Factors Shaping the Net Asset Value of Saudi Real Estate Investment Trusts

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ABSTRACT

This study investigates the impact of the dividend per unit, loan-to-value ratio (LTV), operating performance, and liquidity on the financial performance of Saudi Real Estate Investment Trusts (REITs), as measured by Net Asset Value (NAV). The study examines a sample of 17 listed Saudi REITs over a five-year period, 2019-2023, resulting in 85 observations. Through multiple regression analysis, the results demonstrate a significant positive relationship between NAV and dividend per unit, operating performance, liquidity, and size as a control variable. In contrast, a negative relationship is found between LTV and NAV. These findings provide important insights for investors and portfolio managers, enhancing their understanding of the key factors that drive the financial performance of Saudi REITs.

Keywords-Net Asset Value (NAV); Dividend; Loan To Value (LTV) ratio; liquidity; operating performance; Saudi REITs

I. INTRODUCTION

The real estate sector plays a crucial role in the economic development of most countries, significantly influencing their economic stability and functionality. In recent years, REITs have emerged as a popular investment, offering opportunities for both income generation and capital appreciation. However, the factors driving the performance of Saudi REITs remain largely unexplored. Saudi Arabia was one of the first countries in the Gulf Cooperation Council (GCC) region to establish REITs. The Saudi Capital Market Authority (CMA) issued the Real Estate Investment Funds Regulation on July 15, 2006, and revised it on February 24, 2021 [1]. Public offering of REITs began in 2016. Since then, 19 REITs have been listed on the main market and one on the Saudi Parallel Market (Nomu). The introduction of REITs aligns with the Kingdom's Vision 2030, a strategic initiative aimed at diversifying the economy and reducing dependence on oil revenues. The financial success of REITs heavily depends on their ability to generate a growing income stream from rents, which is distributed to shareholders as dividends. By law, REITs are mandated to pay out at least 90% of their taxable income as dividends [1], making them attractive to investors seeking regular income. Typically, robust financial performance is associated with high dividend payouts, whereas reduced payouts may signal that management is reallocating funds to enhance asset quality or increase rental income. Accordingly, investors closely monitor REIT financial metrics to assess their stability and potential for dividend growth.

This research intends to further explore the linkage among dividends, leverage, liquidity, and operating performance on the profitability of Saudi companies, in particular the Saudi REITs sector computed through the NAV. The very first study is original on two accounts. To begin with, it is predicated on Saudi Arabia, a major economic engine in the region. With the region increasingly internationalizing its financial markets, Saudi Arabia, home to MENA's largest economy with a Gross Domestic Product (GDP) above USD 1 trillion, has positioned itself as a key piece on the chessboard. This represents around a quarter of MENA's GDP. Second, as far as the author is aware, this is the first full-scale analysis that deals explicitly with the financial performance of Saudi REITs. Previous studies, such as those conducted in [2, 3], have primarily focused on REIT performance during Initial Public Offerings (IPOs), while other research has compared REIT performance across the GCC countries. This study seeks to fill this gap by providing valuable insights into the specific dynamics at play within the Saudi market, thereby contributing to a deeper understanding of its evolving landscape.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

A. Dividend and REIT Performance

Many empirical studies have examined the relationship between dividends and REIT performance, utilizing key financial ratios, such as dividend yield, dividend payout, and payout ratio to evaluate dividend-related metrics. Specifically, a positive relationship between NAV, used as a proxy for REIT performance, and dividend yield is identified in [4]. The findings suggest that REITs offering higher dividend yields tend to perform better, overall. This indicates that consistently paying attractive dividends can enhance investor confidence and contribute to improved REIT performance. In [5], it was demonstrated that the dividend payout levels for REITs in Asia were negatively associated with Returns on Assets (ROA). This

aligns with agency cost theory, which implies that companies with higher ROA are more likely to reinvest their profits back into the business rather than distributing them as dividends to shareholders. In a similar way, the results in [3], indicated that despite the negative returns for IPO investors, the REITs listed on Tadawul offered attractive dividend yields. This means that although the market value of the REITs did not increase significantly, the regular dividend income remained a beneficial factor for investors. In an effort to assess the impact of Environmental, Social and Governance (ESG) on financial performance, authors in [6] provided long-term empirical evidence based on REITs in five developed economies from 2003 to 2019. The results revealed that the dividend payout ratio was significantly and positively associated with the REIT excess return and Sharpe ratio. Authors in [7, 8], found a significantly positive relationship between the dividend yield and REIT performance. For investors evaluating REIT investments, dividend yield may contribute to disparities in financial performance, as higher-yielding REITs tend to perform better. Based on this analysis, the following research hypothesis is proposed:

- H1: The dividend per unit has a positive impact on the financial performance of Saudi REITs.

B. Leverage and REIT performance

Many studies have investigated the effect of the leverage on REIT performance, but the results are mixed. In [6], it was indicated that leverage, particularly in the context of environmental policies, can significantly impact financial performance. Specifically, the study supported the trade-off hypothesis, suggesting that while environmental initiatives may incur high financial costs, leading to decreased market returns, Social Investing (S-investing) has been positively valued by investors, particularly in the post-Global Financial Crisis period, 2011-2019. This means that, although environmental efforts may consume resources, social programs can provide an upside in returns and negative systemic risk, aligning with the stakeholder theory. According to [9], the impact of leverage on equity returns is marginal for REITs with low financial leverage. In other words, the debt levels of these REITs do not significantly explain variations in their stock performance. At moderate levels of financial leverage, the risk to shareholders' investments does not increase significantly. However, for REITs with high financial leverage, their debt levels are positively linked to their equity returns. Authors in [7] also supported this evidence, finding that the debt-to-assets ratio is not significantly related to the annual returns of Malaysian REITs. This suggests that leverage is not a critical factor in determining performance in this case. Also, in [8], it was found that the influence of leverage on REIT performance is significantly negative, with the NAV of REITs decreasing as debt levels rise. Drawing on these findings, the following hypothesis is formulated:

- H2: The leverage has a negative impact on the financial performance of Saudi REITs.

C. Operational REIT Performance

The relationship between the financial and operating performance of REITs is crucial to understanding their overall success. The operating performance, measured by indicators, such as cost efficiency, property occupancy, and asset management, directly influences the financial performance of REITs. Efficient operational management maximizes the rental income and minimizes costs, resulting in improved profit margins and better returns for investors. Moreover, a strong operating performance contributes to a REIT's long-term stability, through real estate market cycles and fluctuations in the economic activity. In other words, to achieve sustainable and favorable changes in financial performance, REIT operations must be optimized.

Authors in [10] found that the REIT value was significantly positively correlated with lagged operational efficiency measures. This means that high- performance real estate assets tend to have greater market valuations. Likewise, more efficient REITs were associated with higher average stock returns compared to less efficient ones, suggesting that well-run REITs can offer superior returns to their shareholders. In contrast, authors in [11] demonstrated that higher ESG performance leads to better operational performance, since REITs with higher ESG scores generally tend to display better overall performance overall. Notably, for REITs with strong ratings in operational efficiency, the relationship between the ESG scores and operational performance is even stronger. This suggests that a good ESG performance can amplify the benefits of operational efficiency. Additionally, in [6], it was found that while environmental initiatives are beneficial for sustainability, they can also be costly for REITs. These costs can burden resources and processes, impacting financial performance. On the other hand, the study highlighted that S-investing, particularly in the post-Global Financial Crisis, was well-received by investors, indicating that social measures can improve performance by reducing systematic risk and enhancing competitiveness. Based on these findings, the following research hypothesis is proposed:

- H3: The operating performance has a positive impact on the financial performance of Saudi REITs.

D. REIT's Property Liquiduty

Property liquidity in REITs is one of the key measures for evaluating their financial performance. Sufficient liquidity allows REITs to take advantage of new investment opportunities, withstand market fluctuations, and meet their financial obligations. However, excessive liquidity can lead to opportunity costs, as the capital could be better utilized elsewhere. Therefore, REIT managers are consistently tasked with balancing this trade-off and often adopt a more conservative approach to managing liquidity.

REITs with greater liquidity and larger market capitalization tend to incorporate information more quickly, leading to a faster adjustment of supply and demand, as evidenced by the quicker price reversals following extreme market events [12]. This suggests that liquidity can influence how market shocks affect REIT prices. The authors also found that Equity REITs experience stronger liquidity effects than Mortgage REITs, indicating that the former are more sensitive to changes in market conditions. Overall, investors in REITs should consider the liquidity profile of individual real estate

stocks, as it can significantly impact risk-return assessments. In [13], it was demonstrated that liquidity moderates the relationship between the debt and financial performance of the REITs in Malaysia. This indicates that the effect of debt on the REIT performance depends on the liquidity position maintained by the REIT. The researchers identified an optimal level of liquidity for REITs beyond which further increases do not necessarily lead to better financial performance. In fact, excessive liquidity may have an adverse effect. Authors in [14] reported that the REITs in their sample were primarily small-cap firms with quite low trading volumes. This raises the possibility that liquidity may have acted as a barrier for some investors, namely those looking to invest large sums or needing regular access to their capital. Despite these challenges, the REITs outperformed their rivals over the short term, displaying significantly higher abnormal and risk-adjusted returns than all three sets of competitors. Overall, the fact that these REITs were able to overcome liquidity issues and still produce positive returns for investors is encouraging. The results suggest that these REITs can attract investors and remain profitable, even with liquidity constraints. From this analysis, the following research hypothesis was formulated:

- H4: The liquidity has a positive impact on the financial performance of Saudi REITs.

III. EMPIRICAL METHODOLOGY

A. Data

The sample for this research consists of 85 observations from 17 Saudi REITs listed on Tadawul over the five-year period from 2019, January to 2023, December. The data were collected from annual reports published on the Tadawul website, as well as from other websites, such as Yahoo Finance, MarketScreener, and the official websites of all the selected listed REITs [15-17]. This time period was chosen due to data availability, as Saudi REITs began being listed on the stock market in 2016, but comprehensive data for all 17 REITs became available only from 2019 onwards. Three REITs were excluded from the sample because they were listed in 2023 and 2024.

B. Model Specification

To analyze how various factors influence REIT performance, a general estimation model was developed to explore the relationship between the latter and both dependent and control variables, including dividend per unit, leverage, operating performance, liquidity, and size.

The empirical model is defined as:

$$NAV_{it} = \beta_0 + \beta_1 DIV_{it} + \beta_2 LTV_{it} + \beta_3 OP_{it} + \beta_4 LIQ_{it} + \beta_5 Size_{it} + \varepsilon_{it} \quad (1)$$

where:

- *NAV* refers to the Net Asset Value (the dependent variable)
- *DIV* stands for Dividend per unit
- *LTV* is the Loan to Value Ratio
- *OP* presents the Operating Performance
- *LIQ* is the Liquidity
- *Size* is the firm size
- β_0 is the intercept
- ε indicates the error term
- $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ represent the coefficients of *NAV* with respect to relevant independent and control variables.

This study employs *NAV* as a proxy for REIT performance, a widely used metric in REIT research. *NAV* is determined by subtracting the total liabilities from the total assets and dividing the result by the number of the outstanding units. Four independent variables are analyzed. The first is *DIV*, calculated by dividing the total dividend amount by the number of outstanding units. The second variable is *LTV*, which measures the leverage as the ratio of borrowing to total assets. The third variable, *OP,* is quantified using the logarithm of the operating expenses. The fourth variable, *LIQ*, is expressed by the quick ratio, which is the ratio of the current assets to current liabilities. For the control variable, the size of REIT (*Size*) is utilized, calculated by the logarithm of the total assets.

This study utilizes a combination of cross-sectional and time-series data, making panel regression analysis an appropriate method. Panel regression allows for the identification of statistically significant predictors among the independent variables and enables the estimation of the strength and direction of their relationships with the dependent variable. The pooled Ordinary Least Squares (OLS) method was employed to conduct the regression analysis, assessing whether significant relationships exist between the independent variables and the financial performance of REITs.

IV. EMPIRICAL RESULTS AND DISCUSSION

A. Descriptive Statistics

Table I shows the descriptive statistics of the datasets.

TABLE I. DESCRIPTIVE STATISTICS

	Mean	Std. Dev.	Min	Max	Observation
NAV	9.25	1.30	6.25	12.69	85
DIV	0.52	0.27	0.00	1.35	85
LTV	0.27	0.16	0.00	0.50	85
OP	7.53	0.37	6.60	8.53	85
LIQ	3.74	5.25	0.02	40.37	85
SIZE	9.11	0.28	7.79	9.56	85

The results presented in Table I indicate that the dataset comprises 85 total observations. The mean value of the NAV is 9.25, with a range from 6.25 to 12.69. The dividends had a mean value of 0.52 during the period from 2019 to 2023. Additionally, the mean leverage ratio across the sample is approximately 0.27 ranging from 0 to 0.5, whereas the operating performance had a mean value of 7.53. Finally, the average REIT in the sample maintained a liquidity of 3.74 and a size of 9.11.

B. Corellation Matrix

Table II presents a Spearman rank correlation analysis of the model variables to check for multicollinearity.

TABLE II. CORELLATION MATRIX

	VIF	NAV	DIV	LTV	OP	LIQ	SIZE
NAV	-	1	-	-	-	-	-
DIV	1.12	0.54	1	-	-	-	-
LTV	1.11	-0.01	0.23	1	-	-	-
OP	2.12	-0.19	-0.02	-0.09	1	-	-
LIQ	1.04	0.21	-0.05	-0.06	-0.16	1	-
SIZE	2.18	0.11	0.18	0.10	0.70	-0.17	1

The results depicted in Table II indicate that the correlation matrix does not reveal any significant multicollinearity issues, as none of the correlation coefficients exceed the threshold of 0.8 [18]. Furthermore, the Variance Inflation Factor (VIF) test was conducted, and the model demonstrated a low level of multicollinearity. All VIF values for the tested variables were below 5, as summarized in Table II. While there is no universally strict cutoff for VIF values, a value exceeding 5 is commonly regarded as indicative of potential multicollinearity.

C. Regression Results

Table III portrays the regression model estimations over the full sample period.

TABLE III. REGRESSION MODEL ESTIMATIONS

Variable	Coefficient	t-Statistics
CONSTANT	4.162877	1.145680
DIV	2.537567**	5.822320
LTV	-1.538622*	-2.086019
OP	-1.390681**	-3.253122
LIQ	0.054734*	2.577871
SIZE	1.587886**	2.785513
Observations	85	
R-squared	0.4375	
F-statistic	12.2898	
Prob (F-statistic)	0	

** and * represent $p < 0.01$ and $p < 0.05$ respectively

The research findings reveal that the dividend per unit, liquidity, and size have a positive influence on the REIT performance, whereas leverage and operating expenses have notable negative impacts. The R-squared value indicates that 43.75% of the variance in REIT performance can be explained by the independent and control variables included in the model. Additionally, the F-statistic and its associated probability value (Prob (F-statistic) = 0) confirm that the regression model is statistically significant as a whole.

The positive and significant relationship between the dividends and REIT performance can be attributed to the legal requirement for the Saudi REITs to distribute at least 90% of their net income annually as dividends to maintain their qualification status. Consequently, dividends constitute a large portion of the investor returns, making them a compelling factor for REITs to maintain or increase dividend payouts, especially to attract investors. Furthermore, dividends offer a predictable income stream, which enhances their attractiveness compared to traditional investments, especially during periods of economic instability or market turbulence. This increased investor demand further contributes to positive financial performance. The results support H1, as the p-value was significant at the 1% level. These findings align with those of previous studies [4, 6-8], which demonstrated a positive correlation between the dividends and financial performance. However, this study's results diverge from those of [4], which identified a negative relationship between the dividend payout levels and ROA.

The current study's findings reveal a negative relationship between the leverage ratios and financial performance in the REIT sector, with this association being statistically significant at the 5% level, thereby confirming H2. Leverage is measured by the LTV ratio, a metric commonly used to assess lending risk before mortgage approval. A high LTV indicates a higher proportion of debt relative to the assets, which heightens the financial risk and may hinder the REIT's ability to meet repayment obligations, ultimately impairing its overall performance. Additionally, high LTV ratios are often associated with increased volatility in financial performance, as investors perceive heavily leveraged REITs as riskier. This perception can lead to lower market valuations and reduced returns. Moreover, lenders may impose stricter conditions, increasing borrowing costs and limiting the REIT's financial flexibility. Even though Saudi Arabian legislation imposes a 50% LTV limit, investors may still perceive REITs with LTVs nearing this limit as particularly risky. This concern is reasonable, especially given the heightened vulnerability of highly leveraged REITs during economic downturns or periods of rising interest rates. The present study's results align with a study [8], which also reported that high leverage negatively impacts the NAV of the REITs.

The results of the present study indicate an inverse relationship between the operating performance, as measured by the operating expenses, and the financial performance of Saudi REITs. Specifically, a decrease in the operating expenses correlates with improved financial performance suggesting that efficient resource management enhances the operating profits and overall company performance. In other words, REITs with lower operating expenses tend to achieve superior financial outcomes. The negative coefficient in the obtained results highlights that the operating performance significantly enhances REITs' financial performance, aligning with the findings of [10], where a strong positive correlation between the REIT value and lagged operational efficiency measures was declared. These findings support H3.

The relationship between liquidity and financial performance in Saudi REITs is positive and significant at the 5% level, confirming H4. More liquid REITs are generally perceived as less risky and attack a broader investor base. This increased demand raises REIT share prices and enhances financial performance. Additionally, robust liquidity is crucial for meeting mandatory payout requirements, servicing debt, and fostering investor confidence, all of which contribute to better financial outcomes. Higher liquidity also strengthens corporate governance as large institutional investors, drawn to liquid shares, can exert pressure on management to maximize the shareholder value. These results are consistent with those of [6], where a positive relationship between liquidity and REIT excess returns was reported.

As a control variable, size demonstrates a significant positive impact on the financial performance of Saudi REITs at the 1% level, indicating that larger REITs tend to perform

better. This can be attributed to the economies of scale, better access to capital markets for financing profitable projects or refinancing debt at lower costs, and the ability to maintain diversified real estate portfolios, which reduces overall risk and stabilizes revenues. The current study's findings are consistent with those of [4, 6, 8, 19], which highlighted a notable positive relationship between the REIT size and performance, particularly in advanced markets, like Singapore and Hong Kong. However, they differ from those of [7] in which a negative relationship between market capitalization, as a measure of size, and Malaysian REITs' annual returns was detected.

V. CONCLUSIONS

This study has examined the impact of dividends, leverage, operating performance, and liquidity on the financial performance of 17 Saudi Real Estate Investment Trusts (REITs) from 2019 to 2023. The findings reveal that dividends, operating performance, and liquidity significantly and positively affect financial performance, while leverage demonstrates a significant negative impact. These empirical findings underscore the importance of maintaining a prudent capital structure and emphasize the critical role of operational efficiency and liquidity management in improving the financial performance of REITs. The study's implications offer insightful information for participants in the Saudi real estate market, including investors, policymakers, and other stakeholders. For investors, the findings demonstrate the substantial influence of key financial factors, enabling more informed investment decisions in REITs. Policymakers can utilize these findings to develop strategies that foster a supportive environment for REITs, potentially attracting additional investment and driving economic growth. The participants in the real estate market can adjust their strategies to optimize portfolio allocation based on the determinants identified in this study. Overall, the study enhances the ability to predict REIT performance and offers practical recommendations for stakeholders in the Saudi real estate sector.

Despite its contributions, this study has several limitations. First, it covers a specific period, namely 2019–2023, which may not capture long-term real estate trends. Second, the sample of the 17 REITs may limit the generalizability of the findings. Additionally, while the study focused on quantitative factors, qualitative aspects, such as management practices or market conditions, were not considered. These limitations arise because most Saudi REITs were listed after 2018, and the sample excludes three REITs listed in 2023 and 2024 Future research could replicate this study over a longer time frame or expand to other REITs, such as those in Malaysia, and incorporate qualitative analyses to provide a fuller understanding of the performance drivers. It would also be valuable to examine the impact of the COVID-19 pandemic on REITs, comparing the pre- and post-pandemic performance across sectors. Finally, exploring the role of the blockchain technology in REIT valuation could offer new insights [20].

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