

The Effect of Exchange Rate, Inflation Rate, and Gross Domestic Product on Malaysia Stock Market Return

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Abstract

Purpose: This study aims to expand the knowledge of the relationship between exchange rate, inflation rate, and gross domestic product with stock market return.

Design/methodology/approach: The exchange rate, inflation rate, and Gross Domestic Product serve as the independent variables, while market return represented by the FTSE Bursa Malaysia Kuala Lumpur Composite Index (FBMVKLCI) serves as a dependent variable. This study covers the past ten years, from January 2012 to December 2022, and employs a correlation and regression analysis.

Findings: The outcome reveals that the exchange rate and inflation rate have a negative and significant relationship with market return. Meanwhile, the Gross Domestic Product has a positive and significant relationship with market return. Furthermore, the result shows that in comparison to the exchange rate, inflation rate, and Gross Domestic Product, Gross Domestic Product is the factor that has the greatest influence on stock market return.

Research limitations/implications: To improve the reliability and accuracy of future findings, future researchers may want to consider other macroeconomic factors such as the price of crude oil and the changes in the Government that may affect stock market return.

Practical implications: The findings of this study could serve as a reference for upcoming researchers, start-ups, investors, and the Government to acquire information about Malaysia's macroeconomic factors and its stock market return.

Originality/value: This study contributes to the knowledge regarding the relationship between exchange rate, inflation rate, and gross domestic product on Malaysia's stock market return.

Keywords: Exchange rate, Inflation rate, Gross Domestic Product, Stock market return, FBMVKLCI

Introduction

Stock market returns show an investment's value over time. Understanding how stock market returns effect portfolio growth is crucial for investors (Lake, 2022). Inflation has risen and the local currency has depreciated against international currencies, forcing investors to buy stocks (Segal, 2022). However, investors rarely get the returns they want since stock market volatility reacts to macroeconomic variables like the exchange rate, inflation rate, and Gross Domestic Product (GDP).

Country economic health is shown by stock market return. Monetary and exchange rate policy impact equities. Malaysia exports too. Exporting goods may harm global and local investors due to currency rate changes. Exports will exceed imports when the exchange rate

declines (Twin, 2022). Exports increase Malaysia's income and investment, which boosts the stock and economy. However, depreciated currencies may imply bad performance. Local stock markets will lose foreign investor confidence.

Market return may decrease due to inflation (Zhang, 2021). Thus, expansionary monetary policy can lower inflation and enhance the stock market index by boosting economic activity. Slow economic growth due to tight monetary policy and high inflation can also hurt stocks. If the findings match this common opinion, Malaysian policymakers can carefully craft and implement an inflation rate plan to attract foreign stock market investors.

Malaysia is one of the world's most open economies, with a trade-to-GDP ratio of over 130% since 2010, according to <https://www.worldbank.org> (2020). With almost 40% of the workforce participating in exports, trade and investment have boosted Malaysia's revenues and job possibilities. Since 2010, the Malaysian economy has grown 5.4% yearly, despite the 1997-1998 Asian financial crisis. Thus, Malaysia should become a high-income economy by 2024.

However, Coronavirus Disease (COVID-19) has caused recessions in several nations, including Malaysia. Exchange rates, inflation, and GDP are macroeconomic factors that affect stock prices. Shannon & Carlson (2021) suggest governments must prioritise economic recovery during outbreaks or normality. General economic expansion is needed to address education and healthcare challenges. Thus, governments must cut debt and stimulate growth. Most will cut spending or invest to strengthen the economy. Countries may prioritise economic growth or recovery (Fund, 2019). Thus, a study on how exchange rate, inflation, and GDP effect market return is needed, especially during COVID-19.

Literature Review

The Exchange Rate, Inflation Rate, and Gross Domestic Product (GDP)

Every nation needs stable exchange rates and growing stock markets (Adamu, 2018). Financial development is shown by stable exchange rates. A flexible exchange rate supports domestic macroeconomic goals while allowing currency rate fluctuations (Rabanal, 2017). Prices and exchange rates varied from PPP, according to Stockman (2015). Exchange rate changes have not matched relative price changes. According to Taylor (2016), many policy assessment models transmit information via exchange rates. Arbitrage equations link one country's interest rate to the exchange rate's expected appreciation. Naeem Muhammad (2016) says currency rates balance asset supply and demand. Countries that export more than they import have in demand goods and currencies. Supply and demand dictate that high demand raises prices and currency value. National policy and currency strength affect the exchange rate, according to Octavio Valdez-Lafarga (2019). Strong domestic currencies stimulate imports, whereas weak currencies boost domestic products demand. Foreign and domestic trade are affected by exchange rates. Actual output increases effect domestic enterprises' cash flows, especially exporters (Mikhaylov, 2018).

The inflation rate is the rate at which prices grow over time. According to Charles O. et al. (2018), inflation reduces consumer expenditure and increases living costs. There is also an increase in the prices of products and services. As stated by Musarat et. Al (2022), the year 2022 is despised by everyone due to the ongoing price increase because of inflation. Inflation happens due to money supply variables, exchange rate, benchmark interest (BI) rate, and administered prices (Yolanda, 2017). Inflation also affects depreciation value and profit

(Egilsson, 2020). Therefore, as Faisal Dharma et al. (2020) stated, forecasting future inflation levels is crucial for the government to design future economic strategies. This is because, by having the forecast of future inflation, it gets to maintain overall macroeconomic stability (D'Acunto et al., 2019).

According to Kramer (2022), Gross Domestic Product (GDP) is a country's quarterly or annual product and service value. It measures a country's products and services over time (Fernando, 2022). So, it's the country's gross market value. GDP measures an economy's size and growth. It shows whether the economy is growing due to more production or shrinking due to less. GDP growth is a positive indicator of economic health (Fund, 2022). GDP is significant since it shows an economy's size and health. It is expressed as a percentage since economic growth is measured regularly. The underlying real GDP of the quoted rate is frequently adjusted to account for inflation (Fagan, 2022). Thus, GDP is the ideal economic indicator because it tracks output changes.

The Stock Market Return

A stock market is where stocks and shares are bought and sold. It can be a very complex market. It helps establish a robust, competitive economy (Masoud, 2016). According to SoFi (2023), investors trade stocks and governments and corporations raise long-term money. organisations sell stocks to raise long-term funds for productive investment since people prefer successful organisations over unsuccessful ones (Siegel, 2021). Thus, stock market trading is essential to economic capital allocation (Idenyi et al., 2017). Lake (2022) states that stock market returns are investors' profits or dividends. Non-fundamental factors like investor sentiment affect stock market results. In Malaysia, stock markets overreact to economic crises, which defies the weak Efficient Market Theory because investors can profit by buying losers in an oversold market and selling them later (Uma Murthy, 2017). Exchange rates, interest rates, and inflation rates affect Nigerian stock market return volatility, according to Okechukwu (2019). Nigerian stock market returns are volatile and persistent. Reddy (2012) found that lower interest and inflation rates raised stock prices and GDP.

The Exchange Rate and Stock Market Return

According to T. (2021), the exchange rate affects the stock market return like other commodities. The asset market channel or portfolio balance approach is the relationship between the exchange rate and stock market return. Charles Kwofie (2018) states exchange rate and FBMKLCI are negatively correlated. However, Khan (2019) showed exchange rate adjustments benefited the US stock market. Exchange rates boost stock market returns in countries with net capital inflows.

Mourad Mroua (2020) states that exchange rate and stock market return findings depend on their ability to manage stock market return in advanced and emerging nations and robust domestic stock markets. According to Raja Rehan et al. (2019), a strong stock market attracts foreign investors, which boosts currency demand and vice versa. Classical economists worry that currency appreciation under the floating ER system could impact a country's trade balance and product competitiveness (Martínez-Hernández, 2017). Cash flows and stock market returns will fall as output declines. COVID-19 broke out in late 2019, causing the worst global recession. Permana (2021) found that exchange rates hurt stock market returns in China, the UK, Canada, South Korea, Brazil, Australia, Indonesia, South Africa, and Singapore during COVID-19

The Inflation Rate and Stock Market Return

Omer Elmahgop (2020) identified a negative short- and long-term relationship between Sudanese stock market performance and inflation. Tarek Eldomiaty (2020) also found a negative correlation between stock market return and inflation rate, either expectations or actual, which should increase stock values and the estimated flow of future nominal dividend payments. As Nowzohour & Stracca (2017) mentioned, history shows that high inflation rates can cause economic uncertainty and stock market volatility.

All these statements are also supported by Suhaibu (2017), who stated that stock market return and inflation rate have a very strong negative relationship. Furthermore, because the length of the pandemic is undetermined, COVID-19's negative effects on stock market return and its disruption of the correlation between stock market return and inflation rate may not fade quickly (Gylych Jelilov, 2020). This may slow economic activity. However, Reddy (2012) discovered a favourable correlation between Indian stock market return and inflation. Thus, market participants and governments should examine inflation's impact on stock returns.

Gross Domestic Product (GDP) and Stock Market Return

According to Hall (2022), the stock market return frequently serves as a gauge of public opinion and can positively or negatively affect GDP. This statement is also supported by Khartit (2022) who agrees that stock market returns can have both positive and negative influences on GDP. The stock market return fluctuates in response to demand. The greater the demand for stocks, the higher the prices, and vice versa. Ashraf (2020) found that there is a negative link between stock market return and GDP during COVID-19 due to their detrimental impact on economic activity.

However, TomorrowMakers (2021) found a positive link between stock market return and GDP as indicated by a higher number representing GDP growth. If there is an increase in stock market return, it will have a positive impact on your investment portfolio. GDP is comparable because it grows as consumers, corporations, and governments show demand by spending more (Q.ai, 2022). The economy is expanding, and GDP is increasing. Hence, the stock market return is expected to reflect this mood, perhaps not immediately (Team, 2022). Stock market participants value GDP growth. Many businesses cannot increase earnings if economic production falls or stays stagnant. Excessive GDP growth raises inflation, which devalues money and offsets stock market returns (Barnes, 2022).

Conceptual Framework

Based on the literature review, the above conceptual framework is used to find the relationship between the macroeconomic factors that are exchange rate, inflation rate, and Gross Domestic Product (GDP) serve as independent variables, with a dependent variable which is the stock market return, represented by FTSE Bursa Malaysia Kuala Lumpur Composite Index (FBMKLCI).

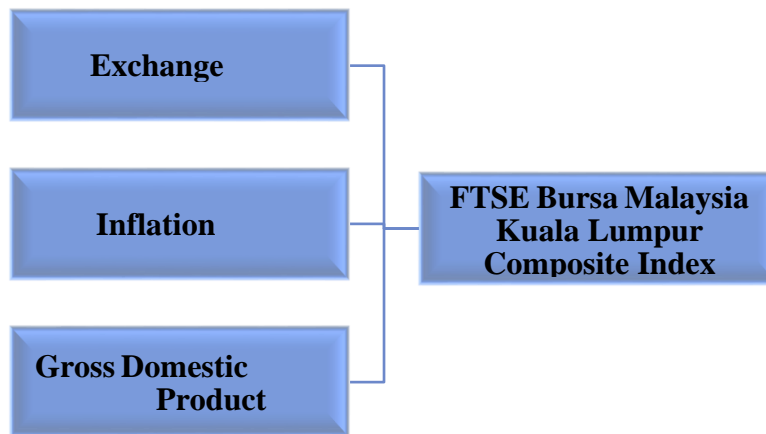


Figure 1: The Conceptual Framework

Method

The objective of this study is to examine the relationship between exchange rate, inflation rate, and GDP with stock market returns represented by FBMKLCI. Data on the exchange rate was collected from Bank Negara Malaysia (BNM). Data on the inflation rate was obtained from the Consumer News and Business Channel (CNBC) website. Meanwhile, GDP was accessed from the World Bank, and FBMKLCI was extracted from Bursa Malaysia. This study covers the past ten years, from January 2012 to December 2022. The correlation analysis is used to analyze the relationship between the stock market returns with the exchange rate, inflation rate, and GDP. Regression analysis was employed to evaluate the variance in stock market returns that can be explained by the exchange rate, inflation rate, and GDP.

Findings

Descriptive Analysis

Table 1 shows descriptive analysis results. Stock market returns ranged from 1219.7200 to 1895.1800. The market return averages 1664.7123 and the standard deviation 120.4864. Minimum and maximum exchange rates are 2.9625 and 4.7480, mean and standard deviation are 3.8886 and 0.4781. Minimum inflation was 104.9080 and maximum was 127.0500 throughout the monitoring period.

Table 1: The Results of Descriptive Analysis

Variable	Minimum	Maximum	Mean	Standard Deviation
Stock Market Return	1219.7200	1895.1800	1664.7123	120.4864
Exchange Rate	2.9625	4.7480	3.8886	0.4781
Inflation Rate	104.9080	127.0500	116.5566	6.6919
Gross Domestic Product (GDP)	-5.5345	6.0067	3.9641	3.1190

Next, for inflation, the mean is 116.5566 and the standard deviation is 6.6919. GDP ranges from -5.5345 to 6.0067. The GDP mean is 3.9641 and the standard deviation is 3.1190.

Correlation Analysis

Table 2 shows the dependent variable and independent variable correlation analysis.

Table 2: The Results of Correlation Analysis

Variable	Stock Market Return	Exchange Rate	Inflation Rate	Gross Domestic Product (GDP)
Stock Market Return	1.000			
Exchange Rate	-0.441**	1.000		
Inflation Rate	-0.411**	0.876**	1.000	
Gross Domestic Product (GDP)	0.469**	-0.267**	-0.242**	1.000

** . Correlation is significant at the 0.01 level (2-tailed).

Cohen (1988) found a medium negative correlation between stock market return, exchange rate ($r = -0.441$, $n = 2696$, $p < 0.01$), and inflation rate ($r = -0.411$, $n = 2696$, $p < 0.01$; Pallant, 2020). An increase in exchange rates and inflation will lower stock market returns. The correlation between stock market return and GDP is moderately positive ($r = 0.469$, $n = 2696$, $p < 0.01$). This shows GDP increases stock market return.

Regression Analysis

Table 3 presents the result of the regression analysis. The correlation coefficient, $R = 0.574$ indicates a strong correlation between dependent and independent variables. The coefficient of determination, $R^2 = 0.329$, indicates that the exchange rate, inflation rate, and GDP account for 32.9% of the variance in the stock market return.

Table 3: The Results of Regression Analysis

	R	R2	Sig. F	Coefficient			p-values Sig		
				ER	IR	GDP	ER	IR	GDP
Stock market return	0.574	0.329	0.001	-0.260	-0.092	0.377	0.001	0.005	0.001

Notes: (i) ER refers to the exchange rate (ii) IR refers to the inflation rate (iii) GDP refers to the Gross Domestic Product

Since the dependent variable is less than 60%, the independent variables cannot explain it. However, the total equation is significant ($p < 0.05$). The coefficient shows that each unit decrease in the exchange rate reduces the stock market return by 0.260 and each unit increase in inflation reduces it by 0.092. Each unit of GDP raises stock market return by 0.377. The study shows that GDP affects stock market return more than exchange rate and inflation. The exchange rate, inflation rate, and GDP strongly affect stock market returns ($p < 0.05$).

Discussion and Conclusion

Based on the findings, there exists a moderate negative correlation between the exchange rate and stock market return. Hence, increasing the exchange rate lowers stock market returns. Charles Kwofie (2018) concluded similarly about the FBMKLCI and currency exchange rates. According to Permana (2021), stock market returns and exchange rates correlated with the COVID-19 pandemic. During COVID-19, exchange rate and stock market returns are

negative. April 2020 began the COVID-19 pandemic. Thus, the Malaysian stock market recovered before the outbreak. The exchange rate and stock market return are weakly correlated during the epidemic since the Malaysian stock market return mean is negative for all times and the lowest (Jordan Ngu Chuan Yong, 2021). Few major losses and little gains. According to (Narayan, 2020), COVID-19 has affected the stock market return-exchange rate relationship, strengthening the Japanese exchange rate. Khan 2019 contradicts this result. According to Analyst (2018), stock-forex links are unscientific because stock market performance and currency rate fluctuate. It does not mean the two factors have no relationship or are meaningless, but traders should consider various indicators before trading. Mourad Mroua (2020) further notes that exchange rate and stock market return findings depend on their ability to control stock market return in advanced and emerging economies.

As confirmed by Omer Elmahgop (2020), Tarek Eldomiatty (2020), Nowzohour & Stracca (2017), and Suhaibu (2017), inflation rate and stock market return have a medium negative association. Inflation has historically hurt the economy, according to Nowzohour & Stracca (2017). According to Jamaludin (2017), the bad link between inflation and stock market return is produced by the inflation rate's money surplus increasing stock exchange supply while demand remains unchanged. That means rising inflation will lower stock market returns. According to Nikolaos Antonakakis (2017), a fall in inflation may not boost the stock market, establishing a negative link. Stock market returns and inflation are negatively correlated with the COVID-19 pandemic. The prolonged epidemic has hurt stock market gains, according to Gylych Jelilov (2020). COVID-19 is predicted to break the link between stock market returns and inflation for a long time. According to Mishra (2021), the global pandemic transmission and severity information negatively affected Asian stock market returns, stock index returns, market volatility, inflation, and interest rates. Reddy (2012) acknowledges that stock market success and inflation are positively correlated.

GDP has a medium positive association with stock market return, per TomorrowMakers (2021). Because GDP rises when the economy grows, stock prices rise. Different from Ashraf (2020), who discovered a negative association. When he researched during COVID-19, GDP hurt economic activity. In COVID-19, Tan (2021) showed a negative link between GDP and stock market return. The amount of COVID-19 confirmed instances affected FBMKLCI closing stock prices, which decreased GDP. Stock market returns affect GDP both positively and negatively, according to Hall (2022) and Khartit (2022). GDP grows similarly as consumers, firms, and governments spend more, according to Q.ai (2022). Regression research examines exchange rate, inflation, and GDP impacts on stock market returns. According to the result, stock market performance is strongly correlated with exchange.

rate, inflation, and GDP. Currency, inflation, and GDP explain 32.9% of stock market return variance. As it is less than 60%, exchange rate, inflation, and GDP alone cannot explain stock market return. The complete equation is significant, as Okechukwu (2019) agrees. As shown by Honig (2019), economic variables greatly affected stock market returns compared to pre- and post-crisis years. GDP affects stock market returns more than exchange rate and inflation, hence the government must maintain high GDP to boost stock market returns. As Reddy (2012) noted, GDP growth boosts stock market returns.

These findings could help future researchers, start-ups, investors, and the government understand Malaysia's macroeconomic fundamentals and stock market return. Researchers

may want to examine macroeconomic factors like crude oil prices and government developments that may affect stock market returns to increase reliability and accuracy.

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