

Capital Structure of Malaysian Companies: Are They Different During the COVID-19 Pandemic?*

Nor Khadijah MOHD AZHARI¹, Radziah MAHMUD², Sara Naquia Hanim SHAHARUDDIN³

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Abstract

This study examined the level of capital structure and its determinants of publicly traded companies in Malaysia before and after the COVID-19 pandemic. The data for this study was examined using Python Programming Language and time-series financial data from 2,784 quarterly observations in 2019 and 2020. The maximum debt is larger before the COVID-19 period, according to the findings. During the COVID-19 period, short-term debts and total debts have both decreased slightly. However, long-term debts have increased marginally. As a result, this research demonstrates that the capital structure has changed slightly during the COVID-19 period. The findings imply that independent of the capital structure proxies, tangibility, liquidity, and business size had an impact on capital structure in both periods. It was found that profitability had a significant impact on total debts both before and after the COVID-19 crisis. While higher-profit enterprises appear to have lesser short-term debts before the COVID-19 periods, they are also more likely to have lower long-term debts during the COVID-19 periods. Even though growing companies tend to have higher short-term debts and thus total debts during those periods, long-term debts are unaffected by potential growth.

Keywords: Capital Structure, Firm-Specific Characteristics, COVID-19, Python Programming

JEL Classification Code: E32, G39, F65, C88

1. Introduction

The outbreak of the COVID-19 pandemic has come as a rude awakening in modern history since mankind was unprepared for the virus's consequences. As of September 14,

2021, the virus had infected 226,322,754 people worldwide and claimed the deaths of 4,656,323 people (WorldOMeter, 2021). In the past, devastating pandemics such as the Spanish flu, which lasted over a year, the H1N1 outbreak or swine flu from 2009 to 2010, and Middle East respiratory syndrome (MERS) in 2012 have swept the world, but they were not as quickly contagious as COVID-19. Unlike COVID-19, the virus eventually died out when the affected persons died, and the community developed immunity to it.

Governments around the world impose movement control orders (MCOs) to prevent the spread of COVID-19, which results in business closures as community health deteriorates, affecting employment, cash flows, supply chain disruptions, changes in consumer demand, and eventually revenue and income contraction (Donthu & Gustafsson, 2020). MCO prevents people from engaging with one another, resulting in social estrangement and the emergence of a new working and social norm. When business, employment, or even school resumes from home, the use of information technology and equipment expands. As a result of the increased use of technology, consumer demand is projected to evolve. Being at home also means spending more time learning new hobbies, skills and starting a new

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¹First Author. Senior Lecturer, Department of Business and Management, Universiti Teknologi MARA, Cawangan Pulau Pinang, Malaysia. ORCID: <http://orcid.org/0000-0003-0827-0147>.

Email: norkhadijah@uitm.edu.my

²Corresponding Author. Senior Lecturer, Faculty of Accountancy, Universiti Teknologi MARA Selangor, Puncak Alam, Selangor, Malaysia. ORCID: <https://orcid.org/0000-0001-9471-9064>. [Postal Address: FPA Building, 42300 Puncak Alam, Selangor, Malaysia] Email: radzi132@uitm.edu.my

³Academic Director, Tymba Education, Professional Accountancy Center, Selangor, Malaysia. Email: sara.nh@tymnaedu.com

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business, all of which could lead to new markets for new items (Donthu & Gustafsson, 2020).

Due to the MCO, which has been in effect since March 18, 2020, public-listed firms in Malaysia are not exempt from a sluggish economic slowdown. The MCO had an impact on a number of industries, including tourism and transportation, such as hotels and airlines. It's because citizens aren't allowed to travel across borders for work or pleasure to prevent the COVID-19 virus from spreading (Becker et al., 2020; Che Omar et al., 2020) while vaccinations are developed and ready to be provided to the public.

The economic downturn caused by the COVID-19 pandemic outbreak is by far the worst since the global recession in 1930 (Shen et al., 2020). The Malaysian government quickly closed the borders and urged the citizens to stay home by implementing the MCO. The MCO has caused companies failure to sustain profitability as most business activities could not be carried out except for essential businesses like health care and food supply companies (Md Shah et al., 2020). This has resulted in companies turning to additional debts as sources in financing the business activities to stay afloat (IMF, 2020).

According to reports, global debt reached above 230 percent of GDP in 2018, owing primarily to an increase in debt financing among emerging and developing countries (Koh et al., 2020). China's manufacturing industry shrank by 13.5 percent in the first quarter of 2020, while European countries are providing debt relief to corporations to assist them to avoid bankruptcy. Central banks around the world are assisting local banks in easing lending and borrowing terms to help businesses stay afloat (Becker et al., 2020). A certain amount of debt can be beneficial to the economy by increasing public consumption and corporate investment. Unfortunately, a high level of debt will expose the companies to have greater liquidity risks as they will be more vulnerable to economic and financial risks shocks. Hence, companies may need to restructure their financing positions through leverage.

Literature has provided empirical evidence of various aspects of capital structure, including capital structure determinants (Saif-Alyousfi et al., 2020; Vo, 2017), corporate governance and capital structure (Feng et al., 2020; Zaid et al., 2020), capital structure, and firm performance (Ahmed & Afza, 2019; Ali & Faisal, 2020; Ayaz et al., 2021; Islam & Iqbal, 2022; Mathur et al., 2021), capital structure during the financial crisis (Danso et al., 2020; Khalfan & Wendt, 2020; Morri & Artegiani, 2015). However, most of the literature uses data from developed countries without considering the impact of a pandemic outbreak. Since research on the impact of the COVID-19 pandemic is still scarce, empirical research must be carried out to analyze whether the capital structure in developing countries differs in response to the COVID-19 pandemic, particularly in the Malaysian context. Thus, this

study looks at how public listed companies in Malaysia structured their capital before and during the COVID-19 pandemic. Prior studies suggest that several determinants may influence capital structure. Following studies such as Chaklader and Padmapriya (2021), Pathak and Chandani (2021), Vo (2017), Zaid et al. (2020), and Zaman et al. (2021), this study explores the impact of tangibility, profitability, liquidity, growth and firm size on the capital structure of Malaysian public listed companies particularly before and during COVID-19 pandemic outbreak.

This research contributes to the body of knowledge about Malaysia's capital structure before and during the COVID-19 pandemic epidemic. Other researchers may be inspired to do a new study in the future with a comparable or different depth, scope, and area. This research could also aid in the recovery of businesses once the pandemic has passed. The comparison analysis may provide greater insight into how the COVID-19 pandemic outbreak affects the companies. This study may also benefit current and potential capital providers by providing information on Malaysia's capital structure, which may be useful in their investment decision-making process.

2. Literature Review

2.1. Capital Structure Theories

The trade-off theory and the pecking theory are two popular capital structure ideas. The ideal capital structure is achieved by balancing the tax benefits and associated bankruptcy costs, according to trade-off theory (Modigliani & Miller, 1963). The trade-off between the revenue of the debt issuance cost (Fischer et al., 1989) and the tax shield benefits determines the level of leverage (Jensen & Meckling, 1976). According to Baxter (1967), increasing debt financing beyond the optimal level could lead to increased bankruptcy risk and capital structure expenses. As a result, capital structure is said to be determined by balancing the benefits and costs of debt (Bradley et al., 1983; Sheikh & Qureshi, 2017).

Pecking order theory, on the other hand, does not place a premium on the optimal capital structure. Rather, it focuses on the efficiency with which corporations manage their capital structure. The disparities in debt ratios are suggested by this idea (Moradi & Paulet, 2019; Shyam-Sunder & Myers, 1999). Because internal funding will be the most important source of funding, debt issuance is used when internal funding is insufficient (Pathak & Chandani, 2021). The plan is to use debt financing to cover the anticipated funding shortfall (Huang & Ye, 2021). Due to asymmetry in information about the firm's value, debt may be favored over stock. As a result, corporations should participate in a series of hierarchical financing

preferences, according to the pecking order idea (Myers & Majluf, 1984).

2.2. COVID-19 and Capital Structure

After the COVID-19 pandemic breakout, the OECD (2020) expects a disruption in economic activity and macroeconomics, including a global recession, as a result of lockdown enforcement in many countries around the world. It was demonstrated that a number of countries, including Japan and the United States, approved huge fiscal packages to revive their weak economies, with Japan and the United States each approving USD1.7 trillion and USD3 trillion for the first nine months of 2020, respectively. The Malaysian government also released economic stimulus measures and recovery plans of RM295 billion in 2020, according to the Central Bank of Malaysia (BNM), to boost the economy's resilience amid the COVID-19 pandemic. In addition, the government promised an extra RM10 billion in funding for additional support, mostly for individuals and small and medium-sized businesses (SMEs).

During an economic slump, Trinh and Phuong (2016) identified three significant effects on the economy. To begin with, product supply is drastically reduced when demand power decreases. Second, the reduction in foreign direct investment has had an indirect impact on domestic business funds. Finally, the financial market has been severely impacted by the halting of investment activity and the change in interest rates. As a result, several governments have applied the same instrument techniques used during the financial crisis to the current economic crisis brought by the COVID-19 pandemic (Quéré & Weder, 2020). Examples include a specific award for the afflicted company, temporary layoff assistance, and temporary credit guarantees to ensure that the bank can meet the enterprises' liquidity needs during the COVID-19 pandemic.

Many firms, particularly those with significant leverage, may face financial distress as a result of COVID-19's negative influence on their financial health (Huang & Ye, 2021). Because low-leverage and profitable businesses have easier access to debt funding, they are assumed to have greater financial flexibility. Companies will be exposed to increased risk as their reliance on debt financing grows. A shortage of cash flows in such companies may lead to a liquidity crisis. As a result, the COVID-19 pandemic has prompted businesses to restructure their capital structure.

2.3. Capital Structure and its Determinants

Strong financial assistance has a significant impact on a company's growth and long-term sustainability. Equity and debt financing are two common types of business funding. During the period 2008–2019, East Asian companies received

roughly 70% of all equity and loan financing (Abraham et al., 2020). Several companies are forced to adjust their paradigms on how to supervise their business operations and financial structure as a result of the negative impact of the COVID-19 pandemic (Rizvi et al., 2020). Debt financing is regarded to be a necessary component of corporate finance, and capital structure is one of the most important factors to consider when assessing a company's financial health. Capital structure can also be exploited as a foundation for investment policy (Muradoğlu & Sivaprasad, 2009). Companies are inclined to have debt financing because of tax shields benefit (Danso et al., 2020). Too much reliance on debts financing may expose companies to a higher risk of repayment default. It is also claimed that high leverage companies may allocate higher profits and cash flows to ensure they do not default on their debt payments (Abraham et al., 2020). Shortage of cash or inability to pay its obligations may have resulted from inefficient debt management or financial obligations. Consequently, companies may need to restructure their financial compositions as a continuous predicament may result in financial distress, eventually leading to business failure. Therefore, the capital structure must be properly strategized to ensure companies' performance and positions are not detrimentally affected.

Empirical studies on non-financial companies have investigated the firm-specific factors that influence capital structure. Frank and Goyal (2009) have identified that asset tangibility, firm profitability, and firm size have a more significant influence on capital structure. The availability of assets may influence the accessibility to more debt financing (Dakua, 2018; Khan et al., 2021). In addition, the profitability level of a company may influence leverage either favorably or unfavorably (Dakua, 2018; Khan et al., 2021). Leverage is also influenced by the firm size (Vo, 2017), and the companies' preference over the types of debts depends on the firm size. Other factors such as liquidity and growth may also influence capital structure (Dakua, 2018; Deesomsak et al., 2004). Hence, following previous literature, this study focuses on the determinants of capital structure, namely tangibility, profitability, liquidity, growth, and size.

2.4. Development of Hypothesis

2.4.1. Profitability and Capital Structure

In line with trade-off theory, profitable companies are expected to have higher leverage levels due to better debt-serving capabilities (Pathak & Chandani, 2021) and tax shields benefits (Khémiri & Noubbigh, 2018). Thus, these companies are likely to have high debts obligations. Studies such as Chaklader and Padmapriya (2021), Dakua (2018), Frank and Goyal (2009), and Gunardi et al. (2020) conclude that profitability is positively associated with leverage.

However, pecking order theory assumes that profitable companies are anticipated to have higher retained earnings, using their internal funds to finance their operations. Since debt payment is mandatory, the use of debts financing will decrease the available cash for managerial use. Hence, profitability and leverage are negatively associated. This view is supported by Fama and French (2002), Kaloudis et al. (2020), Khoa and Thai (2021), Moradi and Paulet (2019), Nguyen and Duong (2022) as well as Saif-Alyousfi et al. (2020). Therefore, in line with prior literature, the first hypothesis is proposed:

H1: Profitability has a significant influence on capital structure.

2.4.2. Tangibility and Capital Structure

Both trade-off and pecking order theories support the view that the accessibility of tangible assets influences capital structure. Trade-off theory assumes that companies with more tangible assets tend to have a higher level of leverage since the assets can be used as collateral to obtain debt financing effortlessly (Titman & Sbeti & Moosa, 2012). Studies done by Chaklader and Padmapriya (2021), Kaloudis et al. (2020), Nguyen et al. (2021), Pathak and Chandani (2021), and Saif-Alyousfi et al. (2020), provide evidence that there is a positive relationship between tangibility and capital structure. Pecking order theory postulates that higher fixed assets will result in lower debt financing (Booth et al., 2001). Empirical evidence suggests that tangibility has an inverse relationship with capital structure (Dakua, 2018; Khoa & Thai, 2021; Nguyen & Duong, 2022; Yusuf et al., 2015) as firms with higher tangible assets have higher tangible Wessels ability to generate internal funds using these assets. However, Gunardi et al. (2020) suggest that physical assets do not influence capital structure. Consequently, the second hypothesis in this study is postulated as follows:

H2: Tangibility has a significant influence on capital structure.

2.4.3. Growth and Capital Structure

Growth has an inverse relationship with capital structure, according to both trade-off and pecking order theories. Chaklader and Chawla (2016) suggested that enterprises with high growth potential would prefer internal funding due to lower distress costs, which is consistent with trade-off theory. According to the pecking order theory, growing companies have lesser leverage because the debt disciplinary function reduces self-interested management. Growth, on the other hand, has a positive impact on capital structure, according to Nguyen and Duong (2022) and

Pathak and Chandani (2021). High-growth companies that have exhausted their internal resources are compelled to rely on debt funding (Michaelas et al., 1999). Therefore, the third hypothesis is suggested as follows:

H3: Growth has a significant influence on capital structure.

2.4.4. Liquidity and Capital Structure

According to the trade-off theory, companies with high liquidity are more likely to use high debt financing since they have lower liquidity risks and can meet their obligations (Saif-Alyousfi et al., 2020; Vo, 2017). As a result, there is a positive relationship between liquidity and capital structure. Bukair (2019), Chaklader and Padmapriya (2021), Dakua (2018), and Gunardi et al. (2020) supported this hypothesis. According to the pecking order theory, because highly liquid companies use their internal funds to support their investments (Khémiri & Noubbig, 2018), liquidity and capital structure have a negative relationship. Companies with lower liquidity may rely more on debt financing. Consequently, these companies experience higher leverage and lower current assets. Thus, the fourth hypothesis in this study is as follows:

H4: Liquidity has a significant influence on capital structure.

2.4.5. Size and Capital Structure

Several studies, including Correia et al. (2015), Kaloudis et al. (2020), Nguyen and Duong (2022), and Pathak and Chandani (2021), suggested that size and capital structure are related. The finding endorses the trade-off theory, which states that due to high business diversification, larger companies are more likely to rely on debt funding. Hence, pecking order theory proposes that capital structure is inversely related to size. Chaklader and Padmapriya (2021) and Saif-Alyousfi et al. (2020) supported this theory. Due to information asymmetry, larger companies are assumed to have the ability to raise their funds through equity (Panda & Nanda, 2020). Hence, the fifth hypothesis of this study is proposed as follows:

H5: Size has a significant influence on capital structure.

3. Methodology

3.1. Sample Selection and Data Collection

In conducting this study, secondary data was used to collect the necessary information. The data was collected through Refinitiv Eikon published by Thomson Reuters.

Before analyzing the data, this study eliminated the sample of financial institutions, incomplete information, missing data, and outliers. The dataset comprises 2,784 quarter observations from the period 2019 until 2021. It is based on 348 public listed companies in Malaysia using eight-quarters of the financial data.

3.2. Variables

This study adopted the variables used by previous literature. Following Shahzad et al. (2021), the dependent variable of the study is the capital structure which is measured by total debts (TD), long-term debts (LTD), and short-term debts (STD). The independent variables used in the study are tangibility, profitability, liquidity, growth, and size. A description of all variables is shown in Table 1.

The data was analyzed using Python Pandas Programming tools, which is unique to this study. The process of extracting data from Excel documents is known as file extraction. The data in the excel file in this study is in a sequential or structured format. For this study, number extraction was performed on the companies excel files collected by Refinitiv Eikon. Hence, the Pandas Python library will be used because it can extract data from Excel files that are sequential or arranged in a specific way.

This library also has the capacity to generate, decrypt, and combine Excel files. The Python Pandas programming language will be used to carry out the extraction operation. Pandas is data manipulation and analysis software library created for the Python computer language. The code will be run on Jupyter Notebook, and the regression equations for this study's objective have been constructed as follows:

$$STD_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 TANG_{it} + \beta_3 GROWTH_{it} + \beta_4 LIQ_{it} + \beta_5 SIZE_{it} + \epsilon_{it} \quad (1)$$

$$LTD_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 TANG_{it} + \beta_3 GROWTH_{it} + \beta_4 LIQ_{it} + \beta_5 SIZE_{it} + \epsilon_{it} \quad (2)$$

$$TD_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 TANG_{it} + \beta_3 GROWTH_{it} + \beta_4 LIQ_{it} + \beta_5 SIZE_{it} + \epsilon_{it} \quad (3)$$

Whereby:

- STD = Short-term debts ratio
- LTD = Long-term debts ratio
- TD = Total debts
- PROF = Profitability ratio
- TANG = Tangibility ratio
- GROWTH = Growth ratio
- LIQ = Liquidity
- SIZE = Firm Size
- ϵ = Error term

4. Results and Discussion

Table 2 shows a summary of descriptive statistics. The standard deviation of the capital structure was extremely high before and during the COVID-19 epidemic. For the time being, it signifies that the fluctuation in capital structure is modest. The capital structure proxies used in this analysis were short-term debt over total assets, long-term debt over total assets, and total debt over total assets. Therefore, some businesses are debt-free, with a debt-to-equity ratio of zero. Furthermore, the maximum debt is higher before the

Table 1: Variables and Variable Measurement

Variables	Variable Measurements
Dependent Variables	
Capital Structure:	
Total Debts (TD)	Total debts _{it} / Total Assets _{it} (Chaklader & Padmapriya, 2021)
Long-Term Debts (LTD)	Long-term debts _{it} / Total Assets _{it} (Chaklader & Padmapriya, 2021)
Short-Term Debts (STD)	Short-term debts _{it} / Total Assets _{it} (Chaklader & Padmapriya, 2021)
Independent Variables	
Profitability (PROF)	Return on Equity (ROE) (Pathak & Chandani, 2021; Yadav et al., 2021)
Tangibility (TANG)	Fixed asset _{it} / Total assets _{it} (Chaklader & Padmapriya, 2021; Haron, 2014; Khan et al., 2021; Pathak & Chandani, 2021; Zaman et al., 2021)
GROWTH	Sales growth ((Sales _{it} less Sales _{t-1}) / Sales _{t-1}) (Danso et al., 2020; Pathak & Chandani, 2021; Purohit & Khanna, 2012)
Liquidity (LIQ)	Current ratio (Haron, 2014; Pathak & Chandani, 2021; Vo, 2017)
SIZE	Natural log of total assets (Khan et al., 2021; Pathak & Chandani, 2021; Vo, 2017)

Table 2: Summary of Descriptive Statistics

	MEAN		STD		MIN		MAX	
	BCOVID	DCOVID	BCOVID	DCOVID	BCOVID	DCOVID	BCOVID	DCOVID
STD	0.113	0.108	0.100	0.096	0.000	0.000	0.502	0.479
LTD	0.100	0.104	0.101	0.100	0.000	0.000	0.602	0.551
TD	0.213	0.212	0.139	0.137	0.000	0.000	0.689	0.678
PROF	0.0078	0.0098	0.0248	0.0248	-0.0741	-0.0741	0.0788	0.0794
TANG	0.493	0.501	0.219	0.217	0.005	0.040	0.986	0.985
GROWTH	0.006	0.046	0.289	0.406	-0.922	-0.978	1.445	1.482
LIQ	2.130	2.239	1.294	1.388	0.090	0.070	7.996	7.880
SIZE	20.307	20.318	1.370	1.373	16.764	16.720	23.909	23.900

Table 3: Correlations Between Variables Before COVID-19 Period

	STD	LTD	TD	PROF	TANG	GROWTH	LIQ	SIZE
STD	1							
LTD	-0.043	1						
TD	0.688	0.695	1					
PROF	-0.181	-0.067	-0.179	1				
TANG	-0.115	0.286	0.125	-0.245	1			
GROWTH	0.031	0.007	0.027	0.178	0.013	1		
LIQ	-0.478	-0.19	-0.482	0.178	-0.308	-0.022	1	
SIZE	0.086	0.386	0.343	0.049	0.235	0.015	-0.249	1

COVID-19 pandemic than during the COVID-19 pandemic period for all forms of capital structures.

In general, the mean value of profitability, tangibility, sales growth, liquidity, and size ratio is higher during the COVID-19 pandemic period than before the COVID-19 pandemic period. In the case of growth, representing current year total sales minus previous year total sales over previous year total sales, it implies high fluctuation before and during the COVID-19 pandemic. It indicates that companies grew better during the COVID-19 pandemic period. In other words, after COVID-19 occurred, companies can continue and show signs of growth in a short period.

The correlation values among variables are shown in Tables 3 and 4. Table 3 depicts the relationships between variables before the COVID-19 pandemic, whereas Table 4 depicts the correlations between variables during the COVID-19 pandemic epidemic. The association between the variables is generally in an opposite direction, especially before and during the COVID-19 pandemic outbreak. Before the COVID-19 period, tangibility and growth were on the upswing. However, it exhibits a negative direction

association during the COVID-19 period. Aside from that, profitability has a negative relationship with short-term debt (STD) and total debt (TD) following the COVID-19 period; however, there was no notable trend before the COVID-19 period. We first identify the variables' heterogeneity and multicollinearity before moving on to the regression analysis. Its purpose is to ensure that the variables are not multicollinear. As a result, Tables 2 and 3 show that the greatest correlation for long-term debt (LTD) and total debt (TD) before and during the COVID-19 pandemic period is 0.695 and 0.714, respectively. Because the value is less than 9, it shows that there is no multicollinearity.

Short-term debt, long-term debt, and total debt scaled over total assets were all regressed. When the independent factors were regressed across the three different dependent variables, we examined them to see if they behaved differently. Table 5 summarizes the findings.

Table 5 shows the regression findings for the factors affecting the capital structure, which are proxied by long-term debt, short-term debt, and total debt over total assets. Overall, the findings of our capital structure research in

Table 4: Correlations Between Variables During COVID-19 Period

	STD	LTD	TD	PROF	TANG	GROWTH	LIQ	SIZE
STD	1							
LTD	-0.016	1						
TD	0.688	0.714	1					
PROF	-0.026	-0.06	-0.061	1				
TANG	-0.134	0.305	0.128	-0.159	1			
GROWTH	0.038	-0.02	0.012	0.27	-0.052	1		
LIQ	-0.487	-0.252	-0.524	0.118	-0.312	-0.006	1	
SIZE	0.113	0.383	0.357	0.109	0.237	-0.014	-0.232	1

Notes: Tables 3 and 4 present the correlations amongst variables employed in the analysis. STD is short-term debt over total assets, LTD is long-term debt over total assets. TD is total debt over total assets, PROF is profitability measured by ROE, TANG is tangibility, GROWTH is sales growth, LIQ is liquidity measured by the current ratio and Size of the companies.

Table 5: Capital Structure Regression Analysis

Model/Variable	STD		LTD		TD	
	BCOVID	DCOVID	BCOVID	DCOVID	BCOVID	DCOVID
Constant	0.2252 (0.000)***	0.1839 (0.000)***	-0.4310 (0.000)***	-0.3887 (0.000)***	-0.2058 (0.000)***	-0.2048 (0.000)***
PROF	-0.7182 (0.000)***	-0.0912 (0.321)	-0.1214 (0.242)	-0.2155 (0.037)**	-0.8397 (0.000)***	-0.3064 (0.019)***
TANG	-0.1523 (0.000)***	-0.1461 (0.000)***	0.0858 (0.000)***	0.0855 (0.000)***	-0.0664 (0.000)***	-0.0605 (0.000)***
GROWTH	0.019 (0.013)***	0.0057 (0.294)	0.0012 (0.889)	0.0019 (0.762)	0.0202 (0.063)**	0.0076 (0.326)
LIQ	-0.0415 (0.000)***	-0.0397 (0.000)***	-0.0035 (0.084)*	-0.0082 (0.000)***	-0.0450 (0.000)***	-0.0479 (0.000)***
SIZE	0.0028 (0.093)*	0.0043 (0.000)***	0.0245 (0.000)***	0.0231 (0.000)***	0.0273 (0.000)***	0.0274 (0.000)***
R-squared	0.333	0.332	0.192	0.211	0.310	0.342
Adjusted R ²	0.331	0.329	0.190	0.208	0.307	0.340
Durbin-Watson	2.020	1.976	1.888	1.806	2.018	1.912
F-statistic	140.5***	135.4***	67.11***	72.76***	126.3***	142.0***

Notes: Standard coefficients are presented (p -values in parentheses) ***, ** and * are significant at 1%, 5% and 10% respectively.

Malaysian enterprises are quite promising. The coefficients are statistically significant at the 1%, 5%, and 10% levels, according to the data in Table 5. Short-term debt and total debt over total assets have greater R -squared values than long-term debt over total assets. Furthermore, for long-term debt and overall debt, R -squared during the COVID-19 pandemic period is larger than R -squared before the

COVID-19 pandemic period. However, when compared to before the COVID-19 epidemic, short-term debt-adjusted R -squared was somewhat lower during the COVID-19 period. Furthermore, the variables chosen in this analysis may explain more than 32% of the variation in leverage in Malaysian enterprises throughout the COVID-19 period for short-term debt and overall debt. Most explanatory variables

are statistically significant at the 1% level in these models, and they are well-fitted.

Short-term debt before the COVID-19 period, long-term debt after the COVID-19 period, and total debt before and throughout the COVID-19 period all have a negative connection with profitability expressed by return on equity (ROE). According to the pecking order idea, companies that make a lot of money shouldn't borrow more money to fund their projects. (Khémiri & Noubbigh, 2018) These companies are retaining their internal funds. As a result, the findings of this study are consistent with the pecking order theory, which states that companies with high profits will borrow less for short-term debt before COVID-19. Profitable enterprises will borrow less for long-term debt after the COVID-19 period. They avoid obtaining long-term debt because of the economic slump in COVID-19; in the interim, companies are using their own funds to fund their activities and projects. This result also implies that a profitable company is not compelled to raise funds through the sale of shares (Pathak & Chandani, 2021).

This finding is in line with those of Danso et al. (2020), Saif-Alyousfi et al. (2020), and Yazdanfar and Öhman (2015), who discovered that profitability is negatively associated with capital structure. Hypothesis 1 is confirmed in this case, suggesting that profitability has a large impact on capital structure for short-term debt before the COVID-19 period, long-term debt after the COVID-19 period, and total debt. The second independent variable is the tangibility ratio representing fixed assets over total assets. Based on Table 5, shows that tangibility has various kinds of significant effects on capital structure. The result reveals that long-term debt positively influences tangibility before and during the COVID-19 pandemic period. Therefore, companies were using tangibility assets as collateral to increase their long-term debt regardless of the period. Supported by Chaklader and Padmapriya (2021), Danso et al. (2020), and Kyissima et al. (2020), tangibility has a positively significant influence on long-term debt. However, surprisingly, short-term debt and total debt over total assets negatively influence before and during the COVID-19 pandemic period. It is supported by Haron et al. (2020), who also found that short-term debt (STD) and total debt (TD) have a negative relationship with tangibility.

Furthermore, Vo (2017) found that tangibility has a direct association with long-term debt and an inverse relationship with short-term debt. This research emphasizes the fact that organizations with more tangible assets as collateral can borrow more long-term obligations. Tangibility assets are worth more than intangible assets in the event of bankruptcy (Huang & Ritter, 2009; Yazdanfar & Öhman, 2015). Hence, Hypothesis 2 holds true: tangibility has a significant impact on capital structure. Given the loan structure's stability and flexibility, Malaysian businesses are likely to be forced to use tangibility assets as collateral for long-term debt.

Before the COVID-19 period, the growth ratio had a positive association with short-term debt and total debt. According to Danso et al. (2020), high-growth enterprises demand additional funding to fund their projects and operations. As a result, enterprises will use short-term loans to enhance their finance before the COVID-19 period. However, Md-Rus et al. (2020) and Moradi and Paulet (2019) found a significant negative relationship between company growth and leverage in their analyses, contradicting these findings. As a result, Hypothesis 3 is examined, which states that expansion has a significant impact on capital structure with short-term debt and overall debt before the COVID-19 pandemic period.

Finally, the capital structure of a corporation is positively correlated with its size: short-term debt, long-term debt, and total debt over total assets. It shows that large companies used short- and long-term debt to fund their investments and activities before and throughout the COVID-19 pandemic. Furthermore, our findings support the trade-off argument that larger businesses are more stable and less likely to fail (Danso et al., 2020; Frank & Goyal, 2009; Khémiri & Noubbigh, 2018; Matemilola et al., 2014; Vo, 2017). As a result, Hypothesis 5 is supported, claiming that size has a major impact on capital structure in terms of short-term debt, long-term debt, and overall debt, independent of the time period preceding or following the COVID-19 pandemic. Furthermore, these findings are consistent with the pecking order theory, which suggests that corporations should use internally generated funds rather than borrowing to increase their debt. Hypothesis 4 is examined, suggesting that the impact of liquidity on capital structure is highly important with short-term debt, long-term debt, and overall debt, regardless of the time period before or after the COVID-19 pandemic.

Finally, the capital structure of a corporation is positively correlated with its size: short-term debt, long-term debt, and total debt over total assets. It shows that large companies used short- and long-term debt to fund their investments and activities before and throughout the COVID-19 pandemic. Furthermore, our findings support the trade-off argument that larger businesses are more stable and less likely to fail (Danso et al., 2020; Frank & Goyal, 2009; Khémiri & Noubbigh, 2018; Matemilola et al., 2014; Vo, 2017). As a result, Hypothesis 5 is supported, claiming that size has a major impact on capital structure in terms of short-term debt, long-term debt, and overall debt, independent of the time period preceding or following the COVID-19 pandemic.

5. Conclusion

Companies have been forced to change their business strategies in response to the COVID-19 pandemic, to be more robust in an uncertain commercial environment. Companies

may finance their activities through extra indebtedness due to the difficulty of maintaining their activity. Debt financing is one of the most important factors to consider, and it will have an impact on the companies' long-term sustainability. As a result, the goal of this research is to evaluate the financial structure of Malaysian enterprises before and after the COVID-19 pandemic, as well as to look into the firm-specific features that may influence the capital structure. The outcomes of this analysis imply that during the COVID-19 period, the capital structure shifts slightly.

The analysis reveals some intriguing facts, such as the fact that short-term and long-term debts have different firm-specific features. Even if high-profit enterprises have fewer short-term debts before the COVID-19 pandemic, they have smaller long-term debts during the COVID-19 period. While access to tangible assets has a negative impact on both short and long-term obligations, it has a beneficial impact on long-term debts. Growing enterprises are more likely to have bigger short-term debts before entering the COVID-19 phase, while long-term debts are unaffected by potential growth. Debt financing is used less often by high-liquid enterprises, while debt financing is used more often by more renowned companies.

Future research may focus on specific industries, as the influence of the COVID-19 pandemic outbreak on business changes for each area, while this study is centered on companies listed on Bursa Malaysia regardless of their sectors. Other variables may be examined to determine the impact of COVID-19 on a company's overall financial health. Despite its flaws, this study adds to the limited literature on the impact of the COVID-19 pandemic outbreak, particularly in the setting of Malaysia. The findings help management understand the factors that influence the capital structure and capital sources while making investment decisions.

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