

The Financial Performance of Life Insurance and Takaful Operators in Malaysia: A Lesson from the Health Crisis for Future Development

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Abstract

The Malaysian Takaful Association (MTA) and Life Insurance Association of Malaysia (LIAM) reports recorded a slow growth progression since 2016 to 2020 especially while COVID-19 hits the country. Therefore, this study aims to examine the trend of financial performance of life insurance and takaful operators in Malaysia during that particular period. Following the trend, this study specifically identifies significant determinants of both life insurance and takaful operators' financial performance as reference in facing unexpected crisis in future. This study uses the panel data obtained from the audited financial statements of nine life insurance operators and five takaful operators in Malaysia ranging from 2016 to 2020. The regression model is estimated using random effects specifications involving the variables of profitability, leverage, solvency, firm size and the gross domestic products (GDPs). The study revealed that solvency is the only significant determinant of the life insurance and takaful's financial performance before and during the COVID-19 health crisis. Either takaful or insurance players may improve their financial performance and be financially sound through solvency margin especially during the financial crisis. Thus, both operators need to determine how to respond to the implications of the unexpected health crisis strategically for future development. It is also found useful for effective risk management for both operators which may be included in the future research.

Keywords Financial Performance, Life Insurance, Takaful, COVID-19, Malaysia

Introduction

Malaysia is one of the leading Islamic finance countries where Kuala Lumpur is nominated as the most qualified city to be Islamic finance hub in comparison to its competitors, London and

Dubai (Akila and Faleel, 2021). In line with the recognition, there is continuous effort among scholars and practitioners in designing Islamic financial products and services to meet the demand. Takaful or Islamic insurance is one of the main industries in Malaysia which caught into attention, even during pandemic COVID-19 crisis. While most of the industries affected from the pandemic, there is a question whether an insurance and takaful industry experienced the same.

A report from Deloitte (2020) provides the global overview where the insurance industry has not escaped its impact from the crisis. However, the insurers are said to be able to respond quickly to the COVID-19 crisis. In fact, the economic fallout from the crisis is seen as a catalyst for positive changes in the insurance industry (Farrel, 2020). In the case of Malaysia, one of the reasons is through the higher awareness arose since then when people started to look for life protection. In comparing to the insurance, it is well reported by studies (Yazid et al., 2012; Sherif and Shaari, 2013; Arifin et al., 2014; Mohammed Kamil and Mat Nor, 2014; Remli et al, 2017; Ahmed and Kawata; 2022) that Muslims choose to sign up takaful because of its predominantly become a substantial substitute of insurance market. The high demand of the products and services mainly due to the absence of the three main prohibited elements in Islam which are the gharar (uncertainty), riba' (usury) and maisir (gambling). It becomes a necessary alternative for the Muslim population to secure a halal type of products for protection (Bank Negara Malaysia, 2020).

While examining the trend of Malaysian life insurance and takaful industry, since the establishment of Takaful Act 1984 followed by the introduction of Syarikat Takaful Malaysia Berhad (STKMB) in August 1985 as a first operator, the Malaysia market share of life takaful only accounted for 38% of domestic life insurance in 2020. This percentage is seen quite low despite being in a Muslim majority country. This issue is expected to be worsen to some takaful operators having unrealized loss in equity investment and lower net contribution of operations (Takaful Ikhlas Family Berhad (TIFB), 2022). Besides being affected by COVID-19 crisis, it becomes the treats for takaful industry in the future.

In early phase, the financial performance of the takaful industry is expected to grow equally to the extent, faster than its competitor; the conventional insurance industry (Bhatty, 2010). The expectation is legit since the three highlighted factors are the low penetration, high gross domestic product (GDP) levels and fast improving affluence of the middle classes. It is also found that the pace of takaful growth in the past was at least 30% per annum. Table 1 illustrates the slow progression of takaful industry in comparison to its competitor based on the annual net premium/contribution according to Malaysian Takaful Associations (MTA) and Life Insurance Association of Malaysia (LIAM) during 2016 to 2020.

Table 1:*Annual Net Premium/Contribution*

Year	LIAM	MTA
2020	43.4	1.5
2019	41.2	1.31
2018	38.8	1.27
2017	36.7	1.22
2016	35.4	N/A

Source: *Malaysian Takaful Associations (MTA) and Life Insurance Association of Malaysia (LIAM) Annual Reports (2016-2020)*

The slow progression shows the aggressiveness of the insurance industry is, though theoretically industry maturity is expected to show a decline (Peltoniemi, 2011). In fact, the theory suggests that the emergence industry; in this scenario, the takaful is expected to grow at a better pace. However, takaful industry is struggling to achieve annual net contribution of RM2 billion for the consecutive years. This becomes an issue when takaful operators struggle to compete at par in terms of their annual financial performance (indicated by the annual contribution) to their insurance counterparts. Currently, MTA reported the robust growth of 18% and 23% market share of net contribution. This highlighted the industry's growth in 2022 (BERNAMA, 2023). Though, the insurance operators are expected to be stuck in growth since they are at the industry maturity level. Instead of annual contribution, other performance measurement i.e. profitability may be tested to give some evidences.

Considering the normal period until its tough time of boom period through the COVID-19 crisis (2016 to 2020), both life insurance and takaful may have some significant factors in increasing their performance especially when the crisis hits the country. It is crucial to help the industries be resilience and keep surviving especially at the time of the crisis started. As a preparation to the upcoming unexpected financial crisis due to health issue, the determinants factors to the financial performance of takaful and insurance operators have to be recognized. Therefore, the main concern of this paper is to examine the trend of financial performance of life insurance and takaful operators in Malaysia before and during the COVID-19 crisis. It addresses the issues of the following questions: What are the significant determinants of life insurance and takaful operators' financial performance? To what extent the determinants affects financial performance of life insurance and takaful operators?

Following this brief introduction, the paper is organized according to the following structure: the next section provides literature review and formulates hypotheses. The third section then elaborates on methodology used in this study. The data collection as well as estimation method and model specification are also presented in this section. While the fourth section highlights the results with descriptive statistics and regression analysis. Hence, the fifth section is the final section which concludes the study and suggests potential future research.

Literature Review

COVID-19 Health Crisis

COVID-19 was a virus that first reported in humans in December 2019. The case started in Wuhan, the capital city of Hubei province in China. Its on-going outbreak is the latest global health threat since it is found highly transmissible through direct contact, droplets, and fomites (Yee et al., 2021). Thus, COVID-19 was announced by WHO as a disease on 11th February 2020 and it then declared as a pandemic disease on 11th March, 2020. The

announcement and declaration made due to the new virus spreading rapidly across the countries around the world.

Many types of security measures and safety actions took by the countries in order to prevent further community spread. Almost all countries implemented the lockdown and mass quarantine through their authorities in the effort to reduce COVID-19 transmission. For instance, Movement Control Order (MCO) was imposed by Malaysian Government which involved the closure of the international border, all educational institutions, and business premises. During that period, any mass gathering was strictly prohibited. There were only selected providers of essential services allowed to operate such as food, health, telecommunication, and transportation (Kalok et al., 2022).

This worldwide pandemic restricts economic activity and poses a severe risk to overall well-being. The impact of COVID-19 on socio-economic includes higher unemployment and poverty rates, lower oil prices, altered education sectors, changes in the nature of work, lower gross domestic products (GDPs) and heightened risks to health care workers (Mofijur et al., 2021). Not only that, it also affects energy sector such as increased residential energy demand due to a reduction in mobility and a change in the nature of work. Lockdown imposed around the globe even worsen the industrial and commercial energy demand as well as waste generation due to movement restrictions. In fact, the restrictions have placed people primarily at home which results to the unhealthy lifestyle and indirectly contribute to the mental health issue.

Due to that, the awareness of life protection started to increase as people felt threatened and needs extra fund for the continuity of life. These needs, however, imposed stress on people when they were suffering unemployment at the same time.

Financial Performance of Insurance and Takaful Industry

Takaful in comparison to its competitor, is predominantly an emerging industry in the global economy. The growth of the takaful market in the Middle East and Asia notably Saudi Arabia, UAE, Malaysia and Indonesia is growing by 15-20% per year (Hemrit, 2020). Takaful growth is dependent upon a stable increment in the profitability levels of each individual operators. Considering the major negative impact of investment, consequently will result on a negative company's balance sheet and profitability immediately (Kantakji et al., 2020). The result of COVID-19 pandemic has shown a number of life takaful policyholders who have little options other than to either reduce or terminate their policies because of the unemployment as the result of the movement control order (MCO) (Monther Eldaia et al., 2021).

Contrary to the insurance which is considered in the state of industry maturity, takaful is struggling to accumulate an ample capital to prepare for possible extraordinary claims in future. The ambition of takaful industry to stand on the same par as the insurance industry may be further postponed due to the pandemic COVID-19; the contribution growth and sales may slow as a result of GDP decline, challenged distribution, and rising unemployment (PricewaterhouseCoopers, 2020). However, these findings may need another supporting empirical result to see whether both insurance and takaful face the struggles hence affect their performance.

In general, performance of the firms as defined by Lebas (1995) is deploying and managing well the components of the causal model that leads to the timely attainment of stated objectives within constraints specific to the firm and to the situation. The tangible indicator of a good performance of firms is profit maximization. Keil et al. (2001) has empirically shown that 'do the best you can' objective leads management to more experimentation; consequently, reducing competitiveness of firms. Therefore, profit is the ultimate objective

of financial management to maximize and to sustain the interests and confidence of owners and investors.

Regarding the performance measurement of insurance and takaful operators, there are studies that have employed financial performance rather than its non-financial performance to examine the profitability and growth trend of the industry. Hidayat and Firmansyah (2017) stated that assessing the financial performance of companies can be measured by return on assets (ROA) which focuses the company's ability to earn profit from its assets. From the previous literatures, Badea (2017) reviewed the determinants of insurers' financial performance globally through 15 articles and revealed that 10 out of 15 articles have employed the ROA as their dependent variable. This significant numbers show that the variable is widely and appropriately applied to measure companies' profitability.

Not only that, Batool and Sahi (2019) have also conducted a study of financial performance for 24 insurance companies from the USA and the UK during the global financial crisis. In the study, financial performance is measured by profitability, specifically through the companies' ROA and return on equity (ROE). Both variables have been a common measurement for company's profitability. Similarly, Ismail et al. (2019) and Tegegn et al. (2020) in their studies had employed ROA as the measurement for financial performance of insurance and takaful operator, accordingly. In contrast, Ismail (2013) in his study, used investment yield (IY) as the dependent variable as it reflects one of the major activities of the general takaful and insurance businesses. The IY was measured as the net investment income divided by the average invested assets. Hardwick and Adams (1999) and Zain (2017) therefore suggested that although there are different ways to measure profitability, ROA is the best measurement to measure the financial performance.

Variable Determinants

Leverage

Leverage by definition is an opposite term to equity, is refers to the use of debt instead of equity to fund or acquire new assets. The assumption made by the previous pecking order theory suggests that firms ought for debt-based funding before issuing equity as the third layer mode of financing new assets (Culata and Gunarsih, 2012).

As mentioned on a study conducted by Batool and Sahi (2019), the leverage turns out to be a significant determinant on financial performance of the insurance companies in the USA and UK. However, the leverage has positive significance on financial performance for the insurance companies in the USA while a negative significance on the financial performance for the insurance companies in the UK. This is supported by Hidayat and Firmansyah (2017) which found negative significant relationship between leverage and financial performance of Indonesian takaful industry.

In another study, Zain (2017) had investigated the financial performance of 10 takaful operators in Malaysia by testing its determinants. The result shows that leverage has no significant relationship to the financial performance. This study is consistent with the findings reported by Abera and Abede (2019) where leverage has no significant relationship to the financial performance of Ethiopian insurance companies over the period of 5 years from 2010 to 2015.

Solvency

Solvency can also be an alternative to liquidity. A feature that differentiates each other is that liquidity only account for the ability of a firm to meet its short-term debt financial obligations,

while solvency is the ability of a firm to meet its short, middle and long-term financial obligations. Insurance companies with higher solvency margin are considered to be more financially sound as it has more surpluses to cater for any unexpected losses (Ismail, 2013). In theory, prospective policyholders would prefer to buy policies from financially sound insurance companies. According to Butsic (1994), many policyholders especially business customers would normally research for the information on the financial soundness of their insurers. Ismail (2013) has investigated the determinants of general takaful and insurance's financial performance over the period from 2004 to 2007. The study which conducted among the sample in Malaysia found that the solvency is significant, but it has negative relationship to financial performance. The finding is consistent with Kyule (2015) which reported the negative significant relationship between solvency and financial performance of firms listed in Nairobi Securities Exchange, Kenya.

Size

The size of firm is generally defined as amount of assets owned by a firm. Past literatures such as Zain (2017), Batool and Sahi (2019) and Sharma et al. (2020) have utilized a common equation for firm size. The variable is measured by the natural log of the total asset. The transformation of natural log equation is part of process to reduce skewness since there is possibility of large gap of total assets owned between new and matured industry operators (Feng et al., 2014).

Mutugi (2012) who has investigated the determinants of financial performance for the whole population of 23 general Kenyan insurance operators found that the firm size is significant but negatively related to the financial performance. It is contradicted to the study of 53 general takaful companies operating in Saudi Arabia, UAE, Qatar, Pakistan and Malaysia. Kantakji et al. (2020) reported that the company size has significant positive relationship with the financial performance. The finding is consistent with the studies conducted by Zain (2017), Batool and Sahi (2019), and Sharma et al. (2020) which revealed the similar result. For the composite (family and general) takaful operators', the variable of size has no significant relationship to the financial performance. This study has conducted by Ibrahim et al., (2020) over the period of 2007 to 2016 for the Malaysian experience.

Gross Domestic Product (GDP)

Gross Domestic Product (GDP) is commonly described as the main indicator of the economic growth. It is one of the three main macroeconomic indicators other than inflation and employment. These macroeconomic indicators allow the researches to analyze economic environment of a country (Heap, 1980). A positive growth indicates there is economic activities from the population, but it also means an increase in inflation. Thus, it is imperative theoretically how GDP affects financial performance of the firms.

Wang et al. (2021) found the commercial insurance premium income, the monthly year-on-year growth rate of premium, insurance density, and insurance depth have all decreased due to COVID-19. It shows that GDP have significant impact due to the COVID-19 outbreak (a decline in growth) towards the China's insurance market. The negative impacts on property and personal insurances are both statistically significant. This finding is also supported by Kantakji et al. (2020). Meanwhile, the study of financial performance of consumer goods sector listed in the Indonesia Stock Exchange presents different outcomes. The result shows that the economic growth proxied by GDP has no significant effect on the financial performance (Suseno, 2020).

Based on the studies above, the relationship between variable determinants and financial performance can be summarized in the Table 2 below.

Table 2:

Summary of the Relationship between Variable Determinants and Financial Performance based on Past Studies

Independent Variables	Relationship to Financial Performance	Past Studies
Leverage	Significant and (+)	Batool and Sahi (2019)
	Significant and (-)	Hidayat and Firmansyah (2017), Ismail et al. (2019)
	Insignificant	Zain (2017), Abera and Abede (2019)
Solvency	Significant and (+)	-
	Significant and (-)	Ismail (2013), Kyule (2015)
	Insignificant	-
Size	Significant and (+)	Hodori and Masih (2017), Zain (2017), Batool and Sahi (2019), Ismail et al. (2019), Kantakji et al. (2020), Sharma et al., (2020), Tegegn et al. (2020)
	Significant and (-)	Mutugi (2012)
	Insignificant	Ibrahim et al. (2020)
GDP per Capita	Significant and (+)	Kantakji et al. (2020), Wang et al. (2021)
	Significant and (-)	-
	Insignificant	Suseno (2020)

From the selected variable determinants, the theoretical framework of the study is presented in the Figure 2 below.

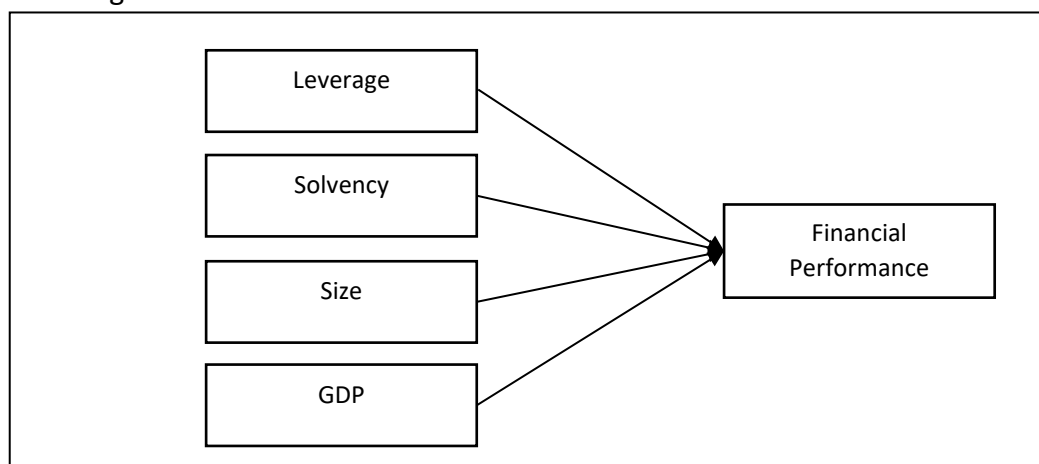


Figure 2: Theoretical Framework

From the literature discussion and the theoretical framework, the study specifies the following hypotheses:

- H₁** There is a significant relationship between leverage and financial performance.
H₂ There is a significant relationship between size and financial performance.

H₃ There is a significant relationship between solvency and financial performance.

H₄ There is a significant relationship between GDP and financial performance.

Methodology

3.1 Sample and Data Collection

This study used secondary data collection method. The data consisted the variables of profitability, leverage, solvency, and firm size for insurance operators and takaful operators in Malaysia. The data were obtained from nine insurance operators and five takaful operators for a period of five years beginning from 2016 to 2020. It involves unbalanced panel data obtained from individually audited and published annual financial statement of life insurance and takaful operators while the data concerning macroeconomic effect as control variable was obtained from BNM website. The list of both selected sample for life insurance and takaful operators is stated in Table 3.

Table 3:

List of Insurance and Takaful Operators in Malaysia

No.	List of Life Insurance Operators in Malaysia	List of Life Takaful Operators in Malaysia
1.	AIA Group Limited	AIA Public Takaful
2.	Great Eastern Life Assurance	Great Eastern Takaful
3.	Prudential Assurance	Prudential BSN Takaful
4.	SunLife Malaysia Assurance	SunLife Malaysia Takaful
5.	Allianz Life Insurance	Etiqa Family Takaful
6.	AXA Affin Life Insurance	
7.	Gibraltar BSN Life	
8.	MCIS Life	
9.	Tokio Marine Life Insurance	

Sources: MTA and LIAM

Variable Measurement and Model Specification

This study employs a few accounting values such as profit before tax to total assets, total liabilities to total equity, natural log of total asset, net profit and depreciation to total liability to act as the variables. The measurement of each variable is introduced as below:

Financial Performance

The formula of return on asset (ROA) is used to calculate profitability ratio representing the variable measurement for financial performance. Thus, ROA is measured by profit before taxes (PBT) divided by total assets. This variable often used to measure how efficient a company uses the assets that it owns to generate profits.

Leverage

The variable of leverage is often used to measure how much capital comes in the form of debt (loans) or assesses the ability of a company to meet its financial obligations. The formula of debt-to-equity ratio is commonly used to calculate leverage ratio representing the variable measurement of leverage (LEV). The variable is measured by the total liability divided by the total equity.

Solvency

The formula of solvency ratio is used to calculate the variable of solvency (SOL). It is measured by net profit plus depreciation, hence divided by total liability. The value of the variable indicates the higher the ratio, the stronger the balance sheet of the company.

Firm Size

The variable of firm size indicates the larger the firm is, the larger its operations will be, and the more it will produce resulting in more sales. The formula used to calculate the firm size (SIZE) is logarithm of total assets.

One of the challenges in conducting an insurance and takaful study is the limitation of data since, unlike Islamic banks, takaful companies are not mandated to publish their annual financial reports. In fact, this study has to omit some common independent variables for the firm financial performance study such as liquidity ratio due to unavailability of the data. Therefore, the available data for all variables measurement and their predicted signs are summarized in the Table 4, below.

Table 4:

Measurement And Predicted Signs For All Variables Used In The Study

Variables	Measurement	Formula	Predicted Sign
<i>Dependent Variable</i>			
Financial Performance / Return on Assets (ROA)	Profitability Ratio	$\text{Return on asset} = \frac{\text{Profit Before Taxes (PBT)}}{\text{Total Assets}}$	+
<i>Independent Variables</i>			
Leverage (LEV)	Leverage Ratio	$\text{Debt - to - equity ratio} = \frac{\text{Total Liability}}{\text{Total Equity}}$	+/-
Solvency (SOL)	Solvency Ratio	$\text{Solvency Ratio} = \frac{\text{Net Profit} + \text{Depreciation}}{\text{Total Liability}}$	+
Firm Size (SIZE)	Logarithm of Total Assets	$\text{SIZE} = \ln (\text{Total Assets})$	+
Gross Domestic Product (GDP)	GDP per Capita	$\text{GDP} = \frac{\text{GDP of the year } n}{\text{Population of year } n}$ $n = 2016 \dots 2020$	+

This study is based on panel data that are used more commonly in economic and financial analyses. This study employs ordinary least square (OLS) to examine the relationship between financial performance and its determinants. To examine the relationship between independent variables (leverage, solvency, firm size and GDP) and dependent variable (life insurance and takaful operators' financial performance), the following regression Model 1 and Model 2 are set up, respectively:

Model 1 : Life Insurance Operator

$$ROA_{it} = \alpha + \beta_1 LEV_{it} + \beta_2 SOL_{it} + \beta_3 SIZE_{it} + \beta_4 GDP_{it} + \varepsilon_{it}$$

Model 2 : Takaful Operator

$$ROA_{kt} = \alpha + \beta_1 LEV_{kt} + \beta_2 SOL_{kt} + \beta_3 SIZE_{kt} + \beta_4 GDP_{kt} + \varepsilon_{kt}$$

Where,

<i>ROA</i>	=	financial performance of insurance/takaful
<i>LEV</i>	=	leverage of insurance/takaful
<i>SOL</i>	=	solvency of insurance/takaful
<i>SIZE</i>	=	size of insurance/takaful
<i>GDP</i>	=	the rate of growth of gross domestic product
ε	=	error term
<i>i</i>	=	Insurance operator
<i>k</i>	=	Takaful operator

Results

Descriptive Statistics

The statistical analysis of the sample data was done using E-Views 13 software. Table 5 and 6 give a summary of the dependent and independent variables employed in the panel data analysis for both life insurance and takaful operators. Thus, descriptive statistics is employed to provide the overall summary of the collected data. The tables summarized the data of dependent and independent variables beginning from 2016 to 2020 for nine life insurance operators and five takaful operators. There were 44 numbers of valid cases for life insurance operators and 29 numbers of valid cases for takaful operators.

Table 5 displays the summary of individual variables' descriptive statistics for the life insurance operators. The statistics shows the minimum value, maximum value, mean, median, standard deviation, skewness, kurtosis, Jarque-Bera and probability for the 44 collected observations. Financial performance is represented by the return on asset (ROA). The ROA value of 0.03 suggests that from 2016 to 2020, life insurance operators have an average of 3.0% return on assets, indicating the companies may slightly less efficient in using the assets that they own to generate profits.

For life insurance operators, the mean, median, and standard deviation for leverage is 10.2, 9.0, and 9.37 respectively. While solvency have 0.1, 0.01, and 0.28 for mean, median, and standard deviation. The mean for firm size in this study is about 15.8%. Also reported in Table 5 are some statistical properties of the panel data, including the skewness and normality tests. With regards to the panel data distribution, results suggest that most data tend to be skewed both positively and negatively. The distributions are also fat-tailed (kurtosis>3.00) particularly in cases of ROA, LEV, and SOL. The data sample is considered normally distributed since the value of skewness is close to zero. The resulting Jarque-Bera values suggests that the data is normally distributed hence it accets the hypothesis that the data is normally distributed.

Table 5:*Summary of descriptive statistics for the overall sample data (Life Insurance Operators)*

Var	Mean	Med.	Max.	Min.	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Prob.
ROA	0.030	0.017	0.214	-0.045	0.045	2.189	8.965	100.353	0.000
LEV	10.204	9.000	39.000	0.099	9.367	1.402	4.853	20.715	0.000
SOL	0.107	0.014	1.227	-0.046	0.278	2.940	10.457	165.316	0.000
SIZE	15.795	15.000	18.000	12.000	1.503	0.145	2.385	0.848	0.654
GD P	43323.02	43378.00	46526.00	39505.00	2325.484	-0.402	2.269	2.167	0.338

In another, Table 6 displays the summary of individual variables' descriptive statistics for the takaful operators. The statistics shows the values for 29 collected observations. The ROA value of 0.01 suggests that from 2016 to 2020, takaful operators have an average of 1.0% return on assets. It also indicates that the takaful operators may slightly less efficient in using the assets that they own to generate profits.

The mean, median, and standard deviation for leverage is 7.0, 7.0, and 2.56 respectively. Meanwhile, solvency have 0.006, 0.00, and 0.09 for mean, median, and standard deviation. The mean for firm size in this study is about 14.56% showing that the size of the takaful operators is much differ with life insurance. Similar with the data of life insurance with regards to the panel data distribution, the results suggest that most data tend to be skewed both positively and negatively. In the case of ROA, SOL, and SIZE, the distributions are also fat-tailed with kurtosis >3.00. Similarly, for takaful operators, the data sample is considered normally distributed according to skewness which is close to zero and the Jarque-Bera value indicates the data is following a normal distribution.

Table 6:*Summary of descriptive statistics for the overall sample data (Takaful Operators)*

Var	Mean	Med.	Max.	Min.	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Prob.
ROA	0.010	0.009	0.081	-0.027	0.023	0.946	4.714	7.872	0.020
LEV	7.034	7.000	12.000	3.000	2.556	-0.078	2.480	0.356	0.837
SOL	0.006	0.000	0.091	-0.031	0.025	1.553	6.072	23.063	0.000
SIZE	14.552	14.000	17.000	13.000	1.021	0.782	3.395	3.134	0.209
GD P	43528.31	43378.00	46526.00	39505.00	2283.995	-0.476	2.457	1.451	0.484

Regression Analysis

The multiple regressions analysis employed in this study is the relationship analysis of the dependent and independent variables. In this study, the independent variables of leverage, solvency, size, and GDP are analysed to see the effect of these variables towards the ROA. The result from the multiple regressions for both regression models of takaful and insurance operators is presented in Table 7.

The Model 1 shows the R^2 of 0.0297. It shows that 2.97% variation in the dependent variable or ROA is described by its independent variables. After adjusting for errors, the adjusted R^2 shows that the variation is about 4.53% of ROA. While Model 2 shows the R^2 of 0.01 and shows that 1.0% variation in the dependent variable or ROA is described by its independent variables. The adjusted R^2 shows that the variation is about 2.26% of ROA. The value of R^2 indicates the dependent variable is not much explained by the selected variables from the previous literatures. The R^2 should be at least 0.95 for regression model to be considered reliable. This may be due to the different industry employed in this study as compared to the most studies in the literatures. There may be some other significant variables to be identified for financial performance in the case of insurance and takaful industry.

Based on the analysis of Model 1 in Table 7, it shows that SOL is the only variable that have a significant and positive relationship with ROA ($p = 0.000$). Meanwhile, the remaining three variables have insignificant relationship with ROA in which showed by the LEV ($p = 0.2368$), SIZE ($p = 0.2274$) and GDP ($p = 0.2476$). Similarly, Model 2 also revealed that only SOL have significant relationship with ROA ($p = 0.000$). Thus, for both life insurance and takaful operators, the only variable that significantly affects the ROA is the SOL. Meanwhile, the other three remaining variables do not statistically have significant effect on ROA. This finding shows that the strong balance sheet of insurance and takaful operators give significant effect to the firm financial performance. Thus, it supports hypothesis (H_3) that there is a significant relationship between solvency and financial performance. The finding is consistent with Kyule (2015) which reported the significant relationship between solvency and financial performance of the firm in Kenya while Ismail (2013) has revealed similar results for the study of financial performance of takaful in Malaysia.

While the theory demonstrated that insurance companies with higher solvency margin are considered to be more financially sound, this factor is found have one and only significant relationship to the financial performance of both takaful and insurance operators in the study. Contrary to liquidity, which might expose the management and the board to the conflict of interest; solvency instead, allow a lower degree of liquidity where this somehow positively affects the financial performance of both. As solvency margin plays an important role in the financial performance of the life takaful and insurance companies in Malaysia, it is imperative for the industry to ensure that there is a balance between the risks of deficiency of the fund and the benefits of higher returns from investments. It can be shown that both life insurance and takaful have sufficient cash flow in meeting their long-term liabilities especially during the global financial crisis due to health issue. This measurement can be seen from the increasing contribution from the policyholders and number of new policies issued subsequent years (MTA and LIAM, 2016-2020). The health crisis has increased the awareness and demand of life protection.

Table 7:*Regression results using OLS with dependent variable of financial performance (ROA)*

Variables	Dependent Variable = ROA	
	Model 1	Model 2
Constant	0.6729	0.1540
LEV	0.2368	0.1031
SOL	0.0000***	0.0000***
SIZE	0.2274	0.5927
GDP	0.2476	0.2385
R ²	0.0297	0.0100
Adjusted R ²	0.0453	0.0226

Note: *** denotes 10% significance level

It is notable that the insurance and takaful market is dynamic, thus variables affecting the financial performance is not limited to four, in addition that the macroeconomic variables also revolve and consistently affect the financial performance in different ways. There is an ample reason for future in addition to add-up the number of variables, also to include other than the samples taken in this study. In addition, the study is also lack of takaful data in view that the industry is relatively new as compared to insurance. Furthermore, the future researcher is invited to study on the determinants of general takaful operators' financial performance. There are currently literatures that compose both general and life financial statements, however, these two markets have own unique characteristics that have to be separated to obtain a better result.

Conclusion and The Way Forward

The study concluded that the financial performance of both insurance and takaful operators in Malaysia is determined by a significant factor particularly within the period of COVID-19 hits the country. From the findings, solvency is a crucial measurement and proven to be a significant determinant in ensuring sound financial statement during the financial crisis due to health issue. Thus, for future progression and development of the industry, both operators have to ensure their ability to meet its long-term debt obligation. The impact of the sudden and unpredicted global health issue becomes a good lesson for both life insurance and takaful to emphasize on solvency for future progression and development.

References

Abera, M. T., & Abede, A. K. (2019). Determinants of Financial Performance; Evidence from Ethiopia Insurance Companies. *Journal of Accounting Finance and Auditing Studies (JAFAS)*, 5(1), 155–172. <https://doi.org/10.32602/jafas.2019.7>

Ahmed, S., & Kawata, Y. (2022). Muslims' Perception of Islamic Insurance (Takaful) in Malaysia. *Journal of Islamic Finance*, 11(1), 51–66. <https://journals.iium.edu.my/iibfjournal/index.php/jif/article/view/635>

AIA. (2021). Annual Report Life Takaful and Insurance (2016-2021). Available at: <https://www.aia.com.my/en/about-aia/media-centre/financial-information.html> (Accessed: 1 January 2022).

Akila, H. W., & Faleel, J. (2021). The Race to Become the Hub of Islamic Finance. *PalArch's Journal of Archaeology of Egypt*.

Allen, M. (2017). Secondary Data: Sources, Advantages, and Disadvantages. In *The SAGE Encyclopedia of Communication Research Methods*.

Allianz (2021) Annual Report Life Insurance (2016-2021). Available at: <https://www.allianz.com.my/personal/allianz-at-a-glance/investor-relations/financial-reports.html#annualfinancialstatements> (Accessed: 1 January 2022).

Apuke, O. D. (2017). Quantitative Research Methods: A Synopsis Approach. Kuwait Chapter of Arabian Journal of Business and Management Review. <https://doi.org/10.12816/0040336>

Arifin, J., Yazid, A. S., & Hussin, M. R. (2014). Demand of Family Takaful in Malaysia: Critical Determinant Factors Examined. *International Review of Management and Business Research*, 3(2), 982–992. www.irnbrjournal.com

AXA Affin (2021) Annual Report Life Insurance (2016-2021). Available at: <https://www.axa.com.my/about-axa/investor-relations> (Accessed: 1 January 2022).

Badea, I. C. (2017). Literature Review on the Determinants of Insurers' Financial Performance the Determinants of Financial Performance. 206–212. http://www.utgjiu.ro/revista/ec/pdf/2017-01.Volumul_1_Special/29_Badea.pdf

Bank Negara Malaysia (BNM). (2020). Malaysian Financial Sector: Islamic Banking & Takaful. Retrieved from <https://www.bnm.gov.my/islamic-banking-takaful>

Batool, A., & Sahi, A. (2019). Determinants of Financial Performance of Insurance Companies of USA and UK during Global Financial Crisis (2007-2016). *International Journal of Accounting Research*, 07(01). <https://doi.org/10.35248/2472-114x.19.7.194>

BERNAMA. (2023). Takaful Industry Shows Strong 2022 Growth, 23 Pct Market Share in Net Contributions. Retrieved from www.bernama.com

Bhatty, A. (2010). The growing importance of Takaful insurance. Asian Regional Seminar.

Bustic, R P. (1994). Solvency measurement for property liability risk-based capital applications, *Journal of Risk and Insurance*, 61, 1 - 6.

Chen, L., Jung, C., & Chen, S.-Y. (2011). How the Pecking-Order Theory Explain Capital Structure. *Journal of International Management Studies*, 6.2(1984), 1–9.

Culata, P. R. E., & Gunarsih, T. (2012). Pecking Order Theory and Trade-Off Theory of Capital Structure: Evidence from Indonesian Stock Exchange. *The Winners*. <https://doi.org/10.21512/tw.v13i1.666>

Deloitte. (2020). Impact of COVID-19 on the Insurance Sector. In *Deloitte Ireland LLP* (Vol. 6, Issue April). <https://www2.deloitte.com/ie/en/pages/covid-19/articles/impact-covid-19-insurance-industry.html>

Etiqua (2021) Annual Report Life Takaful and Insurance (2016-2021). Available at: <https://myetiqua.com/who-we-are/facts-figures/> (Accessed: 1 January 2022).

Feng, C., Wang, H., Lu, N., Chen, T., He, H., Lu, Y., & Tu, X. M. (2014). Log-transformation and its implications for data analysis. *Shanghai Archives of Psychiatry*. <https://doi.org/10.3969/j.issn.1002-0829.2014.02>

Gibraltar BSN (2021) Annual Report Life Insurance (2016-2021). Available at: <https://www.gibraltarsbn.com/financial-statements> (Accessed: 1 January 2022).

Great Eastern (2021) Annual Report Life Takaful and Insurance (2016-2021). Available at: <https://www.greateasternlife.com/my/en/about-us/media-centre/annual-reports.html> (Accessed: 1 January 2022).

Hamid, K., Shahid, R., Akash, I., Asghar, M., & Ahmad, S. (2011). Corporate social performance, financial performance and market value behavior: An information asymmetry perspective. *African Journal of Business Management*.

Hardwick, P. & Adams, M. (1999). The determinants of financial derivatives use in the United Kingdom life insurance industry. *Abacus*, 44(2), 163-184

Heap, S. P. H. (1980). Choosing the Wrong 'Natural' Rate: Accelerating Inflation or Decelerating Employment and Growth? *The Economic Journal*. <https://doi.org/10.2307/2231931>

Hemrit, W. (2020). Determinants driving Takaful and cooperative insurance financial performance in Saudi Arabia. *Journal of Accounting and Organizational Change*, 16(1), 123–143. <https://doi.org/10.1108/JAOC-03-2019-0039>

Hidayat, I & P. Firmansyah, I. (2017). Determinants of Financial Performance in the Indonesian Islamic Insurance Industry. *Etikonomi*, 44(1).

Hodori, A., & Masih, M. (2017). Determinants of Profitability of Takaful Operators: New Evidence from Malaysia Based on Dynamic GMM Approach. *Munich Personal RePEc Archive*, 79441, 24.

Ibrahim, N. I., Muhamat, A. A., Roslan, A., & Jaafar, M. N. (2020). Determinants of Composite Takaful Operators' Financial Performance. *Global Business and Management Research: An International Journal*, 12(4), 331–337.

Ismail, M. (2013). Determinants of financial performance: The case of General Takaful and insurance companies in Malaysia. *International Review of Business Research Papers Issue*, 9(6), 111–130.

Ismail, N., Izam, F. N. N. A., Samsuddin, N. A., Ishak, I., & Manaf, N. A. (2019). Factors Affecting Financial Performance of Takaful Operators in Malaysia. In N. Nadiah Ahmad, N. Raida Abd Rahman, E. Esa, F. Hanim Abdul Rauf, & W. Farhah (Eds.), *Interdisciplinary Sustainability Perspectives: Engaging Environmental, Cultural, Economic and Social Concerns*, vol 44. *European Proceedings of Social and Behavioural Sciences* (pp. 441-448). *Future Academy*. <https://doi.org/10.15405/epsbs.2018.07.02.47>

Kalok, A., Syed Anwar Aly, S. A., Abdul Rahman, R., Mahdy, Z. A., & Sharip, S. (2022). COVID-19 Pandemic and Maternal Psychological Wellbeing During the Malaysian Movement Control Order: A Cross-Sectional Study. *Frontiers in Psychiatry*, 12(January), 1–10. <https://doi.org/10.3389/fpsy.2021.745034>

Kantakji, M. H., Abdul Hamid, B., & Alhabshi, S. O. (2020). What drives the financial performance of general takaful companies? *Journal of Islamic Accounting and Business Research*, 11(6), 1301–1322. <https://doi.org/10.1108/JIABR-06-2018-0077>

Keil, S. K., Reibstein, D., & Wittink, D. R. (2001). The impact of business objectives and the time horizon of performance evaluation on pricing behavior. *International Journal of Research in Marketing*. [https://doi.org/10.1016/S0167-8116\(01\)00027-1](https://doi.org/10.1016/S0167-8116(01)00027-1)

Kimberlin, C. L., & Winterstein, A. G. (2008). Validity and reliability of measurement instruments used in research. In *American Journal of Health-System Pharmacy*. <https://doi.org/10.2146/ajhp070364>

Kyule, J. M. (2015). Impact of Liquidity and Solvency on Financial Performance of Firms Listed at the Nairobi Securities Exchange. A Research Project Presented in Partial Fulfillment of the Requirements for the Award of the Degree of Master of Science Finance.

Lebas, M. J. (1995). Performance measurement and performance management. *International Journal of Production Economics*. [https://doi.org/10.1016/0925-5273\(95\)00081-X](https://doi.org/10.1016/0925-5273(95)00081-X)

MCIS (2021) Annual Report Life Insurance (2016-2021). Available at: <https://www.mcis.my/Media-Centre/Investor-Relations/Financial-Statements> (Accessed: 1 January 2022).

Mofijur, M., Fattah, I. M. R., Alam, M. A., Islam, A. B. M. S., Ong, H. C., Rahman, S. M. A., Najafi, G., Ahmed, S. F., Uddin, M. A., & Mahlia, T. M. I. (2021). Impact of COVID-19 on the social, economic, environmental and energy domains: Lessons learnt from a global pandemic. *Sustainable Production and Consumption*, 26(September 2020), 343–359.

<https://doi.org/10.1016/j.spc.2020.10.016>

Mohammed Kamil, N., & Mat Nor, N. (2014). Factors Influencing the Choice of Takaful Over Conventional Insurance: The Case of Malaysia. *Journal of Islamic Finance*, 3(2), 1–14.

Monther Eldaia, Marzuki, A., Hanefah, M. M., & Shatnawi, S. A. (2021). Impact of COVID-19 on Malaysian Takaful Business. *March*, 571–578. <https://doi.org/10.1007/978-3-030-69221-6>

Mutugi, P. M. (2012). The determinants of financial performance of life assurance companies in Kenya. October.

<http://erepository.uonbi.ac.ke/handle/11295/74685><http://erepository.uonbi.ac.ke/handle/11295/15145>

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*. [https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)

ORCAN, F. (2020). Parametric or Non-parametric: Skewness to Test Normality for Mean Comparison. *International Journal of Assessment Tools in Education*. <https://doi.org/10.21449/ijate.656077>

Osborne, J. W. (2003). Notes on the use of data transformations. *Practical Assessment, Research and Evaluation*.

Panda, B., & Leepsa, N. M. (2017). Agency theory: Review of theory and evidence on problems and perspectives. *Indian Journal of Corporate Governance*.

<https://doi.org/10.1177/0974686217701467>

Peltoniemi, M. (2011). Reviewing industry life-cycle theory: Avenues for future research. *International Journal of Management Reviews*. <https://doi.org/10.1111/j.1468-2370.2010.00295.x>

PricewaterhouseCoopers. (2020). COVID-19 Pandemic Impact on Insurers and Takaful Operators in Malaysia. May's Issue. <https://www.pwc.com/my/en/publications/2020/covid-19-pandemic-impact-on-insurers-and-takaful-operators-malaysia.html>

Prudential (2021) Annual Report Life Takaful and Insurance (2016-2021). Available at: <https://www.prudential.com.my/en/our-company-about-us/financial-listings/> (Accessed: 1 January 2022).

Remli, N., Muda, M. & Rosman, R. (2017) Family takaful demand in Malaysia: Proposed theoretical framework and hypotheses developments. *International Journal of Business, Economics and Law*, 12 (1), 1-5. ISSN 2289-1552

Shaifuddin, S. A. M. (2020). A Literature Review: Determinants for Family Takaful Demand in Malaysia - Breaking Out of the Shadow of Conventional Insurance. *International Journal of Academic Research in Business and Social Sciences*, 10(2), 748–757.

<https://doi.org/10.6007/ijarbss/v10-i2/6995>

Sharma, A., Jadi, D. M., & Ward, D. (2020). Analysing the determinants of financial performance for UK insurance companies using financial strength ratings information.

Economic Change and Restructuring, 0123456789. <https://doi.org/10.1007/s10644-019-09260-w>

Sherif, M., & Azlina Shaairi, N. (2013). Determinants of demand on family Takaful in Malaysia. *Journal of Islamic Accounting and Business Research*, 4(1), 26–50. <https://doi.org/10.1108/17590811311314276>

Sun Life (2021) Annual Report Life Takaful and Insurance (2016-2021). Available at: <https://www.sunlifemalaysia.com/about-us/who-we-are/financial-statement/> (Accessed: 1 January 2022).

Suseno, M. A. (2020). Financial Performance, Macroeconomic Factors and Company Characteristics in Consumer Goods Company in Indonesia. *International Journal of Economics, Business and Accounting Research (IJEBAR)*. <https://doi.org/10.29040/ijebar.v4i03.1168>

Takaful Ikhlas Family Berhad (TIFB). (2022). Statement by Manager & Audited Financial Information. Retrieved from https://www.takaful-ikhlas.com.my/api/uploads/fye_2022_bi_25072022_b1ea5dbba6.pdf

Tegegn, M., Sera, L., & Merra, T. M. (2020). Factors Affecting Profitability of Insurance Companies in Ethiopia: Panel Evidence. *Economics, Business*.

Tokyo Marine. (2021). Annual Report Life Insurance (2016-2021). Available at: <https://www.tokiomarine.com/my/en/about-us/life-insurance/financial-information.html> (Accessed: 1 January 2022).

Wang, Y., Zhang, D., Wang, X., & Fu, Q. (2021). How Does COVID-19 Affect China's Insurance Market? In *Research on Pandemics*. <https://doi.org/10.4324/9781003214687-15>

West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with nonnormal variables: Problems and remedies, in *Structural equation modeling: Concepts, Issues and Applications*. In Sage Publications: Thousand Oaks CA., R.H. Hoyle, Editor.

Yazid, A. S., Arifin, J., Hussin, M. R., & Wan Daud, W. N. (2012). Determinants of Family Takaful (Islamic Life Insurance) Demand: A Conceptual Framework for a Malaysian Study. *International Journal of Business and Management*, 7(6), 115–127. <https://doi.org/10.5539/ijbm.v7n6p115>

Yee, A., Hodori, N. 'Aqilah M., Tung, Y. Z., Ooi, P. L., Latif, S. A. B. A., Isa, H. M., Ng, D. L. C., Chai, C. S., & Tan, S. B. (2021). Depression level and coping responses toward the movement control order and its impact on quality of life in the Malaysian community during the COVID-19 pandemic: a web-based cross-sectional study. *Annals of General Psychiatry*, 20(31), 1–9. <https://doi.org/10.1186/s12991-021-00352-4>

Zain, M. binti. (2017). Factors Influence Financial Performance of the Takaful Industry in Malaysia. In UUM. UUM.

Zurich (2021) Annual Report Life Takaful and Insurance (2016-2021). Available at: <https://www.zurich.com.my/en/about-zurich/the-zurich-story/our-business-performance> (Accessed: 1 January 2022).