Macroeconomic Forces Affecting Islamic Performance Indices

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Abstract: This study aims to investigate the macroeconomic factors that impact the performance of Malaysia's Islamic stock market. This study looks at six independent variables that affect the performance of the Islamic stock market in Malaysia: the world oil price, inflation rate, Islamic interbank rate, money supply (M2), industrial activity index, inflation rate, Islamic interbank rate, exchange rate, and world oil price. The Department of Statistics Malaysia (DOSM), Bursa Malaysia, Bank Negara Malaysia, and Eikon Thomson Reuters were among the secondary data sources used in this study's quantitative data gathering methodology. The research was carried out over four years (2019–2023) using monthly data. A theoretical model was created to investigate the suggested relationship after it was analyzed using the E-views software. The success of the Islamic stock market was found to be significantly correlated with the inflation rate, money supply, Islamic interbank rate, and exchange rate. These determinants are exerting a direct influence on the Islamic stock market in Malaysia, particularly in its macroeconomic aspects. The present study aims to enhance comprehension regarding the possible effects of different elements on how well the Islamic stock market performs. Different results could come from more research into the various elements affecting the Islamic stock market's performance.

Keywords: *Islamic Stock Market Performance, Money Supply (M2), Industrial Activities Index, Inflation Rate, Islamic Interbank Rate, Exchange Rate, World Oil Price*

1. Introduction and Background

The Kuala Lumpur Composite Index (KLCI), which has been enhanced and renamed the FTSE Bursa Malaysia KLCI, is the criteria used by Bursa Malaysia to determine the FTSE in Malaysia. The index is designed to provide a comprehensive representation of the Malaysian stock market, with a focus on the utilization of free float and liquidity screens to ensure its relevance and appeal for investing purposes. Referring to an Islamic stock market, the main focus is on investing in the shares of companies that are Shariah-compliant. According to Karyatun, Waluyo, and Munir (2021), Shariah-compliant investments aim to generate additional revenue through Shariah principles, ensuring ongoing business continuity through carefully managed investments. This means that the companies in question satisfy certain requirements about their commercial activities, financial dealings, and governance. The restriction of activities such as gambling, interest, and other activities that are thought to be harmful or unethical is included in these criteria. In addition to this, the market places a strong emphasis on being transparent, accountable, and fair in all dealings. One effective strategy for investors to guard against inflation risk is to invest in the stock market, which also serves as a helpful gauge of the nation's economic performance (Khil & Lee, 2000).

The stock market is a significant economic indicator as it produces data that enables economists to forecast forthcoming changes in the economy (Damodaran, 2006). The stock market enables investors to create their investment portfolios effectively, hence promoting high-return investments (Arestis, Demetriades, & Luintel, 2001). Despite the growing prominence of the Islamic stock market globally, various previous research has examined the correlation between normal stock prices and macroeconomic conditions. Few studies have looked into how macroeconomic factors affect the performance of the Islamic stock market. From the past event, there has been a global movement in attention towards capital market-based instruments in Islamic finance, moving away from an emphasis on banks (Dewandaru, Rizvi, Bacha, & Masih, 2014). Malaysia views investors, both private and institutional, who have high standards for their Islamic investments, as being very interested in the Islamic capital market (Arouri, Lahiani & Bellalah, 2010).

A stock market's performance is determined by macroeconomic variables that have been utilized to estimate market fluctuations. In the basic discounted revenue valuation model, changes observed in the stock valuation are influenced. Stock prices are impacted by both fundamental and technical factors. Earnings play a crucial role in determining how investors assess companies, yet various other indicators are employed to forecast stock prices. Investor expectations, attitudes, and sentiments also exert an influence on stock prices (Sukesti, Ghozali & Nurcahyano, 2021). Considering that macroeconomic factors have the potential to impact stock market performance, it is reasonable to expect that there is a relationship between both of them.

This research employs descriptive statistics analysis, correlation coefficient analysis, and regression analysis to assess the influence of six variables: money supply, industrial output, inflation, global oil prices, Islamic interbank rates, and exchange rates. The information was gathered from multiple sources, including The Department of Statistics Malaysia (DOSM), Eikon Thomson Reuters, Bursa Malaysia, Bank Negara Malaysia, and Malaysia's Official open data portal. This research aims to determine the positive and substantial relationship between Islamic stock market performance and several elements which include the world oil price, inflation, industrial production, money supply, Islamic interbank rate, and exchange rate. These results have important ramifications for the Islamic stock market and oil prices.

2. Literature Review

FTSE Bursa Malaysia EMAS Shariah Index: The Islamic stock price in Malaysia is represented in this study by the FTSE Bursa Malaysia EMAS Shariah Index. The Islamic stock market is based on Shariah principles where the activities and components are regulated by Islamic law, which is based on reputable sources and authorized by the Fiqh Ulama (Hussin and Muhammad, 2011). The establishment of the Islamic stock market was based on five fundamental principles which are abstaining from usurious practices, sharing risks, avoiding excessive speculation, ensuring that the akad (contract) complies with the terms, and ensuring that all activities are by Shariah law (Bacha, 2021). Bursa Malaysia, formerly known as the Kuala Lumpur Stock Exchange, launched the Kuala Lumpur Syariah Index (KLSI) on April 17, 1999. This was the first step in facilitating participation in equity investments that adhere to the Shariah principles of Islam.

The Islamic stock price in Malaysia is represented in this study by the FTSE Bursa Malaysia EMAS Shariah Index. The creation of the FTSE Bursa Malaysia EMAS Shariah Index creates additional benchmarking opportunities for portfolios by investors to pursue Shariah investments and enables asset managers to develop novel products that cater to the investment community.

Exchange Rate (ER): According to the portfolio balance approach by Branson (1983) and Frankel (1992), market mechanisms influence exchange rates where fluctuations in stock prices may affect shifts in exchange rates. According to this approach, the stock price should negatively correlate with the exchange rate since falling stock prices lower domestic wealth, which in turn lowers interest rates and domestic money demand (Pan et al., 2007; Caporale et al., 2014).

The price of the stock will be significantly impacted by any changes in the exchange rate. It was suggested by Mukherjee and Naka (1995) and Ibrahim and Aziz (2003) that there is a positive association between these two factors. The relationship between exchange rates and stock prices based on the US and the Pacific Basin was investigated by Phylaktis and Ravazzolo (2005) using data from 1980. The correlation between foreign exchange rates and U.S. stocks is determined to be positive. Additionally, Sohail and Hussain (2009) investigated the relationship, both short- and long-term, between macroeconomic factors and Pakistan's Lahore stock exchange. The finding shows that real effective exchange rates significantly increased stock returns over time.

Meanwhile, Ajayi and Mougoue (1996) extensive investigation of the relationship between exchange rates and stock indices across eight advanced economies, spanning from 1985 to 1991 and using daily data analysis, reveals subtle insights into short- and long-run effects. They reveal a significant negative impact on stock prices in the short term associated with exchange rate increases, reflecting the inherent uncertainty in financial markets. The same finding was drawn by Majid and Yusof (2009) and Hussin et al. (2012), who also showed a negative correlation between stock prices and currency rates. They believe that production costs for domestic

businesses will increase when currency depreciates. Profit and stock values for a company will suffer as a result.
H1: The exchange rate is negatively related to Islamic stock market performance.

Industrial Activities Index: Industrial production is the process involved in the production of commodities and services across various sectors of the economy. These activities range from manufacturing and construction to mining, power generation, and utilities. Industrial operations are defined as the transformation of raw materials or components into finished products or intermediate goods using automated processes that often involve machines, equipment, and technology. In this regard, industrial activity is closely related to Islamic performance indices. Based on previous studies stated if something occurs in industrial activities, it will also change Islamic performance indices which explains the existence of a positive relationship (Engle, Ghysels, & Sohn, 2013; Ratanapakorn & Sharma, 2007; Wongbangpo & Sharma, 2002).

However, Majid & Yusof (2009) present a different perspective. Their research indicates that the fluctuations in Islamic stock values may not be well correlated with industrial activities. This finding indicates that outcomes can diverge from those observed in conventional financial markets within the Islamic market environment.
H2: Industrial production is negatively related to Islamic stock market performance.

Inflation Rate: According to the International Monetary Fund (IMF), inflation is defined as the pace at which the expenses of goods and services increase gradually, hence decreasing the purchasing power of money. The Consumer Price Index (CPI), which looks at the weighted average of prices for a basket of consumer goods and services like food, transportation, and medical care, is how inflation is calculated, according to the U.S. Bureau of Labor Statistics. Other than that, Tandelilin defines inflation as the tendency for overall product prices to rise. The amount of real income that investors receive from their investments is decreased by high inflation.

According to a recent study, inflation lowers the abnormal returns on equities. Consequently, an investor will receive a lower return in the event of rising inflation. An increase in inflation has a negative relationship with stock returns since it is unfavorable for investors even when it raises marginal wealth (Zhang, 2021). Suharyanto and Zaki (2021) claim that from 2016 to 2020, manufacturing companies' stock market performance was significantly impacted negatively by inflation.

However, alternative researchers proposed that there is a positive correlation between these two particulars. The link described as the protective value notion was specified by Khil and Lee (2000), Ibrahim and Aziz (2003), Shabri et al (2001), and Ibrahim and Aziz (2003). Equities act as a safeguard against inflation since they represent ownership rights to tangible goods. When positive movement occurs in the stock market, certain researchers (Hussin et al., 2012; Saryal, 2007; Ibrahim & Aziz, 2003; Shabri et al., 2001; Khil & Lee, 2000) have consistently brought up the idea of value protection. If investors want to diversify their asset rates in the event of inflationary pressures, stock markets may end up being their first option. This is because most businesses have a desire to maintain larger cash flows to maximize their profits, particularly those that have the authority to raise the pricing of their goods rather than the consumers of increasing input costs. According to Hussin et al. (2012), in looking at the Islamic stock market there is a positive relationship between the stock market and inflation. This observation gives validity to the theory that wealth might be secured from the risk of inflation by investing in stocks.
H3: Inflation is negatively related to the Islamic stock market performance.

Islamic Interbank Rate (IIR): The interbank rate refers to the interest rate used to borrow and lend transactions between conventional institutions, as well as the buying and selling transactions between Islamic institutions. The interbank overnight market is particularly significant, serving as a crucial component of a country's monetary and payment system and acting as an essential safety valve for banks. The fluctuation of the interbank rate has a direct impact on the profits and expenses incurred by banks. The findings are expected to serve as valuable resources for banks in Malaysia to utilize in their decision-making processes, enabling them to maintain competitiveness in the interbank money market (Yusuf & Zain, 2020).

Previous studies looking into the correlation between interest rates and stock prices have produced

contradictory results. In the contexts of Malaysia and Indonesia, there is a hypothesis that investors tend to transition their investments from equities to alternative assets when there is an increase in interest rates. This is because the rate signifies different investment alternatives. Long-term bond rates are considered to be a more accurate estimate for discount rates in asset pricing than short-term interest rates (Wongbangpo & Sharma, 2002).

When examining the Islamic stock markets in previous research conducted by Majid and Yusuf (2009) and Hussin (2012), several measures of interest rates were examined. However, Islamic investors should not be influenced by interest rates. The study utilized conventional interest rates as a means of illustrating variations in the domestic money market (Majid & Yusof, 2009). In addition, they included the Federal funds rate (FFR) international interest rate as a statistic to consider outside disturbances. According to their research, there appears to be a direct relationship between the returns of Islamic stocks and both local and foreign interest rates. According to them, investors are not discouraged from buying Shariah-compliant equities by rising yields on interest-bearing instruments because the value of Islamic stocks would increase as interest rates rise. The researchers determined that Islamic interbank rates are not a reliable factor for explaining fluctuations in Islamic stock prices.
H4: Islamic interbank rate is negatively related to the Islamic stock market performance.

Money Supply (M2): Money supply is the total amount of all the country's currency and other assets that can be turned into liquid assets to measure the country's economy. Money supply and Islamic stock price can either be related positively or negatively. This positive relationship between money supply and Islamic stock prices can be noticed through the encouragement of the country's economy (Dhakal et al 1993; Mukherjee & Naka, 1995). As one of the early studies (Friedman, 1976) stated the macroeconomic variable which is the money supply has a positive effect on the dependent variable which is Islamic stock market prices.

When there is a very high increase in the money supply, inflation is very likely to occur and when that happens, the aggregate demand and aggregate supply are also affected in the Islamic stock prices (AD-AS) framework (Keynes, 1973) Islamic stock values will eventually respond constructively to these monetary fluctuations and disruptions, which will have a positive effect on the actual amount of total outputs of the economy. Changes in the money supply have direct positive effects because they might affect investors' decisions to hold onto stocks for a longer period or sell them short. Thus, this circumstance may lead to more extensive economic activity.

According to (Dhakal et al., 1993), the money supply significantly boosts the price of Islamic stocks. Another study (Ibrahim & Aziz, 2003) also proposes the same finding that highlights that money supply needs to be carefully considered while maintaining the structure of monetary policies because money supply could also be employed to stabilize consumer prices. As for the conclusion, money supply indicates a positive influence on the performance of the Islamic stock market.
H5: Money supply is positively related to Islamic stock market performance.

World Oil Price (WOP): According to Bašta and Molnár (2018), crude oil is the most significant commodity in the world, with a weight above 50% in the general commodity index. According to Gisser and Goodwin (1986), an increase in oil prices will have an impact on cash flow because it is a key input used in the production of many commodities and services, such as capital and labor. Increasing oil prices will raise production costs in situations where there is no substitution between elements of production; increased production costs will affect cash flow and lower stock values.

However, a study done by Sadorsky (2003) on the relationship between stock market shocks and changes in U.S. oil prices showed that stock prices were negatively impacted by fluctuations in oil prices. Furthermore, Oberndorfer (2009) examined the relationship between changes in the Euro Zone's energy markets and the prices of energy stock markets in Europe. The study conducted between 2002 and 2007, utilizing both ARCH and GARCH analyses, demonstrated that rising oil prices had negative impacts on European stock returns. Siddiqui and Seth (2015) demonstrated that there is no sustained correlation between oil prices and the Indian stock market. Arouri, Lahiani, and Bellalah (2010) used linear and non-linear models to investigate the relationship between oil price shocks and stock returns among oil-exporting nations between 2005 and 2008. The findings showed that while changes in oil prices in Bahrain and Kuwait did not affect stock returns, they

did show a response to changes in oil prices in Qatar, Oman, Saudi Arabia, and the United Arab Emirates.
H6: World oil price is positively related to Islamic stock market performance.

3. Research Methodology

The objective of this study is to analyze the relationship between the performance of the Islamic stock market and macroeconomic variables using the regression coefficient. The sample used in this study consisted of data from the FTSE Bursa Malaysia EMAS Shariah Index spanning the years 2019 to 2023. The present analysis incorporated secondary data comprising independent variables like money supply, industrial activities index, inflation rate, Islamic interbank rate, exchange rate, and world oil price. This study used time series monthly data as its sample. Several research studies have demonstrated the correlation between the performance of the Islamic stock market performance these six independent variables. The study conducted by Mir Hosseini et al. (2022) revealed a statistically significant positive correlation between the money supply and the performance of the Islamic stock market. Similarly, the study conducted by Park and Ratti (2008) demonstrates a positive correlation between the world oil price and the performance of the Islamic stock market. Meanwhile, Ahmad et al. (2021) conclude that the performance of the Islamic stock market is adversely affected by the inflation rate. In addition, Hussin et al. (2012) present evidence of a negative relationship between exchange rates and stock prices. From the websites of the Department of Statistics Malaysia (DOSM), Bursa Malaysia, Bank Negara Malaysia (BNM), and Eikon Thomson Reuters, data on the FTSE Bursa Malaysia EMAS Shariah Index, money supply, industrial production, inflation rate, Islamic interbank rates, exchange rates, and World oil prices were obtained. Initially, a correlation analysis was conducted to ascertain the correlation between the dependent and independent variables and to investigate the presence of multicollinearity in the regression. The Durbin-Watson test is employed to identify autocorrelation issues. The equation for regression is as follows:
FTSE Bursa Malaysia EMAS Shariah Index = $\alpha + \beta_1$ M2+ β_2 IPI+ β_3 CPI + β_4 IIR+ β_5 ER+ β_6 WOP + ε

Where,
M2 = Money Supply
IPI = Industrial Activities Index
CPI = Inflation Rate
IIR = Islamic Interbank Rate
ER = Exchange Rate
WOP = World Oil Price
B1, 2, 3... = coefficient value
ε = error term

4. Results

This section presents results relating to the descriptive statistics of this study, preliminary results consisting of multicollinearity test, normality test, and serial correlation test before presenting and discussing multiple regression results. Table 1 displays descriptive statistics of this research.

Table 1: Descriptive Statistics

Variables	Max	Min	Std Dev	Mean
FTSE Bursa Malaysia EMAS Shariah Index	11705.93	13439.53	10008.03	887.0037
M2 (%)	0.398333	1.680000	-0.490000	0.499587
CPI (%)	1.580000	4.700000	-2.900000	1.969496
IIR (%)	2.394000	3.250000	1.710000	0.577520
ER (RM)	4.290333	4.760000	4.02000	0.200845
WOP (RM)	289.9410	513.6100	78.29000	96.88161
IPI (%)	0.355000	23.70000	-23.40000	5.611925

Note: FTSE Bursa Malaysia EMAS Shariah Index refers to Islamic stock market performance, M2 refers to the money supply, CPI refers to the inflation rate, IIR refers to the Islamic interbank rate, ER refers to the exchange rate, WOP refers to the world oil price, and IPI refers to industrial production.

Descriptive Statistics: Based on Table 1, the FTSE Bursa Malaysia EMAS Shariah Index has a mean value of 11705.93, indicating the average value of this stock market index from 2019 to 2023. The FTSE Bursa Malaysia EMAS Shariah Index, being the dependent variable, is subject to the influence of several independent factors like currency exchange rates, industrial production, inflation rates, interbank rates, money supply, and oil prices. Gaining an understanding of its significance assists in assessing the overall performance of the FTSE Bursa Malaysia EMAS Shariah Index over the designated research period. The FTSE Bursa Malaysia EMAS Shariah Index achieved its peak level of 13439.53 in 2020, being the highest value observed throughout the period in question. As the dependent variable, this peak reflects the most favorable market conditions influenced by the independent variables. According to The Malaysian Reserve, in July 2022, Bursa Malaysia CEO Datuk Muhammad Umar Swift said, "In Malaysia, Islamic banking assets reached US$264.5 billion, making up some 34.2 percent market share from the total banking system assets in 2020," he said during the Invest Shariah Conference 2022 in Bursa Malaysia. He also highlighted that while the Islamic capital market has doubled in size over the decade, by the end of 2020, its Shariah-compliant assets were worth RM2.3 trillion, up from RM1.1 trillion in 2010. On another note, CGS-CIMB Malaysia Research head Ivg Ng pointed out that the FBM Hijrah Shariah Index has outperformed the FTSE Bursa Malaysia KLCI (FBM KLCI) in seven out of the past 11 years (2011-2021). Examining this highest value assists in determining the circumstances in which the FTSE Bursa Malaysia EMAS Shariah Index achieved its optimal performance.

The FTSE Bursa Malaysia EMAS Shariah Index had a minimum value of 10008.03, representing the lowest point attained by the stock market index during the observation period. The trough in question represents the least favorable market conditions that are influenced by the independent variables, serving as the dependent variable. Examining this minimal value aids in determining the circumstances in which the FTSE Bursa Malaysia EMAS Shariah Index performed most poorly, offering a valuable understanding of the elements that contribute to market downturns. The FTSE Bursa Malaysia EMAS Shariah Index has a standard deviation of 887.0037, which reflects the degree of volatility in the stock market index throughout the observed time.

Table 2: Correlation Coefficient Matrix Table

Variable	FTSE	ER	IPI	CPI	IIR	M2	WOP
FTSE	1	.416	0.175	-0.415	-0.598	-0.067	0.374
ER		1	0.019	0.311	0.104	-0.103	0.646
IPI			1	-0.044	-0.123	-0.091	0.070
CPI				1	0.029	0.104	0.729
IIR					1	0.064	0.022
M2						1	0.048
WOP							1

Note: FTSE Bursa Malaysia EMAS Shariah Index refers to Islamic stock market performance, M2 refers to the money supply, CPI refers to the inflation rate, IIR refers to the Islamic interbank rate, ER refers to the exchange rate, WOP refers to the world oil price, and IPI refers to industrial production.

Based on Table 2, this research identified that all the independent variables, which include money supply, industrial production, inflation rate, Islamic interbank rate, exchange rate, and world oil price, exhibited a correlation below the threshold of 0.9. This initial finding is important because it shows that none of the variables are excessively correlated with each other, thus reducing the risk of multicollinearity. However, to ensure the robustness and reliability of these findings, it is essential to perform an additional diagnostic check. This check aims to verify not only whether the independent variables are correlated or not correlated with each other but also to confirm that the correlation values of these variables remain consistently below the threshold of 0.9. This research conducted a Variance Inflation Factor (VIF) test. The VIF test is a widely recognized method for detecting the presence and severity of multicollinearity among independent variables.

Table 3: Variance Inflation Factor test (VIF test)

Variable	Centered VIF
ER	2.006578
IPI	1.057726
CPI	2.505683
IIR	1.054052
M2	1.047076
WOP	3.920698

Note: FTSE Bursa Malaysia EMAS Shariah Index refers to Islamic stock market performance, M2 refers to the money supply, CPI refers to the inflation rate, IIR refers to the Islamic interbank rate, ER refers to the exchange rate, WOP refers to the world oil price, and IPI refers to industrial production.

Based on Table 3, the VIF scores for each of these variables were found to be below the critical threshold of 5 indicating that multicollinearity is not a concern. It shows that all six variables have VIF scores below this threshold and provides strong evidence that multicollinearity is not an issue in this analysis. Therefore, the absence of multicollinearity, as indicated by the VIF test results, supports the validity of including all six independent variables in the time series regression model.

Table 4: Normality Test on residuals

Jarque-Bera	17.37316
Probability	0.000169

Note: FTSE Bursa Malaysia EMAS Shariah Index refers to Islamic stock market performance, M2 refers to the money supply, CPI refers to the inflation rate, IIR refers to the Islamic interbank rate, ER refers to the exchange rate, WOP refers to the world oil price, and IPI refers to industrial production.

A normality test is a statistical procedure used to determine by comparing collected data to the population. The reason for using a normality test is that the data contained in the research has a normal distribution. Based on Table 4, the Jarque Bera is 17.37316 which is the total calculation that includes skewness and kurtosis. Meanwhile, the p-value is 0.000169 which is less than 0.05. Since the p-value is less than 0.05, we have enough evidence to reject H0 because the p-value is significant. However, we can conclude that residuals are not normally distributed for the sample of the time series model. Data may include outliers or extreme values that can heavily influence the distribution shape, resulting in a non-normal distribution.

Table 5: Durbin Watson and Serial Correlation LM Test

Durbin-Watson stat	1.91167
Prob. F	0.0000
Prob. Chi-Square	0.0000

Note: FTSE Bursa Malaysia EMAS Shariah Index refers to Islamic stock market performance, M2 refers to the money supply, CPI refers to the inflation rate, IIR refers to the Islamic interbank rate, ER refers to the exchange rate, WOP refers to the world oil price, and IPI refers to industrial production.

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

Based on the result in Table 5, the Durbin Watson stat is 1.911867 which can be described as having error terms that suffer from 1st order serial correlation. This is because the range of Durbin-Watson stat underlying is in the range of 1.5 to 2.5. It means there is an existence of auto-correlation. Next, based on the Breusch-Godfrey Serial Correlation LM Test, the probability of the Chi-Square stat is 0.000. Since the Chi-Square stat is 0.000 which indicates less than 0.05, there is a presence of auto-correlation and a need to run the Newey-West Test.

Table 6: Multiple Regression Analysis Results (Newey-West Test Checked)

Variable	Hypothesis (+/-)	Result (significant/insignificant)	Probability
Money Supply	Positive Relationship	Significant	0.0162
Industrial Production	Negative Relationship	Insignificant	0.4567
Inflation	Negative Relationship	Significant	0.0620
Islamic Interbank Rate	Negative Relationship	Significant	0.0000
Exchange Rate	Negative Relationship	Significant	0.0741
World Oil Price	Negative Relationship	Insignificant	0.8399
R-squared		0.609579	
Adjusted R-Squared		0.565380	
F-Test		13.79180	
Prob F-stat		0.000000	
Durbin-Watson Test		0.786806	

The F-statistic evaluates if the regression model is significant overall. A high F-statistic, which in Table 6 was 13.79180 here, indicates that the model is statistically significant. This suggests that at least one independent variable has a notable impact on the dependent variable. The p-value related to the F-statistic indicates the probability of observing such extreme F-statistic values if all coefficients were zero. With a p-value of 0.0, the F-statistic is considered statistically significant at any common significance level, providing strong evidence against the null hypothesis and supporting the idea that at least one independent variable significantly affects the dependent variable.

Adjusted R-squared measures the percentage of variance in the dependent variable that can be explained by the currency rate, industrial production, inflation rate, interbank rate, money supply, and oil price in a regression model. A value of 0.565380 for the adjusted R-squared indicates that around 56.54 percent of the variance in the dependent variable can be explained by the independent variables in the model, taking into consideration the number of predictions. Another 43.46 percent was not explained on the regression model, showing that other factors can affect the dependent variable of this research which is Islamic stock market performance indices in Malaysia.

Discussion: Based on Table 6, the regression result probability for money supply is 0.0162. Since 0.0162 < 0.10 which is lower than the threshold of 0.10, then the result is significant. Therefore, we accept the hypothesis that there is a positive and significant relationship between money supply and Islamic stock performances. Based on the results of past studies, this positive relationship between money supply and Islamic stock prices can be noticed through the encouragement of the country's economy (Dhakal et al., 1993; Mukherjee & Naka 1995). The belief is that when there is a change or growth rate of the money supply whether it increases or decreases by an abnormal movement which indicates highly volatile, it warns investors' asset portfolios against becoming out of balance (Rozeff, 1974). When there is a very high increase in the money supply, inflation is very likely to occur and when that happens, the aggregate demand and aggregate supply are also affected in the Islamic stock prices (AD-AS) framework.

Inflation shows a negative significant relationship since the regression result probability is 0.0620 which is lower than the threshold of 0.10. Therefore, we accept the hypothesis that there is a negative significant relationship between inflation and Islamic stock performance. In past studies, inflation lowers the abnormal return on equities (Kumar & Mohanty, 2022). An increase in inflation has a negative relationship with stock returns since it is unfavorable for investors even when it raises marginal wealth (Zhang, 2021). This is supported by the findings of Fama (1981) and Chen et al. (1986) where inflation will raise manufacturing costs and simultaneously reduce the anticipated future cash flow and [profit of the organization.

Meanwhile, the regression result probability for the Islamic interbank rate is 0.00. Since 0.000 < 0.10 which is lower than the threshold of 0.10, then the result is significant. Therefore, we accept the hypothesis that there is a positive significant relationship between the Islamic interbank rate and Islamic stock performance. In past studies we can see Islamic interbank in Malaysia, Bank Negara Malaysia utilizes the interbank money market to implement monetary policy among the country's banks. The market serves three main purposes which are

maintaining liquid assets, fulfilling statutory reserve requirements, and enforcing monetary policies. The efficiency and competitiveness of the market's instruments, coupled with attractive profit rates, have led to increased transaction volumes in Malaysia's interbank money market (Yusuf & Zain, 2020). Therefore, these findings show that the relationship between a dependent variable and the independent variable is the performance of the Islamic stock market in Malaysia and the Islamic interbank rate. This relationship highlights the importance of FTSE in shaping financial market dynamics and underscores the relevance of ongoing research and policy initiatives in this domain.

Lastly, the exchange rate shows a negative significant relationship since the regression result probability is 0.0741 which is lower than the threshold of 0.10. Therefore, we accept the hypothesis that there is a negative significant relationship between exchange rate and Islamic stock performance. A study done by Joseph (2003) shows that an appreciation in exchange rates will decrease exporters' sales and earnings and raise the stock price. Exporters will have an advantage against exporters from other nations, which will boost sales and raise stock prices (Yau and Nieh, 2006). Moreover, a study done by Ajayi and Mougoue (1996) on the relationship between exchange rates and stock indices across eight advanced economies found a significant negative impact on stock prices in the short term associated with exchange rate increases, reflecting the inherent uncertainty in financial markets. The same findings were drawn by Majid and Yusof (2009) and Hussin et al. (2012) where production costs for domestic businesses will increase when currency depreciates. This will make a company suffer on their profit and stock values.

5. Managerial Implications and Recommendations

This research has significant implications for certain parties including Bank Negara Malaysia. The significance of money supply towards Bank Negara in regulating their monetary policy is based on money supply management. The relationship between money supply and Islamic stock prices suggests that an excessive increase in money supply could lead to a potential of rise in inflation in the country. If inflation happens, it could be harmful to the stock market performance, in this research it could be harmful to Islamic stock market performance. By regulating and monitoring the excessive increase of money supply, Bank Negara Malaysia could predict the future performance of the Islamic stock market. This highlights the important role of Bank Negara Malaysia in managing money supply growth to maintain economic stability in Malaysia.

The next party that has a significant implication of money supply in this research is investors. The implication of this research towards investors is on the portfolio management conducted by the investors investing in the Islamic stock market performance. It can be implied by looking at the asset allocation for the investment. The investors might want to adjust or plan their portfolios based on the changes in the money supply growth whether the money supply increases or decreases. The increase in money supply and lower interest rates might prompt a shift from fixed-income securities to equities due to the higher expectations of investors for higher returns.

The other party that also implies the significance of money supply and Islamic stock market performance is Bursa Malaysia. Investing in Islamic or conventional markets is popular these days, with Bursa Malaysia being one of the most reliable platforms. A wide range of investment, capital raising, and exchange-related services are provided by Bursa Malaysia, which also manages and maintains a multi-asset exchange. For the implication of the research, we can look at liquidity and investment. An increase or growth in money supply often leads to more liquidity in the financial system. In most cases, the liquidity in the financial system will provide investors with more funds to invest in the stock market, in this research specifically investing in the Islamic stock market. This could drive up or boost stock prices and also improve the overall market performance.

This research aims to determine the macroeconomic affecting Islamic stock market performance in Malaysia, but it also has limitations. The issue in terms of limitation is due to the data availability and quality itself. Because the Islamic stock market is a new thing compared to conventional stock markets that have been available on the market for a long time, it is quite difficult for researchers to find historical data about the Islamic stock market. About that, most of the data collection that is collected is inconsistent due to different data collection methods which will affect different results and reporting standards. This research also experiences a situation where data sources do not provide information for certain years. This shows that

researchers cannot rely entirely on a single data source and to overcome this problem, researchers need to collect relevant data from various databases and platforms. In this research, macroeconomic forces have been identified as dependent variables and some data for this variable has been collected through Eikon. If the other data is not available or incomplete in Eikon, the researchers will collect data from the relevant website. For example, data for other independent variables such as industrial production has been collected through the International Financial Statistics website.

To address the challenges related to data availability and quality, future researchers can significantly improve data collection methodologies. They should consider diversifying their data sources and platforms to gather comprehensive and reliable data. This entails not only utilizing financial databases such as Eikon and the International Financial Statistics website but also incorporating other reputable sources like Bloomberg, Reuters, and national financial organizations. By expanding the range of data sources, researchers can ensure a more exhaustive and nuanced data set. Additionally, employing another independent variable for different observation periods can reveal patterns in the evolving Islamic capital market in Malaysia. This approach allows for the identification of trends and changes over time, providing deeper insights into market dynamics. Moreover, implementing data standardization techniques is crucial for maintaining consistency in data gathering and analysis. By adhering to established methods for data collection and analysis, researchers can ensure uniformity, which facilitates significant comparisons across different data sets. Establishing a consistent structure for data collection mitigates inconsistencies that often arise from the use of varied data collection methods, thereby enhancing the reliability and validity of research findings.

In addition, another limitation of this research is the gap in understanding the latest developments and trends related to macroeconomic forces affecting Islamic stock market performance is a very large gap due to the lack of recent articles on the issue. Due to this, this research is likely to overlook the existing factors in determining the changes related to Islamic stock market performance and this will lead to errors in drawing Islamic stock market performance trends along with incomplete conclusions. This research literature review has less than 10 articles that discuss Islamic stock performances from 2019, and the above shows that there is a lack of article sources for recent studies in this specific research. Thus, this limitation makes the researchers have to consider using the sources of articles from 2014 and above as references to fulfill the literature review requirement and help to solve this limitation problem. In this research also, there are constraints regarding the explanation of the independent variable of this study and because of that, this research uses articles from other countries such as Indonesia as a reference to this study in terms of alternative data sources and expert opinions that may be used in this study.

Furthermore, researchers can expand the historical data range to provide a more comprehensive analysis of the Islamic stock market. The limitation of the currently available historical data can be addressed by suggesting the use of longitudinal studies. Conducting longitudinal research will allow the monitoring of the performance of the Islamic stock market over an extended period, offering valuable insights into its trends and dynamics. To accomplish this, researchers should initiate data gathering from the inception of the Islamic stock market and ensure that this data is consistently updated over time. In addition, employing data reconstruction techniques can be highly beneficial in predicting missing values and creating a more continuous and robust data series, particularly in cases where historical data is sparse. This approach will enhance the accuracy and reliability of the research findings. Continued study in this area is especially critical in regions like Malaysia, where the Islamic stock market plays a significant role. By focusing on the Malaysian context, researchers can generate more region-specific insights that can inform better investment strategies and policy decisions.

Conclusion: This research focuses on several significant economic indicators that influence the performance of Malaysia's Islamic stock market. It strives to identify the fundamental macroeconomic variables and their effects on Islamic stock performance. This research highlights several key macroeconomic factors, including money supply, interest rates, inflation, exchange rates, Islamic interbank rate, and oil prices for 60 months of data from January 2019 to December 202.

This research uses econometric models to examine data from various macroeconomic indicators and their relationship with the Islamic stock market performance. To evaluate the impact of these factors, statistical techniques such as multiple regression analysis, correlation coefficient analysis, and descriptive statistics

analysis are employed. The findings reveal that money supply, inflation, Islamic interbank rate, and exchange rate have significant influences on Islamic stock market performance. Money supply is the only macroeconomic variable that has a positive relationship with the Islamic stock market performance. As a result, the performance of the Islamic stock market is negatively correlated with interest rates, inflation, currency rates, Islamic interbank rates, and oil prices.

In summary, a number of macroeconomic factors have a major impact on the performance of Malaysia's Islamic stock market. Key factors include the money supply, interest rates, inflation, Islamic interbank rates, exchange rates, and oil prices. Policymakers and investors should take into consideration these factors when making decisions related to the Islamic stock market. The research provides valuable insights for stakeholders in the Islamic finance industry, highlighting the interconnectedness of macroeconomic variables and market performance. Future research could explore other external factors and compare the impacts on conventional versus Islamic stock markets.

References

Ahmad, A., Sohail, A., Riaz, A., Hussain, F., & Ihsan, I. (2021). Examination of stock market performance in emerging economies during difficult times: Role of terrorist events. *International Journal of Disaster Recovery and Business Continuity*, *12*(1), 1063-1075.

Ajayi, R. A., & Mougouė, M. (1996). On the dynamic relation between stock prices and exchange rates. *Journal of Financial Research*, *19*(2), 193-207.

Arestis, P., Demetriades, P. O., & Luintel, K. B. (2001). Financial development and economic growth: the role of stock markets. *Journal of money, credit and banking*, 16-41.

Arouri, M. E. H., Lahiani, A., & Bellalah, M. (2010). Oil price shocks and stock market returns in oil-exporting countries: The case of GCC countries. *International Journal of Economics and Finance*, *2*(5), 132-139.

Bacha, O. I. (2021). The pandemic and the economic conundrum: how Islamic finance can help. *Journal of Business and Economic Analysis*, *4*(01), 83-93.

Bašta, M., & Molnár, P. (2018). Oil market volatility and stock market volatility. *Finance Research Letters*, *26*, 204-214.

Branson, W. H. (1983). A model of exchange-rate determination with policy reaction: evidence from monthly data.

Caporale, G. M., Hunter, J., & Ali, F. M. (2014). On the linkages between stock prices and exchange rates: Evidence from the banking crisis of 2007–2010. *International Review of Financial Analysis*, *33*, 87-103.

Damodaran, A. (2006). The cost of distress: Survival, truncation risk and valuation. *Truncation Risk and Valuation (January 2006)*.

Dewandaru, G., Rizvi, S. A. R., Bacha, O. I., & Masih, M. (2014). What factors explain stock market retardation in Islamic Countries. *Emerging Markets Review*, *19*, 106-127.

Dhakal, D., Kandil, M., & Sharma, S. C. (1993). Causality between the money supply and share prices: a VAR investigation. Quarterly Journal of Business and Economics, 32(3), 52-74.

Engle, R. F., Ghysels, E., & Sohn, B. (2013). Stock market volatility and macroeconomic fundamentals. *Review of Economics and Statistics*, *95*(3), 776-797.

Fama, E. F. (1981). Stock returns, real activity, inflation, and money. The American Economic Review, 71(4), 545-565.

Frankel, J. A. (1992). Monetary and portfolio-balance models of exchange rate determination. In *International economic policies and their theoretical foundations* (pp. 793-832). Academic Press.

Friedman, B. M. (1976). Targets, instruments, and indicators of monetary policy. *journal of Monetary Economics*, *1*(4), 443-473.

Gisser, M., & Goodwin, T. H. (1986). Crude oil and the macroeconomy: Tests of some popular notions: Note. *Journal of Money, Credit and Banking*, *18*(1), 95-103.

Governance (p. 135). Cambridge Scholars Publishing.

Hussin, M. Y. M., & Muhammad, F. (2011). Analisis perkembangan bursa Malaysia dan pasaran saham Islam di Malaysia. *Jurnal Teknologi*, 65-80.

Hussin, M. Y. M., Muhammad, F., Abu, M. F., & Awang, S. A. (2012). Macroeconomic variables and Malaysian Islamic stock market: a time series analysis. *Journal of Business Studies Quarterly*, *3*(4), 1.

Ibrahim, M. H., & Aziz, H. (2003). Macroeconomic variables and the Malaysian equity market. Journal of

Economic Studies, 30(1), 6–27. https://doi.org/10.1108/01443580310455241

Joseph, N. L. (2003). Predicting returns in US financial sector indices. *International journal of forecasting*, *19*(3), 351-367.

Karyatun, S., Waluyo, T., Muis, M., & Munir, A. R. (2021). The Islamic Stock Market and Macroeconomic Relationship. Psychology and Education, 58(1), 265-275.

Keynes, J.M. (1973). The General Theory of Employment, Interest and Money. London: Macmillan.

Khil, J., & Lee, B. S. (2000). Are common stocks a good hedge against inflation? Evidence from the Pacific-rim countries. *Pacific-Basin Finance Journal*, *8*(3-4), 457-482.

Kumar, M., & Mohanty, P. C. (2022). Decoding the three pandemic budgets education, health, and nutrition.

Majid, M. S. A., & Yusof, R. M. (2009). The long-run relationship between Islamic stock returns and macroeconomic variables. Humanomics, 25(2), 127-141. https://doi.org/10.1108/08288660910964193

Mir Hosseini, S. W., Bahraminia, E., & Najafizada, H. (2022). Investigating Impact of macroeconomic variables on the government budget deficit in Iran's economy: an approach with VAR-VECM. *International Journal of Resistive Economics*, *10*(2), 13-23.

Mukherjee, T.K., & Naka, A. (1995). Dynamic relations between macroeconomic variables and the Japanese stock market: An application of a vector error correction model. Journal of Financial Research, 18(2), 223-37, https://doi.org/10.1111/j.1475-6803.1995.tb00563.x

Oberndorfer, U. (2009). Energy prices, volatility, and the stock market: Evidence from the Eurozone. *Energy Policy*, *37*(12), 5787-5795.

Pan, M. S., Fok, R. C. W., & Liu, Y. A. (2007). Dynamic linkages between exchange rates and stock prices: Evidence from East Asian markets. *International Review of Economics & Finance*, *16*(4), 503-520.

Park, J., & Ratti, R. A. (2008). Oil price shocks and stock markets in the US and 13 European countries. *Energy economics*, *30*(5), 2587-2608.

Phylaktis, K., & Ravazzolo, F. (2005). Stock prices and exchange rate dynamics. *Journal of International Money and Finance*, *24*(7), 1031-1053.

Ratanapakorn, O., & Sharma, S.C. (2007). Dynamic analysis between the U.S. stock returns and the macroeconomic variables. Applied Financial Economics, 17(5), 369-377 https://www.tandfonline.com/doi/abs/10.1080/09603100600638944

Rozeff, M. S. (1974). Money and stock prices: Market efficiency and the lag in the effect of monetary policy. *Journal of Financial Economics*, *1*(3), 245-302.

Sadorsky, P. (2003). The macroeconomic determinants of technology stock price volatility. *Review of Financial Economics*, *12*(2), 191-205.

Saryal, F. S. (2007). Does inflation have an impact on conditional stock market volatility? Evidence from Turkey and Canada. *International research journal of finance and economics*, *11*(2), 123-133.

Shabri, M., Meera, A. K., Aziz, P. P. A., & PP, M. Ibrahim.(2001). The Relationship Between Stock Returns and Inflation: Evidence from Malaysia and Indonesia. In *Proceedings of The Malaysia Finance Association Third Annual Symposium* (pp. 517-547).

Siddiqui, S., & Seth, N. (2015). Do Global Oil Price Changes Affect Indian Stock Market Returns?. *Available at SSRN 2695450*.

Sohail, N., & Hussain, Z. (2009). Long-run and short-run relationship between macroeconomic variables and stock prices in Pakistan: The case of Lahore Stock Exchange. *Pakistan Economic and Social Review*, 183-198.

Suharyanto, S., & Zaki, A. (2021). The effect of inflation, interest rate, and exchange rate on stock returns in food & beverages companies. *Jurnal Aplikasi Management*, *19*(3), 616-622.

Sukesti, F., Ghozali, I., Fuad, Kharis Almasyhari, A., & Nurcahyono, N. (2021). Factors affecting the stock price: The role of firm performance. The Journal of Asian Finance, Economics and Business, 8(2), 165-173.

Wongbangpo, P., & Sharma, S. C. (2002). Stock market and macroeconomic fundamental dynamic interactions: ASEAN-5 countries. *Journal of Asian Economics*, *13*(1), 27-51.

Yau, H. Y., & Nieh, C. C. (2006). Interrelationships among stock prices of Taiwan and Japan and NTD/Yen exchange rate. *Journal of Asian Economics*, *17*(3), 535-552.

Yusuf, M. M., & Zain, M. S. M. (2020). Macroeconomic Determinants of Interbank Money Market Rate in Malaysia. *Asian Journal of Accounting and Finance*, *2*(2), 42-51.

Zhang, M. Z. (2021). Stock returns and inflation redux: an explanation from monetary policy in advanced and emerging markets. International Monetary Fund.