



# An Empirical Analysis Emphasizing on the Differences in Determinants of Capital Structure of Private Commercial and Private Islami Commercial Banks of Bangladesh

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## To cite this article:

Rummanur Rahman, Naheem Mahtab. An Empirical Analysis Emphasizing on the Differences in Determinants of Capital Structure of Private Commercial and Private Islami Commercial Banks of Bangladesh. *International Journal of Accounting, Finance and Risk Management*. Vol. 2, No. 2, 2017, pp. 62-73. doi: 10.11648/j.ijafirm.20170202.13

**Received:** September 4, 2016; **Accepted:** March 17, 2017; **Published:** May 19, 2017

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**Abstract:** The capital structure is the blend of obligation and value that an organization uses to fund its business (30). (61) recommended that, in a world without scrapping spot, there is no contrast amongst obligation and value financing with respect to the estimation of the organizations. Proof recommends this doesn't hold actually. Today, the capital structure is a standout amongst the most vital money related choices for any business. This choice is vital in light of the fact that the association needs to augment returns. The effect of the capital structure choice will help the firm define abilities to manage its aggressive surroundings. Besides, the capital structure of a firm is a blend of obligation and value that is utilized by a firm to upgrade its operation. In this manner, an association's particular system ought to manage the suitable blend of obligation and value to back the association's advantages.

**Keywords:** Leverage, Profitability, Tangibility, Size, Growth, Non-Debt Tax Shield

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## 1. Introduction

Banks are the most critical area of an economy. They tackle a large part in the financial development of a nation. Banks have a repetitive investigation by keeping up liquidity and in the meantime procuring satisfactory benefits to safeguard them in the shop. They hold a commitment to fulfilling the interest of the clients expeditiously, paying enthusiasm for the aggregate of cash and meeting the costs to direct out their exercises.

Capital structure choices speak to another vital money related choice of a business association separated from speculation choices. It is essential since it includes a tremendous measure of cash and has long haul suggestions on the organizations. In spite of the fact that (61) have hypothetically contended and demonstrated that capital structure is superfluous in an impeccable economic situation, described by the capital business sector with no charges, no exchange costs and homogenous desires, different works that accepts a few business sector flaws despite what might be expected propose that capital structure choices are significant since it can influence shareholder reaches. (62)considering of

the presence of corporate assessments recommended that organizations ought to use however much obligation capital as could reasonably be expected with a specific end goal to augment their quality by amplifying the interest charge shield. This examination will investigate the degree to which profitability, tangibility, size, growth and non debt tax shield impacts the association's capital structure choices.

## 2. Problem Statement

The capital structure is the financing blend of obligation and value.

In spite of the fact that obligation builds the aggregate net salary, because of interest expense shields; if the obligation of a firm ascends past half, then the danger level ascends, which makes trouble when endeavoring to secure advances.

Higher measures of value, implies that the firm is fiscally steadily and more secure, however it lessens the aggregate net salary, contracted with a levered firm, as expense derivations will be greater.

Therefore, it is a predicament for administration to comprehend which components serve as significant markers

when choosing the ideal equalization of obligation to value of a firm.

### 3. Purpose of the Study

The point of this work is to investigate what determinants are the noteworthy indicators of an organization's capital structure in the banking sector of Bangladesh. Also, what sway does the particular determinant make about the capital structure of the organization. In addition, we likewise need to see that how much our outcomes bolster formal capital structure hypotheses. In outline taking after being exploration destinations:

- To distinguish the potential determinants that impact the capital structure.
- To identify which specific determinant significantly influences the fiscal behavior of the banking sector.
- Analyze and explain the kinship between the dependent variable (Leverage) and all the independent variables (Profitability, Tangibility, Size, Growth and Non-Debt Tax Shield).
- To affirm the theory and research findings through developing a regression model.
- Assess to which extent capital structure affects both private commercial banks, and private commercial Islamic banks.
- Remarking on the usefulness of the developed research model, and its relevance to the research subject.

### 4. Literature Review

The estimation of a firm is not influenced by its financing blend when the investigation of financing decisions at first got little consideration (60). M&M finished up to the extent known hypothesis of "capital structure immateriality" where the money related influence does not influence the company's fairly estimated worth under flawless economic situation.

M&M showed that if an organization's venture approach is taken as given, then ideally where there is no assessment and exchange cost connected with raising cash or going bankrupt, and diligence of all data is sound, capital structure does not influence esteem. This position has been bolstered by others, for example, (44) and (77). Be that as it may, their hypothesis depended on prohibitive presumptions and it is conflicting with this present reality, where firms for the most part utilize just direct measures of obligation (23). M&M unimportant hypothesis have been scrutinized in light of the fact that their hypothesis expect objective monetary conduct and flawless economic situations where as per (24), it has constrained appropriateness to little firms as it were.

The organization's capital structure is ideal when the business sector estimation of the individual offer is expanded, (70). Capital structure for each organization is involved with the part that is contributed by shareholders reserves (i.e. Value) and lender's assets (i.e. Obligation), (15). Plus, financing choice for an organization gives a knowledge to deciding ideal capital blend of different wellsprings of

assets required for financing the benefits obtained, (35).

Study proof by (84) proposed that, when all is said in done, larger amounts of obligation are connected with lower firm execution in view of the relationship between three measures of obligation level. By utilizing current obligation as the measure of obligation, the finding demonstrates that present fleeting obligation was adversely related to profit however emphatically with long haul obligation. In any case, general results show an opposite relationship amongst's obligation and firm execution.

#### 4.1. Profitability

Profitability measures the ability to gain profits (returns) on sales, assets and equity. Return on Assets (ROA) and Return on Equity (ROE) are the two main ratios under profitability. Profitability is one of the most frequently tested companies' tools in empirical research in respect to the impact of capital structure. Profitability can be main independent variable that determines capital structure and represent pecking order and trade-off theories quite clearly. The trade-off theory says firms have identified the target debt ratio by comparing benefit from and cost of leverage. The trade-off theory assumes that higher profitability results in increased debt levels and there are two key elements behind this. For most, companies achieving high profitability have decreased magnitude of default risk and bankruptcy, so the cost of debt is more depressed. Second, higher profitability means that companies can achieve higher utilization of the tax deduction and allowances by increasing the amount leverage, thus the promised interest payments each period. In addition, increased debt will serve as a disciplinary component for managers when free cash flow likely increase with higher profitability. Any reduction (increase) in cost (benefit) allows the firm to readjust target leverage by increasing debt. Profitable firm is less risky with frequent cash flow from business decreasing the cost of financial distress such as bankruptcy cost. It is unanimously acknowledged that more profitability in the world of tax with more leverage can save more tax for the shareholder showing the benefit of leverage. More benefit of leverage will disturb the cost benefit relationship thus allows the firm to adopt more. (36) show that the normal expense of budgetary pain is lower for productive firms hence discovering charge shield more profitable. This mirrors the positive relationship amongst Leverage and profitability. Office cost viewpoint likewise viewed obligation as a disciplinary measure and more important for firms with high benefit creating the all the more free income (5). It implies the exchange of hypothesis demonstrates a positive relationship amongst benefit and influence holding different variables consistent.

(59) dispute range profitability has an unrestrained effect on Leverage of the everlasting. Along the second choice pecking order theory from, beating affectation conviction suggests lose concentration advantageous firm tends to therefore hold back earnings to slow their current or potential expansionary trade position. (65) argues zigzag firms with reference to young justify or deficient explanation choose to

sponge bid and topic equity securities if the requirement for the approval is not fulfilled by foray borrowing. It intercession at hand, counterfeit thesis predicts a derogatory incident between profitability and leverage keeping other factors constant. As local to obsolete, the fitting prefers civilized disdain and follows the sticky dividend policy. If the well-mannered funds are not well enough to finance the fiscal strain of the gang, it undergoes debt financing rather than equity financing. Thus, the higher profitability of the initiative entails the internal financing of investment and less reliance on debt financing. Most of the empirical studies agree with the pecking order theory. The studies of (81) step the devastating significance between the even out of custody in the capital structure and profitability. (55) position turn this way progress approves the predictions of pecking order theory. The richer reconsider companies wide choice scanty resolution venture a preferred raid know-how and courage, suitably, be capable to obtain forth and take vantage of any tax deductibility (2008). The pragmatic studies ended by (43) show the way company's profitability user positively to the debt capacity of the society.

$$\text{Profitability} = \text{Earnings Before Tax} / \text{Total Assets}$$

#### 4.2. Tangibility

Tangible assets play the role of collateral in debt equity. This means that companies with a large amount of tangible assets can access more debt, under favorable conditions and lower costs. Over time, the relationship between tangibility and the proportion of debt was demonstrated through various empiric studies, although opinions are very different. (73) discovered a positive relationship, normal in all companies following the trade-off theory. (71) proved a negative correlation between fixed assets and leverage: if companies face a high level of debt they are limited to use their internal funds because lenders are closely monitoring them. However, this represents a benefit for small companies that would not afford controlling managers in spending the internal resources, and thus they access a large amount of debt to ensure monitoring. There are also studies which could not find any support for the importance of collateral in the proportion of debt (80). Considering the actual financial crisis, the role of fixed assets in mortgage loans is confirmed. Nowadays, the standard loan conditions are more severe, debt became more expensive and consequently, fixed assets are necessary for accessing loans.

Tangible assets are one of the key drivers for explaining the capital structure within firms (26). The impact of a firm's composition of assets and how they explain its capital structure is an ongoing debate. Tangible assets are generally more liquid than intangible assets. Therefore, tangible assets have a higher second market value, and in case of bankruptcy these could be quickly and easily sold. Furthermore, ownership of tangible assets should give companies with such assets an increased debt capacity. As (76) argues the question if tangible assets are negatively or positively associated with debt is not clear. The current divergence between existing studies and theories concerning the

relationship triggered this thesis concerning if tangible assets are a significant variable in order to explain the companies' debt levels.

$$\text{Tangible Assets} = \text{Fixed Assets} / \text{Total Assets}$$

#### 4.3. Size

Total assets have commonly been used in prior studies to measure the size of a bank. However, banks with higher total assets have not always performed financially better (49). Some prior studies have found that small banks tend to have scale economies, whereas the performance of large banks is negatively related to scales (9, 54). The a priori relationship between size and financial performance is therefore indeterminate. The logarithm of total assets (Log TA) is used as a proxy for firm size. Total assets have commonly been used in prior studies to measure the size of a bank. Holverbanks with higher total assets have not always performed financially better (82). Some prior studies have found that small banks tend to have scale economies, whereas the performance of large banks is negatively related to scales (53, 75) when ownership is concentrated in the hands of domestic outsider investors the degree of effective monitoring depends on the identity, number and size of investors are further determinant of investment behavior and access to capitalist firm size. Smaller firms exhibit larger degrees of information asymmetry between insiders and outsiders. In addition, these firms also face higher costs in issuing new equity. If these factors are significant then small firms are expected to rely more on internal funds. Agency costs may also be greater for these firms, raising further the cost of external financing. Overall, small firms are expected to rely more on internal funds than larger firms do. The results of previous empirical work find partial support to this proposition, with (15, 80 and 42) and (39) finding that financing constraints decrease with firm size.

$$\text{Size} = \text{Natural logarithm of Asset}$$

#### 4.4. Growth

The effect of growth is considered by both theories to have a deep role in the determination of capital structure. The TOM predicts that firms with more investment opportunities will be characterized by a lower amount of debt. This behavior can also be read as a disciplinary role of debt: firms with more investment opportunities have less need of the disciplining effect of debt payments to control free cash flows. Moreover, assuming that firms are concerned with the future as well as with the current financial problems, it is very likely that firms with large expected growth opportunities will maintain a low risk debt capacity to avoid financing future investment with equity offerings or passing the investment. Notwithstanding that, debt is supposed to grow when investments exceed retained earnings and to fall when investments are less than retained earnings and thus, ceteris paribus, leverage is predicted to be higher for firms

that face higher investment opportunities. Growth has been shown by researchers to follow the TOM model and therefore assuming a negative and significant value. Among others (77), (45), (84), (31) documented a negative relation between market leverage and market-to-book-value ratio. Given the peculiarities of the industry, REITs are not characterized by high growth rates and certain measures of growth are even unavailable for them (i. e. R&D). The supposed behavior of growth illustrated by the POT, presented above, is not expected to work in the REITs sample. In fact, the rule that implies that REITs have to distribute most of their earnings, does not allow them to follow the standard relationship usually observed between investment opportunities and retained earnings.

$$\text{Growth} = \text{Percentage Change in Total Assets}$$

#### 4.5. Non-Debt Tax Shield

In the event that organizations pay assessments and interest is duty deductible, firm esteem ascends as the utilization of obligation financing arises. In any case, this examination suggests that there are points of confinement to the event of expense deductible obligation. For instance, business hazard prompts varieties in EBIT after some time, which can prompt vulnerability about the association's capacity to completely utilize future interest conclusions. On the off chance that a firm has a negative or zero working pay, an interest reasoning gives little help; it just makes the pretax misfortunes bigger. The upside of assessment deductible intrigue additionally is diminished if the firm has charge misfortune convey advances that decrease present and future years' assessable earnings. Additionally, firms in lower charge sections have less assessment motivating force to get than those in higher expense sections.

A model of corporate influence decision is figured in, which corporate and differential individual charges exist and supply side conformities by firms go into the determination of balance relative costs of obligation and value. The nearness of corporate assessment shield substitutes for obligation, for example, bookkeeping devaluation, consumption remittances, and speculation charge credits is appeared to suggest a business sector harmony in which every firm has an exceptional inside

## 6. Conceptual Framework

$$\text{Leverage} = \alpha + \beta_1 \text{ Profitability} + \beta_2 \text{ Tangibility} + \beta_3 \text{ Size} + \beta_4 \text{ Growth} + \beta_5 \text{ Non-Debt Tax Shield}$$

Where,

Dependent Variable: Leverage

Independent Variables: Profitability, Tangibility, Size, Growth, Non-Debt Tax Shield.

$\alpha$ : Constant

$\beta_1$ : Coefficient1

$\beta_2$ : Coefficient2

$\beta_3$ : Coefficient3

$\beta_4$ : Coefficient4

$\beta_5$ : Coefficient5

ideal influence choice (with or without influence related expenses). The ideal influence model yields various fascinating expectations in regards to cross-sectional and time-arrangement properties of firms' capital structures. Surviving proof bearing on these expectations is inspected (61).

$$\text{Non-Debt Tax Shield} = \text{Depreciation} / \text{Total Assets}$$

## 5. Methodology

Methodology is the arrangement and structure of the examination so considered as to get answers to research questions. The arrangement is the general examination of the system. The principal motivation behind this examination was to put forth a summed up expression of the capital structure choices of the contrasts between private business banks and private Islamic business banks in Bangladesh.

This is a formal study as plainly recognized by the title. It is an illustrative/causal examination clarifying how the reliant variable-Leverage, is delicate to varieties in the autonomous variables-profitability, tangibility, size, growth, and non-debt tax shield.

It is not a contextual analysis, but rather a summed up the study/measurable report of the saving money industry of Bangladesh. Our specimen size has been just ten recorded, banks (five for private business and five for private Islamic business) from the Dhaka Stock Exchange (DSE)- Brac Bank Limited, Prime Bank Limited, Mercantile Bank Limited, Dhaka Bank Limited, Bank Asia Limited, Al-ArafahIslami Bank Limited, Islami Bank Limited, ShahjalalIslami Bank, Social Islami Bank Limited and First Security Islami Bank Limited

Information was gathered from an auxiliary source, the DSE Library gave us-ten years (2006-2015) worth of yearly reports information of the ten banks. Asset reports and wage proclamations broke down to discover certain monetary proportions required for our examination model.

As we are utilizing a sample rather than population data, hypothesis testing is required. Henceforth we will utilize a deductive methodology in our discoveries. Theory testing will be directed utilizing the EViews speculation testing program. A ratio scale will be utilized, significant to the proportions figured from the assembled information.

## Hypothesis

Alternative Hypothesis:

H1: There is a significant relationship between Leverage and Profitability.

H2: There is a significant relationship between Leverage and Tangibility.

H3: There is a significant relationship between Leverage and Size.

H4: There is a significant relationship between Leverage and Growth.

H5: There is a significant relationship between Leverage and Non-Debt Tax Shield.

## 7. Research Design

### 7.1. The Method of Data Collection

In communication, researcher questions the subjects and collects their responses by personal or impersonal means. Be that as it may, with respect to our examination information accumulation technique is checking where we watched yearly reports of Brac Bank Limited, Prime Bank Limited, Mercantile Bank Limited, Dhaka Bank Limited, Bank Asia Limited, Al-Arafah Islami Bank Limited, Islami Bank Limited, Shahjalal Islami Bank, Social Islami Bank Limited and First Security Islami Bank Limited. Observing is a standout amongst the most vital prominences in light of the fact that in this strategy specifically, we can know where and how an occasion or action is happening.

### 7.2. Researcher Control of Variables

In this research, the data which will be running is a secondary one. Along these lines, it can't control the variables. We can just depict what has as of now happened. While leading the examination we need to ensure the information is not affected or one-sided. As the exploration is restricted we have to hold the elements always by the control of discoveries.

### 7.3. Degree of Research Question Crystallization

According to our article our research could be classified as formal study since formal study is done when the research inquiry is completely created. The objective of a formal research outline is to test the speculation. We as of now have the five hypotheses and now the further speculation needs to inspect.

### 7.4. The Purpose of Study

The purpose of the study could be categorized Causal Explanatory. The causal explanatory study is concerned with learning why – that is how one variable produces changes in another. In our research, we were straining to explain relationships among variables.

### 7.5. The Time Dimension

Time measurement could be arranged as longitudinal studies. Inside a longitudinal formative exploration outline, the same members are watching repeats over a state of time. I have done to break down ten years yearly reports. That is the reason the time measurement ought to be longitudinal studies for my research.

### 7.6. The Topical Scope

This research is based on statistical studies because the data gathered from this research will be quantified based.

Statistical study deals with breadth of data rather than depth of the data. Whatever we find is a representation of the sample and validity of the data.

### 7.7. The Research Environment

As indicated by our topic, the research environment will be reproduced since we will analyze our information in different numerical models which will speak to different conditions and connections in real circumstances.

### 7.8. Sampling

In Bangladesh, the aggregate quantities of bank are 64 where state-possessed banks are 4, private Business banks are 32, Islamic business banks are 8, remote banks are 09 and specific Banks are 11. The Dhaka Stock Exchange recorded, banks are 30 and the Chittagong Stock Exchange recorded Banks are 29. In this way, this is impractical to pack every one of the banks as an exploration information and it is likewise unrealistic to gauge every one of the banks, money related execution as a result of as far as possible. Thus, to get a plausible result, an examining system has been expanded.

Sample size usually depends on the number of factors and the researcher must need to give the correct statistical information before to get an answer. Our sample size will be on five private commercial banks and five Islamic commercial banks we will be done with the data for the last ten years.

Sampling unit is the individual items in a sample. We have picked ten banks. Those are Brac Bank Limited, Prime Bank Limited, Mercantile Bank Limited, Dhaka Bank Limited, Bank Asia Limited, Al-Arafah Islami Bank Limited, Islami Bank Limited, Shahjalal Islami Bank, Social Islami Bank Limited and First Security Islami Bank Limited. There are numerous banks recorded at the Dhaka Stock Exchange. We will search for five business private banks and five business Islamic banks the ten years yearly reports recognize the momentum investigation. We get approximately 53 business banks from that the sample was taken by utilizing a random sampling method.

### 7.9. Data Collections

The study depends on optional information. Optional information is one kind of quantitative information that has as of now been gathered by another person for various reasons. We chose ten banks, which Brac Bank Limited, Prime Bank Limited, Mercantile Bank Limited, Dhaka Bank Limited, Bank Asia Limited, Al-Arafah Islami Bank Limited, Islami Bank Limited, Shahjalal Islami Bank, Social Islami Bank Limited and First Security Islami Bank Limited. Monetary explanations of year 2006-2015 had been taken for calculation on the off chance that the greater part of the ten banks. The greater part of my optional information is gathered from the Annual report of these ten specific banks.

## 8. Analysis

### 8.1. Descriptive Analysis

*Table 1a. Descriptive Analysis of Private Islamic Commercial Banks.*

	LEV	PROF	TANG	SIZE	GROWTH	NDTS
Mean	0.927236	0.02061	0.015272	25.3198	0.262402	0.000862
Median	0.92635	0.01995	0.01525	25.5	0.2485	0.0009
Maximum	0.9623	0.0429	0.0307	27.31	0.5561	0.0065
Minimum	0.8885	-0.0065	0.0043	23.7	-0.137	-0.0006
Std. Dev	0.016889	0.010803	0.006943	0.976505	0.153233	0.000959
Observations	50	50	50	50	50	50

Private Islamic Commercial Banks.

From our sample of 5 banks, we have a total of 50 observations.

The mean (average) of our Dependent Variable (LEVERAGE) for all the observations of the 5 banks is 0.927236. The maximum value in all 50 observations of our Dependent Variable (LEVERAGE) is 0.962300, and the minimum value is 0.888500. The Standard Deviation (RISK) for all 50 observations of our Dependent Variable (LEVERAGE) is 0.016889.

The mean (average) of our Independent Variable (PROFITABILITY) for all the observations of the 5 banks is 0.020610. The maximum value in all 50 observations of our Independent Variable (PROFITABILITY) is 0.042900, and the minimum value is -0.006500. The Standard Deviation (RISK) for all 50 observations of our Independent Variable (PROFITABILITY) is 0.010803.

The mean (average) of our Independent Variable (TANGIBILITY) for all the observations of the 5 banks is 0.015272. The maximum value in all 50 observations of our Independent Variable (TANGIBILITY) is 0.030700, and the minimum value is 0.004300. The Standard Deviation (RISK) for all 50 observations of our Independent Variable

(TANGIBILITY) is 0.006943.

The mean (average) of our Independent Variable (SIZE) for all the observations of the 5 banks is 25.31980. The maximum value in all 50 observations of our Independent Variable (SIZE) is 27.31000, and the minimum value is 23.70000. The Standard Deviation (RISK) for all 50 observations of our Independent Variable (SIZE) is 0.976505.

The mean (average) of our Independent Variable (GROWTH) for all the observations of the 5 banks is 0.262402. The maximum value in all 50 observations of our Independent Variable (GROWTH) is 0.556100, and the minimum value is -0.137000. The Standard Deviation (RISK) for all 50 observations of our Independent Variable (GROWTH) is 0.153233.

The mean (average) of our Independent Variable (NON-DEBT TAX SHIELD) for all the observations of the 5 banks is 0.000862. The maximum value in all 50 observations of our Independent Variable (NON-DEBT TAX SHIELD) is 0.006500, and the minimum value is -0.000600. The Standard Deviation (RISK) for all 50 observations of our Independent Variable (NON-DEBT TAX SHIELD) is 0.000959.

*Table 1b. Descriptive Analysis of Private Commercial Banks.*

	LEV	PROF	TANG	SIZE	GROWTH	NDTS
Mean	0.910388	0.023906	0.017116	25.3934	0.235328	0.00211
Median	0.9245	0.0233	0.0161	25.49	0.21855	0.00175
Maximum	0.9988	0.0368	0.0389	26.26	0.7784	0.009
Minimum	0.1951	0.0108	0.0045	24.12	-0.0512	0.0002
Std. Dev.	0.10492	0.007001	0.00727	0.593687	0.160951	0.001732
Observations	50	50	50	50	50	50

Private, Commercial Banks.

From our sample of 5 banks, we have a total of 50 observations-

The mean (average) of our Dependent Variable (LEVERAGE) for all the observations of the 5 banks is 0.910388. The maximum value in all 50 observations of our Dependent Variable (LEVERAGE) is 0.998800, and the minimum value is 0.195100. The Standard Deviation (RISK) for all 50 observations of our Dependent Variable (LEVERAGE) is 0.104920.

The mean (average) of our Independent Variable (PROFITABILITY) for all the observations of the 5 banks is

0.23906. The maximum value in all 50 observations of our Independent Variable (PROFITABILITY) is 0.036800, and the minimum value is 0.010800. The Standard Deviation (RISK) for all 50 observations of our Independent Variable (PROFITABILITY) is 0.007001.

The mean (average) of our Independent Variable (TANGIBILITY) for all the observations of the 5 banks is 0.017116. The maximum value in all 50 observations of our Independent Variable (TANGIBILITY) is 0.038900, and the minimum value is 0.004500. The Standard Deviation (RISK) for all 50 observations of our Independent Variable

(TANGIBILITY) is 0.007270.

The mean (average) of our Independent Variable (SIZE) for all the observations of the 5 banks is 25.39340. The maximum value in all 50 observations of our Independent Variable (SIZE) is 26.26000, and the minimum value is 24.12000. The Standard Deviation (RISK) for all 30 observations of our Independent Variable (SIZE) is 0.593687.

The mean (average) of our Independent Variable (GROWTH) for all the observations of the 5 banks is 0.235328. The maximum value in all 50 observations of our Independent Variable (GROWTH) is 0.778400, and the

minimum value is -0.051200. The Standard Deviation (RISK) for all 50 observations of our Independent Variable (GROWTH) is 0.160951.

The mean (average) of our Independent Variable (NON-DEBT TAX SHIELD) for all the observations of the 5 banks is 0.002110. The maximum value in all 50 observations of our Independent Variable (NON-DEBT TAX SHIELD) is 0.009000, and the minimum value is 0.000200. The Standard Deviation (RISK) for all 50 observations of our Independent Variable (NON-DEBT TAX SHIELD) is 0.001732.

## 8.2. Coorelation Analysis

*Table 2a. Correlation analysis of private islamic commercial banks.*

	LEV	PROF	TANG	SIZE	GROWTH	NDTS
LEV	1.000000	-0.533209	-0.265738	-0.022832	-0.126211	-0.123389
PROF	-0.533209	1.000000	-0.040628	-0.083443	0.511999	0.109112
TANG	-0.265738	-0.040628	1.000000	0.752073	-0.285646	-0.068291
SIZE	-0.022832	-0.083443	0.752073	1.000000	-0.243126	0.055729
GROWTH	-0.126211	0.511999	-0.285646	-0.243126	1.000000	-0.006651
NDTS	-0.123389	0.109112	-0.068291	0.055729	-0.006651	1.000000

Private Islamic Commercial Banks.

From the table, we can see the correlations of our Dependent Variable (LEVERAGE) to our Independent Variables (PROFITABILITY, TANGIBILITY, SIZE, GROWTH and NON-DEBT TAX SHIELD)-

Correlation of LEVERAGE and PROFITABILITY is -0.533209 that is negative. It is a moderate negative correlation. The alternative hypothesis is rejected and the null hypothesis is not rejected.

Correlation of LEVERAGE and TANGIBILITY is -0.265738 that is negative. It is a weak negative correlation. The alternative hypothesis is rejected and the null hypothesis is not rejected.

Correlation of LEVERAGE and SIZE is -0.022832 that is negative. It is a weak negative correlation. The alternative hypothesis is rejected and the null hypothesis is not rejected.

Correlation of LEVERAGE and GROWTH is -0.126211 that is negative. It is a weak negative correlation. The alternative hypothesis is rejected and the null hypothesis is not rejected.

Correlation of LEVERAGE and NON-DEBT TAX SHIELD is -0.123389 that is negative. It is a weak negative correlation. The alternative hypothesis is rejected and the null hypothesis is not rejected.

*Table 2b. Correlation analysis of private commercial banks.*

	LEV	PROF	TANG	SIZE	GROWTH	NDTS
LEV	1.000000	0.177416	-0.119164	-0.201862	0.173504	0.131691
PROF	0.177416	1.000000	-0.297811	-0.506321	0.307742	0.087891
TANG	-0.119164	-0.297811	1.000000	0.500863	-0.300068	0.157419
SIZE	-0.201862	-0.506321	0.500863	1.000000	-0.606630	-0.184252
GROWTH	0.173504	0.307742	-0.300068	-0.606630	1.000000	0.268939
NDTS	0.131691	0.087891	0.157419	-0.184252	0.268939	1.000000

Private, Commercial Banks.

From the table, we can see the correlations of our Dependent Variable (LEVERAGE) to our Independent Variables (PROFITABILITY, TANGIBILITY, SIZE, GROWTH and NON-DEBT TAX SHIELD).

Correlation of LEVERAGE and PROFITABILITY is 0.177416 that is positive. It is a weak positive correlation. The alternative hypothesis is accepted and the null hypothesis is rejected.

Correlation of LEVERAGE and TANGIBILITY is -0.119164 that is negative. It is a weak negative correlation. The alternative hypothesis is rejected and the null hypothesis

is not rejected.

Correlation of LEVERAGE and SIZE is -0.201862 that is negative. It is a weak negative correlation. The alternative hypothesis is rejected and the null hypothesis is not rejected.

Correlation of LEVERAGE and GROWTH is 0.173504 that is positive. It is a weak positive correlation. The alternative hypothesis is accepted and the null hypothesis is rejected.

Correlation of LEVERAGE and NON-DEBT TAX SHIELD is 0.131691 that is positive. It is a weak positive correlation. The alternative hypothesis is accepted and the null hypothesis is rejected.

### 8.3. Regression Analysis

**Table 3a.** Regression analysis of private islamic commercial banks.

Dependent Variable: LEV			
Method: Panel Least Squares			
Sample: 2006 2015			
Periods included: 10			
Cross-sections included: 5			
Total panel (balanced) observations: 50			
Variable	Coefficient	Std. Error	Prob
C	0.8005866	0.0718633	0.0000
PROF	-0.8731116	0.2101855	0.0001
TANG	-1.3440038	0.4339707	0.0034
SIZE	0.0064901	0.0030179	0.0370
GROWTH	0.0101781	0.0153038	0.5095
NDTS	-2.1214987	2.0446584	0.3051
R-squared	0.4392468		
Adjusted R-squared	0.3755248		
F-statistic	6.8931780		
Prob(F-statistic)	0.0000792		

Private Islamic Commercial Banks.

Our dependent variable in this model is Leverage.

The regression is done using the panel least squares method.

Annual data collected for 10 consecutive years, from 2006-2015, for 5 different banks; a total of 50 observations.

The coefficient for the dependent variable (LEVERAGE) is the constant (C), value 0.800587.

The coefficient ( $\beta$ ) for the independent variable PROF (PROFITABILITY) is -0.873112, meaning that a decrease of -0.873112 units of PROFITABILITY will result in a 1 unit decrease of our dependent variable which is LEVERAGE.

The coefficient ( $\beta$ ) for the independent variable TANG (TANGIBILITY) is -1.344004, meaning that a decrease of -1.344004 units of TANGIBILITY will result in a 1 unit decrease of our dependent variable which is LEVERAGE.

The coefficient ( $\beta$ ) for the independent variable (SIZE) is 0.006490, meaning that an increase of 0.006490 units of SIZE will result in a 1 unit increase of our dependent variable which is LEVERAGE.

The coefficient ( $\beta$ ) for the independent variable (GROWTH) is 0.010178, meaning that an increase of 0.010178 units of GROWTH will result in a 1 unit increase of our dependent variable which is LEVERAGE.

The coefficient ( $\beta$ ) for the independent variable NDTS (NON-DEBT TAX SHIELD) is -2.121499, meaning that a decrease of -2.121499 units of NON-DEBT TAX SHIELD will result in a 1 unit decrease of our dependent variable which is LEVERAGE.

Our Significance Level ( $\alpha$ ) = 5% or 0.05(2 tail test).

From our regression table, we find that.

The Probability of Dependent Variable = 0.0000, which is lower than our significance level; that means we reject the null hypothesis. Hence, there is a significant relationship.

The Probability of PROFITABILITY (PROF) = 0.0001, which is lower than our significance level; that means we reject the null hypothesis. Hence, a significant relationship exists.

The Probability of TANGIBILITY (TANG) = 0.0034, which is lower than our significance level; that means we reject the null hypothesis. Hence, a significant relationship exists.

The Probability of SIZE = 0.0370, which is lower than our significance level, therefore we reject the null hypothesis. Hence, there is a significant relationship.

The Probability of GROWTH = 0.5095, which exceeds our significance level, therefore we do not reject the null hypothesis. Hence, there is no significant relationship.

The Probability of NON-DEBT TAX SHIELD (NDTS) = 0.3051, which exceeds our significance level, therefore we do not reject the null hypothesis. Hence, there is no significant relationship.

R-squared signifies the level up to which the variations in the dependent variable (Leverage), can be explained by our independent variables (Profitability, Tangibility, Size, Growth, Non-Debt Tax Shield).

The value of our R-squared = 0.439247, which means that 43.9247% of the variations in Leverage can be explained by the independent variables in our regression model, while other factors and variables that are not included in our model, is responsible for remaining 56.0753%.

The Probability of the F-statistic in this model is 0.000079, which is less than our significance level, meaning that our multiple regression model is a "good fit".

**Table 3b.** Regression analysis of private commercial banks.

Dependent Variable: LEV			
Method: Panel Least Squares			
Sample: 2006 2015			
Periods included: 10			
Cross-sections included: 5			
Total panel (balanced) observations: 50			
Variable	Coefficient	Std. Error	Prob.
C	1.193215272	1.012562	0.244966
PROF	1.479070299	2.542449	0.563704
TANG	-0.763459282	2.555801	0.766563
SIZE	-0.012868858	0.038907	0.742397
GROWTH	0.03609643	0.122442	0.76953
NDTS	6.24218132	9.628571	0.520161
R-squared	0.061689875		
Adjusted R-squared	-0.044936276		
F-statistic	0.578562334		
Prob(F-statistic)	0.716097335		

Private, Commercial Banks.

Our dependent variable in this model is Leverage.

The regression is done using the panel least squares method.

Annual data collected for 10 consecutive years, from 2006-2015, for 5 different banks; a total of 50 observations.

The coefficient for the dependent variable (LEVERAGE) is the constant (C), value 1.193215.

The coefficient ( $\beta$ ) for the independent variable PROF (PROFITABILITY) is 1.1479070, meaning that an increase of 1.1479070 units of PROFITABILITY will result in a 1 unit increase of our dependent variable which is LEVERAGE.

The coefficient ( $\beta$ ) for the independent variable TANG (TANGIBILITY) is -0.763459, meaning that a decrease of -



0.763459 units of TANGIBILITY will result in a 1 unit decrease of our dependent variable which is LEVERAGE.

The coefficient ( $\beta$ ) for the independent variable (SIZE) is -0.012869, meaning that a decrease of 0.012869 units of SIZE will result in a 1 unit decrease of our dependent variable which is LEVERAGE.

The coefficient ( $\beta$ ) for the independent variable (GROWTH) is 0.036096, meaning that an increase of 0.036096 units of GROWTH will result in a 1 unit increase of our dependent variable which is LEVERAGE.

The coefficient ( $\beta$ ) for the independent variable NDTS (NON-DEBT TAX SHIELD) is 6.242181, meaning that an increase of 6.242181 units of GROWTH will result in a 1 unit increase of our dependent variable which is LEVERAGE.

Our Significance Level ( $\alpha$ ) = 5% or 0.05 (2 tail test)

From our regression table, we find that-The Probability of Dependent Variable = 0.2490, which is higher than our significance level; that means we not reject the null hypothesis. Hence, there is no significant relationship.

The Probability of PROFITABILITY (PROF) = 0.5637, which exceeds our significance level, therefore we do not reject the null hypothesis. Hence, there is no significant relationship.

The Probability of TANGIBILITY (TANG) = 0.7666, which exceeds our significance level, therefore we do not reject the null hypothesis. Hence, there is no significant relationship.

The Probability of SIZE = 0.7424, which exceeds our significance level, therefore we do not reject the null hypothesis. Hence, there is no significant relationship.

The Probability of GROWTH = 0.7695, which exceeds our significance level, therefore we do not reject the null hypothesis. Hence, there is no significant relationship.

The Probability of NON-DEBT TAX SHIELD (NDTS) = 0.5202, which exceeds our significance level, therefore we do not reject the null hypothesis. Hence, there is no significant relationship.

R-squared signifies the level up to which the variations in the dependent variable (Leverage), can be explained by our independent variables (Profitability, Tangibility, Size, Growth, Non-Debt Tax Shield).

The value of our R-squared = 0.061690, which means that 6.169% of the variations in Leverage can be explained by the independent variables in our regression model, while other factors and variables that are not included in our model, is responsible for remaining 93.831%.

The Probability of the F-statistic in this model is 0.716097, which is more than our significance level, meaning that our multiple regression model is a "bad fit".

## 9. The Significance of the Study/Findings

As it appears from the above regression analysis that the model for Private Islamic Commercial Banks is a good fit with R squared 43.9247%, whereas the model for Private Commercial Banks is a bad fit with an R squared of 6.169%. So we can say the Private Islamic Commercial Banks

perform better than that of the Private Commercial Banks. As we are a Muslim country so the Shariah based banking has been common use for most of the people. Shariah Laws apply to all aspects of a Muslim's life, finance is no exception. It prohibits interest which is known as (RIBA) as it is clearly injunctioned in Quran and Hadith. Moreover, the Shariah Laws also prohibits "Gharar" uncertainty or speculation. Ethical investing prohibits investment in sectors as gambling, alcohol, tobacco, arms industry, pornography, etc. The auto and home finance for Shariah based banking follows the concepts of DIMINISHING MUSHARAKA (partnership). Basically here they share the rental amount to the client in terms of interest and if the customer fails to pay the rental bill on time than they have to pay a maintenance fee in which the sum is amassed by the bank and moves over the entire amount as charity. For business installment finance they use the term MURABAHA. The credit card which they provide is known as UJRAH. In terms of interest amount in the account they basically share profit/loss by the client which is known as MUDARABA.

Considering the scenario the customers are mostly driven into Islamic banking which is also known as Shariah banking. As a result considering my variables Profitability and Tangibility, the Islamic Banks usually make more profit compared to the Private Banks. Interest plays a vital role here for both profitability and tangibility. In terms of Size for instance Islami Bank has got more branches and ATMs than any of the Commercial Banks. It got branches in some places where you can say they have implement blue ocean strategy. Growth, and Non debt Tax Shield for both Islamic bank and Commercial banks shows no significant relationship. The probable reason might be we got few Islamic Shariah based banks and the number of Commercial banks fails to meet the availability of some places of Bangladesh. On the other hand, as in Shariah only profit shared is possible with no sign of interest in the banking so it might be a handy reason for no significant relationship for the Non debt Tax Shield. However, for Commercial Banks they normally try to reduce their income by pulling depreciation in order to lower the tax rate, hence this might be a tentative reason for significant relationships.

The above reasons are subject to change as it was an analysis done with 10 banks only. As research takes a lot of time and the financial statement which are provided might mislead some major information resulting in an error of the study. So we can just estimate or predict a clear or perfect answer is hard to give based on this research as it might not be fully authentic commenting any.

## 10. Conclusion

Now a day business does not mean simply offering and obtaining the items or administrations. This is very vital to lead the business in a sorted out and successful way. Presently questions arise that how we can make this business procedure successful. Publicizing can be a bigger solution in this part. More than that keeping up a palatable level of client

satisfaction might make the entire offering process significantly more dynamic. As we as a whole know in the business world things proceed onward the will of Impression. Standard Chartered is the world's one of the best leading Bank's. Furthermore, it's the obligation of this Bangladesh corporate office to hold that same picture and continue with the Business.

This paper concentrates on the determinants of the capital structure of private Islamic business banks and private business banks in Bangladesh on information gathered from the time of 2006 to 2015. The panel least squares strategy is utilized to break down the relationship between a dependent variable (LEVERAGE) and independent variables (PROFITABILITY, TANGIBILITY, SIZE, GROWTH and NON-DEBT TAX SHIELD), utilizing EView 8.

It is concluded that as all five independent variables of private business banks and two from private Islamic business banks are rejected by private Islamic being a good fit model in the study while the private business banks being the bad fit according to the regression analysis. So it is recommended that policy makers should focus on these determinants when making any decisions regarding capital structure.

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