

MACROECONOMIC FACTORS AND STOCK MARKET PERFORMANCE IN MALAYSIA DURING THE PANDEMIC

HAU JOH EN and SALAAR FAROOQ

Abstract

The stock market performance and its influence on macroeconomic stability have attracted substantial attention from academia. The pandemic had a big effect on the world economy. There needs to be more research on how the stock market did during pandemic because the results could be different. The primary objective of this study is to investigate the nature of the relationship, if any, that correlation between macroeconomic indicators and stock market performance during pandemic is seen. For this study secondary data were collected every month from 2020 to 2021. The KLCI index, which is used to gauge the overall health of the stock market, will serve as the dependent variable for this investigation. The efficiency of the economy is the independent variable, and Inflation, exchange rates, interest rates, as well as the lot of cash are used to measure volatility that is in circulation. To test the research hypotheses, the multiple linear regression frameworks is also used. Aside from that, the multiple linear regression model built for this research can predict 65.1% of the change in the KLCI index based on how certain macroeconomic factors interact. In the end, USD/MYR exchange rate made the stock market in Malaysia do very poorly during the pandemic. Also, the sum of money of money in circulation, the rate of inflation, and the interest rate have nothing to with how the stock market does in Malaysia during pandemic.

Keywords: Stock market performance, Macroeconomic factors, KLCI index

1. INTRODUCTION

1.1 Background Ofthestudy

The stock market's overall performance is an assessment of the market as a whole (Onyinyechi & Ekwe, 2017). Omodero and Dandago (2018) said that the stock market efficiency is a measure of how well a country's market works. People think that the state of the economy can be seen in how the stock market does. A falling stock price index is an indicator of financial anxiety, while an increasing stock price index could mean growth in the economy (Alugbuo & Chika, 2020). It is important to study the stock market performance for predicting a country's economic health (Islam, 2021). The stock market performance and its effect on macroeconomic stability have attracted substantial attention among academic experts and policymakers because it is a critical indicator of a country's economic well-being (Ogunsakin & Awe, 2020). Islam (2021) agreed with this point of view. He stated that In terms of influencing economic growth, the stock market does have a big role to play is driven by the stock market.

According to Ps & Jain (2020), numerous scholars have conducted studies on stock market performance, and academics have associated the performance with a variety of internal and external factors. Simbolon and Purwanto (2018) also tried to show that analyzing stock market success has become one of the most significant parts of financial activity because the stock market is uncertain and changes quickly. This is due to the fact that it enables investors to create good investment choices by mitigating and avoiding unexpected risks. Many studies (Badullahewage, 2018; Bamurange, Githui, & Omurwa, 2019; Hasan & Sharif, 2019) have

examined the influence of a country's economic conditions on stock market performance utilising selected macroeconomic indicators. But Awadzie and Garr (2020) said that previous studies on stock market success haven't been able to come up with a consistent answer about how macroeconomics variables affect stock market success. They said that this rejection was because earlier studies on the success of the stock market had been done with different data sets. Additionally, the global economy was in upheaval during the COVID-19 pandemic, accompanied by financial market uncertainty, which generated a high risk, so research on stock market performance is still required throughout the pandemic period to assist the investors in making better investment decisions and mitigating risks (Nugroho & Robiyanto, 2021).

1.2 Problem Statement

Many investors and policymakers, according to Ya'acob, Akbar, Ghul, et al. (2021), believe that a large collapse in the stock market will result in an economic recession. Because It is possible for the economics of individual investors to be significantly affected by changes in the stock market as well as the economy as a whole, Islam (2021) noted that a fall in the stock market could affect the economy in a wide variety of ways. According to Khalid and Khan (2017), since there is no evident link between the stock market's success and the elements that drive the macroeconomy, academics should explore the stock market's performance. This was echoed by Ya'acob et al. (2021) that the factors of stock market performance remain a matter of debate in academia because empirical research to date does not reach a consistent conclusion on the factors influencing the stock market performance.

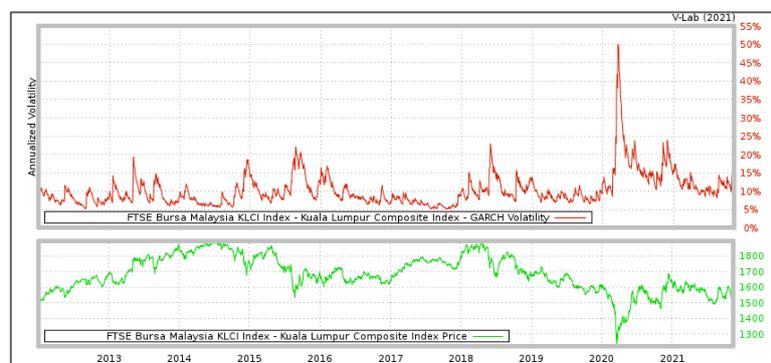


Figure 1.1: Kuala Lumpur Composite Index GARCH Volatility Analysis

Source: V-Lab (2021)

Ngu, Ziaei, & Szulczyk (2021) stated that Malaysian stock performance fluctuated within a narrow range before the pandemic and fluctuated greater during the pandemic, as Figure 1.1 shows that during the first quarter of 2020, KLCI experienced the greatest volatility and the lowest price index in 10 years. According to finance theory, stock market volatility is highly associated with various macroeconomic variables (Khalid & Khan, 2017). However, despite the fact that numerous studies (Khong, Tang, & Ling, 2019; Utomo, Wulandari, Narmaditya, et al., 2019; Ya'acob et al., 2021) is an attempt to discover the link between stock market

performance and macroeconomic factors, but so far they have not been able to come up with a definitive finding.

For example, Khalid and Khan (2017) came to the conclusion that inflation had a significant and favorable effect on the stock price index in their research. Regardless of this, Awadzie and Garr (2020) discovered that inflation has an influence that is rather considerable on the performance of the stock market. Additionally, Yusof, Mahmud, Embong, and others (2020) discovered that there is no substantial association between money supply and KLCI performance. Nevertheless, Ya'acob et al. (2021) discovered a large negative association exists between the amount of cash in circulation that the stock market has performed well. In addition, Yusof et al. (2020) stated that although if The link between macroeconomic and market performance has indeed been thoroughly examined in industrialised countries, but in emerging economies like Malaysia, more research is still needed in this area. Additionally, the pandemic outbreak significantly impacted the global economy, so more study on stock market performance is required during the pandemic because the results may vary, and the findings are helpful for policymakers and investors to make better decisions (Nugroho & Robiyanto, 2021).

1.3 Research Objectives

RO1: To find out if the stock market's performance in Malaysia during a pandemic is heavily influenced by macroeconomic considerations.

RO1a: To find out if the rate of inflation, which is one of the macroeconomics variables, pandemic has a significant influence on the effectiveness of the Malaysian stock market.

RO1b: To find out if the exchange rate, that is a macroeconomic factor, the stock market's performance in Malaysia was significantly impacted by the pandemic.

RO1c: To find out if the interest rate, that is a macroeconomic factor, pandemic has a significant impact on the performance of such Malaysian stock market.

RO1d: To find out if Malaysia's stock market performance during the pandemic was affected by the amount of money in circulation, which is a macroeconomic factor.

2. LITERATURE REVIEW

2.1 Stock Market Performance

Percentage change in value of stocks over a given time period is referred to as "stock market performance" (Dzomonda & Ngwakwe, 2020). The action of the stock market index is used to judge how well the stock market is doing. When the index goes up, it is seen as good performance because investors' wealth goes up. When the index goes down, it is seen as poor performance because investors' wealth goes down (Ullah, Islam, Alam, et al., 2017). The stock market performance can be measured by market capitalisation (Innocent, Shukla, Mulyungi, et al., 2018). This is affirmed by Iyoboyi (2021) that stock market performance can be represented by a stock market index, aggregate market capitalisation, trading value, and trading volume. In

addition, many studies (Badullahewage, 2018; Bamurange et al., 2019; Ya'acob et al., 2021) utilised the stock market index as a proxy of stock market performance.

For the most part, an index's value is determined as a weighted average of its constituent stock values, and the index's overall value will be affected if the market price of any of the underlying securities rises, resulting in the index rising and vice versa (Nugraha, Herlambang, Nugraha, et al., 2020). The performance of a stock market index, according to Tetteh, Adenutsi, and Amoah (2019), is a macroeconomic indicator that demonstrates how well a country's economy is doing. Furthermore, strong stock market performance has a crucial role in an economy's fundamentals and aids in developing a country's efficient economic and financial system (Misra, 2018). Therefore, according to Badullahewage (2018), stock markets have developed into the primary driving force of national and international economies worldwide.

2.1.1 Global Perspective on Stock Market Performance

There are aspects both internal and external to the company that influence how well the stock market performs (Ps & Jain, 2020). Hasan and Sharif (2019) used the Johansen Cointegration analysis to analyze the link between macroeconomic variables and the performance of the stock sector of Bangladesh from 2013 to 2018. The study covered the period from 2013 to 2018, and it focused on the period from 2013 to 2018. They came to the conclusion that the performance of the stock market is closely tied to the rate at which Treasury bills are issued and the exchange rate, but that nothing about it is affected by changes in either the price or the rate of interest. Hasan, Omer, Othman, and Turkish stock market was analysed by other researchers (BIST-KYD index) and macroeconomic indicators from 2003 to 2013. The time period covered by this study was from 2003 to 2013. They came to the conclusion that factors such as supply of money, inflation, interest rate and exchange rate all contribute to the BIST-KYD index's decline. Zuhri and Riantani (2020) conducted research into the ways in which the macroeconomic factors impact the Indonesian stock price index from 2015 to 2019. There was a correlation between the entire stock market index and issues like currency exchange, inflation and interest rates.

2.1.2 Malaysia's Perspective on Stock Market Performance

Hashim, Ramlan, and Rosly (2018) looked at the period from 2010 to 2014 and discovered that certain macroeconomic variables can discuss 89.85% of the change in Malaysia's KLCI Index. They also found that the exchange rate and the amount of money in circulation have a big impact on the KLCI Index. Yusof et al. (2020) initiated an investigation of the ways in which the performance of the Malaysian stock market was affected by macroeconomic conditions from 2007 to 2018. According to what they discovered, there is a high correlation between the FBM 100 Index and interest rates, the exchange rate, as well as the industrial output index. However, it does not have a relationship with the supply of money or GDP. Ya'acob et al. (2021) initiated an investigation of the ways in which the performance of Malaysia's stock market was affected by macroeconomic factors between the years 2016 and 2020. They found that in addition to the CPI, other variables such as the performance of the US stock market, the

total amount of cash in circulating, and the rate of exchange has a significant impact on the success of the Malaysian stock market.

Norehan and Ridzuan (2020) conducted research on the Malaysian stock market and macroeconomic issues from 1981 to 2017. Their findings were published in 2020. They found that over the long term, the stock market in Malaysia was affected by both the exchange rate and the inflation rate. Despite the enormous number of scholars interested in the stock market's performance, little research has been done (Hashim et al., 2018, Yusof et al., 2020, and Ya'acob et al., 2021) have conducted a substantial amount of investigation into the connection between macroeconomic factors and the effectiveness of the stock market. Because according to Awadzie & Garr (2020), the past studies on stock market performance have failed to reach a consensus. So, academic research in the same area is still needed to learn more about how the stock market works (Rakhal, 2018). The findings of the study could have been different if it had been conducted before the COVID-19 epidemic, this had a major effect on the global economy (Nugroho & Robiyanto, 2021).

2.2 Relational Factors of Stock Market Performance

Khalid & Khan (2017) stated that the stock market's movement is highly correlated with various macroeconomic variables according to finance theory. Moreover, the discussion of stock market determinants has been divisive because the fundamental macroeconomic factors influencing stock market performance are inherently unstable (Ogunsakin & Awe, 2020).

2.2.1 Macroeconomic Factors

Macroeconomics is a part of economics concerned with the aggregate economy's behaviour and takes a broad view of economic phenomena (Simbolon & Purwanto, 2018). Rakhal (2018) further stated that macroeconomics is the overall economic indicators and concerns the interrelations between the various economic sectors to understand better how the entire economy functions. Simbolon and Purwanto (2018) also say that a strong economy backed by uniform macroeconomic factors will encourage investors to invest in the financial sector. This will increase the number of stock trades, which will make the stock market index go up. Therefore, when studying the stock market phenomenon, the stock market movement is inseparable from macroeconomic conditions because it influences a company's daily operations (Nugroho & Robiyanto, 2021).

2.2.1.1 Inflation Rate

According to Simbolon and Purwanto (2018), Inflation is the annual percentage increase in the overall level of prices of goods and services that continues and is unabated. As inflation rises, each party's currency can buy a smaller share of goods and services. Utomo et al. (2019) further stated that inflation influences a country's economy by influencing income, wealth, and production efficiency and a high inflation rate can have a detrimental effect on a country. In addition, stock market performance can be improved by keeping inflation as low as possible (Badullahewage, 2018). This is because the high inflation rate reduces consumer spending,

leading to lower corporate profits, resulting in a decline in investor confidence to invest (Nugraha et al., 2020).

High inflation will also lower the real income an investor makes from their investments. On the other hand, investors will take advantage of lower inflation because it reduces the risks of having lost purchasing power and income (Utomo et al., 2019). Many studies (Hasan et al., 2019; Olokoyo, Ibhagui, & Babajide, 2020; Tun & Geetha, 2020) A study has been done on the correlation between inflation with stock market performance and several interesting correlations have been discovered. According to the findings of Norehan and Ridzuan (2020), Over the long term, there is a connection between the Malaysian stock market and inflation. According to research that was conducted in 2021 by Ya'acob and According to my coworkers, Malaysia's inflation rate has little impact on the stock market's performance. Because of the different results, more research is needed to better understand the link among inflation rate and stock market performance (Hashim et al., 2018).

2.2.1.2 Exchange Rate

It is known as an exchange rate when a currency may be traded for another currency (Utomo et al., 2019). It is also crucial to note that the exchange rate has a substantial impact on a wide range of macroeconomic factors, such as the current account balance and inflation (Utomo et al., 2019). Besides that, exchange rate movements influence the firms' output levels and an economy's trade balance (Awadzie& Garr, 2020). Also, when a country's currency loses value against the US Dollar, businesses with US Dollar debt will lose money or make less money (Utomo et al., 2019).

Syahri and Robiyanto (2020) studied the relationship between the Indonesian stock index as well as the local currency. A link was found between both the USD/IDR exchange rate and stock consumer price during the outbreak. This discovery was made at the time. Tetteh et al. (2019) say that the results are not always the same. Khalid and Khan (2017), for example, discovered that the rate of exchange doesn't have much to do with how well the stock market does. However, Ya'acob and colleagues (2021) discovered that the exchange rate has a significant effect on the performance of the stock market.

2.2.1.3 Interest Rate

Interest is a charge or payment made for the use of money, and it is critical in determining the amount of savings versus borrowing (Tetteh et al., 2019). Moreover, Awadzie& Garr (2020) further stated that the interest rate is defined as the annual percentage rate that lenders charge borrowers for the privilege of lending them money Badullahewage (2018) says that when investors worry about rising interest rates, they move their money out of the stock market and into any interest-paying financial surveillance or bank. Because of this, the price of stocks goes down, and As a result, interest rates tend to be inversely related to stock prices. The upshot of this is a decrease in stock values, as investors divert more of their capital from stock investments and into other types of financial assets when interest rates rise (Ogunsakin & Awe, 2020).

Keswani and Wadhwa (2018) reported that the rate of interest and the BSE Sensex Index have been linked for a long time. Wahyudi, Hersugondo, Laksana, et al. (2017) Discovered to have a significant positive impact on Malaysian, Singaporean, Indonesian, and Philippine stock market indices when it comes to interest rate rates Malaysia, Singapore, Indonesia, as well as the Philippines are the four countries included in this list. However, the interest rate in Thailand has a substantial impact just on Bangkok Stock Exchange's index of Thai stocks Tetteh et al. (2019) say that even though a lot of research has been done on how the stock market performs and how interest rates change, the results are not consistent. So, Olokoyo et al. (2020) said that future research might look at the link between interest rates and how well the stock market does.

2.2.1.4 Money Supply

The total amount of money in a nation is called its "money supply." Kinds of money supply are usually grouped into M1, M2, and M3 categories, with each category referring to a various country (Tun & Geetha, 2020). According to Bamurange et al. (2019), increases in money supply reduce interest rates, which stimulates investment; however, decreases in money supply will increase interest rates, making investment more difficult. This is agreed by Ogunsakin & Awe (2020) that economic activity and money supply expansion increased the stock market's price because the increases in the money supply act as an economic stimulant, causing cash flows (the company earnings influence) and stock prices to rise invariably.

Also, Duy and Hau (2017) said that the supply of money and stock market have a clear positive relationship. This is shown by the monetary policy, which increases the consumption of goods and financial assets, such as stock. However, Tun & Geetha (2020) stated that a tremendous rise in the money supply indicates the emergence of additional economic problems and concerns such as inflation and interest rates. Even though there has been a lot of research examining the relationship between money supply and stock market performance, Ogunsakin and Awe (2020) say that there is no clear answer. Duy and Hau (2017) found that the money supply is connected in a good way to the stock index. But Ya'acob et al. (2021) came to the conclusion that the amount of money hurts the stock market. So, the research on the link among money supply and stock market performance needs to be done again (Conrad, 2021).

2.3 Literature Gap

There is a strong link between stock market gains and losses and that of the economy as a whole has been the subject of a great deal of research and discussion (Khalid & Khan, 2017; Hasan & Sharif, 2019; Tetteh et al., 2019). Although numerous macroeconomic factors have been investigated using various methods such as VECM, ARDL, multiple regression model, and granger cointegration, the findings differ among researchers (Misra, 2018). Ullah et al. (2017) say that many studies have identified a high link between macroeconomic indicators and other variables and the efficiency of the stock market, their findings are in agreement with this idea. They say that this is the case despite the fact that other researchers have found the correlation. Other research has not been successful in establishing a direct connection between the behavior of the stock market and a number of important macroeconomic indicators. As a

result, there is not yet a definitive conclusion that can be drawn regarding the connection between various macroeconomic conditions and the performance of the stock market, given that some findings are the same while others are distinct (Rakhal, 2018).

According to the findings of a number of researchers (Awadzie & Garr, 2020; Tetteh et al., 2019; Ya'acob et al., 2021), empirical research has not yet come to a conclusion regarding the nature of the connection that a correlation exists between the stock market's performance and macroeconomic variables. This means that there is an evidence gap in the study of stock market performance because the evidence isn't consistent. Consequently, similar study might be done in the same context for investigate that relationship between stock market's performances and its volatility and the macroeconomic indicators (Ullah et al., 2017). So, the evidence gap can be filled by offering more data about how the stock market works. This helps clear up some of the confusion in the literature (Rakhal, 2018).

2.4 Underlying Theory: Efficient Market Hypothesis

According to Ullah et al. (2017), numerous models and ideas about relationship between stock prices performance and macroeconomic difficulties have been around for a long time. An Efficient Market Hypothesis is one of the most well-known theories (EMH), and it was developed by Eugene Fama (1970). The EMH theory says that the prices of financial assets quickly reflect all available information. This means that abnormal profits can't be made, no matter what investment strategy is used (Bamurange et al., 2019). Also, investors may change their minds about a certain financial asset and its value based on the information they have. There are 3 types of information: historical prices, information that is available to the public, and all other data, which includes private information (Omodero&Dandago, 2018).

Fama (1970) said that that there are three types of market efficiency depending on how much information is available to the market: weak, semi-strong, and strong (Bamurange et al., 2019). According to the weak form, all publicly available information is already factored into the pricing of financial securities that are actively traded. According to the semi-strong form, the prices of traded financial assets take into consideration all of the information that is readily available to the public, and market prices begin to fluctuate as soon as new information is made readily available to the public. According to the strong form, the prices of traded financial securities are quickly responsive to the dissemination of any confidential or proprietary information (Alugbuo& Chika, 2020).

Additionally, economic research is utilized in the realm of investments, particularly on a huge scale. Since the stock market's performance is closely linked to macroeconomic events, this is the reason. Based just on EMH theory, the link between the stock market's performance and the business as a whole may be seen (Zuhri & Riantani, 2020). Also, Olokoyo et al. (2020) said that the efficient market hypothesis says that competition between investors who want to make money would make sure that information regarding macroeconomic variables is completely reflected in the price of equities on the market.

2.5 Theoretical Framework

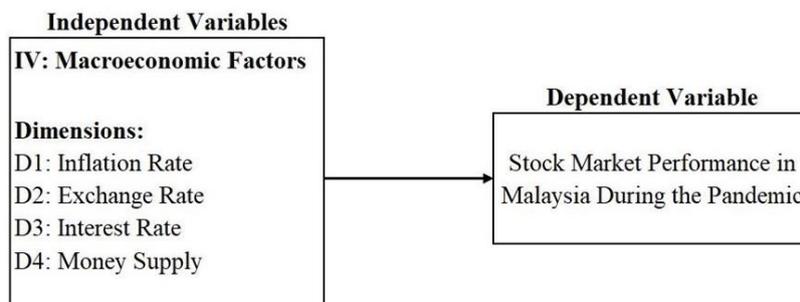


Figure 2.1: Theoretical Framework

2.6 Hypotheses

H1: The stock market's performance in Malaysia during the epidemic is heavily influenced by macroeconomic variables.

H1a: During the pandemic, Malaysia's rate of inflation has a significant impact on the stock market's performance.

H1b: During the epidemic, the Malaysian stock market was heavily influenced by the macroeconomic element of the currency rate.

H1d: During the pandemic, the interest rate, that is a macroeconomic factor, had a big effect on how the stock market in Malaysia did.

H1c: During the pandemic, Malaysia's stock market performance was strongly affected by the money supply, which is a macroeconomic factor.

3. RESEARCH METHODOLOGY

3.1 Research Design

In this case, we're looking at quantitative data in an effort to characterise the world. It is the purpose of this research to better understand how the stock market is performing. When attempting to determine whether or not and how strong a connection exists between the primary independent variables and its various dimensions, this research employed a descriptive-correlational design approach. The stock market's performance is examined in this study. Using macroeconomic factors as the key independent variable, the selected metrics are inflation, currency rates and interest rates.

This study has zero interference because the researcher uses published secondary data to conduct the research. Furthermore, the study setting is non-contrived because no changes are made to the study setting during the research. There is no manipulation in the study environment. The data is gathered through a systematic search of reliable published secondary sources. Besides that, the time horizon of the current study is longitudinal; the same data of

various variables will be collected repeatedly in a specific period from 2020 to 2021. Also, the information will be collected with Statistical Package for Social Sciences (SPSS) analyze software and the Multiple Linear Regression Model will be used to check the study's hypotheses.

3.2 Unit of Analysis and Sampling

In this study, the dependent variable is stock market performance as measured by stock market index (Iyoboyi, 2021). So, in this study, The stock market's current performance is replaced with data from the historical KLCI stock market index. This is similar to what Hashim et al. did (2018). Therefore, the unit of analysis is the index because the population to be studied is the KLCI Index. Besides, this study does not conduct sampling but census because the secondary data is gathered through a systematic search that includes all units of the population studied. Census is a method for collecting data on all members of a group (Bell, Bryman, & Harley, 2019). The studied population is KLCI, which is comprised of the 30 largest listed companies in Malaysia (Khong et al., 2019). All item in the entire studied population is selected, which is considered census.

3.3 Data Collection

The published secondary data used in this study will come from reputable websites on the internet, such as the official website of Bursa Malaysia, both the Department for Statistics Malaysia's and the Central Bank Malaysia's official websites. From January 2020 to December 2021, that is the pandemic period, historical data on different variables will be collected every month. The KLCI index is used in this study as a stand-in for the performance of the stock market in Malaysia. The month-end closing price of KLCI index will be obtained. Besides, the inflation rate in percentage form will be collected on a monthly basis. The month-end closing price of the USD/MYR exchange rate will be collected. Furthermore, this study adopts the overnight policy rate (OPR) to proxy the interest rate. The monthly overnight policy rate in percentage form will be collected. Moreover, historical data of M2 will be obtained on a monthly basis to proxy the money supply. The unit for M2 is in Millions of Ringgit Malaysia.

3.4 Data Analysis Method

In this study, SPSS analytical software is used to look at the data and test the research hypotheses using the multiple linear regression models. This study makes use of both descriptive and inferential statistics.

3.4.1 Testing Of Normality

To ascertain the distribution of data, the normality test will be conducted. The skewness and kurtosis of data will be measured to identify whether the data is normally distributed. According to Kallner (2018), normally distributed data should have a skewness of 0. When the skewness value is zero, the shape of the distribution is symmetric where mean = median. When the skewness value is positive, Right-skewed distributions have a median that is significantly lower than the mean. When the value of skewness is negative, the morphology of the distribution is left-skewed, which means that the median > mean.

Kallner (2018) says that a standard regular distribution is shown by a kurtosis value between -3 and +3. The shape of the distribution is leptokurtic (sharper peak than bell-shaped) when the kurtosis value is higher than zero; the shape of the distribution is platykurtic (flatter than bell-shaper) when the kurtosis value is lower than zero. The shape of the distribution is mesokurtic (bell-shaped) when the kurtosis value is equal to zero.

3.4.2 Measures of Central Tendency and Variation

Bell et al. (2019) stated that measures of central tendency condense a value that is typical of a range of values into a single figure. It is aimed to find the average of distribution, and there are three distinct types of average are recognised in quantitative data analysis, mean, median, and mode. Besides, according to Cooper & Schindler (2018), variability describes the clustering or scattering of numbers within a distribution. A statistical approach of how spread out the numbers is around the mean is the variance. When all the numbers are the same, the difference between them is 0. The more numbers are dispersed, the greater the variance.

3.4.3 correlation Matrix

The Pearson Correlation Coefficient is another name for the Correlation Matrix. It is used to find out the direction, strength, and importance of bivariate connections between all variables (Sekaran & Bougie, 2019). The value of the Pearson Correlation Coefficient is always between negative 1 and positive 1 ($-1 \leq r \leq 1$). Bajpai (2017) says that a solid positive correlation has been found when the value is close to +1, and a solid negative correlation exists when the value is close to -1. When the value is 0, there is no relationship between the two variables. Besides that, the correlation is significant if the Significant F (p-value) < 0.05 ; otherwise, the correlation is insignificant (Sekaran & Bougie, 2019). In addition, a general rule of thumb used by statisticians is that a correlation coefficient greater than ± 0.70 between two independent variables implies the possibility of multicollinearity problems (Sekaran & Bougie, 2019). If this situation arises, the Multicollinearity test should be conducted to identify the extent of the multicollinearity problem.

3.4.4 multicollinearity Test

Sekaran and Bougie (2019) say that multicollinearity is a commonly used statistical phenomenon that the correlation between multiple independent variables is high when performing a multiple regression study of this type. When the correlation between these two independent variables is equivalent to 1, the problem of multicollinearity is at its worst. In this case, it is no longer possible to estimate the regression coefficients. In all other situations, it makes the estimates of the regression coefficients unreliable. Since multicollinearity occurs as a result of complex relationships between several independent variables and may be undetectable using the correlation matrix approach. So, the VIF and the tolerance value are the most common ways to find multicollinearity. These measures show how much an independent variable can be described by an independent variable other than itself. As a general rule, serious multicollinearity problems happen when the VIF is greater than 10. (Bajpai, 2017; Sekaran & Bougie, 2019).

3.4.5 Beta Coefficient

The Standardised Regression Coefficient is another name for the Beta Coefficient. It is used to find out how much each independent variable affects the dependent variable (Sekaran & Bougie, 2019). According to Hair, Page, & Brunsveld (2020), standardised beta coefficients enable direct comparisons between independent variables to ascertain which have the greatest influence on the dependent variable. The closer the β is to +1 or -1, the greater the influence of IV on DV. The greater the absolute value of a beta coefficient, the more predictive power it has over the dependent variable. When β is 0, the IV does not influence the DV. When β is positive, IV and DV vary in the same direction; while β is negative, IV and DV vary in the opposite direction.

3.4.6 hypotheses Testing: Multiple Linear Regression Model

Stock market performance & macroeconomic variables are examined using a Multiple Regression Model. Predicting the value of the dependent variable depending on the values of the independent variables can be done with Multiple Linear Regression Model. This equation is self-weighting, so it can evaluate itself. It is also used to test and explain a theory of what causes what (Cooper & Schindler, 2018). Bajpai (2017) tells that the determination coefficient (R^2) demonstrates how much the independent variables describe about the dependent variable when all of them are put together. The value of R^2 ranges from 0 to 1; the greater the R^2 , the more closely related the dependent variable is to the independent variables used to predict it (Hair et al., 2020).

Multiple Linear Regression Model:

$$\hat{Y}_t = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \varepsilon_t$$

Model applied in this research is specified as:

$$\widehat{KLCI}_t = \beta_0 + \beta_1 INF_t + \beta_2 ER_t + \beta_3 INT_t + \beta_4 MS_t + \varepsilon_t$$

4. DATA ANALYSIS AND RESEARCH FINDINGS

4.1 Descriptive Statistics

4.1.1 Normality Test

Table 4.1: Skewness and Kurtosis

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
KLCI	-1.047	0.472	1.407	0.918
INF	0.102	0.472	-1.298	0.918
ER	0.197	0.472	-0.366	0.918
INT	1.855	0.472	1.981	0.918
MS	0.085	0.472	-0.487	0.918

Note: INF (Inflation Rate); ER (Exchange Rate); INT (Interest Rate); MS (Money Supply)

Skewness and Kurtosis:

Table 4.1 indicates that the research for the Inflation Rate, the Exchange Rate, and the Money Supply are approximately symmetric because the skewness value is within $-0.5 < \text{skewness} < 0.5$. Furthermore, the results indicate that KLCI Index is left-skewed while the Interest Rate is right-skewed. The results are shown in Table 4.1. That all variables are normally distributed because the kurtosis value is within $-3 < \text{kurtosis} < +3$. For the KLCI Index and Interest Rate, the shape of the distribution is leptokurtic because the kurtosis value is higher than zero. Also, the kurtosis value is smaller than zero, the distribution for the Inflation Rate, Exchange Rate, and Money Supply is platykurtic.

4.1.2 Descriptive Statistics

Table 4.2 Descriptive Statistics

	KLCI	INF	ER	INT	MS
Range	276.32	7.57	0.3355	1	217321.11
Minimum	1350.89	-2.89	4.0130	1.75	1948485.88
Maximum	1627.21	4.68	4.3485	2.75	2165806.99
Mean	1531.2613	0.6775	4.1741	1.9167	2051208.806
Std. Deviation	64.7773	2.3401	0.0878	0.3351	59769.0110
Variance	4196.1110	5.4760	0.0080	0.1120	3572334671

Note: INF (Inflation Rate); ER (Exchange Rate); INT (Interest Rate); MS (Money Supply)
The results from Table 4.2 show that the KLCI index has an average index of 1531.26 during the year 2020 and 2021. The lowest monthly closing price recorded is 1350.89, while the highest monthly closing price recorded is 1627.21. Furthermore, the high standard deviation value of 64.7773 indicates a high variability or volatility of the KLCI index. Besides that, the inflation rate has an average rate of +0.6775% during the years 2020 and 2021. The lowest deflation rate is -2.89%, while the highest inflation rate is 4.68%. The standard deviation is 2.3401, which is considered low to moderate data variability.

In addition, based on Table 4.2, the average monthly closing exchange rate for USD/MYR is 4.1741. From 2020 to 2021, the lowest monthly closing USD/MYR exchange rate is 4.0130, while the highest rate is 4.3485. Additionally, the low standard deviation of 0.0878 indicates a low variability in exchange rate value. Aside from that, the average interest rate (overnight policy rate) is 1.9167 percent, while the lowest rate is 1.75 percent and the highest rate is 2.75 percent during the year 2020 to 2021. The overnight policy rate has a low standard deviation of 0.3351, which means its variability is low. Furthermore, the results from Table 4.2 demonstrates that the money supply (M2) has an average money supply of RM 2,051,208.806million. The value of standard deviation 59769.0110 is very high, which indicates substantial-high variability in money supply amount.

4.1.3 Split Descriptive Statistics of 2020 And 2021

The KLCI index's average monthly closing price in 2021 (1559.4242) is increased as compared to the year 2020 (1503.0983). Moreover, the KLCI index's variability in the year 2020 is greater than the year 2021 as the value of standard deviation in 2020 (77.0123) is higher than the year 2021 (33.3510). Besides, the average inflation rate in 2020 (-1.1367%) is lower than the year 2021 (2.4917%), of which the negative inflation rate is considered deflation. Furthermore, the inflation rate in the year 2020 and 2021 has similar variability, with a standard deviation of 1.4054 and 1.5147, which are very close. The average USD/MYR exchange rate in 2021 is slightly lower than the year 2020. In addition, the exchange rate in 2021 has less variability when compared to the year 2020. The average interest rate (overnight policy rate) in 2021 (1.75%) is decreased when compared to the year 2020 (2.0833%). Additionally, in 2021, the value of standard deviation is zero, which indicates no changes in the overnight policy rate during the year 2021; in other words, the overnight policy rate is maintained at 1.75% for the whole year. The average money supply in 2021 (RM 2,098,631.8730million) is substantially increased compared to 2020 (RM2, 003,785.7390 million). In the meantime, the high value of standard deviation indicates great variability of money supply, of which the year 2021 has a higher variability of the money supply when compared to the year 2020.

4.2 Correlation Matrix

Table 4.3 Correlation Matrix

		KLCI	INF	ER	INT	MS
KLCI	Pearson Correlation	1	0.361	-0.701**	-0.598**	0.475*
	Sig. (2-tailed)		0.083	0	0.002	0.019
INF	Pearson Correlation	0.361	1	-0.252	-0.183	0.614**
	Sig. (2-tailed)	0.083		0.235	0.393	0.001
ER	Pearson Correlation	-0.701**	-0.252	1	0.364	-0.199
	Sig. (2-tailed)	0	0.235		0.08	0.351
INT	Pearson Correlation	-0.598**	-0.183	0.364	1	-0.741**
	Sig. (2-tailed)	0.002	0.393	0.08		0
MS	Pearson Correlation	0.475*	0.614**	-0.199	-0.741**	1
	Sig. (2-tailed)	0.019	0.001	0.351	0	
** . Correlation is significant at the 0.01 level (2-tailed).						
* . Correlation is significant at the 0.05 level (2-tailed).						

Table 4.3 shows that the KLCI index is strongly linked to three of the four macroeconomic factors. The exchange rate USD/MYR has a strong negative correlation with the KLCI index, and the p-value < 0.05 indicates a significant correlation. Furthermore, the interest rate (overnight policy rate) has a moderate negative correlation with the KLCI index and the p-value < 0.05, implying a significant correlation. Moreover, the money supply (M2) has a moderate positive correlation with the KLCI index, while the p-value < 0.05 indicates a significant correlation. Other than that, the inflation rate has a weak positive correlation with the KLCI index, while the p-value > 0.05 implies an insignificant correlation. Also, the

connection between both interest rate and the amount of money in circulation is -0.741, which suggests that there could be problems with multicollinearity. Thus, the multicollinearity test needs to be conducted to identify the extent of the multicollinearity problem.

4.3 Multicollinearity Test

Table 4.4: Collinearity Statistics

		Collinearity Statistics	
Model		Tolerance	VIF
1	(Constant)		
	INF	0.379	2.641
	ER	0.708	1.413
	INT	0.252	3.974
	MS	0.182	5.498

a. Dependent Variable: KLCI Index

The results in Table 4.4 reveal that there are no issues with the four independent variables being linked to each other. It is because the VIF value for each of the four variables is less than 10.

4.4 Beta Coefficient

Table 4.5: Beta Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3365.051	742.969		4.529	0.000
	INF	5.134	6.099	0.185	0.842	0.410
	ER	-378.516	118.911	-0.513	-3.183	0.005
	INT	-79.726	52.232	-0.412	-1.526	0.143
	MS	-5.094E-05	0.000	-0.047	-0.148	0.884

a. Dependent Variable: KLCI Index

Note: INF (Inflation Rate); ER (Exchange Rate); INT (Interest Rate); MS (Money Supply)
As seen in Table 4.5, the rate of exchange, rate of interest and money supply all have a standardised beta coefficient (β) that indicates they move in opposing directions to the KLCI index. Furthermore, the inflation rate and KLCI index are varied in the same direction because the β value of 0.185 is positive. In addition, the closer the β is to +1 or -1, an independent variable's influence on the dependant variable increases as its magnitude increases. Therefore, in above Table 4.5, the exchange rate ($\beta = -0.513$) has the highest predictive power on the dependent variable, the KLCI index, when compared to the other three independent variables. In the meantime, money supply ($\beta = -0.047$) has the least predictive power on the KLCI index because the standardized beta coefficient is near zero.

4.5 Hypotheses Testing: Multiple Linear Regression

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.807 ^a	0.651	0.577	42.1144

a. Predictors: (Constant), MS, ER, INF, INT

Table 4.7: ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62811.696	4	15702.924	8.854	0.000 ^b
	Residual	33698.849	19	1773.624		
	Total	96510.545	23			

a. Dependent Variable: KLCI
b. Predictors: (Constant), MS, ER, INF, INT

Table 4.8: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3365.051	742.969		4.529	0.000
	INF	5.134	6.099	0.185	0.842	0.410
	ER	-378.516	118.911	-0.513	-3.183	0.005
	INT	-79.726	52.232	-0.412	-1.526	0.143
	MS	-5.094E-05	0.000	-0.047	-0.148	0.884

a. Dependent Variable: KLCI Index

4.5.1 Substituted Multiple Linear Regression Equation

Using the unstandardized b-coefficients (B) in Table 4.8, the following is the substituted linear regression equation:

$$\widehat{KLCI}_t = 3365.051 + 5.134 INF_t - 378.516 ER_t - 79.726 INT_t - 0.00005094MS_t + \varepsilon_t$$

4.5.2 Strength and Significance of Regression Model

Table 4.6's results demonstrate that the R-Square value is 0.651, 65.1 percent of changes in the KLCI index could be explained by changes in how independent variables are combined (INF, ER, INT, and MS). In other words, the above substituted linear regression equation can predict about 65.1% of the variation in the KLCI index. Therefore, the construct of selected

macroeconomic factors in this study is capable of predicting or influencing the phenomenon of stock market performance. Table 4.7 demonstrates that the value of Sig. is 0.000 (also known as p-value). Because the p-value is lower than 0.05, it can be concluded that the proposed regression model is significant. This means that there is enough proof that at least one of the independent variables (adopted macroeconomic factors) affects the dependent variable (KLCI index).

According to Bajpai (2017), the adjusted R Square is utilised when comparing two or more regression models with an identical dependent variable but different numbers of independent variables. From Table 4.6, the adjusted R Square value is 0.577. Compared with the studies by Hashim et al. (2018) and Ya'acob et al. (2021), the current regression model's adjusted R Square value of 57.7% is relatively lower, which implies that the regression model established in this study has a relatively low prediction power.

4.5.3 The Relationship between Ivs and Dv

Depending on the outcomes in Table 4.8, the unstandardized b-coefficients value of the regression continuing (Y-intercept) is 3365.051, which suggests a positive relationship with the dependent variable. Theoretically, the regression constant represents the estimated KLCI index when the other four independent variables are zero, but this is often irrational in practice (Bajpai, 2017).

Additionally, the unstandardized b-coefficients demonstrate that three of the independent variables have a correlation that is inversely proportional to the KLCI index (It serves as a gauge for stock market performance), whereas only one of the independent variables has a correlation that is proportional to the KLCI index. Firstly, the unstandardized b-coefficient for inflation rate is 5.134. With this relationship in place, an increase of 5.134 points in the KLCI indexes corresponds to a rise of a single unit of inflation. Thus, there is a connection between these two parameters.

Furthermore, the unstandardized b-coefficient for the exchange rate (USD/MYR) is -378.516, which implies a negative relationship with the KLCI index, and it reveals that 1 unit increase in exchange rate results in a decrease of -378.516 units in the KLCI index. Moreover, in Table 4.8, the unstandardized b-coefficient for interest rate is -79.726, which indicates a negative relationship with the KLCI index, and it also implies that 1 unit increase in interest rate results in a decrease of -79.726 units in the KLCI index. In addition, the unstandardized b-coefficient for money supply is -0.00005094. So, there is a negative link between the number of dollars in circulation and the KLCI index. The KLCI index goes down by -0.00005094 units for every 1 unit rise in the money supply.

4.5.4 The Significance of the Relationship between IVs and DV

Inflation Rate:

Based on Table 4.8, the p-value $0.41 > 0.05$ shows that Inflation as well as the KLCI index have no meaningful association.

Exchange Rate:

The p-value of 0.005 < 0.05 in Table 4.8 shows that exchange rate has a significant association with the KLCI index.

Interest Rate:

Based on Table 4.8, the p-value 0.143 > 0.05 shows that there is no substantial relationship between Interest Rate and KLCI Index.

Money Supply:

The p-value of 0.884 is greater than 0.05, which shows that there is no significant link between Money Supply and KLCI Index.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Discussion And Summary Of Findings

5.1.1 Regression Model

Based on the table 4.7, the regression model built as part of this research is significant and the R2 value in Table 4.6 shows that selected macroeconomic factors explain 65.1% of the variation in the KLCI index. However, the unstandardized b-coefficient value reveals a large irrational gap between the regression constant (Y-intercept) and the other four independent variables. This irrational gap may be due to the lack of logarithm transformation in the process of multiple linear regression analysis. Also, Table 4.8 shows that the Regression Constant and Exchange Rate are important, but the Inflation Rate, Interest Rate, and Money Supply are not. Thus, this implies that the regression line is mainly constructed by the Regression Constant (Y-intercept) and the Exchange Rate. Meanwhile, the other three independent variables merely slightly improve the R2 and adjusted R2 value, the prediction power of the model.

Relevant past studies have been referred to identify the attribution of insignificant relationships (INF, INT, MS). Based on a review of the research, Ya'acob et al. (2021) discovered that the inflation rate in Malaysia has no big effect on how well the stock market does. Yusof et al. (2020) also found that the amount of money has no big effect on how well the Malaysian stock market does. So, it seems likely that neither the inflation rate nor the amount of money have much to do with how the stock market is doing in Malaysia during pandemic. Moreover, the insignificant of interest rate could be probably attributed to the unchanged Overnight Policy Rate. As the data collected shows that the Overnight Policy Rate remains unchanged at 1.75% from July 2020 until December 2021. In other words, there are 18 out of 24 OPR data is an identical figure, 1.75%. Therefore, it is rational to propose that this low variability OPR data set may restrict the possibility of contributing to the goodness of the regression line and hence results in an insignificant relationship.

5.1.2 Inflation Rate

In 2020, the negative inflation rate demonstrated a deflation economic phenomenon, reflecting lower consumer consumption. While in 2021, the inflation rate has returned to a positive value

and demonstrated the inflation phenomenon, reflecting the recovery of consumer consumption. Also, the unstandardized b-coefficient value from the multiple linear regression test shows that the inflation rate and the KLCI index are linked in a positive way. Multiple linear regression analyses reveal that the KLCI index and the inflation rate are not strongly linked. 'That's because the p-value is higher than 0.05, which indicates that alternative hypothesis is erroneous. So, we can say that the stock market in Malaysia and the rate of inflation is nothing to do with each other during pandemic. This result is the same as what Awadzic and Garr (2020) found in their research, which was done in an abroad. But this conclusion doesn't match up with what Tun and Geetha (2020) and Ya'acob et al. (2021) found in their research, which was done in Malaysia before the pandemic and found a weakly negative relationship. So, it seems likely that the correlation and the stock market before pandemic will not be the same during pandemic.

5.1.3 Exchange Rate

A rising exchange rate USD/MYR reflects the depreciation of local currency value, while a dropping exchange rate USD/MYR reflects an appreciation of local currency value. In 2020, the average exchange rate was RM 4.1988, while in 2021, the average exchange rate is decreased to RM 4.1494, reflecting the recovery or appreciation of local currency value. Also, the unstandardized b-coefficient value indicates that the USD/MYR exchange rate and the KLCI index are linked in a bad way. This can be shown in the multiple regression test. Multiple linear regression results reveal that the KLCI index is significantly associated with exchange rates because they have a p-value below 0.05 and the alternative hypothesis. The stock market in Malaysia is affected greatly when a pandemic occurs, hence the ringgit value changes dramatically. Many studies that were done in Malaysia before the pandemic came out with the same result (Ya'acob et al., 2021; Hashim et al., 2018; Yusof et al., 2020). So, it's likely that the exchange rate and how the stock market did before and during pandemic were related in the same way.

5.1.4 Interest Rate

In 2020, the average interest rate was 2.0833%, and it was decreased to 1.75% in 2021. Additionally, the interest rate is maintained at 1.75% for the entire year of 2021. Badullahewage (2018) says that when investors worry about rising interest rates, they move their money out of the stock market and into any interest-paying financial safety or bank. This makes stock prices go down, so the rate of interest is often related to stock prices in a bad way. With this description, it makes sense to think that one reason the government keeps interest rates low is to help the stock market do better during the pandemic. Also, the multiple linear regression test's unstandardized value of the b-coefficient shows that the interest rate as well as the KLCI index have a negative relationship. According to multiple linear regression results, there is no correlation between the interest rate as well as the KLCI index. This is because the p-value of 0.143 is larger than 0.05, which also implies that the alternative theory is incorrect. So, we can say that the stock market and the rate of interest in Malaysia have nothing to do with each other during pandemic. Hashim et al. (2018) discovered the same thing when they did research in Malaysia. But this result doesn't fit with what Bamurange et al. (2019) and

Utomo et al. (2019), who, prior to the epidemic, found that interest rates had a major effect on the share after conducting research in various countries This suggests that the relationship between inflation rate and stock performance will be less important during the pandemic than it was previous to breakout.

5.1.5 Money Supply

Overall, the money supply has continued to increase considerably over the pandemic period. Moreover, Bamurange et al. (2019) stated that the increased money supply would provide people with more disposable income to spend on listed companies' products, resulting in stock markets prospering. With these explanations, it makes sense to think that one of the reasons the government is using expansionary policy and keeping the money supply high is to boost economic activity and the performance of the stock market in order to keep the economy stable during the pandemic. Also, the multiple linear regression test's unstandardized b-coefficient value shows that The KLCI index and the money supply have a negative correlation. The KLCI index goes down by -0.00005094 units for every 1 unit rise in the money supply. This shows the amount of money had little impact on the KLCI index during the pandemic.

Also, the outcomes of the multiple linear regression demonstrate that there is no important connection between the money supply and the KLCI Index. As a result, a faulty alternative explanation is implied by the p-value exceeding 0.05. So, so we also can say that the amount of money in circulation doesn't have a big big effect on how well the stock market does in Malaysia during the pandemic. But this conclusion doesn't match up with what Hashim et al. (2018) and Tun & Geetha (2020) found in their studies, which were done in Malaysia before the pandemic and showed a strong positive relationship. So, it seems likely that the relationship between the amount of money in circulation and the efficiency of the stock market may be distinctive during the pandemic than before the pandemic.

5.2 Contribution of Study

Based on how the research results were described, this study suggests that during different times of the year, before and after a pandemic, macroeconomic considerations may have a varied effect on stock market performance. So, the research results give us more information about how the stock market did during the pandemic and suggest areas for academics to study in the future to learn more about how the stock market works in a more complete way. Also, the end of this investigation can be used as a guide for future research into other aspects that perform in Malaysian stock market during and after epidemic.

Besides that, as the highly contagious Covid-19 variant – Omicron has caused another outbreak of Covid-19 worldwide, the findings of this research can assist the industry stakeholders, including fund managers, government agencies, public-listed companies and investors in preparing coping strategy plans for investments to reduce risks and losses during the circumstances of ongoing pandemic crisis. In addition, this study has constructed a linear regression equation that can assist the industry stakeholders to predict 65.1% of the movement in the KLCI index. Moreover, the research findings contribute information for the government in making wise decisions to stabilise the financial market and the country's economy.

5.3 Limitations Of Study

The absence of logarithm transformation in the multiple linear regression analysis is one of the problems with this study. This has caused a large irrational gap in the unstandardized b-coefficient value between the regression constant (Y-intercept) and the other four independent variables. Another limitation is the insufficient data set. Due to the time horizon of this study being restricted to the pandemic period, this study only collects 24 months of variables data to conduct various statistical analyses. The insufficient data set is likely to cause the research findings to be statistically insignificant. Also, the KLCI index doesn't show how the whole stock market is doing because it only looks at the 30 biggest companies listed on Bursa Malaysia. So, it's possible that the research results don't make sense or apply to other stock indices in Malaysia. Also, this research doesn't look at many macroeconomic factors, which limits what can be learned from the research. Also, this study only suggested and looked at one multiple regression models, which makes it harder to find a multiple regression model with a higher ability to predict (known as R-Square value).

5.4 Conclusion

The regression model constructed in this research is capable of predicting 65.1% of the variation in the KLCI index based on the combination of selected macroeconomic factors. It also reveals that apart from the macroeconomic factors employed in this research, there is also other factors impact the stock market performance in Malaysia during the pandemic. In conclusion, the multiple linear regression test reveals that there is sufficient evidence that at least one of the independent variables (adopted macroeconomic factors) influences the dependent variable (KLCI index). So, the alternative to the research hypothesis H1 is accepted. During the pandemic, macroeconomic factors have a big effect on how the stock market in Malaysia does. The p-value of 0.05 indicates that the alternative hypothesis for proposed hypotheses H1b is supported by statistical evidence. At the height of the pandemic, there was a clear link between Malaysian stock market as well as the USD/MYR currency rate. Also, the research doesn't support the alternative hypotheses for research hypotheses H1a, H1c, and H1d because there isn't enough statistical evidence to show that the pandemic had a big effect on the stock market in Malaysia. So, the amount of money, the rate of inflation, and the rate of interest have nothing to do with how the stock market is doing in Malaysia during pandemic.

5.5 Recommendations

Depending on what was discovered, macroeconomic factors have a big effect on how the Malaysian stock market does during pandemic. Thus, the industry stakeholders are recommended to always pay attention to the changes in various macroeconomic indicators in order to take appropriate measures promptly. Also, it is recommended that the government agencies put a high priority on keeping the value of the local currency. This would help the stock market and the economy of the country to stay stable and grow. A lack of correlation between USD/MYR and the overall performance of a stock market is to blame for this.

Also, logarithm transformation should be used in future research on stock market performance that uses multiple linear regression analysis. This will improve the quality of the regression

line and prevent an irrational gap between the regression constant (Y-intercept) and the other four independent variables in the unstandardized b-coefficient value. Besides, there are three research hypotheses been rejected in this research due to insufficient statistical evidence to support a significant relationship? In order to get statistically significant results from future research on how the stock market did during the pandemic, it should be done over a longer period of time than 24 months.

The research revealed that the correlation between macroeconomics variables and the efficiency of the stock market may be distinctive during and before a pandemic. Therefore, future research could benefit from studying the correlation between both the stock market performance and other variables and macroeconomic conditions before, during, and after the pandemic. This would give us a better understanding of how the stock market works as a whole. Also, it is suggested that future research on how the stock market did during the pandemic use more stock indices to show how the market did instead of concentrating on the KLCI index. This would give a more complete picture of the stock market as a whole.

REFERENCES

- Alhamdany, S. N., & Obaid, M. K. (2020). Money supply and its effect on unemployment. An analytical study in the Iraqi economy for the period (2004-2019). *International Journal of Psychosocial Rehabilitation*, 24(3), 4932–4944.
- Alugbuo, J. C., & Chika, E. J. (2020). Monetary policy and stock market performance: Evidence from Nigeria stock exchange market. *International Journal of Research and Innovation in Social Science (IJRISS)*, 4(6), 556–568.
- Awadzie, D. M., & Garr, D. K. (2020). The effect of macroeconomic variables on capital market performance: A case of Ghana stock exchange. *International Journal of Business Management and Economic Review*, 3(5), 44–54.
- Badullahewage, S. U. (2018). The effects of macroeconomic factors on the performance of stock market in Sri Lanka. *International Journal of Innovation and Economic Development*, 3(6), 33–41.
- Bajpai, N. (2017). *Business research methods* (2nd ed.). Pearson India.
- Bamurange, P., Githui, T., & Omurwa, J. (2019). Influence of selected macroeconomic factors on stock market performance in Kenya. *Journal of Finance & Accounting*, 3(2), 1–24.
- Bell, E., Bryman, A., & Harley, B. (2019). *Business research methods* (5th ed.). Oxford University Press.
- Çetin, C., & Kara, A. (2020). Global surveillance, travel, and trade during a pandemic. *Turkish Journal of Medical Sciences*, 50(3), 527–533.
- Conrad, C. A. (2021). The effects of money supply and interest rates on stock prices, evidence from two behavioral experiments. *Applied Economics and Finance*, 8(2), 33–41.
- Cooper, D. R., & Schindler, P. S. (2018). *Business research methods* (13th ed.). McGraw-Hill/Irwin.
- DOSM. (2022). Consumer Price Index Malaysia December 2021. Department of Statistics Malaysia Official Portal.
https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=106&bul_id=N1RKRDJ1aWtlU3l5Y0M3OSfZT21DZz09&menu_id=bThzTHQxN1ZqMVf6a2I4RkZoNDFkQT09

- Duprey, T. (2020). Canadian financial stress and macroeconomic conditions. *Canadian Public Policy*, 46(S3), 236–260.
- Duy, V. Q., & Hau, L. L. (2017). Impact of macroeconomic factors on share price index in Vietnam's stock market. *The International Journal of Engineering and Science*, 6(1), 52–59.
- Dzomonda, O., & Ngwakwe, C. (2020). The link between foreign direct investment and stock exchange value. *EuroEconomica*, 39(3), 38–47.
- Hair, J. F., Page, M., & Brunsveld, N. (2020). *Essentials of business research methods* (4th ed.). Routledge.
- Hasan, E., & Sharif, S. (2019). Do macroeconomic variables affect stock market performance? A case study of DSEX and DS30 index of Dhaka stock exchange. *Business and Economic Research*, 9(3), 182–203.
- Hasan, N., Omer, A. J., Othman, B., Perot, K. A., Majid, A. A., & Kareem, F. A. (2019). Macroeconomic determinates of stock price for industrial companies listed in Istanbul stock exchange. *International Journal of Psychosocial Rehabilitation*, 23(2), 947–963.
- Hashim, S. L. M., Ramlan, H., & Rosly, M. A. M. (2018). The impact of macroeconomic variables towards Malaysian stock market. *Global Business and Management Research*, 10(3), 315–326.
- Innocent, G., Shukla, J., Mulyungi, P., & Ochieng, A. (2018). Effects of macroeconomic variables on stock market performance in Rwanda. Case study of Rwanda stock exchange. *European Journal of Economic and Financial Research*, 3(1), 104–125.
- Islam, A. U. (2021). Impact of Covid-19 on the stock market performance of the developing countries: A case study of Indian market. *MERC Global's International Journal of Management*, 9(1), 30–38.
- Iyoboyi, M. (2021). Unraveling the impact of institutions on stock market performance in Nigeria. 5th International Conference on Business, Management & Economics, 1–14.
- Jochmans, K. (2014). First-differencing in panel data models with incidental functions. *The Econometrics Journal*, 17(3), 373–382.
- Kallner, A. (2018). *Laboratory statistics* (Second edition) (2nd ed., pp. 1–140). Elsevier. <https://www.sciencedirect.com/science/article/pii/B9780128143483000010>
- Keswani, S., & Wadhwa, B. (2018). An empirical analysis on association between selected macroeconomic variables and stock market in the context of BSE. *The Indian Economic Journal*, 66(1-2), 170–189.
- Khalid, W., & Khan, S. (2017). Effects of macroeconomic variables on the stock market volatility: The Pakistan experience. *International Journal of Econometrics and Financial Management*, 5(2), 42–59.
- Khong, Y. L., Tang, K. L., & Ling, T. P. (2019). Relationship between macroeconomic variables and stock market: Case study from Malaysia. *Research in Economics and Management*, 4(2), 102–109.
- Misra, P. (2018). An investigation of the macroeconomic factors affecting the Indian stock market. *Australasian Accounting, Business and Finance Journal*, 12(2), 71–86.
- Modugu, K. P., & Dempere, J. (2020). Country-level governance quality and stock market performance of GCC countries. *Journal of Asian Finance, Economics and Business*, 7(8), 185–195.
- Nawi, F. A. M., Tambi, A. M. A., Samat, M. F., & Mustapha, W. M. W. (2020). A review on the internal consistency of a scale: The empirical example of the influence of human capital investment on Malcom Baldrige quality principles in TVET institutions. *Asian People Journal (APJ)*, 3(1), 19–29.
- Ngu, C. Y. J., Ziaei, S. M., & Szulczyk, K. R. (2021). The impact of COVID-19 pandemic on stock market return volatility: Evidence from Malaysia and Singapore. *Asian Economic and Financial Review*, 11(3), 191–204.

- Norehan, M. A. H., & Ridzuan, A. R. (2020). The impact of macroeconomics variables toward stock market in Malaysia. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 10(1), 360–367.
- Nugraha, N. M., Herlambang, D., Nugraha, D. N. S., & Amalia, S. (2020). The influence of macroeconomic factors on the volatility of composite price stock index: A study on the Indonesia stock exchange. *International Journal of Psychosocial Rehabilitation*, 24(1), 2507–2513.
- Nugroho, A. D., & Robiyanto, R. (2021). Determinant of Indonesian stock market's volatility during the Covid-19 pandemic. *Jurnal Keuangan Dan Perbankan (Journal of Finance and Banking)*, 25(1), 1–20.
- Ogunsakin, S., & Awe, I. T. (2020). Macroeconomic determinants of stock market performance in Nigeria. *Business and Economic Research*, 10(4), 139–158.
- Olokoyo, F. O., Ibhagui, O. W., & Babajide, A. (2020). Macroeconomic indicators and capital market performance: Are the links sustainable? *Cogent Business & Management*, 7(1), 1–17.
- Omodero, C. O., & Dandago, K. I. (2018). Corruption and stock market performance in Nigeria. *Annals of Spiru Haret University. Economic Series*, 18(4), 23–40.
- Onyinyechi, O. C., & Ekwe, M. C. (2017). Impact of foreign direct investment (FDI) on the stock market performances in Nigeria (1985-2014). *Applied Finance and Accounting*, 3(1), 36–48.
- Pearce, J., & Derrick, B. (2019). Preliminary testing: The devil of statistics? *Reinvention: An International Journal of Undergraduate Research*, 12(2).
- Ps, R. K., & Jain, Y. S. (2020). Impact of corporate governance on stock performance—evidence from BSE Sensex. *Indian Journal of Industrial Relations*, 55(3), 543–558.
- Rakhal, R. (2018). Determinants of stock market performance. *NCC Journal*, 3(1), 134–142.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research Methods for Business Students* (8th ed.). Pearson.
- Schindler, P. S. (2019). *Business research methods* (13th ed.). McGraw-Hill Education.
- Schmidheiny, K. (2021). Panel data: Fixed and random effects. *Short Guides to Microeconometrics*, 1–16. Universität Basel.
- Sekaran, U., & Bougie, R. (2019). *Research methods for business: A skill-building approach* (8th ed.). John Wiley & Sons, Inc.
- Simbolon, L., & Purwanto. (2018). The influence of macroeconomic factors on stock price: The case of real estate and property companies. *Global Tensions in Financial Markets*, 34, 19–39.
- Surwanti, A., & Pamungkas, W. S. (2020). Dividend policy, firms' characteristics and the impact on the Southeast Asian firms' value. *Proceedings of the 4th International Conference on Sustainable Innovation 2020-Accounting and Management*, 176.
- Syahri, A., & Robiyanto, R. (2020). The correlation of gold, exchange rate, and stock market on Covid-19 pandemic period. *Jurnal Keuangan Dan Perbankan*, 24(3), 350–362. <https://doi.org/10.26905/jkdp.v24i3.4621>
- Tabachnick, B. G., & Fidell, L. S. (2019). *Using multivariate statistics* (7th ed.). Pearson Education Limited.
- Tetteh, J. E., Adenutsi, D. E., & Amoah, A. (2019). The determinants of stock market return in Ghana: FMOLS and DOLS approaches. *IUP Journal of Applied Finance*, 25(4), 5–27.
- Tun, W. N., & Geetha, C. (2020). The unrestricted macroeconomic variables effect on stock market Malaysia. *Malaysian Journal of Business and Economics (MJBE)*, 7(2), 245–269.
- Ullah, G. M. W., Islam, A., Alam, Md. S., & Khan, Md. K. (2017). Effect of macroeconomic variables on stock market performance of SAARC countries. *Asian Economic and Financial Review*, 7(8), 770–779.

- Utomo, S. H., Wulandari, D., Narmaditya, B. S., Handayati, P., & Ishak, S. (2019). Macroeconomic factors and LQ45 stock price index: Evidence from Indonesia. *Investment Management and Financial Innovations*, 16(3), 251–259.
- V-Lab. (2021). V-Lab: FTSE Bursa Malaysia KLCI Index - Kuala Lumpur Composite Index GARCH Volatility Analysis. V-Lab. <https://vlab.stern.nyu.edu/analysis/VOL.FBMKLCI%3AIND-R.GARCH>
- Wahyudi, S., Hersugondo, H., Laksana, R. D., & Rudy, R. (2017). Macroeconomic fundamental and stock price index in Southeast Asia countries: A comparative study. *International Journal of Economics and Financial Issues*, 7(2), 182–187.
- Ya'acob, F. F., Akbar, A., Ghul, Z. H., Ismail, M. Z., & Mokhtar, N. A. (2021). The relationship between macroeconomic factors and the performance of stock market in Malaysia: The case of Malaysia industrial product and services sector. *International Journal of Academic Research in Business and Social Sciences*, 11(8), 1102–1116.
- Yusof, M. H. M., Mahmud, S. H., Embong, M. F., Mat Nor, M. A. N. B. I., & Fatah, N. L. A. (2020). Stock market movement in Malaysia: Islamic versus conventional stock market. *Global Business and Management Research*, 12(4), 337–352.
- Zuhri, E., & Riantani, S. (2020). The impact of macroeconomic variable movements on stock price index performance in consumer goods industry sector companies: Evidence from Indonesia. *Technium Social Sciences Journal*, 14(1), 339–353.