Economic Journal of Emerging Markets, 17(2) 2025, 157-177

EJEM
Econ.J.Emerg.Mark.

Economic Journal of Emerging Markets
Available at https://journal.uii.ac.id/jep

Monetary policy and sectoral stock market in Malaysia

Ka Shing Lee*, Zulkefly Abdul Karim

Faculty of Economics and Management, University Kebangsaan Malaysia (UKM), Malaysia
*Corresponding author: p134146@siswa.ukm.edu.my

Article Info

Article history:
Received 22 March 2025
Accepted 27 August 2025
Published 28 October 2025

JEL Classification Code:
E440, C580, E520

Author's email:
zak1972@ukm.edu.my

DOI:
10.20885/ejem.vol17.iss2.art4

Abstract

Purpose — This paper aims to examine the extent to which monetary policy shocks (domestic and international) will affect the movement of the sectoral stock index in Malaysia.

Methods — The monetary policy shocks are identified using a structural vector autoregressive (SVAR) model to examine the propagation of both monetary policy shocks (domestic and international) on sectoral stock prices.

Findings — The main results show that foreign monetary shocks significantly affect four sectoral stock indices: industrial and services, plantation, telecommunications, and utilities. In contrast, domestic monetary shocks impact three sectoral indices: industrial and services, technology, and utilities. However, domestic monetary policy shocks have a more dominant effect on the sectoral stock market in terms of magnitude.

Implication — The analysis results provide policymakers, particularly Bank Negara Malaysia (BNM), with valuable insights into which sectors are most sensitive to monetary policy fluctuations. Additionally, the results are beneficial for investors, as the analysis can help them manage their assets more effectively by identifying which sectoral stock indices are most affected by both domestic and international monetary policy shocks, and by guiding them to make more accurate investment decisions.

Originality — First, it focuses specifically on sectoral indices, examining all 13 in Malaysia through the lens of theory, with particular emphasis on impulse-response analysis, which explores the cumulative effects of both domestic and foreign monetary policy shocks on these indices. Secondly, the study employs a lagged analysis using the SVAR model, providing a theoretical framework for comparison with other relevant studies.

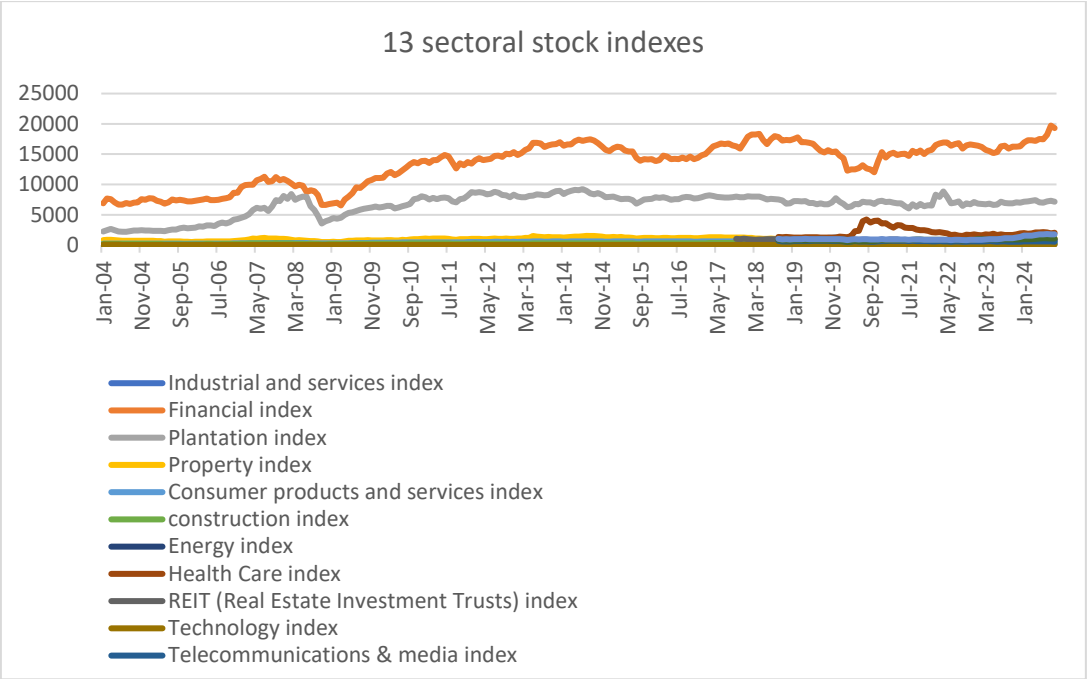
Keywords — Stock market, Malaysia, SVAR model, monetary policy shocks

Introduction

Stock markets are a fundamental component of the global financial system, serving as a barometer for economic health and providing investment opportunities. Monetary policy affects financial markets through several mechanisms, with changes in interest rates being one of the most direct and widely studied channels. For instance, Yusof and Majid (2007) and Kahler (2008) found that interest rates influence financial markets, contributing to stock market volatility. A tightening or loosening of monetary policy can alter investors' expectations of future economic conditions, thereby impacting asset prices, including stocks. In an increasingly globalised world, the effects of foreign monetary policy, particularly from major economies such as the United States, the

P ISSN 2086-3128 | E ISSN 2502-180X

Eurozone, and China, can also spill over into domestic markets, influencing stock prices across sectors, as examined by Ha (2021) and Chiang (2021).



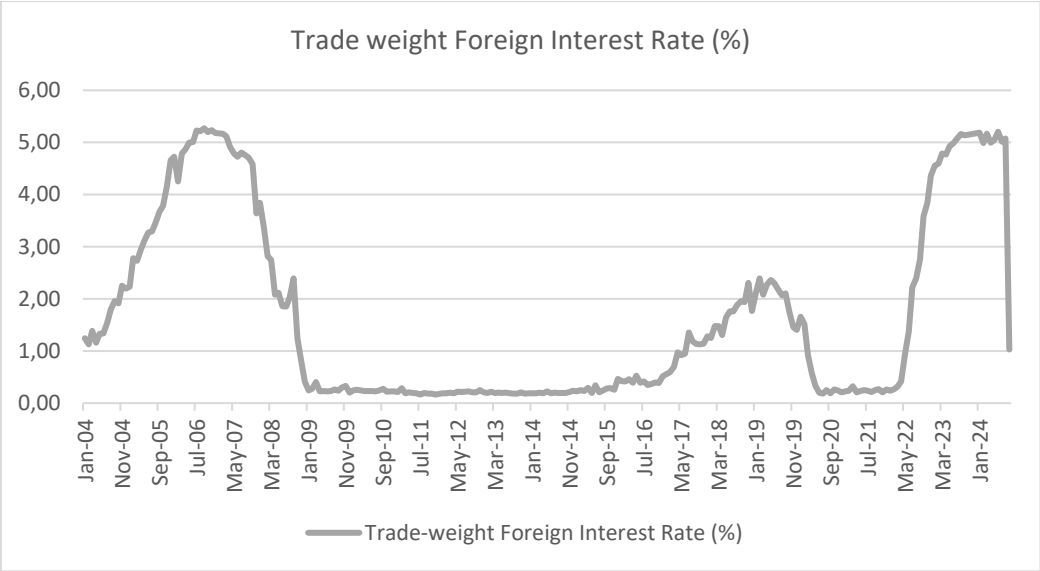
Source: Trading View, 2024.

Figure 1. Substitute Sectoral Index

A key issue in financial research is how monetary policy (both domestic and foreign) affects different sectors of the economy. While there is a substantial body of work examining the relationship between overall monetary policy and stock market performance, the sectoral implications of monetary policy shocks have received relatively less attention, especially in Malaysia. Understanding the impacts of monetary policy on aggregate stock markets and sectoral stock indices differently. Most studies focus on aggregate market indices, overlooking the differentiated responses of specific sectors to monetary policy changes. For instance, Yusof and Majid (2007) and Bhatti, Ziaei, and Raheman (2015) examined stock returns in the KLCI composite market and analysed the effects of various monetary policy measures. Stock market sectors, such as banking, industrials, and technology, often exhibit distinct responses to changes in monetary policy because of their differing exposure to interest rates, liquidity, and global demand. For example, the plantation sector shows varied reactions to interest rate changes, with Kadir and Tunggal (2015) noting the effect but without specifying sensitivity levels. The financial industry, however, is expected to be more sensitive to monetary policy, as changes in interest rates directly affect banking operations and liquidity (Law and Ibrahim, 2014). Conversely, sectors like healthcare tend to be less affected, as demand for medical services remains relatively stable regardless of interest rate fluctuations, according to theory. As shown in Figure 1, the banking (financial) sector tends to respond similarly to changes in domestic interest rates, as illustrated in Figure 2, due to its dependence on lending activities and the spread between deposit and loan rates.

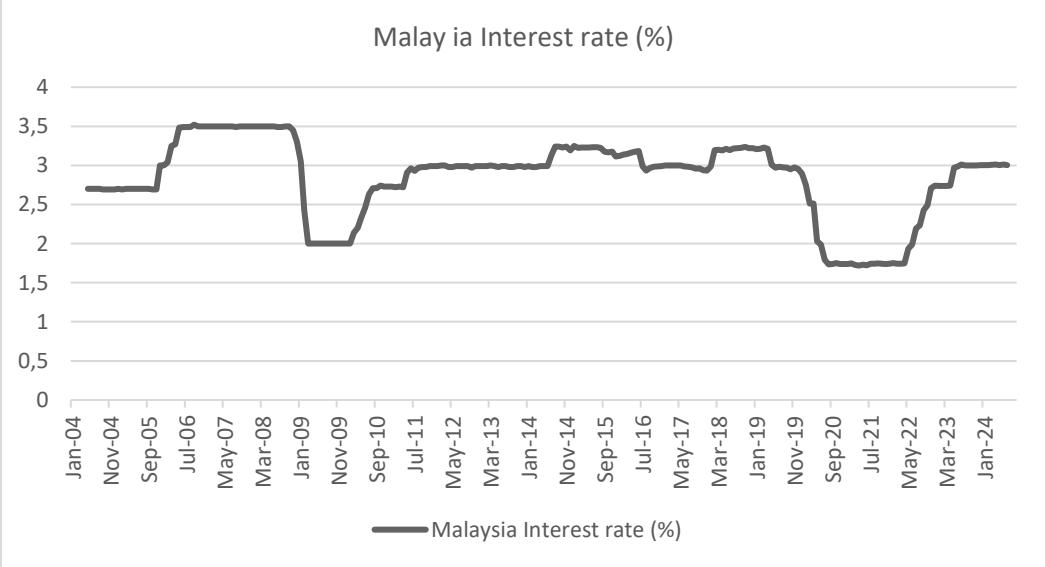
Foreign monetary policies, particularly those originating from major central banks like the US Federal Reserve (in combination with other countries as trade-weight according to Figure 2), have been the focus of past studies, such as Tchereni and Mpini (2020). As a small open economy, Malaysia is highly susceptible to changes in global financial conditions. When the Federal Reserve adjusts its monetary policy —whether through interest rate hikes, rate cuts, or quantitative easing —the effects are not confined to the US economy. It typically leads to higher asset returns in those countries, prompting investors to reallocate capital from emerging markets like Malaysia to seek better yields. This capital outflow results in the selling of Malaysian assets, including stocks, which in turn puts downward pressure on the stock market. As foreign investors sell Malaysian assets, the exchange rate

between the Malaysian ringgit (MYR) and the US dollar (USD) may weaken, leading to a depreciation of the ringgit. A weaker ringgit increases the cost of imports and can negatively affect companies reliant on foreign goods and services, creating additional selling pressure on stocks.



Source: St. Louis Fred database, 2024.

Figure 2. Trade-weight foreign interest rate (%)



Source: Trading Economics, 2024.

Figure 3. Malaysia interest rate (%)

Furthermore, domestic monetary policy is primarily determined by Bank Negara Malaysia (BNM); some past studies found some impacts on the stock market by influencing economic conditions through tools like the Overnight Policy Rate (OPR) by Yakob, Tzeng, and Jr. (2014) and Hadi, Yap, and Zainudin (2019). Adjustments in the OPR directly influence short-term interest rates, borrowing costs, and credit availability, which in turn drive investor expectations and market movements. For example, when BNM raised the OPR in 2022 following the COVID-19 crisis, as shown in Figure 3, the increased borrowing costs reduced consumer and business spending, leading to declines in stock prices, particularly in interest-sensitive sectors. Conversely, a rate cut reduces financing costs, stimulates consumption and investment, and can drive stock prices higher, particularly in industries that rely on affordable credit, such as banking, real estate, and construction.

Therefore, BNM's monetary policy changes trigger sector-specific responses that directly influence the direction and volatility of stock market performance.

Given this background, this study contributes to two dimensions. First, policymakers, particularly central bankers, should examine several sectoral stock indices to determine which ones are most affected by monetary policy, specifically interest rate changes. For investors constructing more sector-sensitive investment portfolios, this study helps policymakers understand the broader impacts of their decisions on specific sectors. It enriches the academic literature on monetary policy transmission mechanisms in Malaysia. Secondly, by focusing on Malaysia, this research provides valuable insights into how external and internal monetary policy shocks influence sector-specific market movements in developing economies, advancing the work of Zaidi, Abdul Karim, and Azman-Saini (2017) and Karim and Karim (2016), it demonstrates that sectors more closely aligned with monetary policy tools, particularly those whose performance trends correlate with interest rate movements, exhibit stronger and more predictable responses to policy shocks. In contrast, sectors less dependent on monetary policy appear to be driven more by intrinsic or non-policy-related factors. In short, the novelty of this study lies in its application of a robust methodology to a relatively unexplored area of research, with far-reaching implications for theory, policy, and practice. Additionally, previous studies on Malaysia, such as those by Bhatti et al. (2015) and Law and Ibrahim (2014), have mainly focused on the impact of monetary policy on broad stock market indices or macroeconomic aggregates, such as GDP and inflation, rather than on sector-specific impacts. This study not only contributes by examining sector-specific implications of monetary policy but also opens several potential research avenues that could advance understanding of how monetary policy affects different sectors, thereby improving both theoretical and practical knowledge, building on the past study by Zuo (2025).

The remainder of the paper is organised as follows. Section 2 reviews the theoretical background of monetary policy and the previous literature on the effects of domestic and foreign economic policy on sectoral stock markets. Section 3 explained the data and methodology, including a small-open-economy SVAR model. Section 4 presents the main empirical results and discussion; Section 5 concludes.

Monetary Policy on the Stock Market

The impact of monetary policy on stock prices can be explained by a model that connects present value and a company's financial condition, as highlighted by researchers such as Karim and Zaidi (2015) and Sova and Lukianenko (2020), as shown below:

$$SP_t = E_t\left[\sum_{j=1}^{K}\left(\frac{1}{1+R}\right)^J D_{t+j}\right] + E_t\left[\left(\frac{1}{1+R}^K\right) SP_{t+k}\right] \quad (1)$$

Where SP_t is the financial stock price at time t, E_t is the conditional expectation operator value based on the market information at time t, D_{t+j} is the present value of expected future dividends, R is the rate of return, and K is the investor's time horizon for an asset holder. The transversality condition implies that as the horizon K increases, the second term in the right-hand side vanishes to zero (by predicting no rational stock price bubbles) or can be written as:

$$\lim_{K\to\infty} E_t\left[\left(\frac{1}{1+R}\right)^K SP_{t+k}\right] = 0 \quad (2)$$

Therefore, a similar equation for the company's financial situation (discounted cash flow) is:

$$SP_t = E_t\left[\sum_{j=1}^{\infty}\left(\frac{1}{1+R}\right)^j D_{t+j}\right] \quad (3)$$

In equation (3), the relationship between monetary policy and sectoral stock returns varies depending on the type of stock. Monetary policy can directly affect stock prices by influencing companies' finances, which in turn can affect their budgets and lead to either an increase or a decrease in stock prices. Additionally, monetary policy has an indirect effect on stock prices, which is shaped by a company's strategic planning and decisions. When the central bank adjusts monetary

policy, companies assess how these changes affect their financial situation, which can influence stock prices, particularly in sectors like industrials and technology. This effect is often linked to changes in cash flow, as higher cash flow can lead to increased dividends in the future, thereby boosting stock prices and returns.

Transmission Mechanism of Monetary Policy Via the Asset Price Channel

Monetary policy has influenced the stock market, often leading to fluctuations in stock prices. This occurs through various channels, such as changes in interest rates, which affect the cost of borrowing and investment decisions. The transmission mechanism in this study concerns the effects of the stock market on investment, as described by Mishkin (2007). A higher stock price will bring high output; the following schematic can explain the transmission mechanism of monetary policy:

$$M \uparrow => SP_s \uparrow => Y \uparrow \quad (4)$$

Where M ↑ represents expansionary of monetary policy, bringing a rise in stock prices (SP_s ↑), which brings a rise in output (Y ↑).

Stock Market Response to Monetary Policy

Numerous studies have examined the impact of domestic monetary shocks on asset prices. For instance, in China, research has focused on sectoral asset prices, analysing several key sectors and their responses to various economic shocks and macroeconomic conditions, including monetary policy (Cai, Zhang, Han, and Liang, 2022). These studies suggest that different asset sectors respond to shocks in ways that depend on the specific economic environment. In Malaysia, Bhatti et al. (2015) examined the combined effects of monetary and fiscal policies on asset prices, finding that while international variables significantly influenced both policies, domestic variables had a lesser impact on asset prices. There is a stable relationship between monetary policy and sectoral output, with monetary policy exerting significant effects on both aggregate and sectoral outputs in terms of magnitude and direction (Ugwuanyi, Ezenekwe, & Kalu, 2021). In the United States, Paul (2020) discovered that house prices (property index) were less responsive to domestic monetary policy shocks when modelled using the SVAR approach, with this relationship varying over time. Similarly, an analysis by Suhaibu, Harvey, and Amidu (2017) indicated that domestic monetary policy influences stock markets through the interest rate channel in 12 African countries. In Nigeria, Nwakoby and Udoka (2016) found that domestic monetary policy shocks accounted for a significant portion of the impact on the stock market. In Indonesia, Handoyo, Jusoh, and Zaidi (2015) observed a positive short-term relationship between domestic monetary policy shocks announced by Bank Indonesia and the trend in the stock market. In Turkey, Baykara (2021) highlighted the critical role of domestic monetary policy on the stock market, particularly within the banking and financial sectors, where interest rates play a pivotal role in transmitting monetary policy effects to asset prices. Zuo (2025) demonstrates the direct impact of domestic monetary policy on the Malaysian stock market using a GARCH model. Moreover, Siang and Rayappan (2023) highlight that Malaysia's interest rate exerts a significant long-term influence on the performance of the domestic stock market.

The stock market is influenced not only by domestic variables but also by foreign variables. For example, US monetary policy has shown a significant and positive relationship with stock markets in Australia, the United Kingdom, and Canada, with specific periods of strong correlation. In contrast, New Zealand and South Korea exhibit an "S" shape, with both positive and negative relationships at different times (Ha, 2021). Studies have found that US monetary policy can affect global stock markets, although its influence is weaker on Latin American and Asian stock markets (Chiang, 2021). US monetary policy has a notably strong impact on European stock indices and similarly affects stock markets in Latin America and Asia (Kishor & Marfatia, 2013). The tightening of US monetary policy has been shown to boost the Irish stock market index (Bredin, Gavin, & O'Reilly, 2005). Additionally, UK monetary policy has been found to impact the German stock market, particularly the industrial sector (Bredin, Hyde, Nitzsche, & O'Reilly, 2009). US monetary policy also has a significant immediate effect on the Chinese financial market, surpassing its impact

on European countries and Japan (Yang, Chen, & Mo, 2023). Monetary policy adjustments by the United States and Germany have been shown to influence the Moroccan stock market, driven by the economic policies of these countries (Belcaid & El Ghini, 2019). In Bangladesh, US and European monetary policies have a weaker but significant impact on major export countries, while major import countries like China and India experience a more substantial effect (Uddin, Hoque, & Ali, 2020). However, the announcement of US monetary policy had an unexpectedly negligible effect on the Indian stock market, despite India's large open economy and its economic ties with the US (Prabu A, Bhattacharyya, & Ray, 2016).

The Identification of Monetary Policy Using the SVAR Model

The monetary shock can affect all parts, including asset prices, which will also be studied in this paper. There have been many studies on the SVAR model to examine how the impact of monetary policy affects all parts of the economy, and vice versa. For example, in the United States, Wolf (2020) studied the real effect of monetary policy shocks on the US economy. The data the author found appear consistent with the theory and past studies, indicating that monetary policy shocks have a contemporaneous effect on the variable, and vice versa. Bacchiocchi, Castelnuovo, and Fanelli (2018) concluded that their analysis results using non-recursive SVAR were similar to those of the previous study, which employed Cholesky-type recursive SVAR in the United States via the impulse response function.

Several studies have focused on the SVAR model in Malaysia, including works by Karim and Karim (2016), Zaidi et al. (2017), and Zaidi and Fisher (2010), all of which provide detailed explanations of the SVAR approach. Prior to these studies, various research papers employed the VAR model (Ibrahim, 2005; Tang, 2006). However, the studies mentioned above demonstrated that the SVAR model is better suited for analysing monetary policy and macroeconomic variables in Malaysia, yielding more accurate results than those obtained with models used in other countries. For instance, Nizamani, Abdul Karim, Zaidi, and Khalid (2016) applied the SVAR model in Pakistan, Adrangi, Baade, and Raffiee (2019) in the United Kingdom, and Anwar and Nguyen (2018) in Vietnam, all of which also highlighted the superiority of the SVAR model in terms of imposing restrictions and aligning with theoretical expectations.

Monetary Policy and Stock Return from A Malaysian Perspective

IBOR, the Interbank Overnight Rate, has been utilised in Malaysia since 2004, following an announcement by Bank Negara Malaysia. Previously known by another name, it is the focus of this paper, which examines IBOR's usage since 2004. IBOR in Malaysia was divided into two categories, of which Malaysia was the Islamic country: conventional interbank overnight rate (CIBOR) and Islamic interbank overnight rate (IIBOR). CIBOR was the interest rate that did not comply with the rules of Shariah. At the same time, IIBOR was the interest rate that complied with the rules of shariah, which prohibited collecting interest improperly, such as casinos and beer profits, as well as receiving a reasonable return from the investor and lending to others via a proper channel (Ramasamy & Zangeneh, 2013).

As a result of the past study, the reflection of Islamic finance, including IIBOR, was to assist conventional finance in carrying out operations in the money market and to examine its influence on macroeconomic variables (Mat Sari, Mirakhor, & Mohd Subky, 2017). Although the Islamic finance system has the IIBOR and other related instruments related to Islamic monetary policy, the conventional rate, such as the CIBOR, also directly influences the Islamic financial system, according to the analysis (Othman & Masih, 2014). There is a high correlation between CIBOR and IIBOR. Based on the analysis, the Islamic banking system is expected to face the same risk as the conventional banking system, except for Bank Negara Malaysia's implementation of a special monetary policy tailored to the Islamic banking system (Bacha, 2008). The Islamic interest rate was found to be in long-run equilibrium with the conventional interest rate, according to the analysis. This is particularly evident in Middle Eastern countries such as Saudi Arabia, the UAE, and Bahrain, which are considered among the more influential Islamic nations, especially in terms of their economies (Nechi & Smaoui, 2019).

According to explanations from past studies on conventional bank systems, including CIBOR, and Islamic banking systems, including IIBOR, IIBOR appears to be a tool that functions well in Islamic finance systems. However, their roles remain less competitive than those of the CIBOR in conventional finance systems. Therefore, this research paper uses CIBOR as the variable for the Malaysian interest rate, also known as the domestic interest rate (DINR).

While some studies in Malaysia, such as Bhatti et al. (2015), indicate that short-term interest rates have little effect on stock prices. Yusof and Majid (2007) highlight a clear impact of interest rates on the stock market. Research by Kahler (2008) also concluded a negative relationship between interest rates and the stock market in Malaysia. Specifically, Law and Ibrahim (2014) found that domestic interest rates have a more pronounced effect on sectors such as the output and consumer sectors in Malaysia. Additionally, according to Yakob et al. (2014), when interest rates decline, the stock market tends to benefit.

Given this backdrop, this study fills the literature gaps in the following ways. First, it focuses specifically on sectoral indices, examining all 13 in Malaysia through the lens of theory, with particular emphasis on impulse responses. This approach analyses the accumulated effects of both domestic and foreign monetary policy shocks on these sectoral indices. Secondly, the study employs a lagged analysis using the SVAR model, which provides a theoretical framework for comparison with other relevant studies. This methodology provides a comprehensive understanding of how domestic and foreign monetary policies impact sectoral stock indices over time.

Methods

Data and Description of Variables

For this research, the methodology combines variables as studied by Karim and Karim (2016) and Zaidi et al. (2017). In the exogenous block, oil prices are included, as they can influence global demand and supply, a relationship previously explored by Karim and Karim (2016), Zaidi, Abdul Karim, & Zaidon (2021), and Ali, Zaman, and Islam (2018). Foreign GDP representing the top five trading partners of Malaysia is incorporated using a trade-weighted calculation, as done by Zaidi et al. (2017) and Zaidi and Fisher (2010). Similarly, foreign interest rates for Malaysia's top five trading partners are calculated using trade weights, following the same methodology. The top five trading partners, based on the most recent data, are Singapore, Mainland China, the United States, Hong Kong, and Japan. Using data from these five countries is more appropriate for the SVAR model, as it allows for more comprehensive and moderate predictions. Relying on data from just one country would limit the model's ability to produce robust, accurate results. The second block consisted of Malaysia's GDP, Malaysia's inflation rate (%), Malaysia's interest rate (the conventional interbank overnight rate, CIBOR), the exchange rate (ER), and Malaysia's sectoral stock index, with 13 types of indices substituted as well.

The study utilised monthly data from January 2004 to September 2024. The domestic interest rate was converted from daily to monthly using EViews software, with data available from May 2004 to July 2024. Malaysian GDP and foreign GDP were also converted from annual to monthly data using EViews. The Malaysian GDP data spanned from January 2004 to January 2023 due to technical issues with frequency conversion. The sectoral stock index data, including the energy, healthcare, telecommunications, media, transportation, logistics, and utilities indices, was available from September 2018 to September 2024. The REIT index data covered October 2017 to September 2024, while the other data followed the exact timeframes as previously mentioned. Oil price data were sourced from the Macrotrends website; foreign output, foreign interest rates, and domestic output were obtained from the St. Louis Fed database; and domestic inflation and domestic interest rate data were sourced from Trading Economics. Exchange rate and Malaysia's sectoral stock index data were sourced from Trading View. The study focused on eight key variables: oil price (OP), foreign output (FO) representing the GDP of Malaysia's top five trading partners (in billion dollars), foreign interest rate (FIR) as trade weights of the top 5 countries, domestic output (DO) as Malaysia's GDP (in billion dollars), domestic inflation rate (DIF) representing Malaysia's inflation rate as a percentage, domestic interest rate (DINR) as the average conventional interbank overnight rate (CIBOR), exchange rate

(ER) between the USD and Malaysian Ringgit, and the Industrial & Services Index (ISI), which is the sectoral stock prices and substitutes with various sector indices in one model (financial, plantation, property, consumer & services, construction, technology, energy, healthcare, real estate investment trust, telecommunications and media, transportation and logistics, and utilities indices).

There will be three dummies, which are the financial crisis of 2008-2009 (Ali & Hatta, 2013; Bahaludin, Abdullah, Lam, & Lam, 2019; Lee, 2011), the COVID-19 pandemic from 2020 to 2023, June Hassan (2024), and currency pegging between the USD and the Malaysian ringgit from January 2004 until May 2007 (Pourkalbassi, Bahiraie, Hamzah, & Lee, 2011; Sidek & Yusoff, 2009). This research will consider exogenous variables to standardise and justify the impact of monetary shocks on sectoral stock indices, assigning values of 1 or 0 only during the crisis period, using the SVAR model. The long form of the variables will be the table below:

Table 1. Variables description

Variable	Notation	Description
Oil Price	OP	Oil Price in US dollars (USD) per barrel based on Karim and Karim (2016)
Foreign Output	FO	Malaysia's Top 5 trading partners trade-weight GDP (USD) based on Zaidi and Fisher (2010)
Foreign Interest Rate	FIR	Malaysia's Top 5 trading partners' trade-weight interest rate (%) based on Zaidi and Fisher (2010)
Domestic Output	DO	Malaysia GDP (million dollars)
Domestic Inflation Rate	DIF	Malaysia Interest Rate (%)
Domestic Interest Rate	DINR	Conventional interbank overnight rate (CIBOR) (Average)
Exchange rate	EX	Exchange rate between USD and Ringgit Malaysia
Industrial & Services index	ISI	Malaysia's industrial and services stock market performance
Financial index	FI	Malaysia's financial stock market performance
Plantation index	PLTI	Malaysia plantation stock market performance
Property index	PRPI	Malaysia's property stock market performance
Consumer & Services index	CSI	Malaysia's consumer and services stock market performance
Construction index	CSTI	Malaysia construction stock market performance
Technology index	TECHI	Malaysia's technology stock market performance
Energy index	ENI	Malaysia's energy stock market performance
Health Care Index	HCI	Malaysia's health care stock market performance
Real Estate Interest Trust (REIT) index	REITI	Malaysia real estate interest trust stock market performance
Telecommunication and Media Index	TMI	Malaysia's telecommunications and media stock market performance
Transportation and Logistics Index	TLI	Malaysia's transportation and logistics stock market performance
Utilities index	UTI	Malaysia's utilities stock market performance

Source: Author's work

All data were logarithmic except for foreign interest rate, domestic inflation rate, and domestic interest rate. The model below shows that there will be a study of about 1 model, which is substituted on the ISI with other sectoral stock indices as follows:

Table 2. Model variables

Variables	Model 1	Model 1	Model 1	Model 1	Model 1	Model 1	Model 1	Model 1	Model 1	Model 1	Model 1	Model 1	Model 1
1	OP	OP	OP	OP	OP	OP	OP	OP	OP	OP	OP	OP	OP
2	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
3	FIR	FIR	FIR	FIR	FIR	FIR	FIR	FIR	FIR	FIR	FIR	FIR	FIR
4	DY	DY	DY	DY	DY	DY	DY	DY	DY	DY	DY	DY	DY
5	DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF
6	DINR	DINR	DINR	DINR	DINR	DINR	DINR	DINR	DINR	DINR	DINR	DINR	DINR
7	ER	ER	ER	ER	ER	ER	ER	ER	ER	ER	ER	ER	ER
8	ISI	FI	PLTI	PRPI	CSI	CSTI	TECHI	ENI	HCI	REITI	TMI	TLI	UTI

Source: Author's work

Structure VAR Modelling

According to Karim and Karim (2016) and Zaidi (2011), the structural VAR equation is:

$$A_0 Y_t = C + (\Gamma_1 L + \Gamma_2 L^2 + \ldots + \Gamma_k L^k) Y_t + \varepsilon_t \quad (5)$$

Where A_0 is an inverse square matrix of the contemporaneous structural parameters, Y_t is a (8 x 1) matrix of economic variables or $[\Delta LOP \quad \Delta LFO \quad \Delta FFR \quad \Delta LDO \quad \Delta INF \quad \Delta INT \quad \Delta ER \quad \Delta ISI]'$, C is a vector of deterministic variables, Γ (L) is the k-th order of the matrix in the lag operator, L, and ε_t is the structural shocks which fulfil the conditions that E(ε_t)=0, E($\varepsilon_t \varepsilon_s'$)= I for all the t and s and E($\varepsilon_t \varepsilon_s'$)= otherwise. (/) means there are different asset price indices in the system based on different models.

Pre-multiplying equation (1) with A_0^{-1} acts as the reduced form of the VAR equation according to Zaidi (2011):

$$Y_t = A_0^{-1} C + A_0^{-1} (\Gamma_1 L + \Gamma_2 L^2 + \ldots + \Gamma_k L^k) Y_t + A_0^{-1} \varepsilon_t \quad (6)$$

Where the $e_t = A_0^{-1} \varepsilon_t$ is the reduced form from VAR, which satisfies the conditions that E(e_t) = 0 , E($e_t e_s$')=$\sum e$. $\sum e$ is the (nxn) symmetric, positive-definite matrix, which can also be estimated. Alternatively, they have another way to show the SVAR model in function form as below:

$$Y_t = f(Y_{1,t}, Y_{2,t}) \quad (7)$$
$$Y_{1,t} = f(OP_t, FO_t, FIR_t) \quad (8)$$
$$Y_{2,t} = f(DO_t, DIF_t, DIR_t, ER_t, ISI_t) \quad (9)$$

$Y_{1,t}$ represents the foreign block, and $Y_{2,t}$ represents the domestic block. Additionally, ISI_t is replaced by sectoral index variables in the SVAR model.

Identification Scheme

According to the SVAR order condition, the system is suitable for both identified and over-identified cases, requiring K(K-1)/2 = 8 (7)/2 = 28 zero restrictions on the contemporaneous matrix A_0. Since the contemporaneous matrix A_0 has 35 zero restrictions; the model was over-identified. In matrix form, it is shown in Equation (10).

Since Malaysia was a small-open country, the foreign variables did not respond contemporaneously or with a lag to the domestic variables as well (Karim & Karim, 2016). More specifically, the oil price was the structural disturbance. A straightforward way to understand this is that oil prices act as demand and supply shocks on other variables or exogenous variables. Malaysia's top 5 trading partners, including the United States, can affect oil prices. The United States was the world's largest economy, and oil was its most significant import.

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ a_{21} & 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ a_{31} & a_{32} & 1 & 0 & 0 & 0 & 0 & 0 \\ a_{41} & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ a_{51} & 0 & 0 & a_{54} & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & a_{64} & a_{65} & 1 & 0 & 0 \\ a_{71} & a_{72} & a_{73} & a_{74} & a_{75} & a_{76} & 1 & 0 \\ a_{81} & a_{82} & a_{83} & a_{84} & a_{85} & a_{86} & a_{87} & 1 \end{bmatrix} \begin{bmatrix} \mu_t^{\Delta LOP} \\ \mu_t^{\Delta LFO} \\ \mu_t^{\Delta FIR} \\ \mu_t^{\Delta LDO} \\ \mu_t^{\Delta INF} \\ \mu_t^{\Delta INT} \\ \mu_t^{\Delta LER} \\ \mu_t^{\Delta LISI} \end{bmatrix} = \begin{bmatrix} \varepsilon_t^{\Delta LOP} \\ \varepsilon_t^{\Delta LFO} \\ \varepsilon_t^{\Delta FIR} \\ \varepsilon_t^{\Delta LDO} \\ \varepsilon_t^{\Delta INF} \\ \varepsilon_t^{\Delta INT} \\ \varepsilon_t^{\Delta LER} \\ \varepsilon_t^{\Delta LISI} \end{bmatrix} \quad (10)$$

The foreign output does not have an immediate effect on domestic output, domestic inflation rate, and domestic interest rate, as domestic output and domestic inflation are slow-moving; regarding the monthly data, domestic output is a slow-moving variable, while, when measured annually or quarterly, it will be affected by foreign output and foreign interest rate. Foreign interest rates are also affected by dynamics like those affecting foreign output, as mentioned above. For exchange rate and industrial & services indices, substitute other sectoral stock indices that react contemporaneously to the foreign output shock and foreign interest rate shock, indicating that policymakers must ensure low and stable inflation, adjusting immediately

when necessary (Zaidi et al., 2017). Regarding oil prices, no effect was observed on domestic interest rates, as Bank Negara Malaysia (BNM) does not base its interest rate decisions on oil price fluctuations, as confirmed in BNM's 2024 announcement. The exchange rate affects the interest rate contemporaneously, with studies providing evidence to resolve the "exchange rate puzzle" (Zaidi et al., 2017). The exchange rate also impacts the ISI index and other sectoral stock indices, reflecting their fast-moving nature. Lastly, the Industrial & Services Index (ISI) and other substitute indices are assumed to influence both foreign and domestic variables, as these indices are fast-moving variables in the system.

As the foreign block is assumed to be the block exogenous, the zero restrictions on the lag values of the domestic variables are represented in equation (11) of the lag coefficient. The vector C contains the intercept and dummy variables. The oil price, foreign output, and foreign interest rate equations are only functions of the lag of oil price, lag of foreign output, and lag of foreign interest rate, and all the domestic variables prefer to lag foreign and domestic variables as well, based on the study from Zaidi et al. (2017).

$$\begin{bmatrix} \Delta LOP_t \\ \Delta LFO_t \\ \Delta FIR_t \\ \Delta LDO_t \\ \Delta INF_t \\ \Delta INT_t \\ \Delta LER_t \\ \Delta LISI_t \end{bmatrix} = \begin{bmatrix} \delta_{11} & \delta_{12} & \delta_{13} \\ \delta_{21} & \delta_{22} & \delta_{23} \\ \delta_{31} & \delta_{32} & \delta_{33} \\ \delta_{41} & \delta_{42} & \delta_{43} \\ \delta_{51} & \delta_{52} & \delta_{53} \\ \delta_{61} & \delta_{62} & \delta_{63} \\ \delta_{71} & \delta_{72} & \delta_{73} \\ \delta_{81} & \delta_{82} & \delta_{83} \end{bmatrix} \begin{bmatrix} dfc \\ dcv \\ dpg \end{bmatrix} + \begin{bmatrix} a_{11} & a_{12} & a_{13} & 0 & 0 & 0 & 0 & 0 \\ a_{21} & a_{22} & a_{23} & 0 & 0 & 0 & 0 & 0 \\ a_{31} & a_{32} & a_{33} & 0 & 0 & 0 & 0 & 0 \\ a_{41} & a_{42} & a_{43} & a_{44} & a_{45} & a_{46} & a_{47} & a_{48} \\ a_{51} & a_{52} & a_{53} & a_{54} & a_{55} & a_{56} & a_{57} & a_{58} \\ a_{61} & a_{62} & a_{63} & a_{64} & a_{65} & a_{66} & a_{67} & a_{68} \\ a_{71} & a_{72} & a_{73} & a_{74} & a_{75} & a_{76} & a_{77} & a_{78} \\ a_{81} & a_{82} & a_{83} & a_{84} & a_{85} & a_{86} & a_{87} & a_{88} \end{bmatrix} \begin{bmatrix} \Delta LOP_{t-i} \\ \Delta LFO_{t-i} \\ \Delta FIR_{t-i} \\ \Delta LDO_{t-i} \\ \Delta INF_{t-i} \\ \Delta INT_{t-i} \\ \Delta LER_{t-i} \\ \Delta LISI_{t-i} \end{bmatrix} + \begin{bmatrix} e_{1t} \\ e_{2t} \\ e_{3t} \\ e_{4t} \\ e_{5t} \\ e_{6t} \\ e_{7t} \\ e_{8t} \end{bmatrix} \quad (11)$$

Equation (11) indicates that domestic variables do not affect all the foreign variables as initially assumed. Specifically, Malaysia, as a small open economy, lacks the power to influence the global economy. Although the lag identification was approximately 2, and the econometric tools provided analysis, it appears this study was based on monthly data. Using 8–12 lags in the analysis can help ensure an accurate estimate of the monetary policy shock for the sectoral index in Malaysia. Still, it seems this study used six sectoral stock indices that lacked data, so it is considered to have two lags.

Results and Discussion

The optimal lag for the model was determined using Akaike's Information Criterion (AIC) and Schwarz Criterion (SC). Table 3 shows that SC selected one lag, while AIC chose two lags for model 1 based on the sectoral stock indices. The study employs two lags for further analysis, as this approach is deemed more suitable and accurate according to the AIC criterion. The stability test showed that all eigenvalues were less than 1, confirming the stability of the SVAR model.

Table 3. Results of the lag length test on Model 1

Number of Lags	AIC	SC
0	-27.341	-26.841
1	-31.254	-29.754*
2	-31.396*	-28.896
3	-31.317	-27.817
4	-31.203	-26.703
5	-31.156	-25.655

*Represents optimal lag length
Source: Author's work

Stationarity Test

Table 4 presents the results of the unit root test for the variables. According to the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests, all variables were stationary at the first difference, or I(1), except for DIF ($p<0.01$), OP and ENI ($p<0.05$), and PLTI, DINR, and TMI ($p<0.10$), which were stationary at the level form, or I(0). The Foreign Output (FO) variable

appeared to be I(2), but for model selection, it was decided to substitute between the ISI index and the sectoral index. These stationarity tests follow methodologies used by Zaidi et al. (2021), Ali et al. (2018), and Karim and Karim (2016).

Furthermore, the unit root test (KPSS) indicates that when the test is significant, the data are non-stationary, and when it is not, the data are stationary. Based on the results as shown in Table 5, most of the variables are stationary, except for OP (oil price), FO (foreign output), DO (domestic output), CSI (consumer and services index), TECHI (technology index), and UTI (utilities index).

Table 4. Result of the unit root tests

Augmented Dickey-Fuller				Phillips-Perron			
Level-Form		1st Difference		Level-Form		1st Difference	
OP	-3.164**	DOP	-13.805***	OP	-2.904**	DOP	-13.834***
FO	1.323	DFO	-2.309	FO	2.269	DFO	-2.382
FIR	-2.126	DFIR	-4.332***	FIR	-1.909	DFIR	-10.851***
DO	-2.298	DDO	-3.164**	DO	-3.146**	DDO	-3.348**
DIF	-4.861***	DDIF	-8.069***	DIF	-3.689***	DDIF	-10.103***
DINR	-2.682*	DDINR	-6.437***	DINR	-2.274	DDINR	-10.219***
EX	-1.155	DEX	-14.865***	EX	-1.212	DEX	-14.864***
ISI	-1.333	DISI	-13.712***	ISI	-1.431	DISI	-13.709***
FI	-1.597	DFI	-14.336***	FI	-1.678	DFI	-14.398***
PLTI	-2.808*	DPLTI	-14.377***	PLTI	-2.766*	DPLTI	-14.456***
PRPI	-1.573	DPRPI	-14.072***	PRPI	-1.954	DPRPI	-14.292***
CSI	-2.012	DCSI	-16.303***	CSI	-2.027	DCSI	-16.303***
CSTI	-1.831	DCSI	-14.632***	CSTI	-2.199	DCSI	-14.734***
TECHI	-1.057	DTECH	-13.712***	TECHI	-1.246	DTECH	-13.737***
ENI	-3.063**	DENI	-8.631***	ENI	-3.089**	DENI	-8.755***
HCI	-1.446	DHCI	-7.494***	HCI	-1.763	DHCI	-7.729***
REITI	-2.054	DREITI	-9.941***	REITI	-1.959	DREITI	-10.322***
TMI	-2.893*	DTMI	-7.822***	TMI	-2.968**	DTMI	-9.587***
TLI	-1.304	DTLI	-8.819***	TLI	-1.166	DTLI	-9.393***
UTI	-1.060	DUTI	-8.428***	UTI	-1.117	DUTI	-8.425***

Notes: *, ** and *** represent significance at 10%,5% and 1% levels, respectively.
Source: Author's work

Table 5. Result of the unit root tests (KPSS test)

Kwiatkowski–Phillips–Schmidt–Shin test (KPSS test)			
Level-Form		1st Difference	
OP	0.657**	DOP	0.103***
FO	1.892***	DFO	0.504**
FIR	0.299	DFIR	0.075
DO	1.726***	DDO	0.532**
DIF	0.186	DDIF	0.023
DINR	0.320	DDINR	0.057
EX	1.171***	DEX	0.152
ISI	1.810***	DISI	0.035
FI	1.503***	DFI	0.085
PLTI	0.995***	DPLTI	0.316
PRPI	0.373*	DPRPI	0.067
CSI	1.633***	DCSI	0.451*
CSTI	0.316	DCSI	0.068
TECHI	0.971***	DTECH	0.456*
ENI	0.327	DENI	0.076
HCI	0.207	DHCI	0.117
REITI	1.026***	DREITI	0.243
TMI	0.536**	DTMI	0.047
TLI	0.857***	DTLI	0.230
UTI	0.472**	DUTI	0.715**

Notes: *, ** and *** represent significance at 10%,5% and 1% levels, respectively.
Source: Author's work

To ensure consistency in the unit root testing of the variables, the HEGY test is used, as it is appropriate for monthly data and helps determine whether differencing is required. Based on the results shown in Table 6, most variables need to be differenced, except for FIR (Foreign Interest Rate), CSI (Consumer and Services Index), and TLI (Telecommunication Index). Therefore, differencing is necessary for the remaining variables. Based on the four types of differencing unit root tests, all variables needed to be differenced, as this stabilised the data and made it easier to observe and interpret.

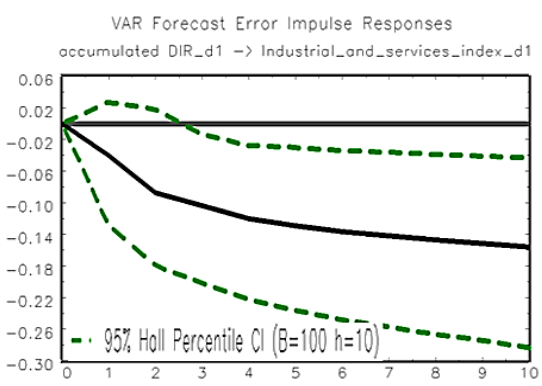
Table 6. Result of the seasonal unit root tests (HEGY test)

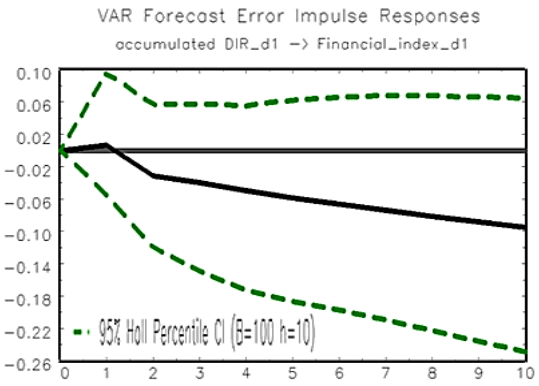
HEGY Test	
	π
OP	-0.133
FO	-1.609
FIR	-2.868***
DO	-1.495
DIF	-1.228
DINR	-0.370
EX	-0.090
ISI	-1.098
FI	-1.075
PLTI	-1.002
PRPI	-0.225
CSI	-1.632*
CSTI	-0.270
TECHI	-0.034
ENI	-0.237
HCI	-1.005
REITI	-0.426
TMI	-1.285
TLI	-3.494***
UTI	-0.786

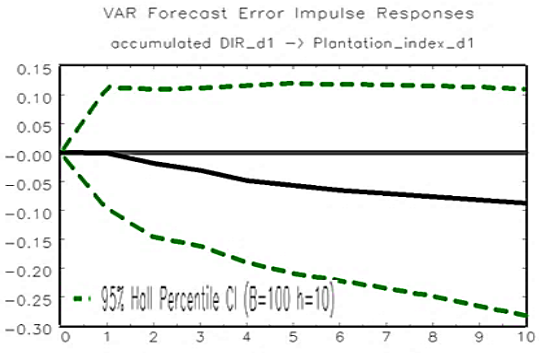
Notes: *, ** and*** represent significance at 10%,5% and 1% levels, respectively.
Source: Author's work

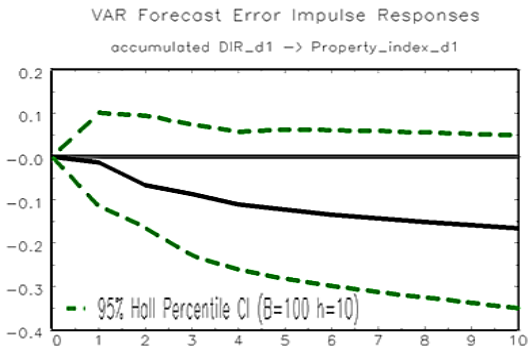
Impulse Response Function

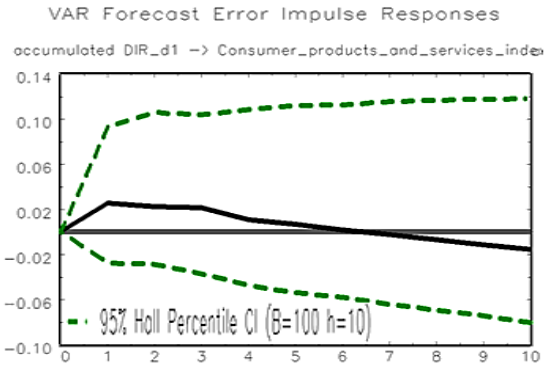
Here, the focus is on how domestic and foreign monetary policies influence 13 sectoral indices. The analysis will use a 2-lag identification to assess the impact of time lags on monetary variables. These confidence bands are constructed using Hall's bootstrap method, based on a 95% confidence interval. Using 8-12 lags in the impulse response could cause issues with six sectoral indices due to limited data and insufficient coefficients. JMULTI software will be used to compute the impulse response as follows.

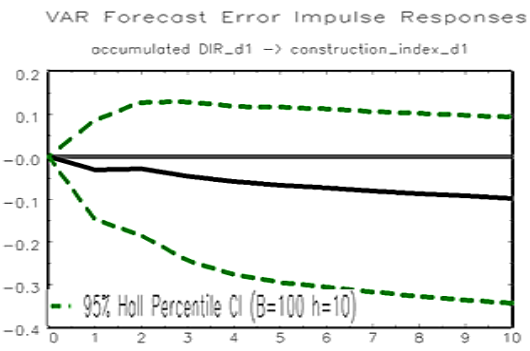


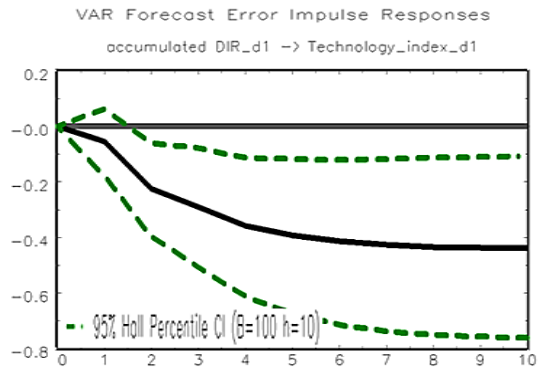


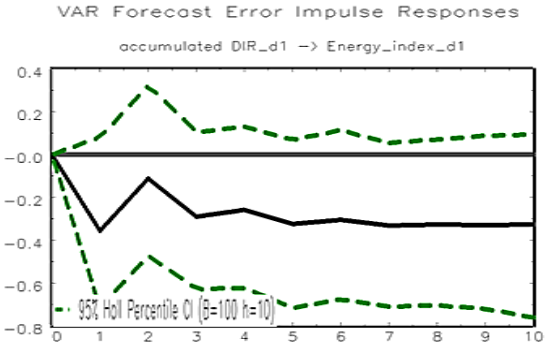

VAR Forecast Error Impulse Responses
accumulated DIR_d1 -> Plantation_index_d1
95% Hall Percentile CI (B=100 h=10)

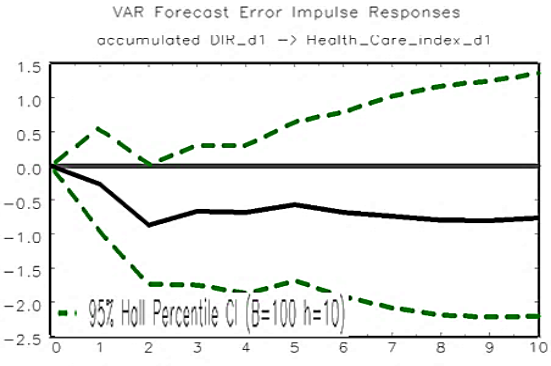

VAR Forecast Error Impulse Responses
accumulated DIR_d1 -> Property_index_d1
95% Hall Percentile CI (B=100 h=10)

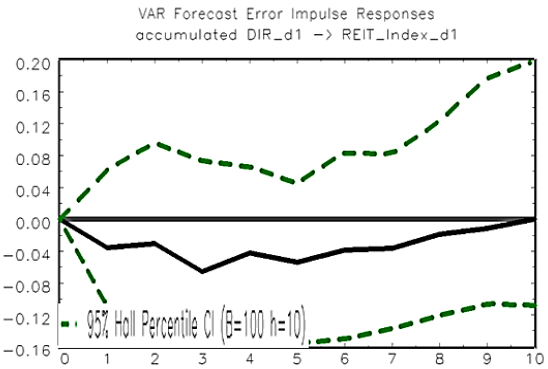

VAR Forecast Error Impulse Responses
accumulated DIR_d1 -> Consumer_products_and_services_index
95% Hall Percentile CI (B=100 h=10)

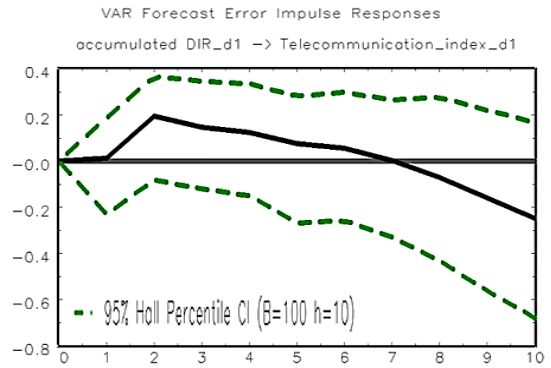

VAR Forecast Error Impulse Responses
accumulated DIR_d1 -> construction_index_d1
95% Hall Percentile CI (B=100 h=10)

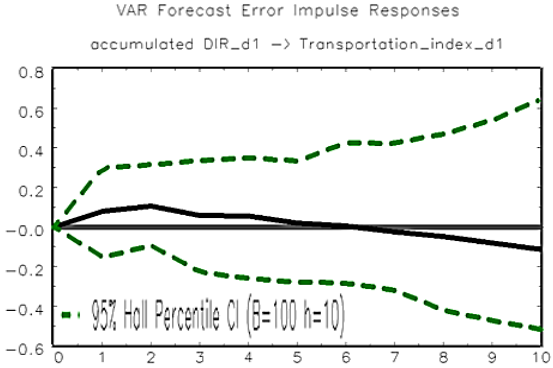

VAR Forecast Error Impulse Responses
accumulated DIR_d1 -> Technology_index_d1
95% Hall Percentile CI (B=100 h=10)

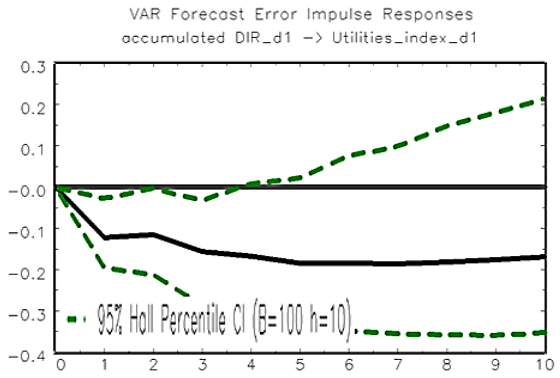

VAR Forecast Error Impulse Responses
accumulated DIR_d1 -> Energy_index_d1
95% Hall Percentile CI (B=100 h=10)


VAR Forecast Error Impulse Responses
accumulated DIR_d1 -> Health_Care_index_d1
95% Hall Percentile CI (B=100 h=10)


VAR Forecast Error Impulse Responses
accumulated DIR_d1 -> REIT_Index_d1
95% Hall Percentile CI (B=100 h=10)


VAR Forecast Error Impulse Responses
accumulated DIR_d1 -> Telecommunication_index_d1
95% Hall Percentile CI (B=100 h=10)


VAR Forecast Error Impulse Responses
accumulated DIR_d1 -> Transportation_index_d1
95% Hall Percentile CI (B=100 h=10)



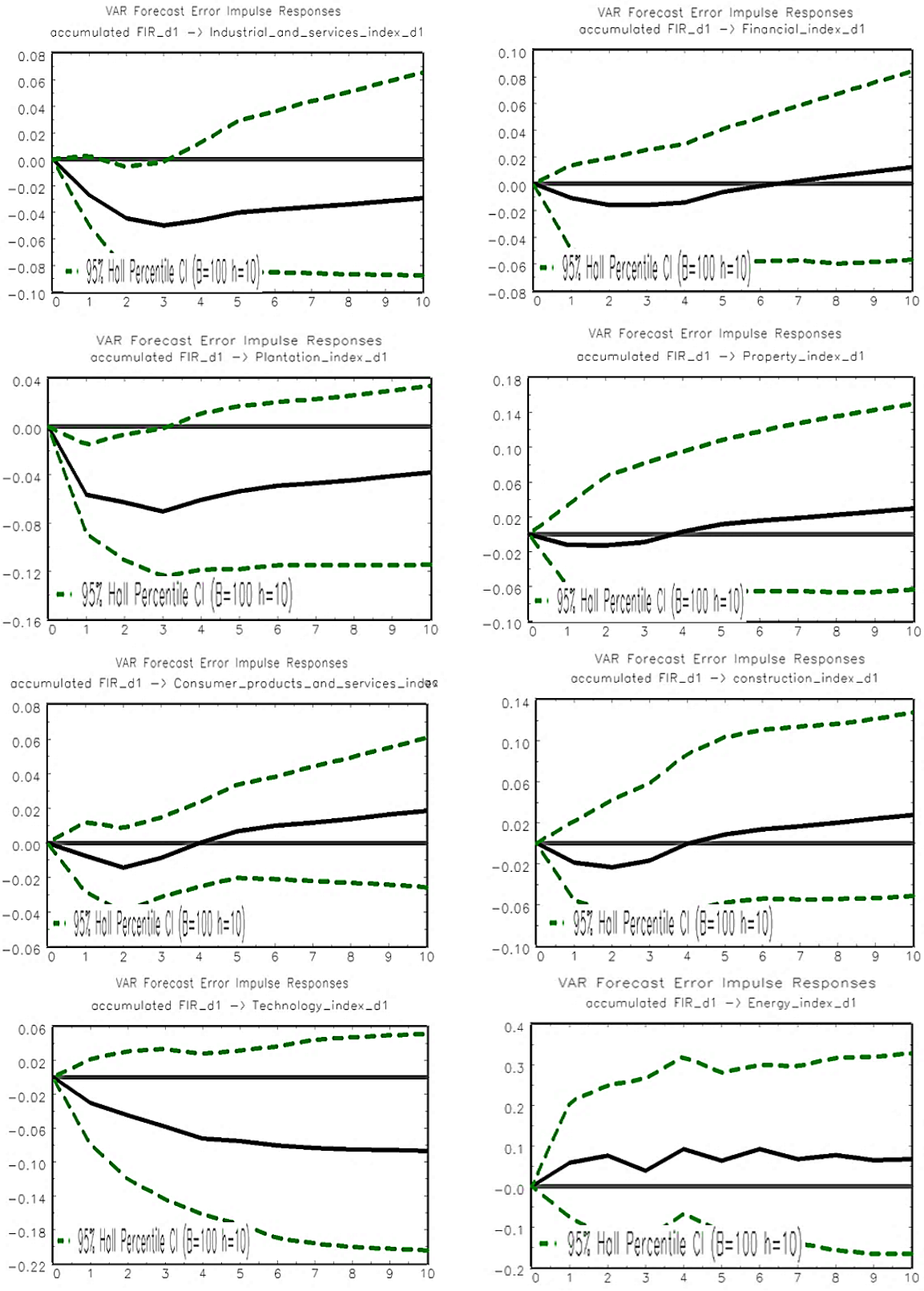
Source: Author's work

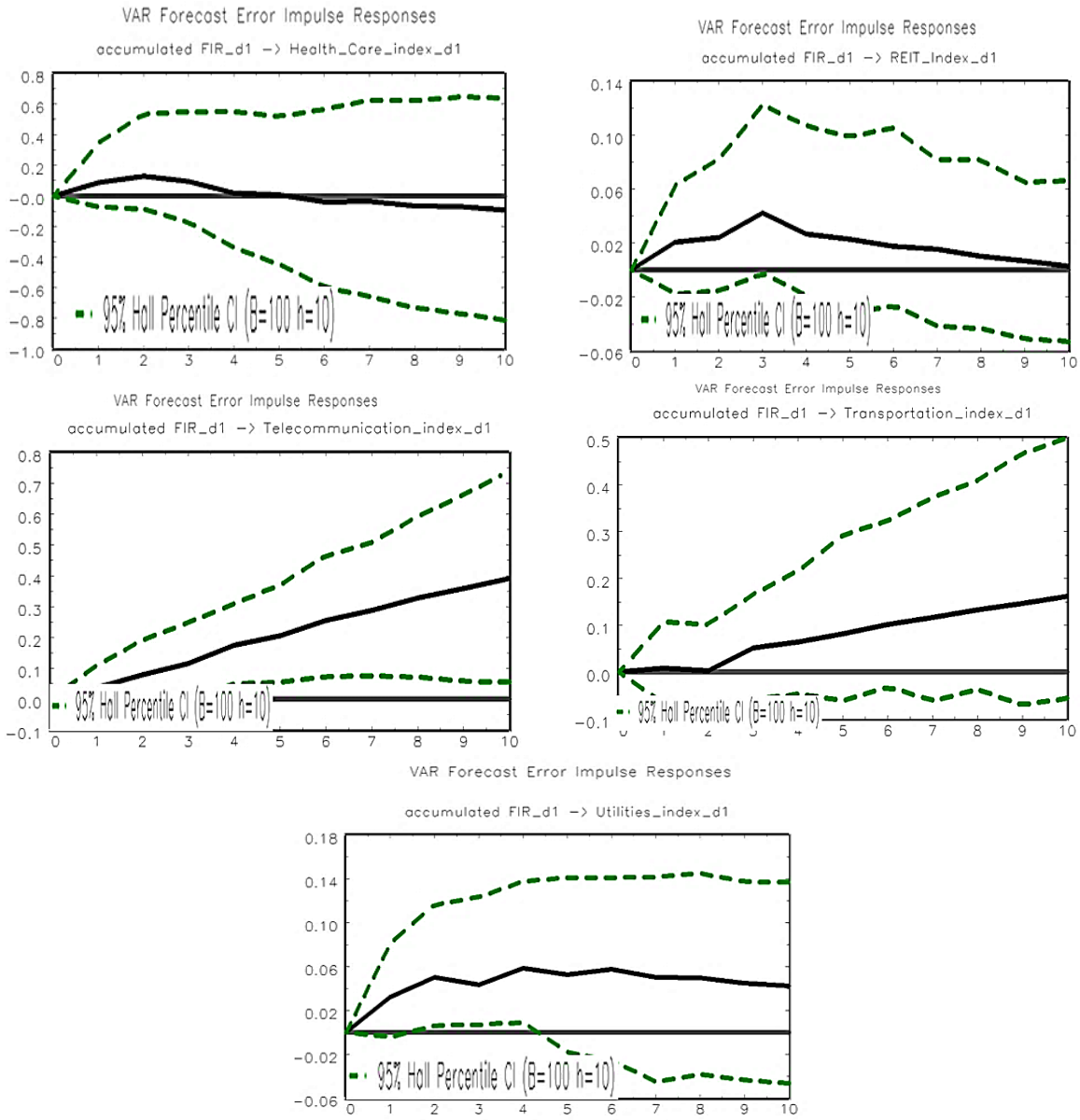
Figure 4. Result of domestic monetary shocks from the sectoral stock index

Figure 4 shows sectoral stock index responses to changes in the domestic interest rate (DINR) in Malaysia, revealing varied sectoral impacts. The Industrial & Services Index showed a significant negative response from months 3-10 (-0.09% in month 2), while the Financial Index had a minor, insignificant negative response (-0.03% in month 2) with limited impact from interest rate. The Plantation Index exhibited a negative but insignificant response (-0.01% in month 2), influenced more by factors beyond interest rate. The Property Index also showed a negative, insignificant relationship (-0.06% in month 2), likely driven by external factors, while the Consumer & Services Index had a mixed response, positive from months 1-5 and negative from months 6-10, though insignificant (0.03% in month 1). The Construction Index experienced a negative but insignificant response (-0.003% in month 2), and the Technology Index showed a negative response across all periods, significant from months 3-10 (-0.4% in month 4). The Energy Index had a negative but insignificant response (-0.3% in month 6), primarily driven by foreign energy supply, while the Healthcare Index showed a negative but insignificant response (-0.5% in month 5), possibly influenced by COVID-19. The REIT Index initially showed a negative, insignificant response (-0.02% in month 8), while the Telecommunication Media Index showed a mixed, insignificant response (0.02% in month 2). The Transportation & Logistics Index had a positive response from months 1-6, followed by a negative response from months 6-10, remaining insignificant overall (0.1% in month 2), and the Utilities Index experienced a negative significant response initially but became insignificant later (-0.1% in month 2). In summary, sectoral responses to domestic interest rates varied, with some sectors showing significant impacts and others influenced more by other factors.

Figure 5 presents the accumulated responses of various Malaysian sectoral stock indices to foreign interest rate changes from the country's top 5 trading partners. The Industrial & Services Index showed a negative relationship with foreign interest rates, significant only in month 2 (-0.05% in month 3), suggesting a limited impact. The Financial Index showed a negative response in months 1-6, then turned positive in months 7-10, but remained insignificant (-0.01% in month 4). The Plantation Index had a significant negative response in months 1-3 (-0.07% in month 3), becoming insignificant thereafter. The Property Index showed a negative but insignificant response throughout the period (-0.01% in month 1), indicating limited influence. The Consumer & Services Index displayed a negative response from months 1-4, followed by a positive response, but remained insignificant (-0.015% in month 2). The Construction Index exhibited a similar pattern, characterised by negative responses in the first four months and positive responses in the subsequent six months, yet it remained insignificant (-0.02% in month 2). The Technology Index showed a consistent negative response throughout, with insignificant results (-0.07% in month 4). The Energy Index exhibited a positive but insignificant relationship across the entire period (0.05% in month 7), reflecting limited influence from foreign interest rates. The Healthcare Index showed a positive response from months 1-5, followed by a negative response from months 5-10, with insignificant results (-0.02% in month 2). The REIT Index followed a positive trend throughout the period. However, it remained insignificant (-0.04% in month 3), while the Telecommunication

Media Index showed an insignificant positive relationship in months 1-3 and a significant positive relationship in months 3-10 (0.2% in month 4). The Transportation & Logistics Index exhibited a consistent positive relationship with foreign interest rates (0.05% in month 3), though it was insignificant, likely influenced by external production and border constraints. The Utilities Index showed a positive relationship throughout, with significant responses in months 2-4 (0.06% in month 6), but became insignificant thereafter, possibly due to energy-sector dynamics and temporary shocks. These results were analysed using the same method as described by Zaidi (2011), Karim and Karim (2016), Zaidi et al. (2017), and Zaidi and Fisher (2010).





Source: Author's work

Figure 5. Result of foreign monetary policy on the sectoral stock index

The findings suggest that foreign monetary policy, particularly changes in the US Federal Funds Rate (FFR), exerts a greater and more immediate influence on Malaysia's sectoral stock markets than domestic monetary policy. This reflects Malaysia's high degree of financial openness and integration into global capital markets, where shifts in major economies' monetary policy are quickly transmitted through cross-border investment flows, interest rate differentials, and exchange rate movements. Firstly, US interest rate changes often drive global stock index movements by influencing international liquidity, credit conditions, and investor risk appetite, as referred to by Kahler (2008). These global dynamics affect capital allocation decisions across countries, leading to synchronised stock market reactions, especially in emerging markets. Secondly, investors routinely compare the relative profitability and risk-adjusted returns of different countries' stock markets. A rise in US interest rates increases the opportunity cost of investing in foreign equities, prompting reallocation of funds back to the US and exerting downward pressure on Malaysian stock prices. This capital rebalancing disproportionately impacts sectors with high foreign ownership or those sensitive to external financing. Thirdly, as a small open economy, Malaysia's equity markets are highly susceptible to shifts in global sentiment and international monetary policy. Even when domestic policy remains unchanged, a tightening of foreign policy can indirectly affect

Malaysia through exchange rate depreciation, higher import costs, and reduced investment confidence. This highlights the theoretical importance of incorporating both external and internal monetary drivers in models of financial market behaviour in emerging markets. Overall, these findings challenge the traditional view that domestic monetary policy is the primary driver of financial conditions and instead support a more nuanced framework that acknowledges the dominant role of global financial cycles in shaping sectoral market dynamics, as referred to by Ha (2021) and Ali and Hatta (2013).

Robustness Checking

In the SVAR model, the 13 substitution stock indices were ordered correctly, revealing that the Malaysian substitution sectoral index is more influenced by foreign monetary shocks and by significant terms, and is more affected by domestic monetary shocks in terms of magnitude. This sectoral index is considered block exogenous, as confirmed by the checks, and this result forms the basis of the analysis.

Focusing on the Impulse Response Function (IRF), the analysis shows that four sectoral stock indices are significantly affected by foreign monetary policy shocks in both the short- and long-term. In contrast, three sectoral stock indices are significantly influenced by domestic monetary policy shocks over both periods. The model's structural identification aligns with theoretical expectations, though it remains unstable across circumstances, with the indices primarily affected by their own shocks. Thus, there is a heterogeneous effect of monetary policy shocks have heterogeneous effects across sectoral stock indices.

Conclusion

This paper examined the impact of domestic and foreign monetary policy shocks on the sectoral stock prices in Malaysia using a Structural Vector Autoregression (SVAR) approach. The analysis revealed how changes in domestic and international monetary policies (interest rate) adjustments by the Bank Negara Malaysia (BNM) and major foreign central banks like the US Federal Reserve, and the combination of other countries interest rates, which were top 5 trading partners with Malaysia, including the United States, affect the stock price of different sectors in the Malaysian economy. Specifically, the Impulse Response Function (IRF) shows the impact of domestic and foreign monetary policy shocks on sectoral stock indices in Malaysia.

The main findings of the study can be divided into two aspects. First, the results reveal that four sector indices — industrial and services, plantation, telecommunications, and utilities — were significantly affected by foreign interest rates. This analysis shows that the results are consistent with the theory for specific sectoral stock indices, while other factors may influence others. Second, regarding domestic interest rates, three sector indices — industrial and services, technology, and utilities — showed significant responses. As mentioned above, it is like the explanation provided by foreign monetary policy.

The finding suggests that Bank Negara Malaysia (BNM) should be aware of the varying impacts of foreign and domestic interest rates on different sectors. As sectors such as industrial, services, plantation, telecommunications, and utilities are significantly influenced by foreign interest rates, BNM should consider these sectors when formulating monetary policies. Moreover, recognising the significant impact of domestic interest rates on sectors such as industry, services, technology, and utilities can help BNM craft targeted policy interventions to mitigate adverse effects on vulnerable sectors. BNM, as usual, cannot implement decisions that affect all sectoral stock indices equally. While theory suggests that monetary policy should significantly impact all sectors, creating a complete transmission channel via the stock market, this study highlights three sectoral indices most influenced by monetary policy. However, these sectors may not be of primary concern to BNM. For investors, the results highlight the importance of closely monitoring both foreign and domestic interest rate changes to adjust their portfolios strategically. Sectors such as telecommunications, technology, and utilities respond significantly to domestic interest rate shifts,

offering opportunities for investors to align their investments with sectoral trends driven by monetary policy changes.

Nevertheless, the study has some limitations. Firstly, the study's findings are limited to the specific period analysed. The impact of monetary policy shocks may vary under different economic conditions or in future periods, and the role of interest rates can differ across different time periods in Malaysia. While the research does not delve deeply into the causal relationships, particularly in terms of how potential feedback effects between sectoral stock indices and domestic or international monetary policies, in this study focus on how domestic and international monetary policy directly affects sectoral stock indices; there have been studies that include other monetary policy effects on several sectoral stock indices that can refer to Bhatti et al. (2015).

Acknowledgement
The authors are grateful to the anonymous reviewers for their valuable comments and insights, which helped improve the quality of the paper.

Author contributions
Both authors contributed equally to the conception, design, analysis, and interpretation of the study, as well as to the drafting and revision of the manuscript. Both authors have read and approved the final version of the manuscript.

Use of AI tools declaration
The authors used AI tools (ChatGPT and DeepSeek) for language editing and grammar review of this manuscript. The authors are fully responsible for the content of this publication.

Conflict of interest
The authors declare no conflicts of interest.

References

Adrangi, B., Baade, H., & Raffiee, K. (2019). Dynamic responses of the economy to monetary shocks in the United Kingdom. *Review of Economics & Finance*, *15*(None), 31–45.

Ali, G., Zaman, K., & Islam, T. (2018). Macroeconomic shocks and Malaysian tourism industry: evidence from a structural VAR Model. *Iranian Economic Review*, *22*(4), 1113–1137. https://doi.org/10.22059/ier.2018.67878

Ali, I., & Hatta, Z. A. (2013). 2008 Economic crisis in Malaysia: Implications on the economy, society and safety nets. *International Journal of Business and Technopreneurship*, *3*(2), 261–276. Retrieved from https://www.researchgate.net/publication/328303185_2008_Economics_Crisis_in_Malaysia_Implications_on_the_Economy_Society_and_Safety_Nets/citation/download

Anwar, S., & Nguyen, L. P. (2018). Channels of monetary policy transmission in Vietnam. *Journal of Policy Modelling*, *40*(4), 709–729. https://doi.org/https://doi.org/10.1016/j.jpolmod.2018.02.004

Bacchiocchi, E., Castelnuovo, E., & Fanelli, L. (2018). Gimme a break! Identification and estimation of the macroeconomic effects of monetary policy shocks in the United States. *Macroeconomic Dynamics*, *22*(6), 1613–1651. https://doi.org/DOI: 10.1017/S1365100516000833

Bacha, O. I. (2008). The Islamic interbank money market and a dual banking system: the Malaysian experience. *International Journal of Islamic and Middle Eastern Finance and Management*, *1*(3), 210–226. https://doi.org/10.1108/17538390810901140

Bahaludin, H., Abdullah, M., Lam, W. S., & Lam, W. H. (2019). The investigation on the impact of the financial crisis on Bursa Malaysia using the minimal spanning tree. *Mathematics and*

Statistics, *7*, 1–8. https://doi.org/10.13189/ms.2019.070701

Baykara, S. (2021). The impact of monetary policy decisions on stock prices: An event study. *Pressacademia*, *13*(1), 52–56. https://doi.org/10.17261/pressacademia.2021.1422

Belcaid, K., & El Ghini, A. (2019). U.S., European, and Chinese economic policy uncertainty and Moroccan stock market volatility. *The Journal of Economic Asymmetries*, *20*, e00128. https://doi.org/10.1016/j.jeca.2019.e00128

Bhatti, G. A., Ziaei, S., & Raheman, A. (2015). Monetary and Fiscal policies variables interaction with stock returns in Malaysia. *Science International*, *27*, 449–465.

Bredin, D., Gavin, C., & O'Reilly, G. (2005). US monetary policy announcements and Irish stock market volatility. *Applied Financial Economics*, *15*(17), 1243–1250. https://doi.org/10.1080/09603100500390836

Bredin, D., Hyde, S., Nitzsche, D., & O'Reilly, G. (2009). European monetary policy surprises: the aggregate and sectoral stock market response. *International Journal of Finance & Economics*, *14*(2), 156–171. https://doi.org/10.1002/ijfe.341

Cai, D., Zhang, T., Han, K., & Liang, J. (2022). Economic policy uncertainty shocks and Chinese stock market volatility: an empirical analysis with SVAR. *Complexity*, *2022*(1), 6944318. https://doi.org/10.1155/2022/6944318

Chiang, T. C. (2021). Spillovers of U.S. market volatility and monetary policy uncertainty to global stock markets. *The North American Journal of Economics and Finance*, *58*, 101523. https://doi.org/10.1016/j.najef.2021.101523

Ha, J. (2021). Financial market spillovers of U.S. monetary policy shocks. *Review of International Economics*, *29*(5), 1221–1274. https://doi.org/10.1111/roie.12542

Hadi, A. R. A., Yap, E. T. H., & Zainudin, Z. (2019). The effects of the relative strength of USD and overnight policy rate on the performance of the Malaysian stock market – evidence from 1980 through 2015. *Contemporary Economics*, *13*(2), 175–186. https://doi.org/10.5709/ce.1897-9254.306

Handoyo, R. D., Jusoh, M., & Zaidi, M. A. S. (2015). Impact of monetary policy and fiscal policy on Indonesian stock market. *Expert Journal of Economics*, *3*(2), 113–126. Retrieved from https://economics.expertjournals.com/23597704-312/

Hassan, H. (2024, January). Covid-19 long way from going away. Retrieved from https://www.themalaysianinsight.com/s/478677

Ibrahim, M. H. (2005). Sectoral effects of monetary policy: evidence from Malaysia. *Asian Economic Journal*, *19*(1), 83–102. https://doi.org/10.1111/j.1467-8381.2005.00205.x

Kadir, S. U. S. A., & Tunggal, N. Z. (2015). The impact of macroeconomic variables toward agricultural productivity in Malaysia. *South East Asia Journal of Contemporary Business, Economics and Law*, *8*(3), 21–30. Retrieved from https://seajbel.com/wp-content/uploads/2016/01/Econ-13.pdf

Kahler, L. (2008). The interaction between the stock market, monetary policy and inflation in both Singapore and Malaysia. *Empirical Economic Bulletin*, *1*(1), 1–15. Retrieved from https://digitalcommons.bryant.edu/cgi/viewcontent.cgi?article=1009&context=eeb

Karim, Z. A., & Karim, B. A. (2016). Foreign shocks, monetary policy, and macroeconomic fluctuations in a small open economy: a SVAR study of Malaysia. *Acta Universitatis Danubius. Œconomica*, *12*(3), 45–67. Retrieved from https://journals.univ-danubius.ro/index.php/oeconomica/article/view/3449/3274

Kishor, N. K., & Marfatia, H. A. (2013). The time-varying response of foreign stock markets to U.S. monetary policy surprises: Evidence from the Federal funds futures market. *Journal of*

International Financial Markets, Institutions and Money, *24*, 1–24. https://doi.org/10.1016/j.intfin.2012.11.004

Law, S. H., & Ibrahim, M. H. (2014). The response of sectoral returns to macroeconomic shocks in the Malaysian stock market. *Malaysian Journal of Economic Studies*, *51*(2), 183–199. Retrieved from https://mjes.um.edu.my/index.php/MJES/article/view/2826/1001

Lee, M. L. S. (2011). The 2008-09 global financial crisis: services to the rescue in Malaysia. *Asian Journal of Business and Accounting*, *4*(1). Retrieved from https://ajba.um.edu.my/index.php/AJBA/article/view/2631

Mat Sari, N., Mirakhor, A., & Mohd Subky, K. H. (2017). Replacing the interest rate mechanism in monetary policy: case of Malaysia. In *the 1st international colloquium on Islamic Banking and Islamic Finance*.

Mishkin, F. S. (2007). The transmission mechanism and the role of asset prices in monetary policy. In *Monetary Policy Strategy* (pp. 59–74). The MIT Press. Retrieved from https://direct.mit.edu/books/book/3276/chapter/101642/The-Transmission-Mechanism-and-the-Role-of-Asset

Nechi, S., & Smaoui, H. E. (2019). Interbank offered rates in Islamic countries: Is the Islamic benchmark different from the conventional benchmarks? *The Quarterly Review of Economics and Finance*, *74*, 75–84. https://doi.org/10.1016/j.qref.2018.05.003

Nizamani, A. R., Abdul Karim, Z., Zaidi, M. A. S., & Khalid, N. (2016). The effectiveness of monetary policy in a small open economy: an SVAR study for Pakistan. *International Journal of Economics and Management*, *10*, 279–296.

Nwakoby, C., & Alajekwu Udoka, B. (2016). Effect of monetary policy on Nigerian stock market performance. *International Journal of Scientific Research and Management (IJSRM)*. Retrieved from https://www.ijsrm.net/index.php/ijsrm/article/view/548

Othman, A. N., & Masih, M. (2014). *The different impact of conventional interest rates on Islamic stock market, Islamic banking and Islamic insurance: evidence from Malaysia*. Retrieved from https://ideas.repec.org/p/pra/mprapa/63285.html

Paul, P. (2020). The Time-varying effect of monetary policy on asset prices. *The Review of Economics and Statistics*, *102*(4), 690–704. https://doi.org/10.1162/rest_a_00840

Pourkalbassi, F., Bahiraie, A., Hamzah, A., & Lee, C. (2011). On the exchange rates behaviour by PPP: a test on Malaysian Ringgit and US Dollar. *African Journal of Business Management*, *5*(17), 7350–7356. https://doi.org/10.5897/AJBM10.1645

Prabu A, E., Bhattacharyya, I., & Ray, P. (2016). Is the stock market impervious to monetary policy announcements: Evidence from emerging India. *International Review of Economics & Finance*, *46*, 166–179. https://doi.org/10.1016/j.iref.2016.09.007

Ramasamy, R., & Zangeneh, M. F. (2013). Convergence of Islamic and conventional interbank rates. *Global Journal of Management and Business Research: C Finance*, *13*(3), 1–8. Retrieved from https://journalofbusiness.org/index.php/GJMBR/article/download/940/851/0

Siang, C. C., & Rayappan, P. (2023). A study on the effect of macroeconomic factors on stock market performance in Malaysia. *E3S Web of Conferences*, *389*, 9037. https://doi.org/10.1051/e3sconf/202338909037

Sidek, N. Z. M., & Yusoff, M. (2009). An empirical analysis of the Malaysian ringgit equilibrium exchange rate and misalignment. *Global Economy and Finance Journal*, *2*(2), 104–126. Retrieved from http://wbiaus.org/GEFJ.html

Sova, Y., & Lukianenko, I. (2020, September). Theoretical and empirical analysis of the relationship between monetary policy and stock market indices. In *2020 10th International Conference on Advanced Computer Information Technologies (ACIT)* (pp. 708-711). IEEE.

Suhaibu, I., Harvey, S. K., & Amidu, M. (2017). The impact of monetary policy on stock market performance: Evidence from twelve (12) African countries. *Research in International Business and Finance*, *42*, 1372–1382. https://doi.org/10.1016/j.ribaf.2017.07.075

Tang, H. C. (2006). *The relative importance of monetary policy transmission channels in Malaysia*. Centre for Applied Macroeconomic Analysis, Crawford School of Public Policy, The Australian National University.

Tchereni, B., & Mpini, S. (2020). Monetary policy shocks and stock market volatility in emerging markets. *Risk Governance and Control: Financial Markets and Institutions*, *10*(3), 50–61. https://doi.org/10.22495/rgcv10i3p4

Uddin, M. A., Hoque, M. E., & Ali, M. H. (2020). International economic policy uncertainty and stock market returns of Bangladesh: evidence from linear and nonlinear model. *Quantitative Finance and Economics*, *4*(2), 236–251. https://doi.org/10.3934/QFE.2020011

Ugwuanyi, S. C., Ezenekwe, U. R., & Kalu, C. U. (2021). A structural VAR analysis of the differential effects of monetary policy shocks on some Nigerian sectoral outputs. *Socialscientia: Journal of Social Sciences and Humanities*, *6*(3). Retrieved from https://journals.aphriapub.com/index.php/SS/article/view/1362

Wolf, C. K. (2020). SVAR (Mis)identification and the real effects of monetary policy shocks. *American Economic Journal: Macroeconomics*, *12*(4), 1–32. https://doi.org/10.1257/mac.20180328

Yakob, N. A., Tzeng, Y. Y., & Jr., C. B. M. (2014). Overnight policy rate changes and stock market reactions –the experience in Malaysia. *Accounting and Finance Research*, *3*(3), p1. https://doi.org/10.5430/afr.v3n3p1

Yang, C., Chen, L., & Mo, B. (2023). The spillover effect of international monetary policy on China's financial market. *Quantitative Finance and Economics*, *7*(4), 508–537. https://doi.org/10.3934/QFE.2023026

Yusof, R. M., & Majid, M. S. A. (2007). Macroeconomic variables and stock returns in Malaysia: an application of the ARDL bound testing approach. *Savings and Development*, *31*(4), 449–469. Retrieved from https://savingsanddevelopment.scholasticahq.com/article/83917-macroeconomic-variables-and-stock-returns-in-malaysia-an-application-of-the-ardl-bound-testing-approach

Zaidi, M. A. S. (2011). *Structural vector autoregressive analysis of monetary policy in Malaysia*. UNSW Sydney. https://doi.org/10.26190/UNSWORKS/23444

Zaidi, M. A. S., Abdul Karim, Z., & Azman-Saini, W. N. W. (2017). Relative price effects of monetary policy shock in Malaysia: a SVAR study. *International Journal of Business and Society*, *17*(1). https://doi.org/10.33736/ijbs.512.2016

Zaidi, M. A. S., Abdul Karim, Z., & Zaidon, N. A. (2021). External and internal shocks and the movement of palm oil price: SVAR evidence from Malaysia. *Economies*, *10*(1), 7. https://doi.org/10.3390/economies10010007

Zaidi, M. A. S., & Fisher, L. A. (2010). Monetary policy and foreign shocks: a SVAR analysis for Malaysia. *Korea and the World Economy*, *11*(3), 527–550.

Zuo, J. (2025). Impact of monetary policy on the stock market volatility: a GARCH-MIDAS approach in the Malaysian economy. *Cogent Economics & Finance*, *13*(1), 2459183. https://doi.org/10.1080/23322039.2025.2459183