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Sustainability Impact on REIT Financial Performance

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Abstract

Sustainability has long been a topic of discussion in the context of climate change, natural resource scarcity, pollution, social responsibility, and human equality. Since introducing the environmental, social, and governance (ESG) concept in 2004, sustainability has increasingly been integrated into corporate business models, particularly through adherence to principles of responsible investment, standardized reporting, and accounting practices. This study examines the impact of ESG factors on the financial performance of Real Estate Investment Trusts (REITs), based on data from Morningstar, Global Real Estate Sustainability Benchmark (GRESB), and European Public Real Estate Association (EPRA), analysing evidence from the reviewed literature. The primary objective is to assess the progress of green transition within the REIT sector and the influence of sustainability initiatives on returns and competitive positioning, with empirical analyses focusing on environmental sustainability (E) and its impact on European REITs' returns. The methodology employed includes comparative analysis, literature review, and OLS regression analysis. The results indicate a slowdown in ESG implementation progress worldwide, largely attributed to the substantial costs associated with compliance, including developing reporting capacity and sustainable initiatives. Despite observed capital outflows, the 2024 real estate assessment results show notable progress in key areas, including energy efficiency, greenhouse gas emissions reduction, water and waste management, and social engagement practices within REITs. The empirical analysis of large-cap European REITs aligns with existing research, showing progress towards reducing environmental impact in 2022-2024, positively influencing share prices. In terms of financial effects, the reviewed literature suggests that while the short-term financial impact of ESG measures varies, there is a general trend toward improved long-term performance. Although results across individual metrics remain inconclusive, findings indicate that complex sustainability strategies contribute to enhanced competitiveness and overall financial performance.

Keywords: ESG, Financial Return, REIT, Sustainability.

Introduction

An increasing number of companies are integrating sustainability into their corporate strategies to address environmental concerns and stakeholder expectations. As one of the largest asset classes, the real estate sector holds considerable potential to influence environmental, social, and governance (ESG) issues. Since its introduction in Europe at the end of the 20th century, the REIT sector has experienced substantial growth, contributing to both the quantitative expansion and qualitative enhancement of the real estate market (1). This progress has been supported by technological advancements, the adoption of higher construction standards, and the integration of ESG-related measures. This study examines the relationship between the environmental, social, and governance (ESG) factors and the financial performance of Real Estate Investment Trusts (REITs) based on operational metrics, considering return on assets (ROA), return on equity (ROE), price-to-book ratios (P/B), and market price. Utilizing data from major global REIT ESG assessment organizations, alongside a review of relevant academic literature and companies' sustainability reports, the research aims to assess the extent to which sustainable practices influence REIT competitiveness, asset performance, and investor returns. Considering that ESG reporting has not been mandatory until 2025, the companies included in this research have voluntarily disclosed ESG-related information on various property categories. Based on ESG data availability, the research geographical focus is on Europe, as the empirical research sample comprises large-cap European-listed REITs. The study considers all ESG metrics, focusing especially on environmental issues in the empirical analysis.

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The hypothesis guiding this study is that continued investment in sustainable assets and adherence to ESG reporting standards yield long-term financial and competitive advantages, despite potential short-term negative returns due to compliance costs. The topic of ESG impact on financial performance is of particular importance given the increasing global awareness of sustainability issues. As the real estate sector plays a crucial role in global energy consumption and emissions, understanding the financial implications of sustainable investment is key to guiding corporate management and investor behaviour. The novelty of this study lies in the integration of multiple data sources, such as Morningstar, GRESB, and EPRA, with literature evidence and empirical research, employing recent data, which gives a more comprehensive perspective, highlighting both the challenges related to compliance costs and opportunities for long-term competitiveness and financial performance. This study contributes to decision makers, researchers, and investors by consolidating recent data and literature to evaluate the effectiveness and financial justification for ESG integration in REITs.

Theoretical Background

Global ESG Adoption and Trends

Sustainability has long been a topic of discussion in the context of climate change, natural resource scarcity, pollution, social responsibility, and human equality. The term ESG was initially introduced in a financial sector report "Who cares wins" (2), published in December 2004 as a joint initiative of 23 leading financial institutions, among which are the World Bank Group, Deutsche Bank, Goldman Sachs, HSBC, UBS, Morgan Stanley, and others. The report provided recommendations for integrating non-financial factors such as environmental issues, social impact, and governance into asset management and securities brokerage services. This marked the establishment of ESG as a framework for assessing corporate responsibility and sustainability. Since its inception, ESG has gained increasing importance through various initiatives, including the development of the Principles for Responsible Investment (PRI) and the formulation of standardized reporting and accounting frameworks. A pivotal moment in the green transition was the adoption of the Paris Agreement in 2015 (3), which is currently ratified by 195 parties. Its core objective is to limit the increase in global average temperature to below 2°C, thereby mitigating adverse climate impacts.

In 2020, the European Commission launched the European Green Deal, aiming to achieve climate neutrality by 2050 (4). Key milestones include: achieving zero emission for all new registered vehicles in Europe by 2035; increased renewable energy production capacity and efficiency, aiming at raising the renewable energy share to 42.5% by 2030; improved energy efficiency of buildings through energy saving initiatives and renovation; nature preservation and biodiversity enhancement; management of natural resources and ensuring their equal access for all EU citizens.

Following the European Green Deal, in December 2022, the Corporate Sustainability Reporting Directive (CSRD) was adopted by the European Parliament (5). The directive mandates enhanced ESG disclosures with initial reporting obligations for large and publicly listed entities, starting in 2025 for fiscal year 2024. As of January 2025, 20 EU member states have transposed the CSRD into their national law, six have introduced draft proposals, and three member states remain under a discussion and consultation phase with drafts in progress (6). Nevertheless, implementation challenges persist as some member states (e.g., Bulgaria), despite legislative transposition, announced a delay in mandatory reporting due to a lack of sufficient capacity and expertise to implement the new ESG standards.

Another major development is the Green Bond Regulation, adopted by the European Union in November 2023, which established a framework for issuing sustainability-linked (green) bonds (7). As a result of European sustainability initiatives and legislative changes, Europe currently leads in global sustainability metrics. As of Q1 2025, Europe accounts for 84% of total sustainable assets and 74% of all sustainable funds (Figure 1).

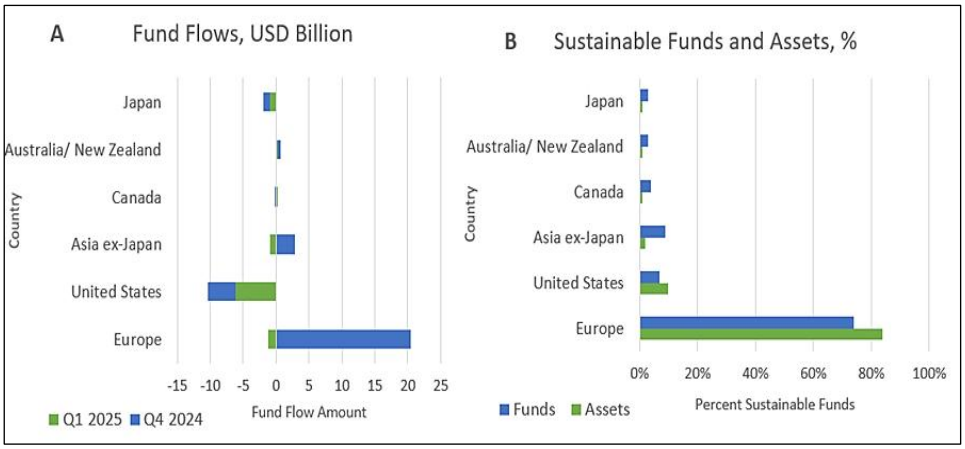

Figure 1: Global Sustainable Assets, Funds, and Flows as of Q1 2025 (Units: A - Fund Flows in USD Billion; B - Sustainable Funds and Assets in %) (8)

Sustainable fund inflows remained robust during the first two years following the Green Deal (2020–2021), predominantly driven by Europe and the United States. However, inflows declined during 2022–2024, with European funds maintaining positive flows, while U.S. funds recorded net outflows. In Q1 2025, nearly all global regions experienced net outflows from sustainable investment funds. These trends suggest a weakening of ESG commitment, further underscored in January 2025, when the United States formally withdrew from the Paris Agreement, thus affirming the European leading position in sustainable development initiatives.

Sustainable REITs

Since ESG reporting has not been mandatory until the beginning of 2025, the sustainability data is based primarily on self-disclosure and voluntary reporting by companies. Among major REIT ESG assessment organizations are the Global Real Estate Sustainability Benchmark (GRESB) and the European Public Real Estate Association (EPRA).

GRESB, established in 2009, is a leading global benchmarking organization that evaluates the ESG performance of real estate entities. GRESB ratings have become a widely accepted standard for academic and industry research on REIT sustainability, often serving as a reference point for analysing the relationship between ESG performance and financial or market outcomes. It assigns each participating company a score (on a scale of 0 to 100) and a star rating (ranging from one to five stars), based on performance across three core pillars:

- Environmental: energy efficiency and renewable energy adoption, water and waste management, greenhouse gas emissions reduction
- Social: Employee well-being, including health, education, diversity, and safety, as well as engagement with local communities
- Governance: Corporate transparency, ethical standards, management structure, risk management, and regulatory compliance

As of 2024, the organization evaluates 2,223 real estate companies across 80 markets, encompassing approximately 208,000 assets with a total gross asset value estimated at $7 trillion (9). The regional distribution includes 1,063 participants from Europe, 588 from the Americas, 392 from Asia, 141 from Oceania, 7 from Africa, and 32 globally diversified firms. Publicly listed companies comprise 18% of all participants, with the remaining 82% representing non-listed private equity entities. Most GRESB members invest in diversified property portfolios, followed by sector-specific investments in residential, office, and industrial assets in Figure 2.

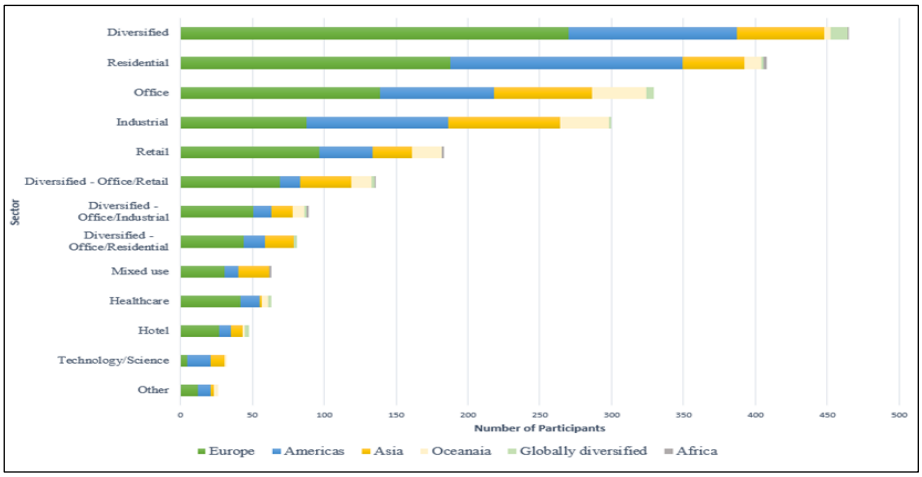

Figure 2: GRESB 2024 Participants by Property type and Region (Unit: Number of Participants) (9)

2024 real estate assessment results demonstrate significant progress in energy efficiency measures, greenhouse gas emissions reduction, water and waste management, and social engagement initiatives. A consistent upward trend in average GRESB scores has been observed since the assessment's inception, which is also positively influenced by the number of consecutive reporting years or the companies' participation period (10). The longest-standing GRESB participants, those with 14 consecutive years of reporting, achieve an average score of 85.3% compared to 62.2% for newly joined (first-year) members, supporting the positive impact of reporting on sustainable results. Moreover, data indicate that the development assets (those in the construction or planning phases) tend to set more ambitious sustainability targets and, as a result, earn higher assessment scores compared to standing investments (existing assets), outlining a tendency towards increasing sustainability awareness in new investment projects.

In alignment with the ESG fund flow data, European REITs lead in the ESG reporting statistics based on GRESB participation data. The European Public Real Estate Association (EPRA) further examines the sustainability performance of European REITs in its 2024 Annual Non-Financial Performance Report (EPRA, 2024). The report analyses 103 publicly listed European REITs, all EPRA members, using three primary environmental indicators: energy intensity, water intensity, and greenhouse gas intensity (Table 1). The findings reveal substantial progress toward climate neutrality over the most recent three-year observation period (2021-2023), with measurable improvements across all evaluated benchmarks.

Table 1: REIT Green Transition Progress, 2021-2023 (11)

Environmental Indicator	2021	2022	2023
Energy Intensity, kWh/m²/year			
Office	164	169	141
Retail	189	172	124
Residential	104	95	109
Healthcare	291	126	129
Self-Storage	3	3	2
Lodging & Resorts	89	129	120
Water Intensity, m3/m2/year)			
Office	0.27	0.8	0.41
Retail	0.75	1.01	0.61
Residential	1.08	1.37	1.01
Industrial	0.17	0.29	0.3

Healthcare	0.88	0.71	0.59
Self-Storage	0.03	0.03	0.03
Lodging & Resorts	0.38	0.59	0.92
GHG Intensity (scope1 + scope2), K CO2/m²/year			
Office	80	37	35
Retail	35	28	34
Residential	130	246	116
Industrial	63	38	10
Healthcare	35	34	not disclosed
Self-Storage	5	4	3
Lodging & Resorts	not disclosed	not disclosed	not disclosed

The study indicates that most properties decrease their energy intensity for the observed period, indicating improved energy efficiency, particularly in the retail, office, and healthcare sectors. Water use fluctuates, with notable peaks in 2022 across multiple sectors, followed by reductions in 2023 as lodging showed the least improvement. GHG Emissions trended downward, especially in the office and industrial sectors, reflecting successful decarbonisation initiatives.

Despite recent outflows from sustainable funds, the real estate sector has implemented a range of sustainability initiatives and is expected to continue demonstrating improvements in ESG performance indicators. A study on the sustainability practices of Australian REITs examines the investments in sustainable assets during the global financial crisis (12). The research employs a content analysis methodology, examining corporate websites and publicly available reports from 24 leading Australian REITs. The findings reveal that, during the crisis, the majority of REITs reduced their investment in sustainability initiatives. However, those that continued to invest in sustainable assets experienced more stable financial returns in the post-crisis period. Performance comparisons were drawn using key financial ratios, including Return on Assets (ROA), Return on Equity (ROE), and Price-to-Book (P/B) ratios, suggesting that long-term commitment to sustainability may contribute to greater financial resilience during periods of economic crisis.

Evidence supporting the positive impact of sustainability on both operational and financial performance is provided in a study, confirming that the investment in sustainability measures primarily related to energy efficiency, including investments in renewable energy, greenhouse gas emissions reduction, and improvements in water and waste management, pays off through enhanced competitiveness of the real estate assets (13). The author examines REITs across North America, Europe, and Asia between 2011-2014, applying regression analysis based on GRESB sustainability scores. The findings indicate that REITs investing in buildings rated with higher sustainability scores achieve better financial outcomes as measured by ROA and ROE. Although the analysis does not provide clear evidence supporting the relationship between greenery and the stock market performance of REITs, the author considers a potential implication in this area.

The relationship between ESG factors and the performance of publicly listed U.S. REITs is examined in a study, utilizing three sustainability benchmarks: GRESB, Thomson Reuters, and KLD (14). The study employs the Fama–French five-factor regression model to estimate excess market returns associated with each ESG metric. The findings reveal that the impact of ESG performance on REIT returns is highly dependent on the benchmark used. Specifically, GRESB scores are negatively associated with REIT returns, whereas both Thomson Reuters and KLD metrics indicate a positive market premium. The authors also find that the effects of all ESG metrics tend to shift over time toward an increase in the return in the long term. A plausible explanation for this dynamic is the initially high compliance and implementation costs associated with ESG adoption, which may suppress short-term profitability but ultimately lead to long-term asset appreciation and business model enhancement. Another key insight is that the Social (S) and Governance (G) factors are linked to positive financial performance, whereas

the Environmental (E) factor is associated with a negative return. This may explain the negative correlation observed with GRESB scores, given that the organization assigns a relatively greater weight to environmental metrics (E), which usually entail significant upfront investment and delayed payoff.

Another research explores the relationship between sustainability performance and financial outcomes in European REITs, analyzing a sample of 20 publicly listed REITs (15). Using Ordinary Least Squares (OLS) regression analysis and GRESB scores as the sustainability metric, the authors assess operating performance through ROE and ROA. The findings indicate that the overall GRESB rating is positively associated with financial performance. However, none of its separate components show a significant impact on ROA and ROE, except for stakeholder engagement, which is positively related to both indicators.

A recent study examines the influence of ESG factors on the sustainability of infrastructure REIT assets (16). Utilizing a structural equation modeling (SEM) approach, the authors analyze the intrinsic relationships between the level of environmental responsibility, social engagement, governance quality, and long-term asset sustainability. The study identifies eleven ESG factors with significant positive effects, with carbon emission optimization, infrastructure asset management, and information disclosure having the strongest influence. Additional impactful factors include resource management, operational efficiency, and adoption of sustainable technologies, multicultural workplace environments, and organizational transparency.

Comparable results are observed in the private real estate sector in a study, focusing on the performance of private equity real estate (non-REITS), specifically those within the Open-End Diversified Core Equity (ODCE) Index and the voluntary ESG reporting to GRESB (17). Using both Fama–MacBeth and OLS regression models, the authors find that the reporting of sustainability metrics contributes to a 0.35% increase in total quarterly return, driven primarily by price appreciation, while having no significant effect on the income component. Macroeconomic variables do not alter the results, suggesting that GRESB membership itself is an important performance factor. The results are further supported by the European Association for Investors in Non-Listed Real Estate Vehicles (INREV, 2023), whose research estimates that GRESB participants outperform non-participants by 1.8% annually in terms of total return (18).

Methodology

The methodology adopted in this study combines a comparative analysis, content analysis, literature review, and OLS regression analysis.

- Literature review: A review of academic studies, industry reports, and ESG performance databases was conducted to understand the theoretical framework and empirical findings in the field. Key sources include studies within the period 2016-2024.
- Content analysis: Qualitative content analysis is applied to evaluate ESG performance benchmarks, such as GRESB, Thomson Reuters, and KLD, as discussed in the literature. The focus is placed on how these metrics relate to financial indicators such as ROA, ROE, and stock price appreciation. ESG fund flow data from major REIT ESG assessment organizations were also analyzed to understand current market behavior.
- Comparative analysis**:** A cross-regional comparison was conducted using data on REIT performance and ESG fund flows of Europe, the United States, Asia, Canada, Japan, and Australia/New Zealand. Temporal comparisons were made between Q4 2024 and Q1 2025 to identify short-term shifts in investment trends and regional disparities in sustainability integration.
- Regression analysis: An Ordinary Least Squares (OLS) regression analysis is employed to evaluate the impact of environmental factors on the market prices of selected REITs during the period 2022–2024. The sample comprises five European large-cap REITs, drawn from the top ten constituents of the FTSE EPRA Nareit Developed Europe Index as of August 29, 2025 (19), namely: Vonovia SE, Germany (20, 21); SEGRO Plc, UK (22, 23); Swiss Prime Site AG, Switzerland (24, 25); PSP Swiss Property AG, Switzerland (26, 27); and LEG Immobilien SE, Germany (28, 29).

The regression model is formulated as follows:

$$Price_{i,t} = \beta_0 + \beta_1(Energy_{i,t}) + \beta_2(Water_{i,t}) + \beta_3(GHG_{i,t}) + \varepsilon_{i,t} \quad [1]$$

- The dependent variable (Price) represents the market price of the REITs, while the independent variables consist of the reported energy intensity (Energy), water intensity (Water), and greenhouse gas intensity (GHG) for the examined periods. The coefficients β_1, β_2, and β_3 show the effect of changes in each environmental indicator on the REITs' market prices, while ε is the error term. The expected sign of the coefficients is negative, as higher intensity values are generally associated with lower sustainability performance and may exert downward pressure on valuation. This allows for an empirical assessment of how environmental sustainability is reflected in capital market outcomes.

This study utilizes secondary data from publicly available databases and reports published by major ESG and real estate sustainability institutions, including the Global Real Estate Sustainability Benchmark (GRESB), European Public Real Estate Association (EPRA), Morningstar, and European Association for Investors in Non-Listed Real Estate Vehicles (INREV), journal articles, and publicly available ESG reports published on the respective companies' websites. While all ESG metrics are relevant to REIT sustainability, the empirical analysis primarily emphasizes environmental metrics (E), as structured data is more consistently available, and their implementation typically requires higher financial resources. Given the data limitations, the empirical analysis is based on large-cap European REITs, focusing on environmental metrics such as energy intensity, water intensity, and GHG intensity, available for the period 2022-2024.

This study does not involve any human participants, animal subjects, or identifiable personal information. Therefore, approval from an Institutional Review Board (IRB) or Research Ethics Board (REB) was not required.

Results

Global ESG Adoption and Trends

Since the introduction of the ESG concept in 2004, sustainability has been increasing its role in corporate business models, driving the adoption of principles for responsible investment and the development of reporting and accounting standards. Key milestones in the global green transition include the Paris Agreement (3), which aims to limit global warming, and the European Green Deal, which targets net-zero greenhouse gas emissions by 2050 (4). In line with these goals, the Corporate Sustainability Reporting Directive was introduced to standardize ESG reporting across EU member states (5). As of January 2025, the Directive is transposed in the national legislation of 20 out of 29 EU member states (6). Despite the delay of its implementation in several countries, due to insufficient administrative capacity and technical expertise, Europe accounts for the majority of ESG funds (8) and the largest share of voluntary ESG reporting entities (9).

A tendency towards a decrease in sustainable fund flows has been observed, predominantly from US companies, coinciding with the United States' recent decision to withdraw from the Paris Agreement (Figure 1). Among the main reasons for the sustainability slowdown are estimated to be the high compliance costs and the associated competitiveness concerns.

REIT Sustainability

To assess the REIT sustainability, academia and industry use data provided by assessment organizations such as GRESB and EPRA. GRESB is a leading global benchmark assessing over 2,200 real estate companies across 80 markets worldwide, investing mainly in diversified property portfolios, residential, office, and industrial assets (Figure 2). 2024 real estate assessment results show substantial progress in energy efficiency measures, greenhouse gas emissions reduction, water and waste management, and social engagement among REITs. The data indicate a steady upward trend in average GRESB scores since the benchmark's inception, which is also positively related to the number of consecutive reporting years (10). This relationship underscores the cumulative benefits of ESG reporting on sustainability outcomes. Furthermore, development assets (new construction projects) set higher sustainability targets. As a result, they receive higher scores compared to standing investments, outlining a

tendency towards increasing sustainability awareness in the new investment projects.

A recent EPRA study on 103 publicly listed European REITs shows considerable progress towards environmental sustainability of the real estate companies, evidenced by three primary environmental indicators: energy intensity, water intensity, and greenhouse gas intensity (Table 1). The study observes declining energy intensity, particularly in retail, office, and healthcare sectors. Water use fluctuates with notable peaks in 2022 across multiple sectors, followed by reductions in 2023. GHG emissions decreased overall, most notably in office and industrial sectors, reflecting effective decarbonisation efforts.

Sustainability Impact on REIT Returns

Evidence from literature shows that companies that invested in sustainable assets during the global financial crisis demonstrated more stable returns in the subsequent years compared to those that invested lower funds, and showed higher ROA, ROE, and B/P ratios (12). Another study further researches the positive influence of sustainability on operational and financial performance, finding that investments in sustainable measures, related mainly to energy efficiency, renewable energy, greenhouse gas emissions reduction, and water and waste management efficiency, pay off through enhanced competitiveness of the real estate assets as companies achieve better financial performance in terms of ROA and ROE (13). Similarly, other authors find that the overall GRESB rating has a positive influence on financial performance. Nevertheless, individual components generally do not show a significant impact on ROA and ROE, except for stakeholder engagement, which demonstrates a consistent positive relationship with both ratios (15). When analysing the individual ESG metrics, researchers conclude that the S and G factors are associated with a positive return effect, while E shows a return discount. In addition, the impact of these metrics tends to increase over time, leading to higher returns in the long term (14). The effect of ESG factors on the sustainability of infrastructure REIT assets is further examined, identifying a positive influence from eleven ESG factors, with carbon emission optimization, infrastructure asset management, and information disclosure having the greatest impact (16).

Empirical results are consistent with the literature, as the large-cap REIT regression analysis shows that higher energy and water intensity are linked to lower market prices, while greater GHG intensity is associated with higher market prices in Table 2.

Table 2: OLS Regression Results

OLS Regression Results						
Dep. Variable:	Price			R-squared:		0.934
Model:	OLS			Adj. R-squared:		0.916
Method:	Least Squares			F-statistic:		51.76
Date:	Sun, 21 Sep 2025			Prob (F-statistics):		8.93E-07
Time:	11:18:57			Log-Likelihood:		-85.71
No. Observations:	15			AIC:		179.4
Df Residuals:	11			BIC:		182.3
Df Model:	3					
Covariance Type:	nonrobust					
	coef	**std err**	**t**	**P>|t|**	**[0.025**	**0.975]**
const	436.3224	113.97	3.828	0.003	185.457	687.188
Energy	-1.9509	0.838	-2.328	0.040	-3.796	-0.106
Water	-670.08	78.964	-8.486	0.000	-843.878	-496.282
GHG	21.4252	2.576	8.316	0.000	15.755	27.096
Omnibus:		2.469		Durbin-Watson:		1.303
Prob (Omnibus):		0.291		Jarque-Bera (JB):		1.04
Skew:		0.064		Prob (JB):		0.594
Kurtosis:		1.716		Cond. No:		722

All independent variables of the OLS regression model have p-values below the 0.05 threshold, indicating statistical significance. The model also shows a high R-squared value (0.916), suggesting strong explanatory power. However, given the methodological limitations and the small sample size, the findings cannot be considered definitive for the entire sector. Instead, they provide preliminary insights into how environmental initiatives may impact market prices, which are also influenced by investor preferences.

Comparable results are observed in the private real estate sector in a study examining the returns of private equity real estate, finding that the reporting of sustainability metrics contributes to a 0.35% increase in total quarterly return, driven primarily by price appreciation, while having no significant effect on the income component (17). The macroeconomic factors do not affect the outcomes, outlining the positive influence of GRESB membership and voluntary reporting. These results are also supported by the European Association for Investors in Non-Listed Real Estate (INREV, 2023), which estimates that GRESB participants outperform non-participants by approximately 1.8% annually (18). The findings are summarized in Table 3.

Table 3: ESG Impact on Financial Performance

ESG Factor	Short-term Impact	Long-term Impact	Reasoning
Environmental (E)	Negative	Positive	High implementation costs
Social (S)	Neutral/Positive	Positive	Tied to stakeholder trust
Governance (G)	Positive	Positive	Enhances transparency
Reporting ESG Consistency	Neutral	Positive	Boosts GRESB scores

Both public (REITs) and private real estate companies show similar results regarding the financial impact of ESG adoption. Although results concerning separate ESG factors vary, the literature consistently concludes that complex sustainability measures enhance competitiveness and generate higher returns in the long term, but also lower returns in the short term, mainly due to environmental initiatives. These findings indicate a possible delayed effect of sustainability investments on enhanced financial performance, while increased expenses may lead to immediate negative outcomes. Considering the latter, the ongoing concern is the substantial costs associated with ESG compliance, including those for reporting, capacity building, and implementation of sustainability initiatives. These expenses are also subject to competitiveness concerns and contribute to the observed outflows from sustainable investment funds.

Discussion

The findings of this study underscore the growing importance of ESG factors in the real estate investment landscape, particularly among REITs in Europe (8). Despite the observed outflows from sustainable funds in recent years (Figure 1), European REITs continue to implement and report on sustainability initiatives, largely due to regulatory drivers like the European Green Deal (4) and the Corporate Sustainability Reporting Directive (5). Sustainable fund inflows were strong during 2020–2021, led by Europe and the U.S., but declined from 2022 to 2024 as U.S. funds showed net outflows and Europe maintained modest gains. By Q1 2025, most regions faced net outflows, reflecting weakened ESG commitment, further highlighted by the U.S. withdrawal from the Paris Agreement, reinforcing Europe's leadership in sustainability. The evidence is further supported by a leading ESG assessment organization for REITs, which evaluates more than 2,200 voluntarily reporting companies worldwide (Figure 2). The participants are predominantly European, with 1,063 from Europe, followed by 588 from the Americas and 392 from Asia. Public companies represent 18%, while 82% are private equity entities, indicating that sustainable real estate reporting is performed mainly by private companies. This opens a discussion on whether the ESG investment in the real estate sector is primarily driven by private capital rather than public markets.

The comparative analysis of the sustainability performance of 103 publicly listed European REITs across environmental indicators, such as energy,

water, and GHG intensity, reveals notable improvements over 2021–2023, especially in office, retail, and industrial properties (Table 1) (11). The findings show declining energy intensity across most properties, reflecting improved efficiency, especially in retail, office, and healthcare sectors. Water use fluctuated, peaking in 2022 before declining in 2023, with lodging showing the least progress. GHG emissions decreased notably in office and industrial sectors, indicating effective decarbonisation efforts. The literature review confirms that ESG adoption correlates positively with financial performance in the long term (12, 13). Literature shows that companies investing in sustainable assets, including energy efficiency, renewable energy, and waste management, tend to achieve more stable returns and higher financial performance based on ROA, ROE, and B/P. However, the impact of individual ESG components varies in the short term, as stakeholder engagement emerges as the most reliable positive driver (14). These findings suggest that sustainable investments in real estate enhance long-term competitiveness and asset value, with certain ESG factors, such as carbon optimization and asset management, having the strongest impact. The OLS regression findings suggest that stronger environmental performance, especially in water and energy use, is associated with higher market prices, likely driven by increased investor demand (Table 2). While sustainability investments may enhance financial performance, the findings suggest this effect is often delayed, especially concerning environmental initiatives that involve high implementation costs (Table 3). These results support the hypothesis that sustainability efforts in REITs enhance asset competitiveness and financial performance, especially when ESG reporting is consistent and long-term (15). However, high compliance costs and technical capacity constraints continue to pose significant challenges, particularly in less developed or non-EU markets.

Limitations and Future Research

This study is based on secondary data and literature review, without primary data collection or interviews. Additionally, the varying definitions and scopes of ESG metrics across datasets may limit comparability.

Further studies could explore sector-specific impacts of ESG measures on REITs, especially in under-researched regions. Quantitative studies incorporating firm-level financial data, asset-level energy use, or tenant satisfaction could provide deeper insights into the causality between ESG initiatives and performance. Future research might also analyse the impact of mandatory ESG reporting post-2025, once the CSRD is fully implemented across all EU member states.

Conclusion

Sustainability is generally considered a concept that addresses the long-term balance between environmental preservation, social equity, and economic development. In the real estate sector, sustainability focuses on reducing environmental impact, promoting social responsibility, and ensuring transparent governance throughout the asset lifecycle.

The results indicate a slowdown in ESG implementation progress worldwide, largely attributed to the substantial costs associated with compliance, including developing reporting capacity and sustainable initiatives. While short-term financial impacts of ESG compliance may be mixed, particularly due to the significant upfront costs, the evidence from literature supports a positive long-term effect on financial results and market resilience. Although results across individual metrics remain inconclusive, findings indicate that complex sustainability strategies contribute to enhanced competitiveness and returns. Empirical results suggest that stronger environmental performance is associated with higher market prices.

Additionally, new developments in the sector are increasingly aligned with higher construction standards as tenants and property owners demand higher-quality real estate. Many of those higher requirements are linked to sustainability compliance. Sustainability initiatives can positively influence performance by enhancing investor perceptions, lowering operating costs, and attracting tenants. At the same time, improved financial performance and stronger market positioning can, in turn, encourage firms to adopt and expand sustainability measures, creating a reinforcing two-way relationship.

Despite recent outflows from sustainable funds, investment in ESG initiatives is expected to continue, supported by literature highlighting their potential to enhance value creation and financial returns in the REIT sector. Future

research could focus on qualitative case studies of REITs with aggressive green policies, longitudinal assessments of sustainability impacts, and cross-country comparisons to understand contextual influences on performance.

Abbreviations

CSRD: Corporate Sustainability Reporting Directive, EPRA: European Public Real Estate Association, ESG: Environmental, Social, and Governance factors, GRESB: Global Real Estate Sustainability Benchmark, REIT: Real Estate Investment Trust.

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Author Contributions

The author affirms full responsibility for all aspects of the work, including the study's conception and design, data gathering, result analysis and interpretation, and the drafting of the manuscript.

Conflict of Interest

The author affirms that there are no conflicts of interest.

Declaration of Artificial Intelligence (AI) Assistance

The author declares that no generative AI or AI assisted technologies were used to create content, ideas, or theories in this manuscript. The research design, analysis, interpretation, and conclusions were carried out entirely by the author.

Ethics Approval

As this work constitutes a literature review and does not involve original research with human participants or animals, ethical approval was not required. All referenced sources have been properly cited to uphold academic transparency and research integrity.

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