KARYA ILHAM PUBLISHING
CONNECTING MINDS, BRIDGING IDEAS, INSPIRING READERS

Journal of Advanced Research in Business and Management Studies

Journal homepage:
https://karyailham.com.my/index.php/arbms/index
ISSN: 2462-1935

Performance Analysis of Conventional and Islamic of Real Estate Investment Trust (REITs) in Malaysia

Siti Ruziana Damar[1,*], Aminah Shari[1], Ribed Vianneca W. Jubilee[1]

[1] Department of Labuan International Finance, Faculty of International Finance, University of Malaysia Sabah, Malaysia

ARTICLE INFO

Article history:
Received 11 March 2026
Received in revised form 31 March 2026
Accepted 10 June 2026
Available online 6 July 2026

Keywords:

Malaysian REITs; Sharpe Ratio; Jensen Ratio; Treynor Ratio; Conventional REITs; Islamic REITs

ABSTRACT

This study investigates the risk-adjusted performance of Malaysian Real Estate Investment Trusts (M-REITs) by comparing Conventional REITs (C-REITs) and Islamic REITs (I-REITs) over the period from January 2018 to January 2026. Grounded in Modern Portfolio Theory, the research evaluates how effectively these investment vehicles generate returns relative to the level of risk undertaken, while also examining their resilience under varying economic conditions, including the COVID-19 pandemic and post-pandemic recovery phase. A quantitative research design is employed using daily secondary data sourced from Bursa Malaysia, with the FBMKLCI and EMAS Shariah Index serving as market benchmarks. The Sharpe Ratio is utilized as the primary measure of risk-adjusted performance, supported by the Treynor Ratio and Jensen's Alpha as robustness checks. The findings indicate that both Conventional and Islamic REITs generally exhibit weak risk-adjusted performance, as reflected by predominantly negative values across all performance measures. However, Islamic REITs demonstrate relatively better performance compared to their conventional counterparts, suggesting greater efficiency in managing risk due to their Shariah-compliant structure and conservative financial practices. Furthermore, both categories of REITs show resilience by outperforming their respective benchmark indices during certain periods, highlighting their role as defensive assets within diversified portfolios. Overall, the study contributes to the existing literature by providing a comprehensive and comparative evaluation of Malaysian REIT performance using multiple risk-adjusted measures, offering insights for investors, policymakers, and financial institutions regarding the effectiveness and stability of REITs in Malaysia's capital market.

[*] *Corresponding author.*
E-mail address: ruziana0903@gmail.com

https://doi.org/10.37934/arbms.42.1.124140

1. Introduction

Real Estate Investment Trusts (REITs) are entities that possess, manage, or fund properties that generate income across various sectors of real estate. Similar to mutual funds, REITs enable individual investors to receive a portion of the income generated from commercial real estate ownership without the need to purchase, manage, or finance any properties on their own. Since their introduction in the United States in 1960, REITs have evolved into a prominent global investment option, currently operating in more than 40 countries and representing a substantial share of listed real estate assets around the world.

Marzuki & Newell stated that United States (US) boasts a highly dynamic and robust market for commercial real estate, recognised globally for its vibrancy. The US stands as the most significant investable property market in the Americas, valued at $7.6 trillion, representing 76% of the region's investable property. It also accounts for 36% of the investable property in developed markets globally and 27% of the entire global investable property universe (EPRA, 2016). The United States boasts a significant degree of liquidity in its property market, positioning it as the fourth most transparent market worldwide, categorised as high transparency. This ranking is surpassed only by the United Kingdom, Australia, and Canada, which hold the first, second, and third positions, respectively.

REITs are investment vehicles with minimal risk that pool funds from investors for the purpose of managing real estate. The stock prices of REITs exhibit lower volatility compared to the stock market yet provide better liquidity than owning physical property. REITs provide individuals with the opportunity to invest in sizeable real estate ventures that generate income. A REITs is a company that possesses and typically operates revenue-generating real estate or related assets. The entities encompass a range of properties, such as warehouses, self-storage facilities, residential buildings, hotels, commercial centres, office complexes, and financial instruments such as mortgages or loans. The organizational framework of REITs and unit trust funds exhibits a degree of resemblance in that both are subject to professional management. Factors like interest rates, stock market fluctuations, currency changes, and oil prices play a crucial role in influencing the landscape of real estate investment trusts. For example, the interest rate impacts the returns of REITs by influencing the expense of borrowing. Conversely, variations in oil prices have an indirect impact on the returns of REITs by affecting inflation and the growth of economic and household spending. Furthermore, variations in currency values have a direct effect on the returns of real estate investment trusts, influenced by shifts in currency exchange rates. At the same time, the fluctuations in stock market performance indicate the level of confidence and preferences among investors in the REITs sector [4]

Furthermore, REITs firms typically produce consistent revenue streams through the recurring rental proceeds derived from their owned properties, which may include office spaces, commercial structures, or serviced apartments. In addition, REITs offer investors the opportunity to participate in large-scale real estate projects at a lower cost relative to direct investment, as they can acquire ownership of shares in the REITs. The Chairperson of the Malaysian REIT Managers Association, Stewart LaBrooy, has underscored a significant benefit of REITs in comparison to traditional corporate equities.

In Malaysia, the framework for Real Estate Investment Trusts was established in 2005 with the introduction of Axis REIT. Since that time, the Malaysian REIT (M-REIT) market has expanded to encompass 20 listed entities, covering sectors such as retail, industrial, healthcare, hospitality, and office. The overall market capitalisation of M-REITs was around RM41 billion (~USD 8.7 billion) in 2024. The author places significant emphasis on the notable degree of certainty that characterizes dividend payouts, which are distributed either quarterly or semi-annually. As a result, it is expected

that investors will receive two forms of returns from their investments in REITs, specifically in the form of dividend payments and capital gains that arise from the appreciation of REITs' prices.

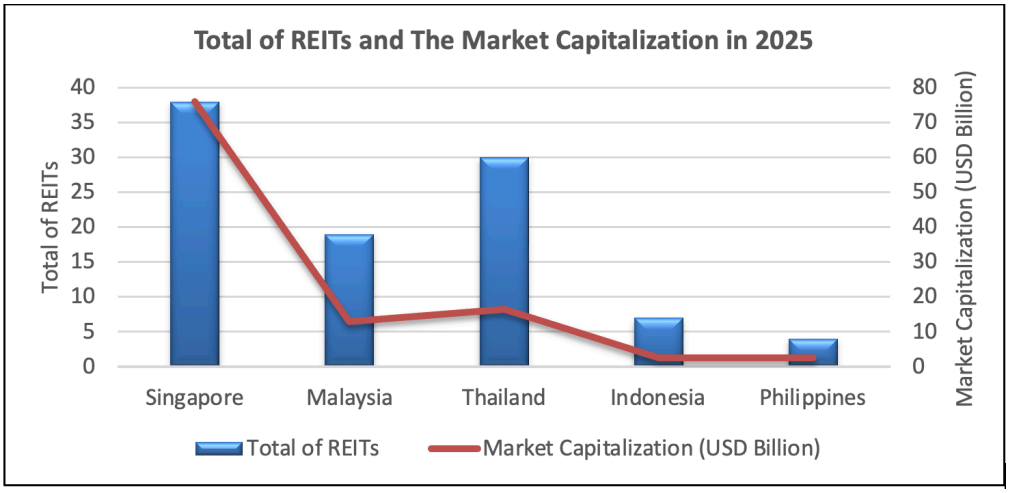

Fig. 1. Total of ASEAN REITs and the market capitalization in 2025

The evolution of Real Estate Investment Trust (REIT) markets throughout ASEAN underscores the comparative standing and effectiveness of Malaysian REITs within the broader investment arena of the region. While Singapore stands as the most developed and expansive market for real estate investment trusts in the area, Malaysia has cultivated a reliable and expanding sector that consistently draws in investors. By the year 2025, Malaysia boasts around 19 publicly listed real estate investment trusts, collectively valued at US$13 billion. Although this market size is less than that of Singapore, which boasts over 38 REITs and a market capitalization exceeding US$75 billion, the Malaysian REIT market has shown steady growth and resilience throughout the years. This suggests that Malaysian REITs continue to be an important investment option in the ASEAN capital market, even when compared to larger and more established markets like Singapore.

The performance of Malaysian REITs has been extensively analyzed in existing research, with numerous studies indicating that M-REITs can deliver competitive returns while offering diversification advantages to investors. Research findings suggest that Malaysian REITs have the potential to exceed the performance of wider market indices during specific timeframes, positioning them as a compelling option for enhancing portfolio diversification [1]. Moreover, Malaysia stands out among ASEAN nations because of its Islamic REITs, which function in accordance with Shariah principles. Studies indicate that Islamic REITs frequently exhibit superior risk-adjusted performance and reduced risk exposure in comparison to conventional REITs, attributed to their more stringent financial frameworks and asset evaluation methods [2]. This unique characteristic enhances the competitive edge of the Malaysian REIT market and offers further investment options for Shariah-compliant investors.

In contrast to Singapore, the real estate investment trusts in Malaysia function within a more limited and less developed market context, potentially impacting their overall performance metrics. Singapore REITs are supported by robust institutional backing, a diverse range of international assets, and established corporate governance structures that enhance their stability and resilience in times of economic challenges [3]. Nonetheless, Malaysian REITs continue to hold a strong position in the regional market, bolstered by favorable regulatory frameworks, tax benefits, and an expanding pool of investors. The regulatory changes implemented by the Malaysian government have fostered greater transparency and bolstered investor confidence, leading to a favorable impact on the performance of M-REITs [4].

In comparison to Thailand, Malaysian REITs exhibit a more even distribution of performance traits. While Thailand boasts a similar quantity of REITs and a marginally greater market capitalization, the returns of Thai REITs often display increased volatility influenced by market size dynamics and sector concentration [5]. Furthermore, external disruptions like the COVID-19 pandemic had a profound impact on the performance of Thai REITs, primarily due to their substantial investment in tourism-related properties [16]. In comparison, Malaysian REITs enjoy a more varied property portfolio, encompassing retail, office, healthcare, and industrial sectors, which aids in reducing volatility and maintaining long-term performance. Consequently, although the Malaysian market is smaller than that of Singapore and similar to Thailand, it showcases significant potential and stability, underscoring its relevance within the ASEAN landscape [5].

1.1 Problem Statement

A significant constraint is to the relevance of global financial performance metrics—such as ROA, ROE [6], funds from operations (FFO), and Tobin's Q [11] in the Malaysian setting. Despite their prevalent use in global REIT research, these indicators may fail to correctly reflect the distinct structural, regulatory, and operational characteristics of M-REITs. For instance, ROE has been shown to have a considerable correlation with net asset value (NAV), whereas Tobin's Q demonstrates an inverse association with NAV, indicating that elevated market valuations do not inherently align with robust asset fundamentals in Malaysia [5]. This misalignment underscores the methodological deficiency of utilizing foreign-developed performance frameworks without contextual adaptation to local market attributes, including gearing constraints, required income distributions, and variations in property valuation. The ongoing discrepancy between Islamic and conventional REITs further complicates performance evaluation. Empirical research demonstrates that Islamic REITs generally surpass their conventional equivalents in efficiency and financial returns while adhering to Shariah-compliant standards [1,6].

Nevertheless, insufficient comparative research renders it ambiguous whether these disparities stem from governance structures, asset mix, risk management techniques, or compliance frameworks. The absence of factual clarity hinders the establishment of standardized performance benchmarks and leads to varied interpretations of financial ratios within the industry. The lack of longitudinal data, the insufficiency of conventional performance metrics for Malaysia's institutional framework, and the persistent performance disparity between Islamic and conventional REITs constitute significant shortcomings that obstruct accurate, consistent, and contextually relevant performance analysis of the Malaysian REIT market.

Besides that, a major concern is the effect of foreign economic shocks, exemplified by the COVID-19 pandemic. The epidemic disrupted economic operations, diminished consumer expenditure, and impacted property demand, especially in the retail and hospitality industries. Consequently, rental income diminished, adversely impacting the overall performance of various M-REITs, although some REITs shown resiliency at specific intervals [16].

Despite the growth of Malaysian Real Estate Investment Trusts (MREITs) as an investment vehicle, their performance has shown periods of instability and decline in recent years. Evidence suggests that the overall MREIT sector experienced weaker performance after 2018 and during the COVID-19 period, where the Bursa Malaysia REIT Index declined and underperformed the broader market index [14]. During this period, several REITs reported declining income and profitability, including IGB REIT, which recorded lower net property income and reduced net profit in 2020, reflecting operational challenges faced by retail-focused REITs. Similarly, studies indicate that Islamic REITs such as Axis REIT and KLCC REIT displayed unstable behavior and slower adjustment to market shocks, highlighting

fluctuations in their return performance [14]. These inconsistencies raise concerns regarding the stability and reliability of MREIT performance for investors. Although previous studies have examined factors influencing REIT performance, limited research has systematically evaluated how different Malaysian REITs perform over time and whether their returns remain competitive compared with other investment alternatives.

Therefore, this study aims to examine the performance of Real Estate Investment Trusts in Malaysia through risk-adjusted return (Sharpe ratio), as prior research which is [6] [11] has predominantly concentrated on ratio analysis without considering risk-adjusted performance.

1.2 Objective of Study

The objective of this study is to analyse the risk-adjusted performance of Malaysian Real Estate Investment Trusts (M-REITs) by employing the Sharpe Ratio, with particular emphasis on comparing the performance between Conventional Real Estate Investment Trusts (C-REITs) and Islamic Real Estate Investment Trusts (I-REITs) in Malaysia.

1.3 Research Question

The research question of this study seeks to examine how the risk-adjusted performance of Malaysian Real Estate Investment Trusts (M-REITs), as measured by the Sharpe Ratio, differs between Conventional Real Estate Investment Trusts (C-REITs) and Islamic Real Estate Investment Trusts (I-REITs) in Malaysia.

1.4 Research Gap

The disparity in Malaysian Real Estate Investment Trust (M-REIT) performance analysis arises from the reliance on conventional financial indicators such as Return on Equity (ROE), Return on Assets (ROA), Funds from Operations (FFO), and Tobin's Q, which mainly measure profitability and financial stability but often neglect risk considerations, limiting their effectiveness in evaluating actual investment performance [11]. In contrast, international REIT studies commonly apply risk-adjusted performance measures such as the Sharpe Ratio, Treynor Index, and Jensen's Alpha, which provide a more comprehensive evaluation by incorporating return relative to risk exposure. Malaysian studies have found that the Sharpe Ratio and M-squared measures are more reliable than the Treynor and Jensen indices due to weaker correlations between M-REITs and broader market benchmarks , while Islamic REITs tend to outperform conventional REITs because of lower leverage and more stable income streams as in Mohamed Arshada & Abdullah (2020) study. Although structural differences in market size, liquidity, and diversification opportunities contribute to the methodological gap between Malaysian and international REIT analysis, Malaysian REITs, particularly Islamic REITs, still offer strong diversification benefits and lower risk exposure . Therefore, adopting risk-adjusted performance models is essential for Malaysian REIT research to achieve more accurate and globally comparable performance assessments.

1.5 Significance of the Study

This study contributes significantly to the understanding of Malaysian Real Estate Investment Trusts (M-REITs) by evaluating their performance using risk-adjusted measures such as the Sharpe ratio, offering a more comprehensive assessment than traditional financial ratios. The findings

highlight the role of M-REITs, particularly Islamic REITs, as stable, low-volatility, and income-generating investment instruments that provide diversification benefits for investors and strengthen Malaysia's financial market stability. The research also contributes to academic literature by expanding empirical studies on REIT performance in emerging markets and supporting the application of Modern Portfolio Theory in Malaysia's dual financial system. In addition, the study provides valuable insights for policymakers, financial institutions, and investors in improving investment strategies, governance standards, and portfolio diversification. Furthermore, the Visit Malaysia 2026 campaign is expected to positively influence retail and hospitality REITs through increased tourism activity, potentially enhancing REIT performance and with broader Malaysian stock market indices.

1.6 Literature Review

1.6.1 Domestic research on real estate investment trust

In Mohamed Arshada & Abdullah (2020) study analyses the performance and diversification advantages of 17 Conventional Real Estate Investment Trusts (C-REITs) and three Islamic Real Estate Investment Trusts (I-REITs) listed on Bursa, Malaysia, from January 2005 to December 2017. The analysis incorporates both surviving and non-surviving Real Estate Investment Trusts (REITs) to mitigate the risk of survivorship bias in the findings. To fulfil the study purpose, the Sharpe index, Treynor index, and Jensen index are utilized to assess the performance of both REITs. The returns on the Kuala Lumpur Composite Index (KLCI) and EMAS indexes serve as a benchmark for total market portfolio returns, while the risk-free rate is denoted by the three-month Malaysian Government Security. The results indicate that I-REITs yield marginally superior average monthly returns compared to C-REITs. Moreover, I-REITs exhibit reduced risk, whether assessed through total risk indicated by standard deviation or systematic risk represented by beta, in comparison to C-REITs. Both REITs fail to surpass the market indices, as indicated by the Sharpe index. Simultaneously, the use of the Treynor index demonstrates that both REITs surpass the market benchmarks. Furthermore, I-REITs outperform C-REITs in terms of both risk-adjusted metrics. According to the Jensen index, both REITs exhibit performance that is not just comparable to market benchmarks but also to each other. Furthermore, investors may experience enhanced diversification advantages by integrating I-REITs with equities rather than C-REITs, due to the weaker correlation between I-REITs and market benchmarks compared to C-REITs.

Khairulanuwar & Chuweni [6] study seeks to explore the importance and performance evaluation of the Malaysian Real Estate Investment Trust (M-REIT) during the period from 2014 to 2018. A quantitative approach serves as a key tool in research methodology, establishing the connections between variables and facilitating the analysis of data, particularly through mathematical operations involving numbers. Consequently, this method is regarded as suitable since the aim of the study is to thoroughly comprehend the performance analysis of Malaysian Real Estate Investment Trusts based on their classification types. The examination is conducted using the financial documentation from the yearly reports of all 18 REIT companies spanning from 2014 to 2018, aimed at supporting meaningful research in line with the goals and objectives of this study. The outlined method is refined through the classification and computation of variables, along with the formulation of mathematical operations to substantiate the analysis. This study utilizes the following ratios: performance is assessed through ROA (Net income/Total Assets) and ROE (Net income/Total equity), while liquidity is evaluated using the current ratio (current assets/current liabilities) and leverage is determined by the debt ratio (total liabilities/total assets).In this study, the finding stated that M-REIT holds the 27th position globally and the 7th position within the Asia Pacific REIT market, highlighting the importance

of this market. The market capitalisation of M-REIT experienced significant growth from 2014 to 2017, followed by a downturn in 2018. The total assets of M-REIT have demonstrated significant growth over the years, with both the market capitalisation of the Islamic REIT sector and total assets reflecting positive advancements throughout the year. Considering the efficiency ratios of ROA and ROE, Islamic REITs are perceived as more advantageous for investors compared to conventional REITs, indicating a strong appeal of Islamic REITs. Regarding operational efficiency, it is clear that various sectors of REITs could face liquidity challenges, as indicated by the decrease in current ratio from 2014 to 2018, with a current ratio below 1 being a significant concern.

On the other hand, in Al-Haija and Syed [2] study, the Islamic Capital Market has experienced significant expansion throughout the years. One of the most intriguing trajectories in the ICM instruments is that of Islamic Real Estate Investment Trusts (I-REITs). This paper aims to emphasize the concept of I-REIT and provides a comparative analysis of Emirates I-REIT and Al-Salam I-REIT from the UAE and Malaysia, seeking to uncover the implications of the significant differences between the two countries' I-REITs. This study analyses the financial reports of the two I-REITs from 2015 to 2019. An observational design data analysis approach is employed to compare both I-REITs, concentrating on five distinct variables: portfolio, governance, financial performance, Shariah compliance, and risk management. The results provide insights into significant distinctions between the two nations concerning the I-REITs. The variations identified in the implications for all variables presented in the paper, particularly regarding the portfolio size for each I-REIT, as well as Shariah compliance and risk management, indicate that Al Salam “Malaysia” employed a more standardized approach compared to the UAE, where the SSB is tasked with establishing the guidelines for Emirates REIT. The risk management approaches employed by the two REITs are distinct from each other.

Moreover, study from Ruslan [13] aims to rigorously analyze the performance of four investment real estate investment trusts (iREITs) in Malaysia: Al-‘Aqar Healthcare REIT, Axis REIT, Al-Salām REIT, and KLCC REIT, from 2012 to 2016. The performance study, focusing on dividend distribution per unit (DPU) and net asset value (NAV), is conducted using trend analysis. The data indicates that both DPU and NAV performance exhibit a robust track record, particularly evident in the cases of Al-‘Aqar Healthcare REIT, KLCC REIT, and Al-Salām REIT. Considering that most Malaysian real estate investment trusts (REITs) were established post-global financial crisis, the data suggest that their performance remains lucrative relative to the market portfolio. Nevertheless, most performances in the market portfolio exhibit subpar results, characterized by a diminished average annual net income and a higher total average return relative to the market portfolio. Conventional real estate investment trusts generally exhibit a lower degree of systematic risk relative to the market portfolio. Investment real estate investment trusts (iREITs) present an attractive investment vehicle, as they generate consistent dividend income for shareholders, underpinned by high-quality underlying assets.

1.6.2 International research on real estate investment trust

The study by Marzuki *et al*., [10] analyzes the performance of Irish Real Estate Investment Trusts (REITs), which were established in 2013 to rejuvenate Ireland's commercial property market. The study assesses the risk-adjusted performance and diversification potential of Irish REITs from March 2015 to February 2019, utilizing monthly total returns in local currency within a mean-variance framework. The results indicate that Irish REITs attained the highest average annual returns with reduced volatility relative to the stock market, showcasing robust risk-adjusted performance and underscoring its significance as a property investment asset centered on total return and income production. The optimal asset allocation research indicates that Irish REITs significantly enhance

portfolio efficiency, providing investors with considerable diversification advantages across different risk and return levels. Irish REITs have successfully fulfilled their intended role by offering a liquid and flexible alternative to private property investments, facilitating the recovery and expansion of Ireland's property market post-Global Financial Crisis, and garnering heightened interest from both domestic and international investors.

In addition, Marzuki and Newell [9] stated that the introduction of the Saudi REIT market in 2016 aligned with the Kingdom of Saudi Arabia's Vision 2030, aimed at diversifying revenue sources and reforming the financial sector. The Saudi REIT market, although in its early stages, has demonstrated considerable growth rapidly, establishing itself as the largest REIT market in the MENA region. Saudi REITs are structured according to recognized global REIT standards to enable effective capital investment in commercial property opportunities within Saudi Arabia. Therefore, this paper aims to examine the development of Saudi REITs and to empirically evaluate their performance from December 2018 to December 2023. The assessment focuses on the risk-adjusted performance, measured by the Sharpe Ratio, and the portfolio diversification characteristics of Saudi REITs, utilizing monthly total returns in local currency (SAR). A series of optimal portfolios is developed to assess the potential value-added role of Saudi REITs within a multi-asset framework. Although the average annual return of Saudi REITs is lower than that of stocks, they provide annual returns with reduced volatility, resulting in a competitive overall risk-adjusted performance compared to other asset classes. This demonstrates the superior income return performance of Saudi REITs attributed to the fiscally efficient framework. Moreover, the inclusion of Saudi REITs in a stocks-bonds portfolio enhances the overall return while simultaneously decreasing volatility. Their allocation within the asset mix is noted to effectively adjust across the portfolio's risk-return spectrum.

However, in Marzuki and Newell [8] analyze the function of Mexico Real Estate Investment Trusts (REITs) as a publicly traded property investment instrument in the context of an emerging economy. The objective of the study is to analyze the investment characteristics of Mexico REITs and to evaluate their efficacy in improving portfolio performance compared to conventional financial assets. The study has two primary objectives. Initially, it aims to compare the returns, risks, and risk-adjusted performance of Mexican REITs with equities and fixed-income securities. Secondly, it seeks to ascertain whether Mexican REITs offer diversification advantages and enhance value when incorporated into a mixed-asset investment portfolio. The study utilizes monthly total return data spanning from April 2011 to December 2019 to accomplish these aims. The methodology encompasses risk-adjusted performance analysis employing return-to-risk and Sharpe ratios, correlation analysis to evaluate diversification advantages, and a constrained mean–variance portfolio optimization framework to assess the portfolio contribution of Mexico REITs in conjunction with stocks and bonds. The results demonstrate that Mexico REITs provided superior risk-adjusted performance relative to equities and fixed income, albeit their increased volatility. The findings indicate that Mexico REITs have minimal correlation with bonds and relatively modest correlation with equities, offering significant diversification advantages. The study shows that Mexico REITs significantly enhance portfolio performance and serve as an effective and competitive investment vehicle for listed property in a growing country.

2. Methodology

This research employs a quantitative methodology grounded in Modern Portfolio Theory (MPT) to analyse the performance and diversification attributes of Malaysian Real Estate Investment Trusts (M-REITs). The primary analytical technique utilised is the Sharpe Ratio to evaluate the risk-adjusted performance of Malaysian REITs, while the Treynor Ratio and Jensen's Alpha are applied as

robustness measures to validate the consistency of the performance results. The analysis utilises secondary data sourced from Bursa Malaysia for the period January 2018 to January 2026, enabling a systematic assessment of performance efficiency and the reliability of risk-adjusted returns within the Malaysian REIT sector.

2.1 Sample Selection

Table 1 shows the sample for this study consisted of 20 Malaysian REITs listed on Bursa Malaysia throughout a 10-year period from January 2018 to January 2026. The data for this study were obtained from Bursa Malaysia, covering the period using daily observations. This timeframe is selected as it captures several significant economic phases, including the pre-pandemic period (2018–2019), the COVID-19 disruption phase (2020–2021), and the post-pandemic recovery period (2022–2025). The pre-pandemic years serve as a benchmark for normal market conditions, while the pandemic period reflects substantial challenges in the real estate sector, such as reduced economic activity, lower occupancy rates, and rental adjustments. The recovery phase highlights gradual improvements driven by the resumption of economic activities and tourism. Additionally, prior studies indicate that since 2018, Malaysian REITs have experienced fluctuations in key indicators such as net asset value, return on assets, and return on equity, making this period suitable for comparative analysis between Conventional and Islamic REITs, particularly in terms of efficiency and risk-adjusted performance.

The FBMKLCI and EMAS Shariah Index are selected as benchmark indices, as they are widely used to evaluate REIT performance. This study primarily employs the Sharpe Ratio to assess risk-adjusted performance, while the Treynor Ratio and Jensen's Alpha are utilised as robustness measures to validate the consistency of results. Previous literature supports the use of these performance measures in REIT analysis, demonstrating their effectiveness even over shorter time horizons. Overall, the selected period and methodology enable a comprehensive and reliable evaluation of Malaysian REIT performance across varying market conditions.

Table 1
List of conventional and Islamic REITs in Malaysia

	REITs	Type of REITs
1	Amfirst REITs	Conventional REITs
2	Atrium REITs	Conventional REITs
3	Capitaland Malaysia REITs	Conventional REITs
4	YTL Hospitality REITs	Conventional REITs
5	AmanahRaya REITs	Conventional REITs
6	Hektar Trust	Conventional REITs
7	IGB REITs	Conventional REITs
8	IGB Commercial REITs	Conventional REITs
9	KIP REITs	Conventional REITs
10	Paradigm REITs	Conventional REITs
11	Pavilion REITs	Conventional REITs
12	Sentral REITs	Conventional REITs
13	Sunway	Conventional REITs
14	Tower REITs	Conventional REITs
15	UOA REITs	Conventional REITs
16	Axis REITs	Islamic REITs
17	Al-Aqar Healthcare REITs	Islamic REITs
18	Al-Salam REITs	Islamic REITs
19	AME REITs	Islamic REITs

20	KLCC REITs	Islamic REITs

$$\text{Sharpe ratio } (S_i) = \frac{R_p - R_f}{\sigma_i} \quad (1)$$

Which,
Rp = Return of portfolio
Rf = Risk-free rate
σi = Standard deviation of the portfolio

$$\text{Standard deviation } (\sigma_i) = \sqrt{\frac{\sum (R_i - R_{avg})^2}{(n-1)}} \quad (2)$$

Ri = actual rate of return
Ravg = average rate of return *(mean)*
n = number of daily returns

According to the following formula, the average daily returns of fund (*R*) for the Sharpe ratios are computed:

$$\text{Return } (R) = \frac{V_c - V_i}{V_i} \quad (3)$$

Which,
Vc = Current value
Vi = Initial value

2.2 Robustness Check

In examining the performance of Real Estate Investment Trusts (REITs), robustness tests are employed to validate the reliability of findings derived from primary performance measures. While the Sharpe Ratio is used as the main indicator of risk-adjusted performance, the Treynor Ratio and Jensen's Alpha are incorporated as robustness checks to ensure the consistency and stability of results across different risk-adjusted evaluation approaches, particularly when varying assumptions regarding systematic risk are considered.

$$Treynor\ (Ti) = \frac{(\ Rp - Rf\ )}{\beta i} \quad (4)$$

Which,

Rp = Average portfolio return
Rf = Average risk-free rate
ϐi = Beta of the portfolio

$$\text{Jensen's alpha } (a_i) = (R_p - (R_f + \beta_i * (R_m - R_f))) \quad (5)$$

Which,

Rp = Expected portfolio return
Rf =Risk-free rate
ϐi = Beta for the portfolio
Rm = Expected market return

In examining the performance of Real Estate Investment Trusts (REITs), robustness tests are employed to validate the reliability of findings derived from primary performance measures. While the Sharpe Ratio is used as the main indicator of risk-adjusted performance, the Treynor Ratio and Jensen's Alpha are incorporated as robustness checks to ensure the consistency and stability of results across different risk-adjusted evaluation approaches, particularly when varying assumptions regarding systematic risk are considered.

(1)

3. Results

3.1 Conventional REITs

The results in Table 2 present the risk-adjusted performance of Conventional Malaysian REITs (C-REITs) using the Sharpe ratio over the sample period from 2018 to 2025. Overall, the findings indicate that the majority of C-REITs recorded negative Sharpe ratios, suggesting that their returns were insufficient to compensate for the level of risk undertaken. This result is consistent with the broader trend observed in the Malaysian REIT market during periods of economic uncertainty, particularly after 2018 and during the COVID-19 pandemic, where REIT performance weakened due to declining rental income and market disruptions [16].

Among the listed REITs, IGB Commercial REITs stands out as the only trust with a positive Sharpe ratio (0.0099), indicating superior risk-adjusted performance relative to its peers. This suggests that certain REITs with strong asset quality and strategic property portfolios are able to generate competitive returns despite market volatility. This finding is supported by Abdullah *et al*., [1] who found that selected Malaysian REITs are capable of outperforming market benchmarks due to efficient asset management and stable income generation. In contrast, REITs such as Paradigm REITs (-0.2484) and UOA REITs (-0.0848) recorded the lowest Sharpe ratios, reflecting weak performance and higher risk exposure. This variation across REITs is consistent with findings by Khairulanuwar *et al*., [6], which highlight that differences in portfolio structure, sector exposure, and governance significantly influence REIT performance.

In comparison with the benchmark, the FBMKLCI Index (-0.0837) also recorded a negative Sharpe ratio, indicating that the overall equity market performed poorly on a risk-adjusted basis during the study period. However, several REITs such as IGB REITs (-0.0263), Sunway REITs (-0.0344), and Pavilion REITs (-0.0351) outperformed the market index despite still having negative Sharpe ratios. This supports the argument that REITs exhibit relatively better resilience compared to equities.

Previous studies confirm that Malaysian REITs generally demonstrate lower volatility and defensive characteristics, enabling them to perform relatively better during market downturns [1] .

Furthermore, when compared to the risk-free proxy, T-Bills (-0.0466), most REITs underperformed, indicating that low-risk instruments provided better risk-adjusted returns during this period. This finding reinforces the importance of using risk-adjusted performance measures such as the Sharpe ratio, which evaluates returns relative to total risk and provides a more accurate assessment of investment performance.

In summary, the findings demonstrate that although C-REITs in Malaysia experienced generally weak risk-adjusted performance, several REITs still outperformed the market benchmark. This supports the literature that identifies REITs as a stable and diversification-enhancing asset class, consistent with Modern Portfolio Theory, which suggests that assets with lower correlation and volatility can improve overall portfolio efficiency.

Table 2
Daily performance measure for Conventional Malaysian REITs: January 2018 – January 2026

Conventional M-REITs	Mean	SD	Sharpe
Amfirst REITs	-0.000196606	0.009591584	-0.074816397
Atrium REITs	0.000111273	0.008070859	-0.050766404
Capitaland Malaysia REITs	-0.000205922	0.010076679	-0.072139146
YTL Hospitality REITs	5.18553E-05	0.011409382	-0.041119327
AmanahRaya REITs	-0.000276586	0.010462656	-0.076231855
Hektar Trust	-0.000259866	0.013013024	-0.060006627
IGB REITs	0.000254391	0.010149181	-0.026269183
IGB Commercial REITs	0.001054426	0.054054888	0.009868197
KIP REITs	5.46609E-05	0.007468437	-0.062441519
Paradigm REITs	-1.09631E-06	0.002101633	-0.248424787
Pavilion REITs	0.000124343	0.011298038	-0.035108641
Sentral REITs	-0.000103579	0.009437007	-0.066184151
Sunway	0.000189023	0.009638909	-0.034441507
Tower REITs	-0.000326962	0.016435703	-0.051592762
UOA REITs	-0.000171361	0.008161728	-0.084830388
FBMKLCI Index	1.05477E-05	0.006095847	-0.083737953
T-Bills	5.43946E-05	0.010002629	-0.046648423

3.2 Islamic REITs

The results presented in Table 3 illustrate the risk-adjusted performance of Islamic Malaysian Real Estate Investment Trusts (I-REITs) as measured by the Sharpe ratio over the period from 2018 to 2025. The findings reveal that all Islamic REITs exhibit negative Sharpe ratios, indicating that the returns generated were insufficient to compensate for the total risk undertaken. This outcome reflects the challenging market conditions during the sample period, particularly the post-2018 slowdown and the COVID-19 pandemic, which adversely affected property income, occupancy rates, and overall REIT performance [16].

Despite the overall negative performance, there are observable differences among the individual REITs. Axis REITs (-0.0332) and Al-Salam REITs (-0.0298) recorded comparatively higher (less negative) Sharpe ratios, suggesting relatively more efficient risk-return trade-offs within the Islamic REIT segment. This indicates that these REITs were better positioned to manage volatility while maintaining stable returns, potentially due to diversified asset portfolios and consistent rental income streams. This observation is consistent with the findings of Chuweni *et al*., [6], who argue

that Islamic REITs tend to demonstrate greater financial discipline and lower leverage due to Shariah compliance, thereby contributing to more stable performance. Conversely, KLCC REITs (-0.0552) and Al-Aqar Healthcare REITs (-0.0489) exhibited weaker Sharpe ratios, reflecting relatively poorer risk-adjusted performance. Such disparities support the empirical evidence that REIT performance is significantly influenced by factors such as asset composition, sectoral concentration, and management efficiency [1].

When benchmarked against the EMAS Shariah Index (-0.0796), all Islamic REITs demonstrated superior performance in risk-adjusted terms, as evidenced by their relatively less negative Sharpe ratios. This suggests that I-REITs were more resilient than the broader Shariah-compliant equity market during the study period. This finding aligns with prior literature, which indicates that Islamic REITs generally exhibit lower volatility and enhanced diversification benefits, making them relatively defensive investment instruments.

In comparison with the risk-free benchmark, T-Bills (-0.0466), the performance of Islamic REITs appears mixed. While REITs such as Axis REITs and Al-Salam REITs outperformed the risk-free proxy on a risk-adjusted basis, others underperformed, suggesting heterogeneity in their ability to generate excess returns. This further emphasizes the importance of employing risk-adjusted performance measures to provide a more comprehensive evaluation of investment efficiency.

In conclusion, although Islamic REITs in Malaysia recorded negative Sharpe ratios over the study period, they consistently outperformed the EMAS Shariah Index and exhibited relatively stronger stability. These findings provide empirical support for the argument that Islamic REITs function as resilient and lower-risk investment vehicles, consistent with the principles of Modern Portfolio Theory, which emphasize diversification and the inclusion of less volatile assets to enhance overall portfolio efficiency.

Table 3
Daily performance measure for Islamic REITs: January 2018 – January 2026

Islamic M-REITs	Mean	SD	Sharpe
Axis REITs	0.000200809	0.009630389	-0.033248174
Al-Aqar Healthcare REITs	4.25832E-05	0.009781582	-0.048910115
Al-Salam REITs	-5.05066E-05	0.019204208	-0.029759521
AME REITs	0.000160743	0.007914138	-0.045520844
KLCC REITs	8.49461E-05	0.007901362	-0.055187371
EMAS Shariah Index	-2.2611E-06	0.006572596	-0.079612776
T-Bills	5.43946E-05	0.010002629	-0.046648423

3.3 Robustness Check
3.3.1 Conventional REITs

The robustness of the performance findings is further evaluated using the Treynor ratio and Jensen ratio, which account for systematic risk and abnormal returns relative to the market benchmark. The results are broadly consistent with the Sharpe ratio outcomes, thereby strengthening the validity of the study.

Overall, most Conventional Malaysian REITs (C-REITs) recorded negative Treynor ratios and negative Jensen's alpha values, indicating that they were unable to generate sufficient returns relative to their level of systematic risk and failed to outperform the FBMKLCI index as shown in Table 4. This reflects weak risk-adjusted performance during the sample period, particularly under adverse market conditions. Such findings are consistent with previous studies suggesting that REIT

performance is sensitive to macroeconomic conditions, including interest rate fluctuations and economic downturns, which can negatively affect property income and asset values.

Despite this overall trend, IGB Commercial REITs stands out as the only REIT with both a positive Treynor ratio (0.0124) and positive Jensen's alpha (0.00056), indicating its ability to generate excess returns above the expected market return while efficiently managing systematic risk. This result highlights the importance of asset quality and portfolio positioning in driving superior REIT performance that emphasize that well-managed REITs with strong underlying assets tend to outperform their peers.

In contrast, REITs such as Paradigm REITs recorded significantly negative values, indicating substantial underperformance relative to market risk exposure. When compared to the FBMKLCI Index, which has a Jensen's alpha of zero by definition, most REITs generated negative abnormal returns, further confirming their inability to outperform the market portfolio.

In conclusion, the consistency of results across the Sharpe, Treynor, and Jensen measures confirms the robustness of the findings, indicating that the majority of C-REITs underperformed on a risk-adjusted basis. This supports the argument that multiple performance measures are essential for a comprehensive evaluation of REIT performance, particularly in volatile market environments.

Table 4
Robustness check for daily performance measure for Conventional Malaysian REITs: January 2018 – January 2026

Conventional M-REITs	Treynor	Jensen
Amfirst REITs	-0.003157925	-0.000601612
Atrium REITs	-0.001947179	-0.000302318
Capitaland Malaysia REITs	-0.00231795	-0.000566842
YTL Hospitality REITs	-0.000894934	-0.000201554
AmanahRaya REITs	-0.001812048	-0.000572907
Hektar Trust	-0.001510203	-0.000516932
IGB REITs	-0.000879707	-0.000111909
IGB Commercial REITs	0.012355573	0.000555462
KIP REITs	-0.001464936	-0.000303845
Paradigm REITs	-0.053240159	-0.000517092
Pavilion REITs	-0.000983721	-0.000190832
Sentral REITs	-0.001615587	-0.000427241
Sunway	-0.000857627	-0.000134387
Tower REITs	-0.002187142	-0.000650058
UOA REITs	-0.003442825	-0.000589709
FBMKLCI Index	-0.000510454	0
T-Bills	-7.373026905	-0.000466567

3.3.2 Islamic REITs

The robustness of the performance findings for Islamic Malaysian REITs (I-REITs) is further examined using the Treynor ratio and Jensen's alpha, which evaluate performance based on systematic risk and abnormal returns relative to the market benchmark. The results are consistent with the Sharpe ratio findings, thereby reinforcing the reliability of the overall analysis.

The findings in Table 5 indicate that all Islamic REITs recorded negative Treynor ratios and negative Jensen's alpha values, suggesting that these REITs were unable to generate sufficient returns relative to their systematic risk and failed to outperform the EMAS Shariah Index. This reflects generally weak risk-adjusted performance over the study period. Such results are in line with existing

literature which suggests that REIT performance may decline during periods of economic uncertainty, as macroeconomic pressures affect rental income, occupancy rates, and asset valuations.

Among the I-REITs, Axis REITs recorded the least negative Treynor (-0.00149) and Jensen (-0.00021) values, indicating relatively better performance compared to its peers in terms of managing systematic risk. In contrast, AME REITs exhibited the lowest Treynor ratio (-0.00482), reflecting weaker performance and higher sensitivity to market risk. These variations suggest that differences in portfolio structure, sector exposure, and management strategies continue to play a significant role in determining REIT performance that emphasize the importance of asset allocation and diversification in REIT efficiency.

When compared to the EMAS Shariah Index, which has a Jensen's alpha of zero, all Islamic REITs generated negative abnormal returns, confirming their inability to outperform the market portfolio. Additionally, the relatively small Treynor value for T-Bills (-0.00047) reflects its low systematic risk, indicating that Treynor ratio may be less informative for near risk-free assets.

In conclusion, the consistency of negative results across Treynor and Jensen measures confirms the robustness of the earlier findings, indicating that Islamic REITs underperformed on a risk-adjusted basis during the study period. This further supports the importance of employing multiple performance indicators to obtain a comprehensive evaluation of REIT performance.

Table 5
Robustness check for daily performance measure for Islamic Malaysian REITs: January 2018 – January 2026

Islamic M-REITs	Treynor	Jensen
Axis REITs	-0.00149093	-0.000207817
Al-Aqar Healthcare REITs	-0.00259959	-0.000382535
Al-Salam REITs	-0.002556826	-0.000454547
AME REITs	-0.004823038	-0.000321173
KLCC REITs	-0.002485956	-0.000344271
EMAS Shariah Index	-0.000523263	0
T-Bills	-0.000466607	5.66557E-05

4. Conclusions

In conclusion, this study aimed to analyse the risk-adjusted performance of Malaysian Real Estate Investment Trusts (M-REITs) using the Sharpe Ratio, with a specific focus on comparing Conventional REITs (C-REITs) and Islamic REITs (I-REITs). The findings provide a clear response to the research question regarding how risk-adjusted performance differs between these two categories of REITs in Malaysia.

The results reveal that both C-REITs and I-REITs generally recorded negative Sharpe ratios, indicating that returns were insufficient to compensate for the level of risk undertaken during the study period. This suggests that overall risk-adjusted performance was weak across the Malaysian REIT sector, largely influenced by adverse market conditions. However, a comparative analysis shows that Islamic REITs tend to exhibit relatively better (less negative) Sharpe ratios compared to Conventional REITs, indicating slightly superior risk-adjusted performance. This implies that I-REITs were more efficient in managing risk relative to returns, potentially due to their Shariah-compliant structure, which emphasizes lower leverage and more conservative investment practices.

In addition, when benchmarked against their respective market indices, both categories of REITs demonstrated relative resilience, with several REITs outperforming the FBMKLCI and EMAS Shariah Index on a risk-adjusted basis. This highlights the role of M-REITs as relatively stable investment instruments, even though they did not generate positive excess returns overall. The robustness

checks using the Treynor ratio and Jensen's alpha further confirm these findings, as the majority of REITs recorded negative values across these measures, reinforcing the conclusion of weak but consistent performance patterns.

Overall, the study concludes that while Malaysian REITs did not achieve strong risk-adjusted returns during the period examined, Islamic REITs demonstrate comparatively better performance than Conventional REITs, thereby answering the research question. These findings suggest that M-REITs, particularly I-REITs, can still serve as defensive and diversification-enhancing assets within an investment portfolio, consistent with the principles of risk-return trade-off in financial theory.

References

[1] Abdullah, Nur Adiana Hiau, Kamarun Nisham Taufil Mohd, and Woei Chyuan Wong. "Implications of dividend tax reforms on M-REITs performance." *Journal of Property Investment & Finance* 35, no. 2 (2017): 184-199. https://doi.org/10.1108/JPIF-11-2016-0087.

[2] Al-Haija, Elias Abu, and Mehveen Syed. "Islamic real estate investment trust: comparative study between emirates Islamic REIT UAE and Al Salam Islamic REIT Malaysia." *Journal of Islamic Accounting and Business Research* 12, no. 6 (2021): 904-918. https://doi.org/10.1108/JIABR-09-2020-0273.

[3] Cheong, Calvin WH, and Ling-Foon Chan. "Market context matters: the impact of corporate diversification on REIT performance in Malaysia and Singapore." *Journal of Property Investment & Finance* 42, no. 3 (2024): 269-291. https://doi.org/10.1108/JPIF-03-2023-0028.

[4] Danila, Nevi. "Interconnected dynamics of REITs and other financial Instruments in ASEAN: a comprehensive analysis." *Cogent Economics & Finance* 13, no. 1 (2025): 2468388.https://doi.org/10.1080/23322039.2025.2468388.

[5] Hashim, Haniza, Nur Baiti Shafee, Shadia Suhaimi, and Siti Nurul Huda Mohd. "Analysis of M-REITs Performance Based on Financial Factors and the Degree of Specialization." *Studies of Applied Economics* 39, no. 4 (2021). https://doi.org/10.25115/eea.v39i4.4874.

[6] Khairulanuwar, Aina Jazima, and Nor Nazihah Chuweni. "The significance and performance analysis of Malaysian real estate investment trusts." *International Journal of Law and Management* 63, no. 4 (2021): 417-430. https://doi.org/10.1108/IJLMA-01-2020-0022.

[7] Marzuki, Muhammad Jufri, and Graeme Newell. "The significance and performance of US commercial property in a post-GFC context." *Journal of Property Investment & Finance* 35, no. 6 (2017): 575-588.https://doi.org/10.1108/JPIF-02-2017-0018.

[8] Marzuki, Muhammad Jufri, and Graeme Newell. "The investment attributes of Mexico REITs as a listed property investment vehicle." *Journal of Property Investment & Finance* 39, no. 4 (2021): 408-421. https://doi.org/10.1108/JPIF-05-2020-0048.

[9] Marzuki, Muhammad Jufri, and Graeme Newell. "Practice Briefing: The inception and preliminary performance analysis of REITs in the Kingdom of Saudi Arabia." *Journal of Property Investment & Finance* 43, no. 1 (2025): 95-110. https://doi.org/10.1108/JPIF-03-2024-0038.

[10] Marzuki, Muhammad Jufri, Graeme Newell, and Stanley McGreal. "The development and initial performance analysis of REITs in Ireland." *Journal of Property Investment & Finance* 38, no. 1 (2020): 56-70. https://doi.org/10.1108/JPIF-08-2019-0114.

[11] Ola, Olumide Samson, Mohd Lizam, and Edie Ezwan Mohd Safian. "EVALUATING THE FINANCIAL PERFORMANCE METRICS OF REAL ESTATE INVESTMENT TRUSTS: IDENTIFYING APPROPRIATE METRICS FOR INVESTMENT ANALYSIS." (2025). https://doi.org/10.22495/bprv3i2p2.

[12] Ramachandran, Jayalakshmy, Khoo Kok Chen, Ramaiyer Subramanian, Ken Kyid Yeoh, and Kok Wei Khong. "Corporate governance and performance of REITs: a combined study of Singapore and Malaysia." *Managerial Auditing Journal* 33, no. 6-7 (2018): 586-612. https://doi.org/10.1108/MAJ-09-2016-1445.

[13] Ruslan, Siti Marsila Mhd. "THE FINANCIAL PERFORMANCE OF ISLAMIC REAL ESTATE INVESTMENT TRUSTS (REITS) IN MALAYSIA." *Asian Academy of Management Journal of Accounting & Finance* 15, no. 1 (2019). https://doi.org/10.21315/aamjaf2019.15.1.8.

[14] Choo, William Keng Soon, Mohd Yahya Mohd Hussin, and Fidlizan Muhammad. "Macroeconomic shocks and leverage effect on Malaysian Islamic real estate investment trust stock return." *Journal of Critical Reviews* 7, no. 6 (2020): 607-617. https://doi.org/10.31838/jcr.07.06.108.

[15] Tsai, I-Chun. "Volatility clustering, leverage, size, or contagion effects: The fluctuations of Asian real estate investment trust returns." *Journal of Asian Economics* 27 (2013): 18-32. https://doi.org/10.1016/j.asieco.2013.04.010.

[16] Victor, Elsa Sapphira, Muhammad Najib Razali, and Hishamuddin Mohd Ali. "The Dynamics of the Impact of the Covid-19 Pandemic on Pan-Asia's Real Estate Investment Trusts." *Real Estate Management and Valuation* 31, no. 4 (2023): 11-22. https://doi.org/10.2478/remav-2023-0026.