DETERMINANTS OF TAKAFUL PERFORMANCE IN MALAYSIA

Zahariah Sahudin ¹, Hasni Abdullah ¹, Husniyah Abdul Rahim ², Nur Zahidah Bahrudin ¹, Faridah Pardi ³

1 Faculty of Business and Management, Universiti Teknologi MARA, Cawangan Selangor, Malaysia

2 Faculty of Human Ecology, Universiti Putra Malaysia, Malaysia, 3 Faculty of Business and Management, Universiti Teknologi MARA, Cawangan Negeri Sembilan, Malaysia

E-mail: zahariah128@uitm.edu.my

Received June 2022; accepted September 2022

Abstract

This paper intends to find out the factors influencing the company's performance in Takaful industry in Malaysia. It is done by investigating on the micro level factors such as liquidity and firm size. For macro level factors, the study employs inflation and gross domestic product to know their influence towards performance of Takaful companies. The data for this research were gathered from the annual report of the company itself and from the World Bank website. The duration of the study is from year 2011 until 2020. The sample size of the study is five Takaful companies, and it makes the observations become 50. Panel Data Analysis is used to analyse the data. As a result, it shows that liquidity, size of the firm and GDP have significant relationship with the performance of Takaful companies in Malaysia. It is hope that the findings from this study will give impact and contribution towards the existing body of knowledge. Furthermore, it will give better understanding to the managerial level in order for them to improve their firm's performance, thus will improve takaful industry performance in Malaysia.

Research paper

Keywords: Takaful performance, return on asset, size of the firm, liquidity, GDP

Reference to this paper should be made as follows: Sahudin, Z., Abdullah, H., Abdul Rahim, H., Bahrudin, N. Z., & Pardi, F. (2022). Determinants of Takaful Performance in Malaysia. *Journal of Entre*preneurship, Business and Economics, 10(2S2), 1–17.

Introduction

In the present challenging economic condition due to COVID-19 pendamic, the Takaful industry in Malaysia is still undergoing a progressive development (Salleh, Chowdhury, Cahyono & Widiastuti, 2022). Takaful is considered an attractive company to meet the needs of the country's economy. In this day and age, takaful industry is considered as good business as it satisfies the needs of the public. Takaful comes from an Arabic word which can be translated as "solidarity" or "mutual guarantee". Over the past two decades, Takaful's business has focused on establishing long-term relationships with Takaful members by providing an efficient, innovative, as well as ethical services to the customers. There are many takaful operators, local and foreign, which doing business in Malaysia. Among all are Etiqa Takaful, BSN Prudential Takaful, Hong Leong MSIG Takaful, Takaful Ikhlas, Syarikat Takaful Malaysia Berhad, Great Eastern Takaful, AIA Public Takaful, Zurich Takaful Malaysia and many more.

These *takaful* operators are operated under the system of *takaful* based on *Ta'wun* and *Tabarru'*. *Ta'wun* can be defined as mutual help according to the principle of mutual co-operation, guaranteeing each other and making profit. The main purpose of these *takaful* operators is not primarily profit making. On the other hand, *Tabarru'* mean is donation or risk sharing by participants to eliminate the uncertainty's element. The group of *takaful* holders will utilizes the fund to help the members who are facing difficulties and in need of the fund (Ismail, 2013). It shows that, it gives a share of this surplus back to the policyholders. Thus, the competitiveness of takaful product and significance potential growth makes takaful as an acceptable product to non-Muslims as well. The Islamic Financial Services Act (IFSA) 2013, translates

takaful business as an arrangement of administrating, managing, and operating the pooled takaful fund on behalf of takaful participants. It may comprise of investment and savings activities such as retakaful business. Takaful industry can be said as one of the industries that keep with the growth of 20 percent annually and globally (Redzuan, Rahman & Aidid, 2009; Dana et al., 2021, 2022). The revolutionising in Takaful industry performance is due to a few disputes such as improvement of technologies in medical, increase in income levels as well as escalation in Islamic financial industry (Sherif and Shaairi, 2013).

All *Takaful* companies in Malaysia must comply with Shariah when signing contracts with clients. They are also required to appoint a Shariah board to ensure that the operations and products of the company are Shariah-compliant. Contracts in *takaful* transactions are transparent and there are no hidden transactions occur. Additionally, the operations of *takaful* companies are free from alcohol, gambling and tobacco. Hence, all the investment portfolios of *takaful* companies must be Shariah-compliant and in ethical financial services only. In terms of the governance structure, either takaful companies or conventional insurers, they have the same structure. But, for takaful companies, they have an independent Shariah board which will ensure the processes, investments and products of the takaful company are according to Shariah which are free from these three elements of *Riba* (Interest), *Gharar* (Uncertainty) and *Maysir* (Ambiguity) (Ansari, 2022).

Islamic financial industry in Malaysia is considered as one of the best in the world. It is said to be good in term of regulatory system, number of Islamic financial institutions (IFI), profitability as well as resiliency. The takaful companies have outperformed conventional insurance companies during financial crises because takaful has different structure and mechanism (Hassan and Marimuthu, 2018). Other than that, these takaful companies also have undergone a very good financial performance as well as passive challenges. They have encountered 6% annual growth rate from 2012 to 2017. Consequently, this faster's growing situation has motivated and encourages the people who are religious-sensitive to go for Shariah-compliant institutions (Nomran et al., 2018). According to Al Huda Today (2021) the strong growth of Takaful Family and General Takaful by the Malaysia Takaful Industry had been noted during the 1st half of 2021 compared to the period of 2020 even though Malaysia was hit by Covid-19 pandemic (Dheer & Salamzadeh, 2022; Hameed et al., 2021; Pereira et al., 2021). Furthermore, the Deputy Chairman of Malaysian Takaful Association reported that the total contributions of Takaful Family business have increased by 46.7% to RM4.68 billion in the first half of 2021 as compared to RM3.19 billion in the first half of 2020.

Literature Review

Takaful Performance

Performance of a company is the utmost important thing in business. It indicates the strength of the organization in terms of financial or managerial performance. Eldaia, Hanefah and Marzuki (2022) as well as Saad (2012) had investigated the performance of conventional insurance and *takaful*. He used the input factor of commission and company expenses, while the output factors are net investment income and the insurance premium. He found that the conventional insurance performed better than *takaful*. Another study on performance of insurance between Malaysia and Brunei done by Saad, Idris and

Edzalina (2011), they measure performance by Return on Asset (ROA) and this Dupont ratio. Dupont ratio was developed by Dupont in 1919. In finance, ROA is widely used to measure the financial performance of the firm. Study done by Guendouz and Ouassaf (2018) found that liquidity, firm size, inflation as well as Gross Domestic Product (GDP) have influence on profitability, where profitability is proxied by ROA.

Internal Factors

From the previous studies, it indicates that there are many factors influencing the *takaful* firm's performance. It can be divided into internal and external factors (Rahman et al., 2021; Salamzadeh & Dana, 2021, 2022). Example for internal factors are liquidity and firm size.

Liquidity

In Finance, liquidity consists of cash. It is also referred to quick ratio. It shows that how much firm's assets can cover the liabilities. Almajali, Alamro and Al-Soub (2012) as well as Arshad, Afifah, Othman and Abdullah (2020) have done a research on Jordanian insurance companies for the period between 2002 till 2007. They found that liquidity has a significant positive relationship with the firm performance. Another study by Bilal, Khan, Tufail and Ul-Sehar (2013) as well as Malik (2011) found a positive significant relationship between return on assets and liquidity of the *takaful* companies.

However, according to Adams and Buckle (2003), they used liquidity to measure the insurer's ability in fulfilling their commitment to the policyholders as well as stakeholders. The result shows that liquidity has a negative significant relationship with performance. They argued that company must

have a low liquidity in order to reduce the agency cost and hence, provide incentives for managers to improve their performance.

Size of Firm

According Hemrit (2020), the performance of the firm has a relationship in a positive direction with the size of the firm. It indicates that the larger the size of the firm, the performance of that firm will be better. This statement is supported the findings by Eldaia, Hanefah and Marzuki (2022), Afza and Asghar (2012), Chen and Wong (2004) as well as Arshad et al., (2020). They found that size of the firm and performance has a positive relationship. Nevertheless, Arshad, Zakaria, Mohamad and Irijanto (2016) have a different view, whereby they stated that the firms need to utilize the scale of economics in retaining the resources. Therefore, when size of the firm and performance has a positive relationship, it's proven that the large company was outperformed smaller ones.

External Factors

There are also a few factors determining the *takaful* performance in terms of external factors such as Gross Domestic Product (GDP) and inflation.

Gross Domestic Product (GDP)

Total economic activities in the country are normally represented by GDP. The expected relationship between firm's performance and GDP growth should be positive relationship. It is proven when Redzuan, Rahman and Aidid (2009), Abdullah (2012) as well as Guendouz and Ouassaf (2018)

confirmed that GDP played an important role in defining the Malaysia's demand for *takaful*. Hence, obviously GDP has influence towards *takaful* performance.

Inflation

Percentage changes in consumer price index (CPI) is normally will represent inflation. According to Shahid (2018), Takaful can be used as a tool to protect the firm's value and one of the techniques to ensure that the business has sufficient funds. It is also to reassure that the firm will be productive in the Islamic banking and against inflation. Thus, inflation has a positive relationship towards the *takaful* performance.

Agency Theory

Agency theory has been used since its existence in 1976 and is considered as a well-known and recognisable theories in economic, finance, and management. The founder of agency cost theory, Jensen and Meckling (1976), describe the relationship of agency within the company as: "A contract under which one or more person (the principal) engages another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent". As stated by the agency theory, agency conflicts may occur if there are misunderstanding in the management style and if the company practise split-up or separation in management and ownership. Conflicts also could arise if there are insufficient work commitment and less understanding between the managers and staff in the office. Agency theory also explain about the relationship between firm performance

and liquidity as well as firm size. Additionally, agency costs are closely related to performance of the firm but in the different direction. It means that if agency costs are lower, the firm values will be the higher, therefore, the performance of the firm will be better. Najaf and Najaf's (2021) indicate that agency theory is very important and will give impacts in explaining on the firm performance.

Looking at the *Shariah* perspective, it is referred to agency concept in Islamic financial agreement. In Islam, the agency contract is known as *Wakalah*. *Takaful* companies in Malaysia used *Wakalah* contract in their business model. Hence, the *takaful* companies may apply this model in their agency system effectively and promoting the *takaful* to their customers. Under *Wakalah* contract, *takaful* companies will act on behalf of the clients or participants to manage the *takaful* fund and therefore, *wakalah* fee will be charged to the participants. At the end of the day, if there is nothing happens to the participants, a *takaful* firm will return a small percentage of the profit to the participants.

Methodology

This research employed a quantitative method to determine the *takaful* performance. The secondary data is collected from the annual report of that *takaful* firms. The estimation of Pooled Ordinary Least Square (OLS) Model by using STATA software is conducted. Table 1 below states the 5 *takaful* companies in Malaysia from year 2011 to 2020. This study period is chosen because it has embraced many important events such as the financial crises as well as the world's greatest financial scandals. Moreover, the Malaysian

Corporate Governance Code has been revised twice that are in year 2012 and 2017.

Table 1. List of the takaful companies

Number	List of Companies
1.	AIA Public Takaful Berhad
2.	Etiqa Family takaful Berhad
3.	Takaful Ikhlas Family Berhad
4.	Syarikat Takaful Malaysia Keluarga Berhad
5.	Zurich Takaful Malaysia Berhad

Sources: Financial Report from 2021 to 2020

Table 2 shows the proxy for the dependent variable and independent variables being employed in this study.

Table 2. Proxy for performance of Takaful

Type of Varia- bles	Variables	Nota- tion	Measurement	References
DEPENDENT VARIABLE	Perfor- mance of Takaful	ROA	ROA = Net Profit / Total Asset	Eldaia, Hanefah & Marzuki (2022); Guendouz and Ouassaf (2018)
INDEPEND- ENT VARIA- BLE	Liquidity	LIQ	Cash and bank balance @ cash equivalent / To- tal Liability	Bilal et al. (2013)
	Size of the firm	SIZE	Log Total Assets	Arshad et al. (2016)
	Gross Do- mestic Prod- uct	GDP	GDP Per capita	Abdullah (2012)
	Inflation rate	INF	Consumer price index	Shahid (2018)

Theoretical Framework

Figure 2 indicates the theoretical framework of this paper. The dependent variable is performance proxied by ROA, while the independent variables are interest rate, GDP, liquidity and size of the firm.

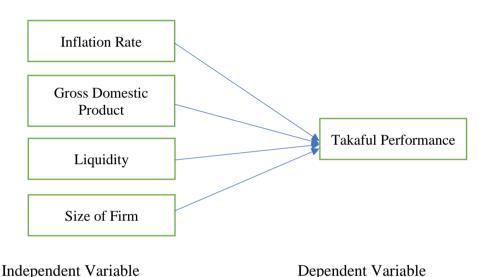


Figure 2. Theoretical Framework

Panel Data Regression Model

To determine the relationship between dependent variable and independent variables, panel data analysis is employed. This test is being applied to analyse the relationship of macroeconomic and microeconomic factors on firm performance. Panel data is used in a lot of studies because it accommodates the multicollinearity issues within the variables, and it also increases the degree of freedom. Other than that, it also permits an efficient estimation. By doing this analysis, it can determine the relationship between those variables. The regression equations for this study are as follow:

 $ROA_{it} = \alpha + \beta_1 LIQ_{it} + \beta_2 SIZE_{it} + \beta_3 GDP_{it} + \beta_1 INF_{it} + \varepsilon_{it}$ where,

- (i) *ROA_it* is the dependent variable (Performance) with N cross-sectional observations and T time-series observations.
- (ii) α is the intercept.
- (iii) *LIQit*, *SIZEit*, *GDPit*, *INTit*, are the independent variables with N cross-sectional observations and T time-series observations.
- (iv) ε_{it} is error term with mean zero and variance σ^2 .

Empirical Results

Table 3 below shows the descriptive statistic of the variables in the final sample of 50 observations. The table indicates the results of panel data analysis which hypothesised the Pooled Ordinary Least Square (POLS) estimates.

Table 3. Descriptive Statistics

Analysis	(ROA)	Liquidity	Size of firm	GDP	Inflation
Mean	1.0170	1.6478	9.3973	6.0559	2.1300
Std Deviation	0.0444	0.8164	0.5281	0.0851	0.9761
Minimum	0.9352	0.2903	8.0566	5.9146	0.6600
Maximum	1.2402	3.3616	10.1024	6.1792	3.8700

Note: All variables measured by raw data; Number of samples for each variable is 50 observations.

Table 3 exposed the descriptive analysis statistic for the variables identified the determinants of *takaful* company's performance in Malaysia for the period of 10 years starting from 2011 until 2020. The table shows the return on asset (ROA) as the dependent variables of the study represented in a percentage form has a mean of 1.0170. The maximum variable that is 1.2402, and the minimum is 0.9352. The deviations in the data hence lead the

standard deviation of 0.0444. For gross domestic product (GDP), the mean is 6.0559, while the standard deviation of gross domestic product data is 0.0851. At the same time, the maximum and minimum of gross domestic product (GDP) is 8.0566 and 10.1024.

Besides gross domestic product, inflation rate also has effects on *taka-ful* performance in Malaysia. The mean of inflation rate is 2.1300 while for the standard deviation of inflation rate is 0.9761. On the other hand, the minimum and maximum of is 0.6600 and 3.8700. The mean of liquidity that is 1.6478 while for the standard deviation it is quite low than previous variables which is 0.8164. However, the maximum of liquidity is 3.3616 is slightly differentiated from the minimum which is 0.2903. The last variable to be justified from the descriptive statistics is the size of firm. The mean size of firm showed the highest figure that is 9.3973. While the standard deviation, minimum and maximum are 0.5281, 8.0566 and 10.1024 respectively.

On the other hand, variance inflation factor (VIF) senses the multicollinearity that exist between the independent variables in the analysis. Table 4 below shows that all the variables have VIF values for less than 5.0 (VIF <5). It stipulates that there is no multicollinearity problem exist among the variables. Therefore, next step can be taken.

Table 4. Variance-Inflating Factor (VIF)

Variable	VIF	1/VIF	
GDP	1.20	0.836165	
Inflation	1.05	0.949240	
Liquidity	1.05	0.949937	
Size of the firm	1.16	0.859654	
Mean VIF	1.12		

Table 5 demonstrates the panel data result. Based on the result, liquidity has a positive relationship with performance at 10% significance level and the coefficient is 0.0149. The result is consistent with study done by Bilal et. al. (2013); Arshad and Suppia (2019); and Arshad et al., (2020). Their findings shows that the higher the liquidity, the greater will be the firm performance. It indicates that the firm has ability to settle their short-term debt in order to have a good financial performance.

Table 5. Regression Result for Takaful Companies in Malaysia

Variables	Pooled OLS
Constant	1.7567 ***
	(0.4413)
Inflation	-0.0046
	(0. 0063)
GDP	-0.1714 **
	(0.0767)
Liquidity	0.0149^*
	(0.0075)
Size of the firm	0.0302**
	(0.0122)
\mathbb{R}^2	0.1869
Adj. R ²	0.1146
F-statistic	2.59 (0.0496)
Mean VIF	1.12

Notes: Values in parentheses are the standard errors. ***, ** and * denote significant level at 1%, 5% and 10% respectively

It also found that *takaful* performance has a significant positive relationship with size of the firm at 5% level. Thus, the result specifies that firm size has a positive influence towards the performance of *takaful* companies. It indicates that the larger the *takaful* firm is, the better the performance of that *takaful* company. It is also parallel with the study by Chen and Wong (2004), Afza and Asghar (2012), Arshad et al., (2020), Hemrit (2020) as well as Eldaia, Hanefah and Marzuki (2022).

Next, the result for GDP. It displays that GDP has a negative relationship with *takaful* firm's performance but in a different direction. This result illustrates that increase in GDP will decrease the *takaful* firm's performance. However, the result is significant at 5% level. It shows that, in Malaysia, no matter whether the GDP is increasing or declining, people will still buy *takaful* as this is a good protection and investment for themselves and their family members. This is because they are aware that health and protection is the utmost important in their life. This finding is coherent with the study of done by Yakob and Isa (2016). They found that the demand of takaful products is increasing because the public are aware on the importance of buying takaful as well as its benefits.

Conclusion

This study is aiming to determine factors affecting *takaful* performance in Malaysia. In this paper, it only chooses five *takaful* operators including local and foreign *takaful* companies into consideration. The duration of study is from year 2011 up to 2020. By employing this panel data analysis, the findings confirms that liquidity as well as size of the firm has a positive significant relationship, while GDP has a negative significant relationship with *takaful* performance in Malaysia.

As a conclusion, the industries in Malaysia including *takaful* industry has an important role in contributing towards the Malaysian GDP. Consequently, it will contribute to the development of Malaysian's economy. This is parallel with The Global Challenge for Government Transparency: The Sustainable Development Goals (SDG) 2030, goal number 3 which is Good Health and Well-being. It's official wording is to ensure healthy lives and

promote well-being for all at all ages. It is very related to takaful as it's helping people to have good health and good life. This finding will help the *takaful* operators to identify the factors that will boost their performance up to the maximum level and thus, they will sustain in the industry and the economy.

References

- Abdullah, N. I. (2012). Analysis of Demand for Family Takaful and Life Insurance: A Comparative Study in Malaysia. Journal of Islamic Economics, Banking and Finance, 113(470), 1-20.
- 2. Adams, M and Buckle, M (2003). The Determinants of Corporate Financial Performance in The Bermuda Insurance Market, Applied Financial Economics, 13, 133 143.
- Afza, T., and Asghar, M. J. E. K. A. (2012). Financial Reforms and Efficiency in The Insurance Companies of Pakistan. African Journal of Business Management, 6(30), 8957 - 8963.
- 4. Al Huda Today (2021) https://www.alhudatoday.com/takaful-industry-growth/
- Almajali, A. Y., Alamro, S. A., and Al-Soub, Y. Z. (2012). Factors Affecting the Financial Performance of Jordanian Insurance Companies Listed at Amman Stock Exchange. Journal Of Management Research, 4(2), 266.
- 6. Ansari, Z. (2022). A review of 20 years of takaful literature using a systematic method. Asian Journal of Economics and Banking.
- Arshad, N. C and Suppia, N. M. I. (2019). Bank Specific Characteristics Profitability of Islamic and Conventional Banks in Malaysia. International Journal of Islamic Business. Vol. 4 Issue 1, pp.39-53.
- 8. Arshad, N. C., Afifah, N., Othman, A. H., & Abdullah, Y. (2020). Measuring Sustainability of Takaful Performance in Malaysia. International Journal of Islamic Economics and Finance Research, 3(1), 1–13.
- Arshad, N. C., Zakaria, R. H., Mohamad, A. A. S and Irijanto, T. T. (2014). Determinants of Displaced Commercial Risk in Islamic Banking Institutions: Malaysia Evidence. Jurnal Trikonomika. Vol. 13, No.2, pp.205-217.
- Bilal, S., Khan, J., Tufail, S., and Ul-Sehar, N. (2013). Determinants of Profitability Panel Data: Evidence from Insurance Sector of Pakistan. Management and Administrative Sciences Review, 2(1), 10 - 22.
- 11. Chen, R and Wong, KA (2004). The Determinants of Financial Health of Asian Insurance Companies, The Journal of Risk and Insurance, 71(3), 469 499.

- Dana, L. P., Salamzadeh, A., Hadizadeh, M., Heydari, G., & Shamsoddin, S. (2022). Urban Entrepreneurship and Sustainable Businesses in Smart Cities: Exploring the Role of Digital Technologies. Sustainable Technology and Entrepreneurship, 100016.
- Dana, L. P., Salamzadeh, A., Mortazavi, S., & Hadizadeh, M. (2022). Investigating the impact of international markets and new digital technologies on business innovation in emerging markets. Sustainability, 14(2), 983.
- 14. Dana, L. P., Salamzadeh, A., Mortazavi, S., Hadizadeh, M., & Zolfaghari, M. (2022). Strategic futures studies and entrepreneurial resiliency: a focus on digital technology trends and emerging markets. Tec Empresarial, 16(1), 87-100.
- Dana, L. P., Tajpour, M., Salamzadeh, A., Hosseini, E., & Zolfaghari, M. (2021). The impact of entrepreneurial education on technology-based enterprises development: The mediating role of motivation. Administrative Sciences, 11(4), 105.
- Dheer, R. J., & Salamzadeh, A. (2022). Pandemic threats: how SMEs can respond to the challenges from global crises. International Journal of Globalisation and Small Business, 13(1), 1-17.
- 17. Eldaia, M., Hanefah, M., & Marzuki, A. (2022). Moderating role of Shariah committee quality on relationship between board of directors effectiveness and the performance of Malaysian Takaful. Competitiveness Review: An International Business Journal.
- 18. Guendouz, A. A., and Ouassaf, S. (2018). Determinants of Saudi Takaful Insurance Companies Profitability. Academy of Accounting and Financial Studies Journal, 22(5), 1 24.
- 19. Hameed, N. S. S., Salamzadeh, Y., Rahim, N. F. A., & Salamzadeh, A. (2021). The impact of business process reengineering on organizational performance during the coronavirus pandemic: moderating role of strategic thinking. foresight.
- Hassan, R. and Marimuthu, M. (2018), "Bridging and bonding: having a Muslim diversity on corporate boards and firm performance", Journal of Islamic Accounting and Business Research, Vol. 9 No. 3, pp. 457-478.
- Hemrit, W. (2020). Determinants driving Takaful and cooperative insurance financial performance in Saudi Arabia. Journal of Accounting & Organizational Change.
- Ismail, M. (2013). Determinants of financial performance: The case of general Takaful and insurance companies in Malaysia. International Review of Business Research Papers, 9(6), 111-130.
- 23. Jensen, M., and Meckling, W. (1976). Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure. Harvard University Press, 3(4), 1 78.
- Malik, H. (2011). Determinants of Insurance Companies Profitability: An Analysis of Insurance Sector of Pakistan. Academic Research International 1(3), 314 - 320.

- 25. Najaf, R. and Najaf, K. (2021), "Political ties and corporate performance: why efficiency matters?" Journal of Business and Socio-Economic Development, Vol. 1 No. 2, pp. 182-196.
- Nomran, N.M., Haron, R. and Hassan, R. (2018), "Shari'ah supervisory board characteristics effects on Islamic banks' performance", International Journal of Bank Marketing, Vol. 36 No. 2, pp. 290-304.
- 27. Pereira, J., Braga, V., Correia, A., & Salamzadeh, A. (2021). Unboxing organisational complexity: how does it affect business performance during the COVID-19 pandemic?. Journal of Entrepreneurship and Public Policy.
- 28. Rahman, M. M., Rahaman, S. M., Salamzadeh, A., & Jantan, A. H. (2021). Positive consequences of covid-19 pandemic: reflections based on university students community in Bangladesh. International Review, (3-4), 83-92.
- Redzuan, H., Rahman, Z. A., and Aidid, S. S. S. H. (2009). Economic determinants of family Takaful consumption: Evidence from Malaysia. International Review of Business Research Papers, 5(5), 193 - 211.
- Saad, N. M. (2012). An Analysis on The Efficiency of Takaful And Insurance Companies in Malaysia: a Non-Parametric Approach. Review of Integrative Business and Economics Research, 1(1), 33.
- Saad, N. M., Idris, N. E. H., and Edzalina, N. (2011). Efficiency of Life Insurance Companies in Malaysia and Brunei: A Comparative Analysis. International Journal of Humanities and Social Science, 1(3), 111 - 122.
- 32. Salamzadeh, A., & Dana, L. P. (2021). The coronavirus (COVID-19) pandemic: challenges among Iranian startups. Journal of Small Business & Entrepreneurship, 33(5), 489-512.
- 33. Salamzadeh, A., & Dana, L. P. (2022). A systematic literature review of crisis management in and by small and medium-sized enterprises. Small and Medium Sized Enterprises and the COVID-19 Response, 38-61.
- 34. Salleh, M. C. M., Chowdhury, M. A. M., Cahyono, E. F., & Widiastuti, T. (2022). Measuring the effect of GST towards performances of Malaysian takaful operators. Journal of Islamic Accounting and Business Research.
- Shahid, I. (2018). Macroeconomic Essence of Takaful: Exploring the Significance and Impact of Takaful in Macroeconomic Context. Journal of Emerging Economies & Islamic Research, 6(1), 26 - 31.
- Sherif, M., & Shaairi, N. A. (2013). Determinants of demand on family Takaful in Malaysia.
 Journal of Islamic Accounting and Business Research.
- 37. Yakob, R., and Isa, Z. (2016). Stability of Relative Efficiency in DEA of Life Insurers and Takaful Operators. Global Journal of Pure and Applied Mathematics, 12(1), 857–874.