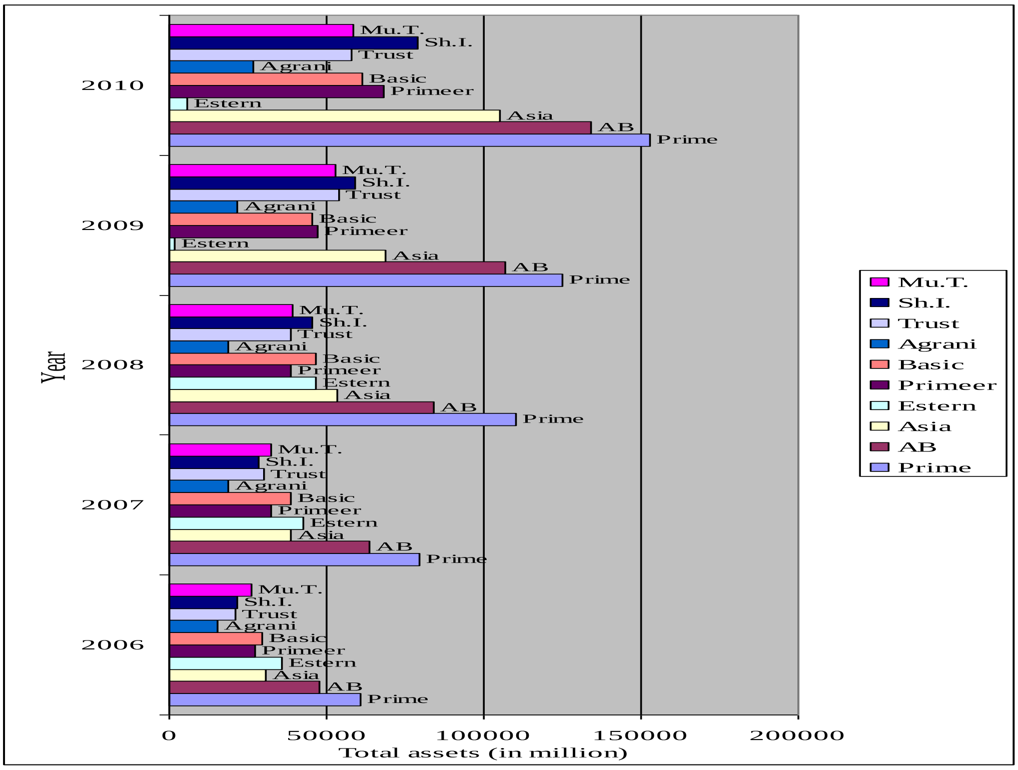


Figure 1. Net income of ten banks of five years



Source: Annual Reports's data from 2006-2010 of Prime Bank , AB Bank, Bank Asia, Eastern Bank, Primer Bank, BASIC Bank, Agrani Bank, Trust Bank, Shahjalal Islamic Bank, and Mutual Trust Bank Limited.

Figure 2. Volume of total assets of ten banks of five years

corresponding net incomes of them. Besides this, the table 5 showed the probable error 7.39%, 2.55%, 1.62%, 12.87% , 2.54 %, 9.27 %, 24.23%, 8.30%, 3.13% and 11.15% of Prime bank, AB bank, bank Asia, Eastern bank, Primer bank, BASIC bank, Agrani bank ,Trust bank, Shajalal Islamic bank and Mutual trust bank respectively in statistical measurement. Figure 1 (bar diagram) represented net income of ten banks for the five years. In figure 1 it was identified that the net incomes of AB bank were over that of other nine banks individually on an average and the incomes of AB bank in the successive years were growing rate. Figure 2 (bar diagram) represented the total assets and showed that AB bank's total assets were the top in every year.

Comparatively than that of other banks individually and the assets volume of nine banks were greater in the successive years except Eastern bank. The assets volume of Eastern bank fluctuated in the successive years. The study showed that 90% financial organizations' total asset increased in the next years that indicated the growth of business of financial organizations.

CONCLUSION

Basis on the variables of ROI, the study drives the statistical tools and analysis. The graphical presentation of statistical models showed the trend, relation and results as well as the calculation of data by statistical measures like SD, CV, mean, coefficient of correlation etc. The study reveals that the net income of the financial organizations has the impact on the equation: asset = liabilities + owner's equity and the growth of total asset. The mean and standard deviation of ROIs of Eastern bank were highest over these often banks. CV of Eastern bank was the top and its correlation of coefficient between variables: net income and total assets of ROI was negative. The study revealed that higher CV could be responsible for negative correlation. Net income positively makes increase the total asset in year after year of financial organizations when they continue and the expansion of total asset extends the growth of financial organizations. The study recommends that the financial organizations may follow the optimum payout ratio for the growth in the future as the net income has impact on the capital and the financial organizations should have optimum capital structure that indicates the good financial health. The study also recommend the financial organizations with least CV as the consistent risk (SD) and return (income) help the financial organizations to sustain in the competitive market.

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