Evaluating Capital Structure Dynamics During Financial Crises: Insights from Shariah Compliant Companies Using Python Pandas

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DOI: https://dx.doi.org/10.47772/IJRISS.2024.8100218

Received: 13 October 2024; Accepted: 18 October 2024; Published: 18 November 2024

ABSTRACT

Shariah Compliant Companies (SCC) have gained significant prominence and preference among investors recently. Several key factors influence investor decisions to commit their funds to these companies, including profitability, leverage, and capital structure. Analyzing a company's capital structure allows stakeholders and potential investors to gauge and predict its financial health. However, the capital structures of SCCs differ from those of non-Shariah compliant companies (NSCCs), financial institutions, and small and medium enterprises (SMEs) due to their distinct characteristics and features. This paper explores the impact of capital structure during periods of financial crisis. It focuses on two main aspects: first, the study will analyze SCCs from five Southeast Asian countries as a sample, and second, it will employ a novel methodology using Python Pandas programming for data analysis. Additionally, the research seeks to determine the differences in capital structures between SCCs and NSCCs, along with the underlying reasons for these differences. The data for this study will be sourced from DataStream, published by Thomson Reuters Eikon, covering the period from 2005 to 2012. The results demonstrate that the capital structures of SCCs and NSCCs are markedly different. Furthermore, during financial crises, SCCs exhibit greater resilience, attributed to their unique features and financial benchmarks.

Keywords: Capital Structure, SCC, Financial Crisis, Python Pandas

INTRODUCTION

The rapid growth of the Islamic finance industry—including sectors such as Islamic banking, takaful, waqf, and sukuk—has garnered significant attention and interest globally, spanning both Islamic and non-Islamic countries like Singapore, South Korea, Japan, Europe, Australia, Brazil, and Latin America. According to the Islamic Financial Services Board (IFSB) and Ernst & Young, the Islamic finance industry reached a gross value of USD 1.88 trillion by 2015, demonstrating consistent double-digit growth rates despite challenges such as low energy prices, geopolitical conflicts, and economic uncertainty (IFSB & Ernst & Young, 2016). The Global Islamic Finance Report 2017 further indicated that the global Islamic financial services industry stood at USD 2.293 trillion in December 2016.

Moreover, Derigs and Marzban (2015) highlighted a growing trend where investors are increasingly seeking ethical investments rather than focusing on profit. This trend is supported by a PWC Malaysia report in 2008, which revealed that many Islamic finance customers were non-Muslims, coupled with a rising presence of foreign investors in the sector (PwC Malaysia, 2008). El-Qorchi (2005) identified three primary motivations

for the shift toward Islamic finance: the strong demand for Shariah-compliant products and services, the demand from Gulf countries for Shariah-compliant investments, and the attractiveness of competitive Shariah-compliant options for both Muslim and non-Muslim investors.

Consequently, the main objective of this paper is to investigate the impact of capital structure during periods of financial crisis. Specifically, this study aims to determine how much the capital structure of Shariah-compliant companies (SCC) differs from that of non-Shariah-compliant companies (NSCC).

While numerous studies have explored capital structure, many have concentrated on its determinants (Titman & Wessels, 1988; Du & Dai, 2005; Hassan et al., 2012; Shambor, 2017; Korkmaz, 2018; Ozkan et al., 2023), the effects of taxation on capital structure (Gertler & Hubbard, 1990; Mackinlay, 2012), and the relationship between short-term debt and financial crises (Benmelech & Dvir, 2013; Fosberg, 2013; Krishnamurthy & Jorgensen, 2013; Bhaduri et al., R., 2022); Huang et al., Y., 2023). Most of these studies have utilized samples from financial institutions, small and medium-sized enterprises (SMEs), and public listed companies (PLCs). Therefore, there is a pressing need to fill this research gap by studying the impact of capital structure specifically during financial crises, focusing on Shariah-compliant companies (SCC) in Southeast Asia. No empirical study has yet been conducted to address this area.

LITERATURE REVIEW

Shariah-compliant companies

Shariah-compliant companies (SCC) are deemed to comply with Shariah principles, rules, values and restrictions when dealing with financing activities. In order to ensure that the SCC comply with all the Shariah principles and is free from prohibited elements such as riba (interest), masyar (gambling) and gharar (speculation), the Shariah Advisory Council (SAC) were established to monitor the SCC activities.

As information, SCC must meet the terms with the qualitative and quantitative criteria for the screening process that the index provider sets. Dow Jones Global Islamic Index (DJIM), FTSE Global Equity Shariah Index series, and S&P Shariah Indices are the three leading equity index providers. Even though these are leading indexes in the market, every index provider has a different screening process that SCC must comply with. For example, in Malaysia, the Shariah screening methodology was formulated by the Shariah Advisory Council (SAC), which was established in May 1997 as the highest authority in Islamic finance. Based on the Data Stream that will be used as a channel for data collection in this study, the screening process of SCC is based on the FTSE index provider. Under the FTSE Shariah global equity index series, Yasaar Ltd is an impartial consultancy and leading authority on handling Shariah matters, including the screening process. Hence, for this study, all the samples must follow the screening process that Yasaar Ltd sets for the FTSE Islamic index as an index provider.

The first stage is a qualitative or operation screening process which is a non-permissible activity. All the company must not be involved in any of the below activities:

1. The companies do not involved to any conventional finance such as non-Islamic banking, finance and
2. Alcohol
3. Pork-related products and non-halal food production, packaging and processing or any other activity related to pork or non-halal
4. Entertainment activities such as casinos, gambling, and pornography
5. Manufacture of or trade in activities such as tobacco, arms and defence

Initially, suppose any of the companies are involved in the above activities. In that case, they will be filtered out as Shariah complaints and will not qualify to proceed to the second screening stage.

The second stage is a quantitative or financial screening process. Table 1 below shows the financial screening criteria companies must meet to be considered Shariah compliant. If any company exceeds the financial benchmark above, it will be unqualified to get Shariah-compliant status.

Table 1: Shariah Compliant Companies' Financial Screening Process

Benchmarks	**Measurement**
The 33.33 % benchmark	Debt is less than 33.33 per cent of total assets
The 33.33 % benchmark	Cash and interest-bearing items are less than 33.33 per cent of total assets
The 50 % benchmark	Accounts receivable and cash are less than 50 percent of total assets
The 5 % benchmark	Total interest and non-compliant activities income should not exceed per cent of total revenue

All companies that go through these processes must pass these two screening stages to be listed in the Islamic index and get the Shariah-compliant status. This screening process will be tested and held twice a year to ensure all the companies listed under the Islamic index follow the qualitative and quantitative criteria. Suppose any company should have followed the qualitative criteria or exceeded these benchmarks for the quantitative criteria. In that case, they will immediately be removed from the Islamic index and classified as non-Shariah compliant.

Several previous studies have explored how firms or financial managers determine the optimum capital structure to ensure they can maximize the firm's corporate performance. Based on empirical results show that numerous factors impact the capital structure of the firm, such as profitability, growth, size, tangibility, tax, leverage, liquidity, and industry (see e.g.: Titman & Wessels, 1988; G.Rajan & Zingales, 1994; Baharuddin et al., 2011; Haron, 2015; Shambor, 2017). Therefore, this study will focus on the benchmark ratios that index provider, FTSE Shariah index set. An example is short-term debt ratio, long-term debt ratio, tangibility, cash plus account receivable, growth, corporate performance and size of the company.

Short-term debt ratio (STD) vs long-term debt ratio (LTD)

Fosberg (2013) conducted a study on listed companies in the US and found that short-term debt (STD) financing increased from 1.3 per cent in 2006 to 2.2 per cent in 2008, representing a $34 million increase due to the financial crisis that happened in 2008. He added that this increase in STD during the financial crisis period was due to a decrease in asset sales and rejection from banks to lend the loans. It supported by numerous studies (see Brealey et al., 2008; Almeida et al., 2011; Federal Reserve, 2012; Fosberg, 2013) that during the stock market collapse in 2008, the borrowing power of firms became less than before due to the credit supply was limited. Therefore, firms intend to use more STD financing during financial difficulties. Hassan and Samour (2016) added that it was clear that capital structure financing decisions were impacted during the financial crisis period. During financial crises, firms often shift towards STD to manage immediate liquidity needs. A 2022 study by Krishnan and Moyer found a notable uptick in firms' use of short-term loans during the 2020 crisis.

Cheema et al. (2017) and Shahar and Shahar (2015) found that SCC uses long-term debt (LTD) financing more than short-term debt (STD) financing. It might be because of the restriction for limited interest and risk sharing under Shariah guidelines. Nevertheless, NSCC is using more STDs to meet the working capital requirement. A study by Sahudin, Ismail, Sulaiman, Rahman, and Jaafar (2019) found contradictory results that mention SCC using more STD compared to LTD. Short-term debt is more widely used than long-term debt by Shariah-compliant firms in Malaysia because most Islamic debt instruments issue short-term rather than long-term debt (Aggarwal & Yousef, 2000). This also supports agency theory, which justifies the function of short-term debt as a mechanism to control debt and mitigate agency problems. Financial turmoil usually

prompts shifts in capital structure. Research by Ozkan and Meric (2023) shows that firms reduce leverage by prioritizing debt repayment, especially short-term obligations, to restore stability. LTD can align management and creditor interests, reducing agency costs. A recent paper by Chen et al. (2023) discusses how firms that maintained higher LTD ratios exhibited better long-term performance, particularly during economic downturns.

Zhang and Yang (2022) explore how firms adjusted their capital structure in response to the economic impacts of COVID-19. They found that many companies shifted towards increased short-term debt to maintain liquidity under uncertain conditions, mirroring some behaviors observed in the 2008 financial crisis.

Financial performance

Most of the previous studies (e.g. Rajan et al., 1994; Deesomsak et al., 2004; Mat Nor, Haron, Ibrahim, Ibrahim, and Alias, 2011; Hassan et al., 2012; Ahmad & Azhar, 2015; Kunt et al., 2015) have been used earnings before interest and tax (EBIT) over total assets to measure the firm's financial performance. However, other studies used different methods to measure the firm's financial performance, such as total net profit over total assets (Iqbal & Kume, 2014; Proença et al., 2014; Trinh and Phuong, 2016; Cheema et al., 2017) and profit before interest and tax (Inchausti, 1997; Janggu, 2004; Othman et al., 2009; Darus et al., 2013). Therefore, this study decides to use profit before tax and zakat over total assets or in other words, is called pre-tax return on assets (Pre-tax ROA), to measure the firm's financial performance. This ratio measures how the firm's effectiveness can earn on its investment in its assets or how it uses its assets effectively to generate income or profit.

Tangibility ratio

Tangible assets have become increasingly popular as a measurement for bank viability following financial crises. One reason for this trend is that tangible assets are generally more liquid than intangible ones. This is supported by Charalambakis and Garrett (2012), who stated that tangible assets are a crucial factor in explaining the capital structure within firms. As a result, tangible assets hold higher market value, and even if firms encounter financial difficulties or face bankruptcy, they can more easily and quickly sell their tangible assets.

Scott (1977) and Titman and Wessels (1988) noted that less profitable firms tend to have a higher value of tangible assets, which they can use as collateral to secure additional debt or loans. Consequently, firms with more incredible tangibility are likely to issue more debt. This aligns with the trade-off theory, which emphasizes that firms should leverage the tax advantages of debt financing while maintaining profitability. Ahmad and Azhar (2015) further indicated that tangible assets can assist firms in defaulting on their debt by providing a means to avoid bankruptcy.

Recent studies, such as those by Chen et al. (2021), have reinforced these findings, highlighting the critical role of tangible assets in enhancing firm stability and access to financing in uncertain economic environments.

Cash plus Account Receivables Ratio

Most of the previous studies (Deesomsak et al., 2004; Mat Nor et al., 2011; Bundala, 2012; Proença et al., 2014; Ahmad & Azhar, 2015) used liquidity ratio in order to measure the firm's ability to meet the short-term financial obligation. Even Thabet and Hanefah (2014) found in their study that liquidity was one factor that impacted a firm's corporate performance.

This ratio is essential to ensure the firm has a cut in the limit for total cash and account receivables at one time to avoid excess or lack of cash. In addition, it reduces the agency's costs. To the best of our knowledge, this is the first study that used total cash plus account receivables over total assets (CashAR) as a variable. This variable is chosen as an independent variable for this study because one of the characteristics SCC must follow

and pass the benchmark in order to be listed in the Islamic index. Farooq and Alahkam (2016) also supported that the Islamic financial system is more stable and resilient because the economy is based on Islamic guidelines. Recent research by Khan et al. (2021) further emphasizes the importance of liquidity management in enhancing corporate performance, particularly in Islamic finance, highlighting the need for firms to maintain adequate liquidity to navigate financial challenges effectively.

Growth ratio

Growth ratios are essential indicators for measuring a firm's expansion and can be assessed through various methods. Previous studies highlight different approaches to measuring firm growth, such as the annual growth rate in sales (Titman & Wessels, 1988; Zeitun & Tian, 2014), the market-to-book value ratio (Du & Dai, 2005), and the growth of total assets (Harris & Raviv, 1991; Ghosh et al., 2000).

According to Titman & Wessels (1988) and Rajan & Zingales (1995), firms with high future growth prospects tend to utilize less leverage in their financing decisions. This shift occurs because these firms often prefer equity financing over debt financing. Recent research by De Jong et al. (2023) supports this notion, indicating that high-growth firms increasingly turn to equity markets, especially in uncertain economic environments.

Furthermore, growth influences capital structure decisions within firms. For instance, a study by Huang et al. (2022) found that firms experiencing rapid growth are likely to carry lower debt ratios as they seek to maintain financial flexibility for future investments. This trend aligns with the findings of Chen et al. (2023), who argue that the growth opportunities available to a firm significantly affect its capital structure choices, particularly in varying market conditions.

Size ratio

Previous studies show there have many different types of measuring firm's size, such as logarithm of sales (Du & Dai, 2005; Nejad et al., 2013; Shahar & Shahar, 2015; Ramli & Haron, 2017), the total sales (Flannery & Rangan, 2006), and In real sales (Baker & Wurgler, 2002). Other studies by Ebaid (2009), Frank & Goyal (2003), and Salim & Yadav (2012) recommend that the firm's size will influence the capital structure. The larger the firm, the more capability and capacity they have.

This study decides to use the logarithm of total assets as a proxy of firm size. It is supported by prior studies (Titman & Wessels, 1988; Rajan et al., 1994; Cotei & Farhat, 2009; Mat Nor et al., 2011; Hassan et al., 2012; Fosberg, 2013; Iqbal & Kume, 2014; Proença et al., 2014; Ahmad & Azhar, 2015; Jaafar et al., 2017) that are also used the exact measurement for size ratio in their studies.

METHODOLOGY

This study will focus on selected Southeast Asian countries: Malaysia, Indonesia, Vietnam, Singapore, and Thailand. The selection sample is in Southeast Asia because the Asia region Southeast Asia is the most progressive in the Islamic capital market (Yakcop, 2002). This study has identified 481 Public Listed Companies in Southeast Asia under the Industrial sectors. The sample has been collected through DataStream, which Thomson Reuters Eikon publishes.

This study uses Python Pandas analysis programming language to analysis the data. Python Pandas analysis refers to the process of using the Pandas library in Python to manipulate, analyze, and visualize data in tabular format (such as rows and columns). Pandas provide powerful data structures like DataFrames and Series, which allow users to efficiently perform essential data tasks, including data cleaning, transformation, aggregation, and statistical analysis. Nowadays Python Pandas analysis is a crucial part of data science and analytics workflows, providing powerful and flexible tools for understanding and manipulating data. Whether they are performing simple data tasks or complex analyses, Pandas offers the functionality needed to

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue X October 2024

efficiently handle the challenges of data analysis. To run this analysis, the regression equations have been developed as follows:

$$Y\ (STD) = \beta 0 + \beta 1ROAit + \beta 2Tangit + \beta 3CASH/ARit + \beta 4GRWit + \beta 5SIZEit + \beta 8(X) + \varepsilon \quad (1)$$

$$Y\ (LTD) = \beta 0 + \beta 1ROAit + \beta 2Tangit + \beta 3CASH/ARit + \beta 4GRWit + \beta 5SIZEit + \beta 8(X) + \varepsilon \quad (2)$$

Whereby:

STD = Short-term debt ratio

LTD = Long-term debt ratio

ROA = Return on asset before tax ratio

TANG = Tangibility ratio

CASHAR= Cash plus account receivable ratio

GRW = Growth ratio

SIZE = Size ratio

ε = Error term

X = dummy variable, 0 = Non-Shariah Compliant Companies (NSCC)

1 = Shariah Compliant Companies (SCC)

Variables

This study adopted the variables used in previous literature. The dependent variable of the study is capital structure which is measured by long-term debts (LTD) and short-term debts (STD). The independent variables used in the study are return on assets (ROA), tangibility, Cash plus receivables, growth, and size. A description of all variables is shown in Table 1.

Table 1: Variables and Variable Measurement

Variables	Variable measurements	
Dependent Variable		
Capital Structure: Long-Term Debts (LTD) Short-Term Debts (STD)	Long-term $debts_{i,t}$ / Total Assets Short-term $debts_{i,t}$ / Total $Assets_{i,t}$	Chaklader & Padmapriya, 2021 Chaklader & Padmapriya, 2021
Independent Variables		
Return on Assets	Return on Equity (ROA)	Yadav et al., 2021; Pathak & Chandani, 2021
Tangibility (TANG)	Fixed asset / Total assets	Chaklader & Padmapriya, 2021; Haron, 2014; Khan et al., 2021; Pathak & Chandani, 2021; Zaman et al., 2021
Cash plus receivables (CASHAR)	Accounts receivable and cash / Assets	Mat Nor et al., 2011; Bundala , 2012; Proença et al., 2014; Ahmad & Azhar, 2015
GROWTH	($Sales_t$ less Sales $_{t-1}$) / $Sales_{t-1}$)	Danso, 2020; Pathak & Chandani, 2021; Purohit & Khanna, 2012
SIZE	Natural log of total assets	Khan et al, 2021; Pathak & Chandani, 2021; Vo, 2017

RESULT AND DISCUSSION

The descriptive statistics in Table 3 reveal that the short-term debt (STD) ratio and long-term debt (LTD) ratio show that Shariah-compliant companies (SCC) maintain lower ratios than non-Shariah-compliant companies (NSCC) across all periods studied—before, during, and after the financial crisis. These results align with expectations due to the benchmarks set by index providers during the quantitative or secondary screening process. To remain listed in Shariah indices, SCC must consistently adhere to the benchmarks established by index providers, resulting in a persistent lower ratio than NSCC. This lower STD and LTD ratio indicates a reduced risk of insolvency, suggesting that these companies are stable (Bouras et al., 2022).

Regarding corporate performance, measured by return on assets (ROA), it is evident that, before the financial crisis, NSCC exhibited higher ROA than SCC. However, during and after the financial crisis, the ROA for SCC surpassed that of NSCC. This shift can be attributed to the financial benchmarks mandated by index providers, which include debt ratios, equity ratios, and cash plus account receivables ratios. As shown in Table 3, ROA ratios fell during the financial crisis for both SCC and NSCC. Post-crisis, while the ROA for SCC slightly increased, NSCC's ROA continued to decline compared to prior periods (Ibrahim et al., 2023).

The tangibility ratio for SCC remained higher than that of NSCC throughout the financial crisis periods. This ratio gains significance in the post-crisis, measuring bank viability and indicating the company's collateral level. Consequently, SCC, with a higher tangibility ratio, can issue more debt and is better positioned in the event of bankruptcy, as they can liquidate tangible assets to settle debts (Shah et al., 2023). This trend demonstrates that SCC were more resilient during the financial crisis.

Regarding liquidity, measured by the cash plus account receivables ratio, SCC consistently recorded lower figures than NSCC before, during, and after the crisis. While higher liquidity can entice lenders and facilitate investments, it also poses a higher risk of bankruptcy and non-payment. Conversely, lower liquidity may help mitigate agency problems (Ali & Ahmed, 2022).

Lastly, the growth ratio indicates that NSCC had higher ratios than SCC before and during the financial crisis. However, after the financial crisis, SCC exhibited superior growth ratios, suggesting an improved performance in attracting investors and lenders. This shift may be attributed to the perception that SCCs are more resilient and stable post-crisis, making them more appealing to stakeholders (Khan & Azhar, 2023).

Table 3: Descriptive Analysis for Shariah Compliant and Non-Shariah Compliant Companies Based on Financial Period

	Before Financial Crisis (BFC)		**During Financial Crisis (DFC)**		**After Financial Crisis (AFC)**	
	SCC	**NSCC**	**SCC**	**NSCC**	**SCC**	**NSCC**
STD	10.25	15.77	12.57	15.97	13.71	16.08
LTD	8.10	10.83	8.66	9.43	9.01	10.38
ROA	6.22	6.94	5.40	4.53	5.67	4.30
TANG	0.58	0.52	0.58	0.52	0.61	0.51
CashAR	27.77	32.50	26.34	29.21	26.56	30.26
Growth	25.97	27.53	9.21	10.71	15.54	13.64
Size	9.59	9.76	9.85	10.10	9.97	10.31

The findings from the multiple regression analysis, using short-term debt (STD) as the first proxy for debt financing, indicate that the independent variables are negatively and statistically significant with return on assets (ROA) before and during the financial crisis. Furthermore, it was found that ROA and the tangibility ratio (TANG) are negatively and statistically significant with STD after the financial crisis period. This suggests that as the tangibility of assets increases, reliance on short-term debt decreases, reflecting a strategic shift in financing (Alhabshi et al., 2023).

For the second proxy, the long-term debt (LTD) ratio exhibited a negative and statistically significant relationship with the cash plus account receivables (CashAR) ratio. In contrast, the size (Size) ratio showed a positive and statistically significant correlation before the financial crisis. During the crisis, TANG, growth (GROW), and Size ratios were positive and statistically significant, whereas CashAR was negative and statistically significant. After the crisis, ROA and CashAR remained negatively and statistically significant, with size positively significant with LTD. This illustrates how asset quality and size influence long-term financing decisions in different economic conditions (Hasan & Mollah, 2023).

A key highlight of this regression analysis is the coefficients for the Dummy variable (SCC), which were negatively and statistically significant throughout the financial crisis. The results indicate that the STD ratio for SCC is consistently lower than that for NSCC. Specifically, before the crisis, the STD ratio for SCC was lower than that for NSCC by 2.3481 times; during the crisis, it dropped to 3.2743 times lower, and post-crisis, the ratio further decreased to 5.5857 times lower. For the LTD ratio, SCC was found to be lower than NSCC by 1.4967 times, and after the crisis, the ratio was 3.3787 times lower.

These findings underscore the critical role of debt financing, particularly during financial turmoil. The benchmarks and screening processes established by Islamic index providers ensure that companies maintain lower debt ratios, contributing to their financial crisis resilience. This lower reliance on debt correlates with a reduced risk of insolvency and lower chances of client non-payment, which solidifies the stability of SCC compared to NSCC (Khan et al., 2023).

Table 3: Summary of Regression Analysis Based on Financial Period

DV	**Short term Debt (STD)**			**Long term debt (LTD)**		
	BFC	**DFC**	**AFC**	**BFC**	**DFC**	**AFC**
Prob (F-Statistic)	0.0045	0.00295	7.54e-09	0.00169	3.43e-11	1.03e-10
Dummy (SCC)	-2.3481 (0.038)**	-3.2743 (0.019)***	-5.5857 (0.000)***	-1.4967 (0.101)*	-1.1206 (0.195)	-3.3787 (0.002)***
ROA	-0.0725 (0.095)*	-0.1982 (0.0000)***	-0.0736 (0.019)***	-0.0279 (0.424)	-0.0141 (0.686)	-0.0823 (0.031)*
TANG	-0.0895 (0.910)	-0.1879 (0.912)	-2.1673 (0.030)**	0.4421 (0.487)	2.6202 (0.013)**	0.0126 (0.992)
CashAR	-0.0068 (0.833)	-0.0280 (0.523)	-0.0318 (0.220)	-0.0727 (0.005)***	-0.1260 (0.000)***	-0.1475 (0.000)***
Growth	0.0139 (0.230)	0.0104 (0.418)	0.0053 (0.496)	-0.0054 (0.561)	0.0146 (0.067)**	-0.0051 (0.587)
Size	0.0203 (0.921)	0.0009 (0.997)	-0.1786 (0.284)	0.3891 (0.019)**	0.5329 (0.001)***	0.7581 (0.000)***
R-Squared	26%	22.1%	31.5%	14.5%	26.4%	41%

*** significant at 1%
** significant at 5%
*Significant at 10%

CONCLUSION

The primary objective of this study is to examine the impact of capital structure during financial crises, focusing on how the capital structure of Shariah Compliant Companies (SCC) differs from that of Non-Shariah Compliant Companies (NSCC). The research utilizes a sample of 284 NSCCs and 197 SCCs from five countries. The findings reveal that Return on Assets (ROA) influences short-term debt (STD) decisions before

and during the financial crisis. Furthermore, ROA and tangibility ratios affect STD decisions after the crisis, indicating that the STD ratio for SCCs is lower than that of NSCCs during the financial crisis.

Additionally, the study shows that the cash plus accounts receivable (CashAR) and size ratios impact long-term debt (LTD) decisions before the crisis. During the crisis, the tangibility ratio, CashAR, growth ratio, and size ratio all influence LTD. However, this period has no statistical significance for SCCs concerning LTD. After the crisis, ROA, CashAR, and size ratios affect LTD financing decisions, highlighting that SCCs utilize STD less frequently than NSCCs. This trend is consistent with the observation that SCCs also employ LTD less than NSCCs before and after the financial crisis.

The results of this study contribute to a greater understanding of how capital structure is influenced during financial crises. Additionally, the findings provide insights for regulatory bodies and government agencies to formulate guidelines and frameworks related to Shariah compliance. To establish new regulations and guidelines, these agencies must comprehend the needs of investors and the characteristics of SCCs to attract more investors effectively. For instance, Malaysia's government incentivizes new SCCs with a five-year tax exemption. At the same time, the UK and France have restructured their tax systems to support the Islamic finance sector, including SCCs. Furthermore, several international financial centres have incorporated Islamic finance components to meet the demands of this growing market.

For future research, it is recommended to utilize larger samples encompassing various sectors and regions in Asia. Comparative studies with different regions and sectors are also suggested, as they offer a broader perspective on how capital structure impacts financing decisions, particularly for Shariah-compliant companies.

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