Factors Influencing Islamic Banks’ Capital Structure in Developing Economies

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Abstract

Purpose – The paper investigates the influence of company-specific attributes on capital structure decisions of Islamic banks in Gulf Cooperation council (GCC) countries during the period 2009-2011.

Design/methodology/approach – To improve the econometric estimates' efficiency, the paper uses the generalized least square (GLS) regression model to increase the levels of freedom and reduce collinearity.

Findings – The empirical results indicate that bank size, liquidity, and corporate age are positively associated with the leverage ratio of GCC Islamic banks, supporting the trade-off theory. Inconsistent with theoretical predictions, it is found that the profitability, tangibility and growth have positive insignificant relationship with the level of leverage, suggesting these determinants are not important in capital structure decisions. Furthermore, gross domestic product (GDP) and non-debt tax shield have negative effects on the leverage ratio, and significant for GDP.

Research limitations/implications – Overall, the evidence provided in the study highlights the significance of company specific characteristics in determining and affecting the capital structure decisions of IBs in GCC countries. It is useful to employ these variables in the analysis of IBs’ capital structure in the GCC region before the financial crisis in 2007. One limitation for this study is that the sample is restricted to only the Islamic banking sector. Future research could include all Islamic financial institutions (IFIs) operating within the Gulf region. Second, the study only concentrates on GCC countries to the neglect of other countries. Finally, the study controls for the country level only and does not account for firm factors. Future research could consider all these limitations.

Another possible avenue is by examining other variables, such as corporate governance mechanisms.

Originality/value – Despite that most previous studies investigated the determinants of the capital structure of financial conventional industries, research on Islamic banking is almost non-existent. Moreover, the extant literature on Islamic finance has been theoretically explored, and the empirical research regarding capital structure is still in the infancy stage. Accordingly, it is evident that based on the Islamic trade-off perspective, theoretical hypotheses and empirical findings provide a novel addition to the capital structure theory for IFIs.

Keywords - Islamic banks, capital structure, trade-off theory, firm characteristics

Paper type - Research paper

1. Introduction

Banks’ operations and activities have been described as highly regulated, diverse, risky by nature and market sensitive, (Shih et al., 2010). However, banks' risk-taking behavior is restricted by
regulatory capital requirements in order to curb the bank insolvency. Preserving the capital at a high level impedes the ability of banks to compete in different financial markets because equity is more costly compared to debt. Requirements of the bank capital include the portfolio composition, the flow of liquidity, the management and the environment in which it develops. Using capital requirements to prevent bank insolvency is not effective and appropriate tools (Kim and Santomero, 1988). In order to maximize the levels of capital responding to regulatory requirements, banks may raise their risks by increasing speculative operations and the investment in derivative products. In the absence of regulation within financial institutions, increasing the competition leads to high levels of risks (Repullo, 2004). To protect the capital value, it is important to know the level of the insolvency risks and the shocks to the company value (Froot, 2001). Based on this argument, the capital structure decision is considered one of the most significant financial policies of a company.

In the context of Islamic banks (IBs), the capital structure consists of both shareholders’ equity and the debt. Investment accounts and current accounts are the main sources of the debt. The major significant element influencing the capital structure is the debt, since it constitutes the greatest portion of the capital. IBs collect funds from depositors to invest their money with reasonable profits and risks by the professional investment management. Capital structure is considered one of the most substantial attributes, which enforces essential constraints on IBs. As a rule, IBs hold more capital than the obligated minimum level by capital requirements in order to face the potential shocks.

This study aims to assess the capital structure determinants in the Islamic banking industry that has unique features compared to its conventional counterparts. The great number of IFIs that operate all over the world is found in the Gulf region. This is due to the fact that more than US$262.6 billion (over 40%) of the total financial assets of Shariah-compliant (US$640 billion) at the end of 2007, are invested in the GCC countries (Wilson, 2009). Greater profits and assets in the banking sector are preferable in order to save bank failure, and contribute to the stability of financial system, and therefore, the national economic stability (Zeitun, 2012). This may also contribute to improve the quality of existing banking services and offering new products in markets.

Most empirical studies on determinants of the capital structure have been conducted on conventional banking industry. Conversely, none of the earlier studies have investigated the determinants of the bank capital structure in GCC countries, and as a result a little is known about such issue in this region.

This study contributes to extant literature of the capital structure in threefold. It is the first study that examines the effect of internal firm attributes on the capital structure of IBs in GCC countries which share some common economic, cultural, and political similarities, which by far outweigh any differences they might have (Al- Muharrami and Matthews, 2009). IBs are completely different from their counterparts in terms of monitoring and supervising, and of their lower risks and bankruptcy costs. Secondly, this study uses the trade-off theory from an Islamic perspective as a framework in order to develop the theory of capital structure for IFIs. Third, empirical findings of 135 IBs would enhance the capital structure theory for IFIs.

Nonetheless, recent studies show that determinants of the capital structure not just enhance companies to use further debt, but more importantly, the effects of bank-specific characteristics are also reinforced. The study empirically examines the factors that influence the capital structure, including bank size, profitability, liquidity, tangibility, non-debt tax shields (NDTS),
bank growth, and bank age, controlling for financial economic conditions, and whether they are applicable to IBs.

2. Theoretical Framework
The principles of Shariah dominate all operations of IBs. Based on these principles, IBs must have peculiar transactions, assets, governance system, risk management approaches, and sources of funds compared with their conventional counterparts. All these unique characteristics of IBs influence the capital structure.

Capital structure conventional theories are derived from the concept of individual wealth maximization based on the probable utility objective, and they have been developed ultimately in order to justify the preference between the equity and the debt. In the case of IBs, the capital structure decision is dominated by Shariah principles which prohibit issuing of interest bearing loans or accepting interest-based deposits. On the contrary to conventional banks, IBs use different financing instruments to mobilize funds, including shareholders’ equity, investment accounts, and current accounts.

Shareholders’ equity is the sole source that can increase the bank funding via the sale of common shares to the public, including any reserves accumulated over years. IBs cannot issue preference shares, which are prohibited in Shariah. Investment accounts are considered as equity finances, not as a liability. This fund is the unique and novel financing mechanism of IBs compared to conventional counterparties, which allows them to invest their money on the profit-sharing basis. Current accounts are also a type of bank funding, since customers have the right to withdraw their money on demand at any time without returns on their deposits.

Some researchers studied the theory of capital structure from Islamic viewpoints. Al-Deehani, Karim, & Murinde (1999) conducted their study based on profit-sharing contracts. Their theoretical framework suggests that as investment accounts’ funding of IBs increased both the market value and rates of shareholders’ return without exchanging the financial risk level. Recently, Toumi, Viviani, & Belkacem (2012) reinvestigated several assumptions under trade-off theory, agency theory, and pecking order theory from an Islamic point of view. They found that the trade-off theory is more appropriate than other theories for IBs’ capital structure measured by the equity ratio (equity to total assets). Moreover, Kusasi (2013) examined the theory of capital structure from an Islamic viewpoint. She tested the impact of Islamic debt (sukuk) on capital structure based on trade-off, agency, and pecking order theories. She concluded that cost determines the choice of the capital structure of IBs, and it is not a tradable cost. From an Islamic viewpoint, the optimal capital structure is a matter of tangible asset value, excluding the transaction cost. Hence, this study aims to employ the trade-off theory from an Islamic perspective as a framework for the capital structure decision based on the leverage ratio.

2.1 Trade-Off Theory from an Islamic Perspective
The static trade-off theory declares that the optimal capital structure generates from the balance between the benefits of tax and associated costs of bankruptcy (Modigliani and Miller, 1963). Increasing the use of debt leads to high risk of bankruptcy, and therefore, rising costs of capital structure (Baxter, 1967). This is actually due to that debt holders’ demand more remuneration against risks. De-Angelo and Masulis (1980) developed the tax model of Miller (1977) by adding
non-debt tax shields in terms of assets’ depreciation account and tax of credits’ investment. Their results showed that each company has its own optimal capital structure. Bradley, Jarrell and Kim (1984) found that non-debt shields have an effect on the level company debt. In the same vein, Berger, Herring and Szego (1995) concluded that the trade-off between the advantages of tax and costs of bankruptcy influences the optimal capital structure.

In the Islamic context, investors should participate in the real local economy by investing their funds in tangible assets, which is considered as a safety technique that enables IBs to monitor the exposure of their risks. In this context, credit portfolio is one of the guaranteed contracts that contribute to minimize the bank’s exposure to the risk of counterparty. In addition, IBs are described by a greater level of real assets that reduces the bankruptcy costs resulting from the debt.

According to the trade-off theory, Toumi et al (2012) hypothesized that IBs have a minimal equity ratio because they have lower bankruptcy costs. This theoretical assumption is supported by Kusasi (2013) who found that the financial distress cost for IBs would be lower as Islamic debt is considered as asset-backed and consequently, the great part of total debt would be limited by the tangible assets in the ownership of IBs. Derived from the above discussion and the extant literature of the capital structure from Islamic viewpoint, the leverage ratio would be higher for larger banks with more tangible assets.

3. Literature Review and Hypotheses Development

Earlier studies on the determinants of capital structure showed that the level of company leverage is strongly correlated to the quality of business, such as the banking industry (Titman and Harris and Raviv, 1991; Wessels, 1988). The empirical findings regarding these determinants are conflicting. This is because of the institutional differences that may affect the cross-sectional relationship between determinants and the leverage ratio. Amidu (2007) found that profitability, asset structure, risk, growth, size, and tax affect the capital structure of Ghanaian banks, based on trade-off and pecking order theories. In addition, Ahmed, Ahmed, and Ahmed (2010) showed that the profitability, liquidity, risk, and corporate age influence capital structure (leverage ratio) of insurance companies, and found that pecking order and trade-off theories are pertinent to Pakistani environment. In the same vein, Najjar and Petrov (2011) documented that the tangibility, size, and liquidity significantly affected the capital structure (debt ratio) of Bahraini insurance companies, supporting both perspectives of the trade-off and the pecking order. More recently, Juca, Sousa, & Fishlow (2012) found that leverage has an inverse association with size, profitability, growth, tangibility, risk, and compensation program for executive managers, and positively related to deposits’ market value in North American banks. Lim (2012) found a negative correlated between leverage and profitability, non-debt tax shields (NDTS), earnings volatility, and no circulating share, but positive with size among Chinese financial services listed companies. He also found that size and NDTs negatively affected the debt of long-term. The extant literature of the conventional banking sector indicates that size, profitability, tangibility, growth, liquidity, non-debt tax shields, and age are the most important factors influencing capital structure.

In the context of IFIs, most previous studies have primarily focused on theoretical perspective of the capital structure instead of empirical research (Al- Deehani et al., 1999; Kusasi, 2013; Nagano, 2010; Rajhi and Hassairi, 2012). Al- Deehaniet al. (1999) re-explored the capital structure of traditional school and Modigliani and Myers perspectives in the
contemporary corporate finance literature. They found both theories, which state that the capital can only be increased by equity and debt, unsuitable for explaining the capital cost and market value of IBs, as they have unique capital structure that depend on profit sharing instrument, which has important implication for the concept of financial risk. Nagano (2010) examined the Islamic finance choice from firms based on the capital structure theories in Malaysia and Middle East countries. Rajhi and Hassairi (2012) studied issues related to capital structure of Islamic financial institutions that differentiate them from conventional ones. They set framework of capital adequacy for IBs and compared to the framework of the Basel II. They also studied the risk profile of IBs, and the relationship between risk management and capital structure. Meanwhile, Kusasi (2013) examined traditional capital structure theories from an Islamic perspective using implication of Islamic debt (sukuk). However, only Toumi et al. (2012) and Al-Kayed, Zain, and Duasa (2014) examined the influence of profitability, size, dividends, and tangibility on the capital structure of both Islamic and conventional banks in seven countries, including GCC countries, Malaysia and Egypt during 2005-2010. Their sample contains 44 IBs, and 32 conventional banks from the Gulf region. They found that IBs have a greater equity ratio compared to conventional banks. This higher equity ratio is because IBs are much more flexible during financial crises. They found that the size has a negative effect on the equity ratio for both types of banks, while profitability variable has a positive effect and payout ratio and tangibility are not significant. They state that trade-off theory is more proper for IBs as information asymmetry agency conflicts are less important for them than conventional ones, and also because IBs have unique characteristics such as the existence of Shariah supervisory board, which differentiate them from their conventional counterparts. Accordingly, this study aims to investigate the most significant determinants of the capital structure among 135 IBs of GCC countries after the financial crisis, where these countries have the same factors of regulations, cultural, social, political, business and economic (Al-Muharrami and Matthews, 2009).

3.1 Bank Size
Costs of bankruptcy are somewhat greater for smaller companies (Baker and Wurgler, 2002). Although this may be true, bigger companies have lower possibility of bankruptcy due to their additional diversification (Titman and Wessels, 1988). Consequently, a positive association between bank size and leverage ratio is expected, as suggested by the trade-off theory that supposes an inverse association between firm size and the probability of bankruptcy.

From an Islamic perspective, larger IBs have fewer costs of bankruptcy because of their nature of business contracts that must comply with Shariah principles, having diversified portfolios, and lower investment risks. Therefore, IBs prefer to borrow more debt to finance new projects. Sizable banks have to finance a great number of profitable investment chances. According to the trade-off theory, firms that have extra tangible assets have higher leverage ratios. This argument is consistent with the Islamic viewpoint, and is supported by Toumi et al. (2012) who found that bank size has a negative effect on the capital structure measured by the equity ratio, implying a greater leverage multiplier. Hence, based on both the trade-off theory and Islamic perspective, the following hypothesis is developed:

**H1**: There is a positive relationship between bank size and leverage ratio.

3.2 Profitability
The trade-off theory suggests a positive relationship between profitability and leverage ratio (Jensen, 1986). This implies that the greater leverage ratio, the better would be business
performance, and therefore, the management and investors would be more confident regarding future investment opportunities. Profitable companies have additional cash-flows, so they tend to utilize more debt in order to get the advantages of tax, and because of the higher possibility of refund. Furthermore, greater level of leverage can alleviate conflicts between shareholders and managers in terms of the option of investment, the amount of risk-taking, the liquid conditions, and the policy of dividend (Pratomo and Ismail, 2006).

In the case of IBs, investment accounts allow shareholders to share the profits and losses of investments, implying that the lower level of leverage may encourage a bank to earn more returns to minimize bankruptcy costs. This perspective is consistent with results of Toumi et al. (2012), who found a positive relationship between profitability and capital structure measured by the equity ratio. Based on the Islamic viewpoint, the level of debt should be inversely correlated with profitability (Kusasi, 2013). Hence, the following hypothesis is developed:

H2: There is a negative relationship between profitability and leverage ratio.

3.3 Tangibility
Assets of a firm have been categorized into two categories tangible and intangible. Companies with a great amount of tangible assets can maximize the debt because they have the ability to repay lenders more than companies with a low portion of these assets. According to the trade-off theory, greater proportion of tangible assets influences the leverage ratio. The possible interests’ conflict between shareholders and debt holders is due to management’s engagement in sub-optimal investment, which exposes debt-holders to high risks. According to Harris and Raviv (1991), creditors have motives to gain tangible assets of firms as a security to minimize risks. Previous empirical and theoretical studies found a mixed result related to the influence of the assets’ tangibility on the capital structure of financial institutions. Gropp and Heider (2010) and Najjar and Petrov (2011) showed that the tangibility of assets has a positive effect on the capital structure of banks and insurance companies measured by leverage ratio. On the other hand, Juca et al. (2012) found a negative impact on banks’ capital structure measured by financial leverage. In contrast with the above studies, Gul, Khan, Razzaq, & Saif (2012) showed a positive association between tangibility and leverage of insurance companies, and a negative correlation with banking leverage.

IBs have a great amount of tangible assets, which minimize the bankruptcy costs for creditors. In the context of Islamic perspective, banks that have further tangibility borrow more debt secured by such assets. Tangible assets owned by banks are considered a cornerstone in determining the level of debt (Kusasi, 2013). The tangibility of IBs is the most important determinent of their capital structure because the leverage ratio cannot be more than the value of assets’ tangibility. Empirical findings show that the tangibility of assets has no effect on the equity ratio of IBs (Toumi et al., 2012). Hence, based on both an Islamic perspective and the trade-off theory, the following hypothesis is developed:

H3: There is a positive relationship between the tangibility of assets and leverage ratio.

3.4 Growth
Both theoretically and empirically, researches have extensively debated the association between growth level and financial leverage. Based on the trade-off theory, firms with more opportunities of investment in terms of intangible assets, which cannot be secured, have the minimal leverage ratio (Gropp and Heider, 2010). The trade-off theory indicates that companies with extra investment opportunities have minimal leverage because they have stronger motivations to avoid
asset substitution and under investments that can increase from the conflict between shareholders and debt-holders. More recent studies documented that possible growth has a negative impact on the leverage ratio (Amjad, Belal, & Tufail, 2013; Juca et al., 2012).

According to the trade-off theory, profitable companies that have extra tangible assets have higher leverage ratios. However, companies with more risks, additional intangible assets, and good growth opportunities have lower leverage ratios (Niu, 2008). Based on this theory, the determinant of the debt size is the debt cost. According to empirical and conceptual studies, the future growth of IBs is expected to have a negative impact on the leverage ratio for two reasons. First, according to the trade-off theory, the financial crisis costs exceed with growth prospects, forcing managers to minimize the level of debt in the capital structure. Second, in general, during the distress many IBs may suffer losses that lead to reduce their tangible assets, and in lower leverage ratio.

**H4**: There is a negative relationship between bank growth and leverage ratio.

### 3.5 Liquidity

According to Sundarajan and Errico (2002), liquidity is used to measure the bank’s ability to face short-term commitments and uncommon withdrawals. Theoretically, the trade-off perspective predicts a positive correlation between the leverage ratio and firm liquidity. This implies that firms that have a high level of liquidity (great short-term assets), have lower liquidity risks, and borrow more debt, because of their ability to repay the debt. Consequently, empirical studies showed that the ratio of liquidity has a varied result on the capital structure of banks. For instance, Ahmad, Ariff, & Skully (2008) found that the liquidity has a positive correlation with capital ratios and Gul et al. (2012) found a negative correlation between the liquidity and leverage ratio. An inverse finding is supported by Ahmed et al. (2010) and Najjar and Petrov (2011) who found a negative association between the liquidity and leverage ratio in Pakistani and Bahraini insurance companies.

IBs have a great amount of liquid assets, reflecting the constraints on this type of assets, and the competition from conventional banks. The main constraints on IBs' liquidity are less developed financial market and market mechanisms. Generally, IBs depend more on commodity of *murabahah*, interbank placement finances on *mudarabah*, *ijarah*, *wakalah*, and other instruments for managing liquidity risk. This situation requires setting proper policies, mechanism, and techniques for efficient and effective liquidity management for the philosophy of Islamic finance. Liquid assets consist of cash or cash equivalents, short term placements to banks or financial institutions and liquid quoted investments. The strong liquidity position gives IBs the ability to seize upon good opportunities that may become available in regional markets. According to Islamic perspective, banks with more liquidity may enhance their capital structure by minimizing liquidity risks at the time of financial crisis, and demand on debt must decline. Furthermore, banks with the higher level of current assets produce more internal funds that can be utilized to finance their activities and new investments. Hence, the following hypothesis is formulated:

**H5**: There is a negative relationship between bank liquidity and leverage ratio.

### 3.6 Non-Debt Tax Shields

The benefits of debt can be considered as costs to substitute the tax (Modigliani and Miller, 1958). These benefits of tax shields encourage firms to issue the debt. In addition to debt, the depreciation of fixed assets and investment tax credits are two types of non-debt tax shields...
(NDTS), which are able to offset the payment of tax. De-Angelo and Masulis (1980) argued that NDTS can be concerned as alternatives for tax interests of debt funding, and a company with great NDTS is likely to borrow less debt. Lim (2012) found that NDTS had a negative impact on the leverage ratio of financial companies in China, as consistent with the trade-off theory. This result is confirmed by Ahmad and Abbas (2011) in the context of Pakistani banks. The same sign but insignificant has been found by Gul et al. (2012) in banking and insurance sectors of Pakistan. However, Iwarere and Ankinleye (2010) found a positive correlated between NDTS and the financial leverage of Nigerian banks.

In this study, the ratio of depreciation expenses over total assets is used to measure NDTS. Financial institutions, such as IBs, are generally less relied on fixed assets compared with liquid assets. This implies that the total depreciation expenses of fixed assets would never affect financing decisions of IBs. Given this fact, it can be expected that NDTS has no effect on the leverage ratio of IBs. Hence, the following alternative hypothesis is developed:

**H6:** There is no relationship between non-debt tax shields (NDTS) and leverage ratio.

### 3.7 Bank Age

The age of a company is considered one of the most important determinants of the capital structure. Previous studies showed that financing costs are not fixed along with the life cycle of a company. Generally, younger companies with insufficient internal funding sources to finance their investments borrow more (Beck, Demirguc-Kunt, & Maksimovic, 2008). Companies with uncertainty and asymmetry of information have greater chances to obtain further debt (Beck and Demirguc-Kunt, 2006). Since company age can be defined as a standard criterion of reputation in capital structure models (Shehu, 2011), the growing company age as a continuing business leads to reduce the asymmetry of information, which implies more debt (Akhtar and Olivier, 2009) and thus, a positive correlation is expected. A company uses its reputation that has been growing overtime that allows it to achieve great profits in order to treat problems of debt, and shows its ability to pay. In the same vein, the trade-off theory suggests that over a long time, companies tend to use more external financing rather than internal funding. This view is supported by Kayhan and Titman (2004), who found that through the long term, companies use more debt to finance their projects. Earlier studies documented direct relationship between corporate age and leverage ratio. Furthermore, recent study by Akhtar and Olivier (2009) found that the age of a company is positively correlated with the leverage ratio of Japanese firms. This result is supported by Zare, Farzanfar, & Boroumand (2013) in the context of Iranian companies.

In the case of IBs, corporate age is used as a proxy for reputation in capital markets to acquire the investors’ confidence in order to get more external financing because of a reduction of information asymmetry. Thus, a direct relationship exists between bank age and leverage ratio. Hence, the following hypothesis is developed:

**H7:** There is a positive relationship between bank age and leverage ratio.

Furthermore, in order to control the effect of the macroeconomic conditions of GCC countries, following Kayo and Kimura (2011) the country variable; the growth of gross domestic product per capita (GDP) is used. Kayo and Kimura (2011) stated that the growth of GDP is considered to add to the well-being of a particular country, and provide good opportunities of investments, and as a result, financial leverage is minimized. Previous studies showed that GDP growth has a negative effect on the company leverage level (Kayo and Kimura, 2011). It is
expected that GDP has a negative influence on leverage ratio because of the effect of the financial crisis that starting from 2007.

4. Research Method
4.1 Specific Model
This study uses the cross-sectional time series for the period from 2009 to 2011 to provide appropriate information on multiple statistical observations in order to increase the freedom levels and minimizing collinearity. This improves the efficiency of econometric estimates (Shah and Khan, 2007). In this model, the slopes and intercepts are known as coefficients of constant. With the assumption of no effect of time among all cross-sectional IBs, the study uses a GLS regression model that remedies the problems of heteroskedasticity and any bias of omitted variable regarding heterogeneity issue due to unobserved variables and time-invariant sources.

The following equation of the model is formulated as:

\[ \text{LEV}_{it} = \alpha + \sum \beta_i X_{it} + \epsilon_{it} \] \hspace{1cm} (1)

\[ \text{LEVRG}_{it} = \text{the total debt/total assets for an Islamic bank} \]
\[ \alpha = \text{represents the model intercept} \]
\[ \beta_i = \text{the change co-efficient for} \ X_{it} \text{variables} \]
\[ X_{it} = \text{the number of explanatory variables of an Islamic bank} \]
\[ i = \text{represents the total number of Islamic banks i.e.} \ i = 1, 2, 3...N (N= 45 banks) \]
\[ t = \text{the period of the study i.e.} \ t = 1, 2, 3...T (T = 3 years). \]

The final model equation after employing diverse independent variables becomes:

\[ \text{LEVRG}_{it} = \alpha + \beta_1 \text{BSIZE}_{it} + \beta_2 \text{PROFT}_{it} + \beta_3 \text{TANGT}_{it} + \beta_4 \text{GROTH}_{it} + \beta_5 \text{LIQUID}_{it} + \]
\[ \beta_6 \text{NDTS}_{it} + \beta_7 \text{BAGE}_{it} + \beta_8 \text{GDP}_{it} + \epsilon_{it} \] \hspace{1cm} (2)

Where:

\[ \text{LEVRG}_{it} = \text{The sum of investment accounts and current accounts over total assets for an Islamic bank} \]
\[ \text{BSIZE}_{it} = \text{Represents the size of the Islamic bank} \]
\[ \text{PROFT}_{it} = \text{Net income before taxes and Zakah/ total assets for an Islamic bank} \]
\[ \text{TANGT}_{it} = \text{Depreciation of fixed assets/total assets for an Islamic bank} \]
\[ \text{GROTH}_{it} = \text{Increase in the annual total assets’ ratio for an Islamic bank} \]
\[ \text{LIQUID}_{it} = \text{Represents current ratio of an Islamic bank} \]
\[ \text{NDTS}_{it} = \text{Non-debt tax shield of the Islamic bank} \]
\[ \text{BAGE}_{it} = \text{Number of years from the date of incorporation for an Islamic bank} \]
\[ \text{GDP}_{it} = \text{The amount of GDP per capita for an Islamic bank} \]
\[ \epsilon_{it} = \text{The disturbance term.} \]

4.2 Sample and Data Gathering
The study collected the data from the annual reports during the period from 2009 to 2011. The sample size comprises 45 IBs operating in GCC countries (Saudi Arabia, Bahrain, Kuwait, Qatar, and United Arab Emirates), using the balanced panel data. The list of banks was drawn from the website of AAOIFI and AIBIM. The hypotheses were examined based on grounded data gathered from the historical information published in the annual reports of banks.
4.3 Measurements of Variables

4.3.1 Dependent Variable

In the capital structure literature, the proxy used to measure the leverage ratio is based on its definition. Previous empirical studies have employed the debt book value over book value of debt + equity market value or the book value of debt to debt book value + equity book value to measure financial leverage (Titman and Wessels, 1988). The former measure of debt book value is better than debt market value for three reasons (Shah and Khan, 2007). First, the optimal financial leverage is governed by the trade-off between the advantages and expenses of debt funding. The prime advantage of leverage is the cash flows produced. This advantage will never change by debt book value (Banerjee, Heshmati, & Wihlborg, 2000). Second, an increase in the debt costs raises the probabilities of bankruptcy. When a company is being bankrupt due to the financial crisis, the debt relevant value will be the book value. Third, the book value measurement is quite easy and accurate to use and calculate.

The other foresight lies in choosing the proper measurement for the financial leverage. Researchers have used varied proxies for the leverage ratio according to capital structure theories, such as short-term debt, long-term debt, and total debt as a proportion of overall assets. In contrast to conventional banks, the capital structure of IBs consists of shareholders’ equity, investment accounts, and current accounts. IBs work as an agent (mudarib) to use the money from investment accounts holders (IAHs) under a modaraba contract. According to Archer, Karim, & Al-Deehani (1998), the collective investment portfolio of IBs includes the equity of shareholders and funds from IAHs and other sources available to banks. This study measures the leverage ratio by dividing the sum both investment accounts and current accounts over total assets.

4.3.2 Independent Variables

4.3.2.1 Bank Size

Previous studies used several proxies to measure the size of a firm, such as total assets, number of branches, and number of employees. This study follows Ahmad et al. (2008), Amidu (2007), Gul et al. (2012), Juca et al. (2012), and Lim (2012), who employed the natural logarithm of the book value of total assets as a proxy to measure the bank size. The change of accounting values by using the logarithm is more appropriate because small companies are specifically influenced by the impact of size.

4.3.2.2 Profitability

To measure the profitability, different proxies were used in previous studies, such as return on equity (ROE), return on assets (ROA), Tubin Q, and earnings per share (EPS). Following recent studies, this study employed ROA as a proxy for profitability (Ahmad and Abbas, 2011; Amidu, 2007; Amjad et al., 2013; Gul et al., 2012; Lim, 2012). ROA is considered to be the most important indicator that shows the ability of the bank’s management to invest financial sources in order to produce revenues (Hassan and Bashir, 2003). Many factors determine the ROA of a bank, including strategic decisions of the bank, economic changes, and government regulations.
as uncontrollable elements (Sufian and Chong, 2008). In addition, ROA represents the best measurement for the bank profitability, because it reflects its ability to generate profits from the assets’ portfolio, and it is not affected by the great growing equity (Rivard and Thomas, 1997).

4.3.2.3 Tangibility
The structure of an asset is considered one of the most important determinants of the bank capital structure. According to Amidu (2007), the extent to which the assets of the bank are tangible and intangible would lead to a higher value of the bank’s liquidation. The proportion of tangible assets to total assets is used to measure the tangibility of IBs.

4.3.2.4 Growth
In the context of financial institutions, previous studies used several measures for the potential growth, including market to book value of equity, the proportion change of overall assets or sales, the growth ratio of advances or deposits, and research expenditure over total sales. Following Ahmad and Abbas (2011), Ahmed et al. (2010), Gul et al. (2012), and Lim (2012), this study uses the annual change in the overall assets as a proxy for growth of an Islamic bank, as the data was available in the annual reports.

4.3.2.5 Liquidity
In the capital structure literature, researchers have used varied proxies to measure liquidity. These measures include the total funding proportion or cash and cash equivalent to overall assets, liquid assets over deposits, and current assets divided by current liabilities. This study employed liquid assets (cash and cash equivalents) over total assets as a proxy for IBs’ liquidity (Akhtar, Ali, & Sadagat, 2011; Igbal, 2012). Increasing the proportion of finances invested in cash and cash equivalents leads to decline a bank’s liquidity (Angbazo, 1997). The higher the liquid ratio is the greater liquid assets, and the lower profitability.

Liquid assets of IBs are related to the solvency, and are used to meet the demand on withdrawals. In general, banks with health liquidity should be able to survive and meet financing requirements of assets and other obligations of payments. If a bank lacks sufficient liquidity to face this demand from depositors and credit- holders, this would lead to its shut-down.

4.3.2.6 Non Debt Tax Shields
Several measures of non-debt tax shields (NDTS) were employed in the literature of the capital structure. These include the total annual depreciation and investment tax credits over earnings before interests, taxes, and depreciation, the proportion of depreciation and investment tax credits, the depreciation plus amortization, or the depreciation to overall assets. This study employed the same measure for NDTs that was used by Ahmad and Abbas (2011), Gul et al. (2012), and Lim (2012), which is the ratio of the depreciation over total assets.

4.3.2.7 Age of the bank
Age factor is used as a measure of bank reputation because of the economic experience that is built along with its business life. Furthermore, it can be utilized as a proxy for the information external investors have. Previous studies of the capital structure employed number of years from the date of establishment or its natural logarithm to measure the age variable. In this study, the number of years from the date of business commencement was used to measure the bank age, following Zare et al. (2013).
Furthermore, GDP is used in this study to measure the annual growth of the gross domestic product per capita. Table 1 displays the definition of dependent and explanatory variables, as well as the control variable.

### Table 1: Definition of Dependent and Explanatory Variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definition</th>
<th>Exp. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leverage (LEVRG)</td>
<td>The sum of investment accounts and current accounts over total assets</td>
<td></td>
</tr>
<tr>
<td>Bank size (BSIZE)</td>
<td>Natural logarithm of total assets</td>
<td>+</td>
</tr>
<tr>
<td>Profitability (PROFT)</td>
<td>ROA=Net income before tax and Zakah over total assets</td>
<td>-</td>
</tr>
<tr>
<td>Tangibility (TANGT)</td>
<td>The proportion of tangible assets to total assets</td>
<td>+</td>
</tr>
<tr>
<td>Growth (GROTH)</td>
<td>The annual change in total assets</td>
<td>-</td>
</tr>
<tr>
<td>Liquidity (LIQUD)</td>
<td>The ratio of cash and cash equivalents into total assets</td>
<td>+</td>
</tr>
<tr>
<td>Non debt tax shields (NDTS)</td>
<td>The annual depreciation expenses to total assets</td>
<td>No relationship</td>
</tr>
<tr>
<td>Bank age (BAGE)</td>
<td>The number of years from the date of business commencement</td>
<td>+</td>
</tr>
<tr>
<td>The gross domestic product per capita (GDP)</td>
<td>The annual growth of the GDP per capita</td>
<td>+</td>
</tr>
</tbody>
</table>

5. Findings and Discussion

5.1 Descriptive Statistics

Table 2 shows the outline of descriptive statistics of the leverage ratio with seven explanatory variables, and one control variable.

### Table 2: Descriptive statistics of dependent and independent variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Dev.</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVRG</td>
<td>0.4145926</td>
<td>0.41</td>
<td>0.3707511</td>
<td>0.002</td>
<td>0.911</td>
</tr>
<tr>
<td>BSIZE in US$ million</td>
<td>7360.177</td>
<td>1255.051</td>
<td>15731.93</td>
<td>12.086</td>
<td>126247.5</td>
</tr>
<tr>
<td>PROFT</td>
<td>-0.030097</td>
<td>0.003</td>
<td>0.1029992</td>
<td>-0.59</td>
<td>0.218</td>
</tr>
<tr>
<td>TANGT</td>
<td>0.9954</td>
<td></td>
<td>0.03458</td>
<td>0.605</td>
<td>1</td>
</tr>
<tr>
<td>GROTH</td>
<td>0.09873556</td>
<td>0.0434</td>
<td>0.8983283</td>
<td>-0.7131</td>
<td>10.077</td>
</tr>
<tr>
<td>LIQUD</td>
<td>0.0693323</td>
<td>0.0388121</td>
<td>0.1150423</td>
<td>0.000167</td>
<td>0.8614765</td>
</tr>
<tr>
<td>NDT S</td>
<td>0.0000383</td>
<td>0.0023117</td>
<td>0.0051062</td>
<td>0.0000273</td>
<td>0.030129</td>
</tr>
<tr>
<td>BAGE</td>
<td>15.5587</td>
<td>11.08</td>
<td>12.0544</td>
<td>0.25</td>
<td>37</td>
</tr>
<tr>
<td>GDP</td>
<td>0.0078831</td>
<td>0.0354257</td>
<td>0.1377776</td>
<td>-0.3078568</td>
<td>0.2773071</td>
</tr>
</tbody>
</table>

The mean value of LEVRG is 0.4146, showing that 41.46% of total assets of IBs are financed by external sources (investment accounts and current accounts). This proportion indicates that most banks in the sample are small, and they are in the growing stage, which implies that they are more dependent on debt to finance their investments. The mean of BSIZE (the accounting value of total assets of Islamic banks) is US$7360.177 million. This average is higher than US$221 million found by Juca et al. (2012) in the case of North American Banks. PROFT recorded the mean of about -0.0301, showing that IBs loss US$3.01 for each US$100
before tax and Zakah on their assets. This mean is similar to Bukair’s results (2013) in IBs of GCC countries. This loss is due to the financial crisis that started in 2007. The mean of TANGT is 0.9954, indicating that 99.54% of total assets are tangible. The reason for the very high ratio of TANGT is that most IBs have full tangible assets, which minimize bankruptcy costs for creditors. The mean of GROTH is 0.0988, showing that the change in total assets rises by 9.88% yearly. This implies that IBs have the potential to grow, giving them a tendency in the markets to acquire more debts. The mean value of liquidity is 0.0693, showing that only 6.93% of total assets of IBs are liquid assets as the majority of them are small, and because of the effect of the financial crisis. NDT S registered a mean of 0.000038, showing that only 0.0038% of total assets are considered as depreciation. This ratio is extremely low and this can be attributed to the fact that IBs spend small amount of their funds to finance fixed assets. This indicates that depreciation is not an appropriate tool as a source of capital structure. The mean of BAGE is 15.5587 years, showing that IBs are in the growing stage. The mean value of GDP is about 0.0079, which indicates that the GDP per capita is growing annually by only 0.79% a slow growth justified by the financial distress that started in 2007.

5.2 Correlation Matrix
Table 3 demonstrates the findings of correlation between all variables for this study. The direct relationship indicates the positive correlation, while an inverse sign shows the negative correlation. The coefficient of correlation between LEVRG and BSIZE is in the same direction (0.6108), showing that an increase in the level of leverage is associated with the size of IBs. This relationship is confirmed by the trade-off theory. LEVRG is also positively correlated with PROF T, indicating that the rising in the financial leverage leads to growth in the banks’ profitability. This prediction has been supported by both the trade off and signaling theories. LEVRG is negatively correlated with GROTH and NDT S, indicating that an increase in financial leverage leads to decline both growth and non-debt tax shields of IBs. The adverse correlation between GDP per capita and LEVRG implies that an improved GDP of GCC countries leads to decline in the demand of the debt from IBs. LEVRG is positively correlated with TANGT, LIQU D, and BAGE, which is consistent with the trade-off theory. This means that as IBs have more tangible assets and liquidity, and become older, they borrow more debt. Empirical findings support all signs of correlations except GROTH, which has a positive effect on the leverage ratio.

In sum, larger and older IBs of GCC countries with more tangible assets, higher profitability, and stronger liquidity, have greater leverage ratios. Banks with lower growth and lesser depreciation, and more GDP per capita, have to borrow little debt.

Table 3: Correlation Matrix
<table>
<thead>
<tr>
<th>Variable</th>
<th>LEVRG</th>
<th>BSIZE</th>
<th>PROF T</th>
<th>TANGT</th>
<th>GROTH</th>
<th>LIQU D</th>
<th>NDT S</th>
<th>BAGE</th>
<th>GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVRG</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSIZE</td>
<td>0.6108</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROF T</td>
<td>0.2112</td>
<td>0.3413</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TANGT</td>
<td>0.1063</td>
<td>0.0314</td>
<td>-1.0000</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROTH</td>
<td>-0.0082</td>
<td>0.1369</td>
<td>-0.0241</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIQU D</td>
<td>0.1697</td>
<td>0.1097</td>
<td>0.1429</td>
<td>0.0135</td>
<td>0.0651</td>
<td>1.0000</td>
<td></td>
<td></td>
<td>1.0000</td>
</tr>
<tr>
<td>NDT S</td>
<td>-0.0786</td>
<td>-0.1359</td>
<td>0.1572</td>
<td>0.1262</td>
<td>-1.0000</td>
<td>1.0000</td>
<td>0.0720</td>
<td>0.0564</td>
<td>1.0000</td>
</tr>
<tr>
<td>BAGE</td>
<td>0.3917</td>
<td>0.4637</td>
<td>0.0538</td>
<td>0.0445</td>
<td>-0.2299</td>
<td>0.1402</td>
<td>0.0642</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>-0.0931</td>
<td>0.0290</td>
<td>0.0362</td>
<td>-0.0217</td>
<td>-0.0103</td>
<td>0.1402</td>
<td>0.0564</td>
<td>1.0000</td>
<td></td>
</tr>
</tbody>
</table>
5.3 The Generalized Least Square (GLS) Regression
The GLS regression is used to empirically examine the association between the financial leverage of IBs as dependent variable and seven explanatory variables, controlling for the GDP. Table 4 shows the results of GLS regression.

The table indicates that the model is statistically significant at < 0.0000 level (p-value=0.0000 and Wald chisq = 101.59). The table also shows that bank size, liquidity, bank age, and GDP are the most important determinants of IBs capital structure in GCC countries.

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-1.964382</td>
<td>0.7121</td>
<td>-2.76</td>
</tr>
<tr>
<td>BSIZE</td>
<td>0.2193232</td>
<td>0.0343186</td>
<td>6.39</td>
</tr>
<tr>
<td>PROFIT</td>
<td>0.0540381</td>
<td>0.2579589</td>
<td>0.21</td>
</tr>
<tr>
<td>TANGT</td>
<td>0.8661963</td>
<td>0.7010754</td>
<td>1.24</td>
</tr>
<tr>
<td>GROTH</td>
<td>0.0001411</td>
<td>0.0002805</td>
<td>0.50</td>
</tr>
<tr>
<td>LIQUID</td>
<td>0.4458834</td>
<td>0.221971</td>
<td>2.01</td>
</tr>
<tr>
<td>NDTS</td>
<td>-0.311</td>
<td>0.0815021</td>
<td>-0.38</td>
</tr>
<tr>
<td>BAGE</td>
<td>0.1499383</td>
<td>0.0651389</td>
<td>2.30</td>
</tr>
<tr>
<td>GDP</td>
<td>-0.3651463</td>
<td>0.1770446</td>
<td>-2.06</td>
</tr>
</tbody>
</table>

The findings reveal that bank size has a positive and highly significant association with leverage, indicating that larger IBs have low financial crisis costs and have more opportunities to access financial markets compared with smaller ones, and they prefer debt funding in their capital structure. Furthermore, bigger IBs have low costs of monitoring that would lead to minimize agency costs, and they have lower risks of bankruptcy due to their diversified financial transactions and stable cash flows. Thus, they use debt funding more than other capital sources. This implies that IBs can run their business with low equity capital. This result supports H1 and with the application of trade-off theory from an Islamic perspective. This finding is also consistent with previous studies in the financial sector (e.g. Ahmad and Abbas, 2011; Ahmed et al., 2010; Amidu, 2007; Najjar and Petrov, 2011).

Profitability has an insignificant positive effect on the capital structure of IBs, and this rejects H2 and both the trade-off theory and the Islamic perspective. This result indicates that profitable IBs have additional agency costs because of the possibility of the conflict between debt-holders and shareholders when IBs decide to raise debt funding. Moreover, the major objective of debt-holders of IBs is not to achieve a high level of profits, but they prefer the safety of tangible assets. This finding explains that 38 percent of IBs in the sample during the period from 2009 to 2011 have net losses because of the financial crisis effects, which started in 2007. This result is consistent with Siddiqui and Shoalb (2011) in the Pakistani banking sector. Tangibility has a positive insignificant effect on the leverage ratio. The result is contrary to H3 and the trade-off theory from an Islamic perspective. This result is supported by Amidu (2007), Ahmad and Abbas (2011), and Lim (2012). This implies that an increase in the tangibility of IBs maximizes the
leverage ratio. This may be because IBs have low investment in ambiguous assets, which would decrease the opportunities of bankruptcy. Therefore, in ambiguous situations, investors can verify their assets, indicating that the leverage of IBs in GCC countries increases tangible assets’ function. IBs’ growth has a positive insignificant effect on leverage ratio. Thus, H4 is rejected. This result is in line with previous studies (Ahmed et al., 2010; Amidu, 2007), but it is not supported by the trade-off theory from an Islamic viewpoint. Specifically, 41 percent of banks in the sample have achieved a reduction in the change ratio of total assets, which affects the relationship between bank growth and leverage ratio. IBs with more growth opportunities prefer to use equity funding more than debt to finance new projects at high levels of risks. Moreover, managers of IBs are working as an agent of shareholders - they prefer to use equity to finance risky investments in order to maximize shareholders’ wealth.

Liquidity has a significant positive impact on the leverage ratio, which confirms H5. The result is consistent with the trade-off theory and from an Islamic perspective. This result is consistent with Fama and French (2002) and Ozkan (2001). IBs with high level of liquidity have lower risks, which gives managers choice to raise the shareholders’ interest instead of creditors by decreasing the debt costs. IBs with more cash can play great role in the credit market by lending more and raising the leverage. IBs with more liquidity have healthier ability to meet consumers’ requirements on time. The NDTS has a negative insignificant impact on the leverage ratio. Thus, H6 is supported and consistent with the Islamic perspective, indicating that IBs do not use depreciation as a substitute to the debt. It can say that IBs made capital structure decisions to obtain more debt regardless the amount of accumulated depreciation. This result confirms earlier study by Gul et al. (2012). Bank age has a positive significant impact on the leverage ratio. Thus, H7 is confirmed, and is consistent with the trade-off theory from an Islamic perspective, as well as studies of Akhtar and Olivier (2009) and Zare et al. (2013). This result implies that IBs build up brand-names in financial markets over the long-time, which enable them to meet their commitments on time. This result further explains that when IBs survive in financial markets for a long-time, then they have low internal financing sources for running their business transactions, and thus they maximize their debt funding. Moreover, the direct relationship between age and leverage can be applied in transition economies as GCC countries because maturity and experience of IBs towards economic reforms are growing. Regarding the control variable, GDP has a negative significant impact on the leverage ratio. This result is consistent with the expected hypothesis of the study, and is in consistent with previous studies (Kayo and Kimura, 2011). The result suggests that the GDP growth of GCC countries gives IBs good opportunities to finance a great number of profitable investments. The lower rate of economic growth in GCC countries allows IBs to borrow more debt to finance new investment.

In sum, larger and older IBs of GCC countries with more liquidity and lower growth of GDP have to borrow more debt to finance their operations and new projects. Profitability, tangibility, growth, and NDTS are considered unimportant determinants in the capital structure decisions.

6. Conclusion
Capital structure theories have been mostly developed and tested within the context of a particular country or in the conventional banking industry. The study examined a number of company-specific characteristics that may affect IBs’ leverage, based on the prime accepted theoretical framework of capital structure and the trade-off theory from an Islamic perspective. A great extensive literature has been conducted to date focusing on the internal company
determinants affect the capital structure of firms operating in a particular country or within the traditional financial sector. This study explores the influence of these elements, controlling for a country variable (GDP) among 45 IBs working in five GCC countries, using panel data.

The study finds three company-specific characteristics (namely bank size, liquidity, and age), as well as GDP, are significant in affecting capital structure of IBs in GCC countries, and are in conformity with the implication of the trade-off theory and the Islamic perspective. While the bank size, liquidity, and bank age have a positive effect, GDP has a negative one. Furthermore, most results are consistent with the study’s hypotheses and both Islamic and trade-off theories. The decisions of capital choice of IBs seem to follow Islamic and trade-off debt, then retained profit, and finally equity, therefore, IBs’ management prefers debt funding rather than equity financing. The findings imply that the Islamic characteristics of banks could explain an important part of the leverage level. It means that factors specific to IBs are necessary in determining the level of capital.

This study has many important implications for the capital structure. First, it fills the gap in literature by focusing on emerging markets through understanding of the capital structure decision for Islamic banks (IBs) of GCC countries. Such an understanding provides managers with applied knowledge of determining their appropriate capital structure in order to compete locally and globally in which IBs operate. Second, the empirical results reveal that large IBs are found to have more leverage than small ones because larger IBs have low financial crisis costs and have more opportunities to access financial markets, and they prefer debt funding in their capital structure. Furthermore, large IBs have low costs of monitoring that would lead to minimized agency costs, and they have lower risks of bankruptcy due to their diversified financial transactions and stable cash flows. Managers of IBs should be concerned with putting measures of ROA in place in order to increase and enhance their ROA, which will reduce their debt ratios. A reduction in IBs debt ratios will enable them to minimize the negative tendencies that are associated with increasing financial leverage such as bankruptcy cost and financial crises. IBs that have more tangible assets have high leverage ratio because IBs in GCC countries have low investment in ambiguous assets, which would decrease the opportunities of bankruptcy. Therefore, in ambiguous situations, investors can verify their assets. IBs with more growth opportunities prefer to use equity funding more than debt to finance new projects at high levels of risks. Moreover, managers of IBs are working as an agent of shareholders - they prefer to use equity to finance risky investments in order to maximize shareholders’ wealth. IBs with high level of liquidity have lower risks, which gives managers choice to raise the shareholders’ interest instead of creditors by decreasing the debt costs. IBs with more cash can play great role in the credit market by lending more and raising the leverage. IBs with more liquidity have healthier ability to meet consumers’ requirements on time. Nevertheless, a negative relationship between IBs leverage and the NDTS, indicating that IBs do not use depreciation as a substitute to the debt. It can say that IBs made capital structure decisions to obtain more debt regardless the amount of accumulated depreciation. In other words, managers tend to react positively to a leverage issue as a result of “the NDTS”. IBs build up their brand-names in financial markets over the long-time, which enable them to meet their commitments on time. Managers use their debt funding for running their business transactions because IBs have low internal financing sources. Moreover, the direct relationship between age and leverage can be applied in transition economies as GCC countries because maturity and experience of IBs towards economic reforms are growing. Finally, the government and monetary authorizes in GCC countries should put policies in place to curb the financial crisis effects, which started in 2007 in order to avoid...
unexpected financial crises, since unexpected financial crises reduces IBs debt ratios because the cost of borrowing will be very high.

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References


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