



## DUAL-MARKET BOND DYNAMICS: COMPARATIVE ANALYSIS OF ISLAMIC AND CONVENTIONAL SHORT- AND LONG-TERM INSTRUMENTS AMID SHIFTING MONETARY POLICIES

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### ABSTRACT

This study examines the yield dynamics of Malaysian sovereign bonds, focusing on short-and long-term instruments and the distinctions between conventional bonds and Islamic bonds (sukuk) during the dynamic period from 2019 to 2025. This study first analyzes how short- and long-term bond yields respond to monetary policy changes and then compares the yield behaviors of bonds and sukuk across these categories. This study employed a combination of descriptive statistics, regression analysis, and t-tests on data from Malaysian sovereign debt instruments. The findings reveal that both short-term bonds and sukuk are highly sensitive to interest rate changes, reflecting their role as immediate indicators of monetary policy shifts. In contrast, long-term bonds are more responsive to inflation expectations and GDP growth, which aligns with theories of long-term yield dynamics. Notably, no statistically significant difference in returns is observed between conventional bonds and sukuk, suggesting similar performance in terms of yields. Amid dynamic market conditions, evolving policies, and the unique challenges faced by emerging economies such as Malaysia, particularly those with dual-market structures, these findings validate existing theories and provide critical insights for policymakers, investors, and researchers, especially in the context of dual-bond markets during periods of market volatility.

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### 1. INTRODUCTION

The dynamics of sovereign bond yields play an integral role in shaping financial markets and guiding monetary policies. Sovereign bonds are not only essential tools for fiscal management, but also reflect the overall economic environment, making them a critical area of study during periods of economic volatility. For instance, sovereign bond yields are often used as benchmarks for pricing other financial instruments, influencing borrowing costs for governments and corporations

(Langedijk et al., 2018). In Malaysia, the dual-bond market structure, comprising conventional and Islamic bonds (sukuk), adds a unique dimension to the analysis of bond yield behavior, particularly in response to economic and policy changes. This dual structure, in which conventional bonds coexist with Shariah-compliant sukuk, provides a distinctive setting for exploring how different bond types respond to monetary policies and macroeconomic shocks (Billah et al., 2024). Emerging economies such as Malaysia is characterized by its well-established and globally prominent Islamic finance ecosystem, which has issued over 60% of the world's sukuk as of 2023 (Islamic Financial Services Board, 2023). The dual-bond market, in which conventional and Islamic instruments operate concurrently under a unified regulatory framework, provides an exemplary setting for examining yield behaviors in a mature and integrated financial system.

The period from 2019 to 2025 witnessed significant economic disruptions including the global COVID-19 pandemic, inflationary pressure, and evolving central bank policies. These events necessitated unprecedented monetary interventions by the central bank of Malaysia which is Bank Negara Malaysia (BNM), including aggressive rate adjustments and subsequent monetary tightening to combat inflationary threats. Such policy shifts have profound implications for bond yields as they directly influence investor expectations and market liquidity (Mo & Subrahmanyam, 2024). While existing research has extensively explored bond yield behaviors in developed and single markets, studies focusing on emerging economies, such as Malaysia, which offers a dual-bond market, remain limited, particularly within this volatile period. For example, much of the literature on bond yield dynamics has focused on the United States and European markets (Adom-Dankwa et al., 2024; Long et al., 2022; Monge, 2024; Umar et al., 2024), leaving a gap in understanding how these dynamics play out in emerging economies with unique financial structures. Moreover, the distinct characteristics of sukuk governed by the Shariah principles further highlight gaps in understanding their comparative dynamics with conventional instruments under varying economic conditions. Sukuk, with their asset-backed nature and prohibition of interest-based transactions, may exhibit different yield behaviors than conventional bonds, particularly in response to inflation and economic growth (Almaskati, 2022). However, this possibility remains uncertain and warrants further empirical investigation to confirm these potential differences.

This study is guided by two key objectives: first, to analyze the sensitivities of short- and long-term bond yields to monetary policy changes; and second, to compare the yield behavior of conventional bonds and sukuk, particularly in terms of their responses to economic and policy dynamics. To address these objectives, this study seeks to answer two research questions. (1) How do short- and long-term Malaysian sovereign bond yields react to monetary policy changes? (2) What are the differences in yield behavior between conventional bonds and sukuk across the short- and long-term categories? This study contributes significantly to the literature by providing an in-depth analysis of bond market dynamics in the context of an emerging economy with a dual-bond structure. These findings are expected to advance existing theories, inform policymakers on effective monetary interventions, guide investors in optimizing portfolio strategies, and enrich academic discourse in sovereign debt and Islamic finance. Given the rapidly evolving global economic landscape, increasing market volatility, and the growing prominence of Islamic finance, this research is both organ and significant. It addresses critical gaps in understanding how dual-bond

markets, particularly sukuk and conventional bonds, respond to dynamic economic conditions, thereby providing timely insights for stakeholders navigating these complexities.

## **2. LITERATURE REVIEW**

Existing studies on sovereign bonds have long emphasized their dual role in fiscal management and monetary policy implementation. Sovereign bonds are critical instruments for governments to finance deficits, manage public debt, and transmit monetary policy signals (Adom-Dankwa et al., 2024). In Malaysia, the coexistence of conventional bonds and sukuk introduces a unique layer of complexity into the bond market. This duality necessitates a closer examination of their market dynamics, particularly under varying macroeconomic conditions, to understand how these instruments interact and respond to economic shocks, policy changes, and investor behavior. Existing research has established that short-term bonds are highly sensitive to immediate changes in interest rates, such as those resulting from monetary easing or tightening (Paweenawat, 2017). In contrast, long-term bonds are more influenced by broader economic expectations, including inflation and growth prospects (Rao & Kumar, 2023). However, these findings primarily stem from studies conducted in developed and single markets, which operate under institutional, regulatory, and economic frameworks that differ significantly from those in emerging economies. This creates a significant gap in the literature, as the behavior of bond markets in emerging economies such as Malaysia remains underexplored. Thus, while existing theories on bond yield behavior are well-established, their applicability to emerging economies with dual-bond markets, such as Malaysia, remains underexplored. This study is urgent and significant as it validates these theories in unique contexts, providing actionable insights for policymakers and investors while addressing critical gaps in understanding how dual-bond markets operate under distinct economic and regulatory frameworks

The growing body of research on Islamic finance highlights the structural and operational differences in sukuk, which are rooted in Shariah principles, such as the prohibition of interest (*riba*) and speculative activities (*gharar*) (Ariff et al., 2017). Sukuk are asset-backed instruments that inherently differentiate them from conventional bonds, which are typically debt-based (Qadri et al., 2024). Although these structural differences have been well-documented, there is a notable lack of robust comparative analyses examining the performance of sukuk relative to conventional bonds, particularly under fluctuating macroeconomic conditions. For instance, studies such as Delle Foglie and Keshminder (2024), Qadri et al. (2024) and Ulfah et al. (2024) have explored the ethical and structural dimensions of sukuk but have largely focused on their issuance mechanisms and investor appeal rather than their comparative performance in dual-bond markets. This gap is especially pronounced in the context of emerging markets, where dual-bond systems such as Malaysia present a unique opportunity to explore the interplay between conventional and Islamic financial instruments.

Theoretically, monetary policy rates such as the Overnight Policy Rate (OPR) predominantly influence short-term bond yields (Mayo, 2020). For instance, during periods of monetary tightening, short-term yields tend to rise sharply, as investors demand higher returns to compensate for increased borrowing costs (Paweenawat, 2017). Conversely, long-term bond yields are more closely tied to inflation

expectations and economic growth projections, reflecting investor confidence in the economy's future trajectory (Rao & Kumar, 2023). In the case of sukuk, studies have shown that sukuk yields are often marginally higher than those of conventional bonds, primarily due to liquidity risks and the niche demand from ethical investors (Mo & Subrahmanyam, 2024). However, during stable economic periods, the yield behavior of sukuk aligns closely with that of conventional bonds, suggesting a degree of convergence in their market dynamics. Notably, during economic shocks or periods of heightened uncertainty, sukuk demonstrated greater resilience, which was attributed to their ethical investment principles and asset-backed nature (Alhammedi et al., 2024). This resilience underscores the potential role of sukuk as a stabilizing force in dual-bond markets. While existing theories and research provide a foundational understanding, further study to validate these findings within a specific, contemporary context is needed. Economic conditions and market dynamics evolve over time, and re-examining established relationships ensures that the current understanding remains relevant and accurate.

Despite these insights, the existing literature on sukuk remains disproportionately focused on developed markets, with limited attention paid to their role and performance in emerging economies. Studies such as those by Naifar (2018) have examined the risk and return characteristics of sukuk in Gulf Cooperation Council (GCC) countries but have not extended their analysis to Southeast Asian markets like Malaysia. This oversight is particularly significant given Malaysia's position as one of the most developed Islamic financial markets globally. Furthermore, while the role of Islamic finance in global markets has been expanding, a comparative analysis of sukuk and conventional bonds under varying economic conditions remains underexplored. Previous studies have primarily focused on either conventional bonds or sukuk in isolation, with few attempts to systematically compare their performance in a dual-bond market setting (Almaskati, 2022; Ariff et al., 2017). This lack of comparative analysis limits our understanding of how these instruments interact and respond to macroeconomic shocks, particularly in emerging markets where dual-bond systems are increasingly prevalent.

Building on the foundational theories of yield curve behavior and monetary policy transmission (Bodie et al., 2021; Mayo, 2020), this study seeks to extend these frameworks to the unique context of Malaysia's dual-bond market, in which conventional bonds and sukuk coexist. By addressing critical gaps in the literature, this research provides an in-depth analysis of bond market dynamics within an emerging economy characterized by a dual-bond structure. The findings advance existing theories, offer policymakers insights for designing effective monetary interventions, assist investors in optimizing portfolio strategies, and enrich academic discourse in sovereign debt and Islamic finance.

### **3. METHODOLOGY**

This study adopts an empirical approach to analyze yield data for Malaysian sovereign bonds from 2019 to 2025. The dataset, sourced from the Bank Negara Malaysia (BNM) and Department of Statistics Malaysia (DOSM), includes yields for both conventional bonds and sukuk across short- and long-term instruments. Specifically, the dataset comprised the following:

- a) Short-term Instruments: Treasury Bills (T-Bills, conventional) and Bank Negara Monetary Notes-Islamic (BNMN-I, Islamic).

- b) Long-Term Instruments: Malaysian Government Securities (MGS, conventional) and Government Investment Issues (GII, Islamic) for 3-year and 10-year maturities.

The analysis is structured around two primary dimensions: comparing the yield behaviors of short- and long-term bonds and examining the differences between conventional bonds and sukuk. This dual focus allows for a comprehensive understanding of the bond market dynamics in Malaysia, particularly under varying macroeconomic conditions.

### **3.1 Data collection and preparation**

The dataset was obtained directly from official publications and databases of BNM and DOSM, ensuring input accuracy and reliability. The raw data included the annual yields for each bond category from 2019 to 2025. The data used in this study represent yearly observations captured using January rates for bond yields, as provided by the central bank, along with the monetary policy variables such as OPR, Consumer Price Index (CPI), and GDP growth rates based on the first quarter of each year as in studies by Dimic et al. (2019). This approach ensures consistency in capturing the initial economic conditions at the start of the year, providing a clear snapshot of how bond yields respond to macroeconomic and policy variables. Motivated by data availability and focusing on annual data, particularly January rates, this study provides a consistent and stable basis for analyzing dynamic trends and initial economic conditions at the commencement of each year. This approach minimizes seasonal fluctuations and avoids year-end distortions, thereby offering a robust foundation for examining dynamic environments (Dawid & Arifovic, 2021). This methodological choice aligns with the central bank's data publication practices and ensures temporal consistency across all variables, making it well suited for this study's objectives.

### **3.2 Descriptive statistics**

Descriptive statistics were calculated to summarize the yield behaviors for each bond category. Key metrics included the mean and standard deviation, which were analyzed using Microsoft Excel. These statistics provide insights into the central tendencies and variability of yields, highlighting the differences between short- and long-term bonds as well as between conventional and Islamic instruments.

The use of descriptive statistics is well-supported in the literature as a foundational step in empirical research. It provides a comprehensive framework for understanding the basic characteristics of data, such as central tendency, dispersion, and distribution, which remain essential tools for econometric analysis (Andrews et al., 2020). In a bond yield analysis, descriptive statistics are particularly useful for identifying trends and patterns over time (Billah et al., 2023; Sapiri & Putra, 2023). These studies highlight the role of descriptive statistics in analyzing bond market dynamics, particularly in the context of monetary policy and macroeconomic shocks. In addition, Dimic et al. (2019) offers a practical application of descriptive statistics in emerging markets, further underscoring their relevance in this study. For instance, the mean yield for each bond category was calculated to determine the average performance over the study period, whereas the standard deviation was used to measure yield volatility. The results of the descriptive statistics provide a summary of the central tendencies and variability of bond yields for each category (short-term vs. long-term and conventional bond vs. sukuk). The mean yield indicates the average performance

of each bond type over the study period, whereas the standard deviation measures yield volatility, indicating how much the yields fluctuate around the mean. For example, a higher mean yield for sukuk than for conventional bonds suggests that sukuk generally offers higher returns, whereas a lower standard deviation indicates greater stability. These insights will help contextualize the behavior of bond yields under different market conditions.

### **3.3 Inferential statistics through regression analysis**

A multiple regression analysis was conducted to examine the relationship between bond yields and macroeconomic variables. The regression model assesses how factors such as interest rates (OPR), inflation expectations (CPI), and GDP growth influence bond yields. This model can be expressed as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \epsilon$$

Where:

- $Y$  represents the bond yield (dependent variable).
- $\beta_0$  is the intercept, indicating the base yield when all independent variables are zero.
- $\beta_1$  and  $\beta_2$  are coefficients representing the change in bond yields for a one-unit change in each independent variable (OPR and inflation rates).
- $X_1$  and  $X_2$  denote the independent variables (OPR and inflation rates).
- $\epsilon$  is the error term, accounting for unexplained variations in yields.

The regression results quantify the relationship between bond yields and the macroeconomic variables. The coefficients ( $\beta$ ) for each independent variable are interpreted to understand the magnitude and direction of their impact on bond yields (Simu, 2017). The p-values were used to test the statistical significance of the relationships, with p-value < 0.05 indicating a statistically significant relationship. The R-squared value was calculated to assess how well the model explained the variance in the bond yield (Simu, 2017). Regression analysis was conducted using Microsoft Excel using the Data Analysis Toolpak for statistical computations. The Ordinary Least Squares (OLS) method was employed to estimate the regression coefficients, minimizing the sum of the squared residuals to derive the best-fitting line. Prior to the analysis, the data were cleaned and standardized to ensure consistency, with missing values addressed through interpolation or exclusion, as appropriate. To validate the regression model, diagnostic checks were performed to test key assumptions. Specifically, the independence of residuals was assessed using the Durbin-Watson statistic, which tests for autocorrelation in the residuals (Simu, 2017). A Durbin-Watson value close to 2 indicates that the residuals are independent, whereas values significantly deviating from 2 suggest an autocorrelation. In this study, the Durbin-Watson statistic was calculated to ensure that the residuals were not correlated, thereby satisfying the assumption of independence.

Regression analysis is a widely accepted method to examine the relationship between bond yields and macroeconomic variables. Studies, such as Simu (2017) use regression models to quantify the impact of macroeconomic variables on bond yields. This approach is particularly suitable for this study because it allows for a nuanced understanding of how macroeconomic conditions such as interest rate, inflation rate

and GDP growth rate influence bond yields in Malaysia's dual-bond market, which will help identify the key drivers of bond yields and their relative importance in Malaysia's dual-bond market.

### **3.4 Comparative analysis through t-test**

Independent two-sample t-tests were conducted to compare the performances of conventional bonds and sukuk. The t-test is a robust statistical method for evaluating the difference in mean yields between two independent groups relative to their variances, thereby determining whether the observed differences are statistically significant (Auer, 2022). The t-statistic was calculated using Microsoft Excel using the following formula:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

Where:

- $\bar{X}_1$  and  $\bar{X}_2$  represent the mean yields of the conventional bond and sukuk, respectively.
- $S_1^2$  and  $S_2^2$  denote the variances of the two groups.
- $n_1$  and  $n_2$  are the sample sizes for the two groups.

The analysis began with the formulation of hypotheses: the null hypothesis ( $H_0$ ) posited that the mean yields of conventional bond and sukuk are equal, while the alternative hypothesis ( $H_1$ ) suggested that the means differ. For the short-term comparison, yield data for T-Bills (conventional) and BNMN-I (Islamic) were extracted, whereas for the long-term (10-year) comparison, data for MGS 10-Year (conventional) and GII 10-Year (Islamic) periods were utilized. The t-statistic, which quantifies the difference between the group means relative to the data variability, was calculated for each comparison. A higher absolute t-value indicates greater divergence between the means. Subsequently, the p-value was computed to determine the probability of observing such differences, under the assumption that the null hypothesis is true. A p-value below the conventional significance threshold of 0.05 would lead to the rejection of the null hypothesis. However, in both the short- and long-term comparisons, the p-values exceeded 0.05, suggesting no statistically significant differences between the yields of conventional and Islamic instruments. These findings align with prior research, such as that of Asmuni and Tan (2021) and Taufik and Budiarsyah (2024), who employed t-tests to compare conventional bonds and sukuk yields, emphasizing the unique structural and ethical characteristics of sukuk. The results of this analysis provide empirical evidence that within the Malaysian context, the yields of conventional bonds and sukuk do not differ significantly in either the short or the long term. This insight is valuable for investors and policymakers seeking to understand the performance dynamics of financial instruments.

## 4. FINDINGS

### 4.1 Descriptive statistics on conventional bond and sukuk yields

The descriptive statistics reveal distinct patterns in bond yield behavior across different categories. The results are summarized in Table 1 of Descriptive statistics of Malaysian bond yields.

**Table 1: Descriptive statistics of Malaysian bond yields**

Bond Type	Mean Yield (%)	Std. Dev. (%)
T-Bills (Short-Term)	2.85	0.64
BNMN-I (Short-Term, Islamic)	2.9	0.63
MGS (Long-Term)	3.38	0.52
GII (Long-Term, Islamic)	3.58	0.56

Sukuk (BNMN-I and GII) exhibited marginally higher mean yields than their conventional counterparts (T-bills and MGS). This yield premium can be attributed to the unique characteristics of sukuk, such as their asset-backed nature and the ethical investment principles that appeal to a niche investor base. Short-term bonds show higher volatility (standard deviation) than long-term bonds do, reflecting their sensitivity to immediate market changes. For example, the standard deviation for T-Bills (0.64%) is higher than that for MGS (0.52%), indicating that short-term bonds are more reactive to fluctuations in monetary policy and market conditions. highlighting the differences in yield behavior between short- and long-term bonds. Higher volatility and a wider range of short-term bonds underscore their role as immediate indicators of monetary policy changes, whereas the stability of long-term bonds reflects their alignment with long-term economic outlooks.

### 4.2 Regression analysis on relationship between bonds yields and macroeconomic variables

The regression model examines the relationship between bond yields (dependent variable) and three macroeconomic variables: Overnight Policy Rate (OPR), which represents monetary policy changes; inflation expectations (CPI), which reflects future inflation risks; and GDP growth, which represents overall economic health. Table 2 shows the regression results for each bond category.

**Table 2: Regression analysis results of bond yields to macroeconomics variables**

Bond Type	Variable	Coefficient ( $\beta$ )	p-value	R-squared
T-Bills (Short-Term)	OPR	-0.75	<0.01	0.68
	CPI	0.1	0.12	
	GDP Growth	-0.05	0.25	
BNMN-I (Short-Term, Islamic)	OPR	-0.72	<0.01	0.67
	CPI	0.12	0.1	
	GDP Growth	-0.04	0.3	
MGS (Long-Term)	OPR	-0.15	0.08	0.65
	CPI	0.48	<0.05	
	GDP Growth	0.2	0.06	
GII (Long-Term, Islamic)	OPR	-0.18	0.07	0.72
	CPI	0.52	<0.05	
	GDP Growth	0.22	0.05	

The regression results for short-term bonds reveal a significant negative relationship between bond yields and the Overnight Policy Rate (OPR). For T-Bills,

a 1% increase in the OPR leads to a 0.75% decrease in yields ( $\beta = -0.75$ ,  $p < 0.01$ ), while for BNMN-I, the coefficient is  $-0.72$  ( $p < 0.01$ ). The strong sensitivity of short-term yields to OPR underscores its role as an immediate indicator of monetary policy shifts, consistent with the expectations hypothesis of the yield curve, which posits that short-term interest rates are directly influenced by central bank policy rates, as suggested by Serdavaa (2025). In contrast, inflation expectations (CPI) and GDP growth do not show statistically significant relationships with short-term bond yields ( $p > 0.05$ ). This suggests that short-term bonds are primarily influenced by monetary policy rather than inflation or economic growth. This phenomenon is also observed in developed markets such as the U.S., where Bauer & Rudebusch (2020) find that short-term yields are more responsive to the Federal Reserve policy than to macroeconomic indicators. These findings highlight the unique role of short-term bonds in monetary policy transmission mechanisms, particularly in Malaysia's dual-bond market, where both conventional and Islamic instruments exhibit similar sensitivities to policy rate changes.

For long-term bonds, the results show a significant positive relationship between bond yields and inflation expectations (CPI). For MGS, a 1% increase in inflation expectations leads to a 0.48% increase in yields ( $\beta = 0.48$ ,  $p < 0.05$ ), whereas for GII, the coefficient is  $0.52$  ( $p < 0.05$ ). This aligns with the Fisher effect, which posits that nominal interest rates adjust to reflect the expected inflation (Fisher, 1930). Similarly, recent studies in emerging markets, such as those by (Mishra et al., 2016) in India, find that long-term bond yields are highly responsive to inflation expectations, reflecting the importance of inflation risk premiums in long-term debt markets. In contrast, the Overnight Policy Rate (OPR) does not show a statistically significant relationship with long-term bond yields ( $p > 0.05$ ), indicating that monetary policy has a weaker impact on long-term instruments. This is consistent with findings in developed markets such as the U.S., where Bauer & Rudebusch (2020) demonstrate that long-term yields are less sensitive to central bank policy rates and are more influenced by macroeconomic factors such as inflation and growth. However, GDP growth shows a significantly positive relationship with GII yields ( $\beta = 0.22$ ,  $p = 0.05$ ), suggesting that long-term sukuk are influenced by economic growth. The unique sensitivity of GII yields to GDP growth may reflect the asset-backed nature of sukuk, which ties their performance more closely to real economic activity, as highlighted by Arafat Mansoor et al. (2018) in their study on sukuk in the Gulf Cooperation Council (GCC) region.

The regression results highlight key differences between conventional bonds and sukuk. For short-term bonds, both T-Bills and BNMN-I exhibit similar sensitivities to OPR, with no significant differences in their responses to inflation or GDP growth. However, for long-term bonds, the GII yields show a stronger response to inflation expectations and GDP growth than the MGS yields. This suggests that long-term sukuk are more sensitive to macroeconomic conditions, likely because of their unique structural characteristics and investor bases.

#### **4.3 T-test on differences between conventional bond and sukuk**

The t-test results for the specified comparisons of short-term (T-Bills vs. BNMN-I) and long-term (10-Year: MGS vs. GII) bonds are presented to assess the statistical significance of yield differences between conventional bonds and sukuk, as shown in Table 3 of T-test on short- and long-term conventional bonds vs sukuk.

**Table 3: T-test on short- and long-term conventional vs sukuk**

Comparison	t-statistic	p-value
Short-Term: T-Bills vs BNMN-I	-0.0396	0.969063
Long-Term (10-Year): MGS vs GII	-0.30276	0.76726

The t-test results for the short-term comparison between the conventional bond and sukuk yields reveal a t-statistic of -0.0396, which is very close to zero. This indicates that the difference between the mean yields of the two instruments was negligible. The corresponding p-value of 0.9691 was significantly higher than the conventional significance threshold of 0.05, leading to a failure to reject the null hypothesis. This suggests that there is no statistically significant difference between the average yields of T-Bills and BNMN-I from 2019 to 2025. The interpretation of these results highlights that short-term conventional bond and sukuk instruments exhibit nearly identical performance in terms of returns, reflecting a similar yield behavior over the observed timeframe.

For the long-term comparison of 10-year bonds, the t-test results for the conventional bond and sukuk yields show a t-statistic of -0.3028, which is also close to zero. This result suggests a minimal difference between the mean yields of the two bond categories. A p-value of 0.7673, well above the threshold of 0.05, further supports the failure to reject the null hypothesis. This indicates that there is no statistically significant difference between the average yields of the MGS and GII 10-Year bonds. The interpretation of these findings underscores that long-term conventional bonds and sukuk have provided similar returns over the years, demonstrating comparable yield performance in the long-term investment horizon. The results of both short-term and long-term comparisons revealed no statistically significant differences in yields between conventional and Islamic instruments. This suggests that within the Malaysian dual-market context in the dynamic period, both conventional bonds and sukuk exhibit similar yield behaviors across short- and long-term periods. These findings align with pioneering research, such as Godlewskiet al. (2013), which also found limited divergence in yields between conventional bonds and sukuk. Haque et al. (2018) reveal that sukuk and conventional bonds exhibit time-varying spillover, with their interconnectedness increasing during distress periods, while Trabelsi et al. (2024) further showing that sukuk and conventional bonds yield similarly in the long term, with sukuk leading conventional bonds in certain investment horizons.

## 5. CONCLUSION

This study reveals the distinct behaviors of short- and long-term bonds in response to macroeconomic factors, both sukuk and conventional bonds. Regression analysis shows that short-term bonds are highly sensitive to interest rate changes, reflecting their role as immediate indicators of monetary policy shifts. By contrast, long-term bonds are more responsive to inflation expectations and GDP growth, aligned with the Fisher effect and theories of long-term yield dynamics. Notably, the t-test results show no statistically significant difference in returns between sukuk and conventional bonds in both the short- and long-term categories, suggesting similar performance in terms of yields. These findings confirm established theories of bond yield behavior and are supported by empirical evidence from developed and emerging markets, such as studies in the U.S. by Bauer & Rudebusch (2020) and GCC regions by Arafat Mansoor et al. (2018).

The relevance and significance of this study lie in its focus on Malaysia's dual-bond market, providing insights into the unique dynamics of conventional bonds and sukuk in an emerging economy. Its novelty stems from the comparative analysis of yield sensitivities across short- and long-term horizons, which offers a nuanced understanding of how monetary policies and macroeconomic factors influence different bond categories. These findings are valuable for policymakers designing monetary interventions, investors optimizing portfolios, and academics advancing discourse on sovereign debt and Islamic finance. Future research could build on these findings in two ways. First, investigating the role of liquidity and credit risk in shaping yield differentials between conventional bonds and sukuk could provide deeper insights into the risk-return profiles of these instruments. Second, exploring the impact of global financial stocks such as geopolitical events on the yield behavior of dual-bond markets could enhance our understanding of how these markets respond to external uncertainties. Such studies will further enrich literature and provide practical guidance for investors and policymakers to navigate complex financial landscapes.

## REFERENCES

- Adom-Dankwa, A., Atsu, F., Gyamfi, E. N., & Amewu, G. (2024). Assessing the asymmetric interrelationships between sovereign bond yields and selected potential determinants: The case of frontier WAMZ economies. *Heliyon*, *10*(19), e37995.
- Alhammad, S., Archer, S., & Aloumi, D. (2024). Sukuk structure and risk exposures: Evidence from an originator perspective. *Journal of Islamic Accounting and Business Research*. Doi: 10.1108/JIABR-10-2023-0343.
- Almaskati, N. (2022). Sukuk versus bonds: New evidence from the primary market. *Borsa Istanbul Review*, *22*(5), 1033–1038.
- Andrews, I., Gentzkow, M., & Shapiro, J. M. (2020). On the informativeness of descriptive statistics for structural estimates. *Econometrica*, *88*(6), 2231–2258.
- Arafat Mansoor, A., Zairy, Z., & Ahmad Khilmy, B. A. R. (2018). The Role of Macroeconomic Factors on Sukuk Market Development of Gulf Cooperation Council (GCC) Countries. *International Journal of Economics and Financial Issues*.
- Ariff, M., Chazi, A., Safari, M., & Zarei, A. (2017). Significant difference in the yields of sukuk bonds versus conventional bonds. *Journal of Emerging Market Finance*, *16*(2), 115–135.
- Asmuni, N. H., & Tan, K. S. (2021). Exploring the yield spread between sukuk and conventional bonds in Malaysia. *Journal of Emerging Market Finance*, *20*(2), 165–191.
- Auer, B. R. (2022). On false discoveries of standard t-tests in investment management applications. *Review of Managerial Science*, *16*(3), 751–768.
- Bauer, M. D., & Rudebusch, G. D. (2020). Interest Rates under Falling Stars. *American Economic Review*, *110*(5), 1316–1354. <https://doi.org/10.1257/aer.20171822>
- Billah, M., Amar, A. Ben, & Balli, F. (2023). The extreme return connectedness between sukuk and green bonds and their determinants and consequences for investors. *Pacific-Basin Finance Journal*, *77*, 101936.
- Billah, S. M., Kapar, B., Hassan, M. K., Pezzo, L., & Rabbani, M. R. (2024). Tail-risk connectedness between sukuk and conventional bond markets and their

- determinants: Evidence from a country-level analysis. *Borsa Istanbul Review*, 24(1), 137–163.
- Bodie, Z., Kane, A., & Marcus, A. J. (2021). *Investments (12th ed.)*. McGraw-Hill.
- Dawid, H., & Arifovic, J. (2021). Dynamic Analysis in Complex Economic Environments. In *Dynamic Modeling and Econometrics in Economics and Finance Book*, 26. Cham: Springer.
- Delle Foglie, A., & Keshminder, J. S. (2024). Challenges and opportunities of SRI sukuk toward financial system sustainability: A bibliometric and systematic literature review. *International Journal of Emerging Markets*, 19(10), 3202–3225.
- Dimic, N., Orlov, V., & Äijö, J. (2019). Bond-equity yield ratio market timing in emerging markets. *Journal of Emerging Market Finance*, 18(1), 52–79.
- Fisher, I. (1930). The Theory of Interest, as Determined by Impatience to Spend Income and Opportunity to Invest It. *Macmillan*.
- Godlewski, C. J., Turk-Ariss, R., & Weill, L. (2013). Sukuk vs. conventional bonds: A stock market perspective. *Journal of Comparative Economics*, 41(3), 745–761.
- Haque, Md. M., Chowdhury, M. A. F., Buriev, A. A., Bacha, O. I., & Masih, M. (2018). Who drives whom - sukuk or bond? A new evidence from granger causality and wavelet approach. *Review of Financial Economics*, 36(2), 117–132.
- Islamic Financial Services Board. (2023). *Islamic Financial Services Industry Stability Report 2023*. [https://www.ifsb.org/wp-content/uploads/2023/10/Islamic-Financial-Services-Industry-Stability-Report-2023\\_En.pdf?utm\\_source=chatgpt.com](https://www.ifsb.org/wp-content/uploads/2023/10/Islamic-Financial-Services-Industry-Stability-Report-2023_En.pdf?utm_source=chatgpt.com)
- Langedijk, S., Monokroussos, G., & Papanagiotou, E. (2018). Benchmarking liquidity proxies: The case of EU sovereign bonds. *International Review of Economics & Finance*, 56, 321–329.
- Long, S., Tian, H., & Li, Z. (2022). Dynamic spillovers between uncertainties and green bond markets in the US, Europe, and China: Evidence from the quantile VAR framework. *International Review of Financial Analysis*, 84, 102416.
- Mayo, H. B. (2020). *Investments: An Introduction (13th ed.)*. Cengage Learning.
- Mishra, P., Peter, M., & Sengupta, R. (2016). *Monetary Transmission in Developing Countries: Evidence from India* (16/167). <https://www.imf.org/external/pubs/ft/wp/2016/wp16167.pdf>
- Mo, J., & Subrahmanyam, M. G. (2024). What drives liquidity in the Chinese credit bond markets? *The Journal of Finance and Data Science*, 10, 100139.
- Monge, M. (2024). The financial market wants to believe in European sustainability. Time trends and persistence analysis of green vs. brown bond yields. *Environmental Science: Advances*, 3(10), 1452–1463.
- Naifar, N. (2018). Exploring the dynamic links between GCC sukuk and commodity market volatility. *International Journal of Financial Studies*, 6(3), 72.
- Paweenawat, A. (2017). The information content of the term structure of interest rates in emerging economies: The case of Thailand. *Journal of Emerging Market Finance*, 16(2), 136–150.
- Qadri, H. M. U. D., Mustafa, A. U., Ali, H., & Tahir, A. U. M. (2024). Islamic bonds (sukuk) a safe haven for investors? Truth or myth? *Journal of Islamic Accounting and Business Research*. Doi: 10.1108/JIABR-11-2022-0299

- Rao, D. T., & Kumar, R. (2023). An assessment of unconventional monetary policy during COVID-19 pandemic in India. *Journal of Emerging Market Finance*, 22(3), 297–325.
- Sapiri, M., & Putra, A. H. P. K. (2023). Causality of bank financial performance, green bond, CSR, green financing portfolio and CO2 emissions in transportation: Evidence from Indonesia. *International Journal of Energy Economics and Policy*, 13(6), 511–522.
- Simu, N. (2017). Determinants of Indonesian corporate bond yield. *Business and Economic Horizons*, 13(5), 621–631.
- Taufik, M., & Budiarsyah, G. G. (2024). Board characteristics and profitability in sharia-compliant and non-sharia-compliant firms: Beyond mere ceremony? *Asian Review of Accounting*, 33(2), 341-366.
- Trabelsi, N., Umar, Z., Dogah, K. E., & Vo, X. V. (2024). Are investment grade sukuku decoupled from the conventional yield curve? *International Review of Financial Analysis*, 91, 102981.
- Ulfah, I. F., Sukmana, R., Laila, N., & Sulaeman, S. (2024). A structured literature review on green sukuk (Islamic bonds): Implications for government policy and future studies. *Journal of Islamic Accounting and Business Research*, 15(7), 1118–1133.
- Umar, Z., Iqbal, N., Teplova, T., & Tan, D. (2024). Dynamic impact of the US yield curve on green bonds: Navigating through recent crises. *The North American Journal of Economics and Finance*, 74, 102223.