



15 September 2023

Volume 1198

## A Cost-Benefit Analysis of Efficient Real Estate Assets through a South African and Global Lense

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*Sustainable real estate, also known as green or eco-friendly real estate, is the practice of designing, constructing, and managing buildings and developments in an environmentally responsible and resource-efficient manner. These real estate assets prioritise energy efficiency, water conservation, waste reduction, and the utilisation of renewable resources. The goal of sustainable real estate is to reduce the negative environmental impact of real estate projects while also providing economic and social benefits. Central to the sustainable real estate theme is the drive towards reducing reliance on non-renewable resources, which includes the use of energy and water efficient infrastructure or systems such as solar panels, and rainwater harvesting among other eco-friendly features. In this article, we explore the cost-benefit analysis of investing in efficient real estate assets from a South African and Global real estate market perspective.*

The growth prospects of real estate assets hinge on two distinct levels of economic influence. At the macroeconomic level, broader factors such as the underlying economic conditions, capital market dynamics, and the regulatory environment all play a pivotal role. The second pillar is the microeconomic level, which shifts the focus towards granular determinants, notably market specific supply-demand dynamics, demographic attributes, quality of real estate assets (wherein the importance of sustainable real estate lies), credit quality and profitability of tenants, duration of lease agreements among other considerations. These macro and microeconomic factors wield substantial influence over the growth trajectory and returns of real estate assets.

Real estate is estimated to contribute around 30-50% of Greenhouse Gas (GHG) emissions for any given country. These GHG emissions are primarily produced throughout the life cycle of a building, starting from the materials used during the construction phase to the maintenance of the building and the everyday consumption of resources such as water, energy, and waste production. This places a significant responsibility on real estate owners, operators, and investors to play an instrumental role in achieving the net-zero emissions goal by 2050, as called for by the United Nations 2015 Paris Agreement. As real estate asset owners race towards the 2050 goal, real estate market participants are increasingly weighing the costs and benefits associated with investing in and owning sustainable and energy-efficient buildings.

### **The South African Listed Property Market:**

South Africa faces several challenges, including energy, water disruptions, shortages, rising municipal costs, and poor service delivery. All of which directly impact the real estate market. On average, municipal charges constitute 60% of property operating expenses across the real estate market. The increasing risk of municipal collapse, coupled with steep cost increases, present property owners with an opportunity to focus on sustainability, retrofit existing inefficient buildings, and implement other innovative electricity, water, and waste design interventions.

The Green Building Council of South Africa (GBCSA) is an independent, non-profit organization that has developed Green Star SA rating tools to provide an objective measurement for green buildings in South Africa and the broader African continent. Green buildings have gained traction for their potential to mitigate environmental impacts, reduce operational costs, and enhance long-term asset value. According to the South African Green Annual Property Index produced by MSCI (in conjunction with the GBCSA and Growthpoint), green star-rated office buildings in South Africa have consistently outperformed non-green office buildings of similar quality, both in terms of valuation and income returns. This annual outperformance dates back to 2016 when the index was first established, further supporting the investment case for efficient properties.

# MSCI South Africa Green Annual Property Index

Results for the year to December 31, 2022



	Certified	Non-certified
Total return (%)	6.1	5.6
Net operating income per m <sup>2</sup>	134.5	108.6
Capital value per m <sup>2</sup>	20 431	16 411
Valuer capitalisation rate (%)	8.6	8.8
Total operating costs as % of gross income (%)	39.7	43.0
Water usage (m <sup>3</sup> per annum)	0.6	0.7
Electricity usage (kWh per annum)	146.8	153.7

Source: MSCI Green Annual Property Index, 2023

As shown in the figure above (MSCI Green Annual Property Index), the inclusion of green features results in cost savings for landlords and tenants gleaned from the reduction in energy consumption. Such buildings also boast:

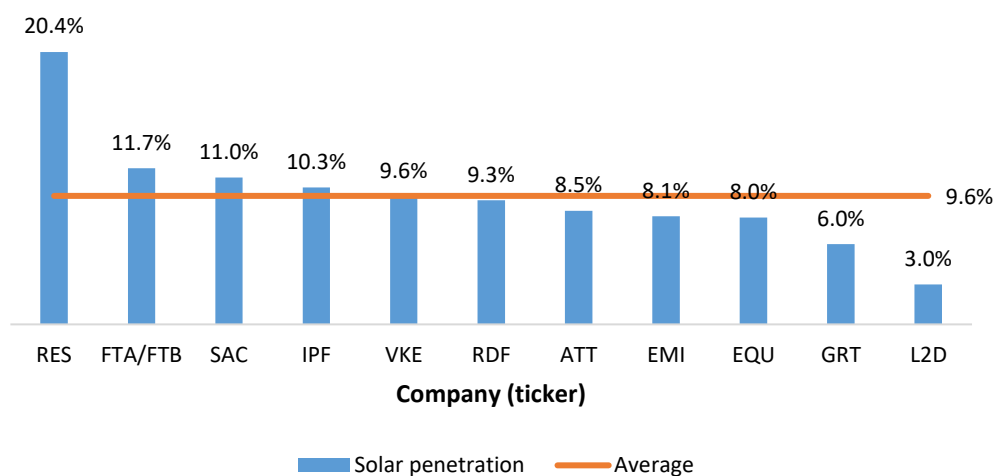
- Lower vacancy rates, particularly in the office sector where there is a shift towards quality and strict leasing criteria from multinational tenants.
- Higher tenant retention due to tenants considering the total cost of occupation amidst rising utility costs.
- Enhanced indoor air quality, facilitated by natural light, green spaces, and sustainable design elements that contribute to the occupants' well-being, satisfaction, and productivity.
- Reduced carbon emissions, contributing to the reduction of the buildings' carbon footprint and alignment with climate change policies.

Green certified properties are shielded against escalating utility expenses and emissions, potentially resulting in the reduction of real estate asset risk, and therefore warranting a lower discount rate (proxy for risk). Green certified buildings enjoy reduced capital expenditure needs overtime. The combination of higher cash flows and lower vacancies, support capital value appreciation.

With load shedding becoming an increasing concern in the South African property sector, landlords are accelerating their investment in alternative energy sources to reduce reliance on the grid. Solar projects are particularly attractive, often yielding high double-digit returns. Given the lengthy approval process and

the recent lifting of the 1MW private energy licensing threshold, current solar penetration is relatively low, creating an opportunity for property funds to increase capacity.

### Solar penetration (% of total consumption)



Source: Company reported data, Catalyst Fund Managers

In addition to the benefits of owning efficient portfolios as discussed above, there are significant risks associated with not embracing sustainable building practices. While building regulations in South Africa are not as advanced as those in the Western markets, South Africa, under the Paris Agreement, has set a target to achieve net-zero greenhouse gas emissions by 2050 with interim goals of reducing emissions by 28% by 2025 and 42% by 2030. In response, listed property funds have targeted, and some have achieved, net-zero carbon certificates from the GBCSA.

On the 8th of December 2020, the Minister of Mineral Resources and Energy, under section 19(1)(b) of the National Energy Act, made it mandatory for building owners to display and submit an Energy Performance Certificate (EPC) for their buildings, with an effective end date of December 2025. Energy Performance Certificates indicate how much energy is being used to operate a building. Properties that do not hold an EPC risk losing their compliance certificates, along with the potential reputational damage associated with non-compliance.

South Africa's debt capital market is experiencing a surge in demand for high-quality commercial instruments that are supported by ESG principles. The benefits of sustainability-linked financing include competitive financing with margin benefits, a positive environmental impact, and risk mitigation for both lenders and borrowers. SA listed property companies have issued billions in sustainable debt, including green bonds and sustainability-linked bonds and loans, and this trend is growing as a percentage of their total balance sheets. The latest example is Redefine, which issued an oversubscribed R1 billion green bond in August 2023, aligning its funding sources with its sustainability goals and long-term climate-resilient framework.

In an environment of low economic growth that exerts downward pressure on rentals, the management of operating costs is of utmost importance. This, coupled with climate, reputational, and obsolescence risk management, reinforces the investment case for companies to integrate ESG into their long-term property management strategies.

### **The Global Listed Property Market:**

The 2050 net-zero objective is supported by regulatory requirements, albeit with varying degrees of stringency across different countries globally. However, the general direction is towards a world where GHG emissions from the built environment are significantly reduced. European countries such as the Netherlands, Finland, and the UK have been at the forefront of these efforts, as evidenced from the enforcement of carbon fines (or taxes) based on buildings' GHG emissions.

Similar to the South African real estate market, the UK government has proposed regulations requiring leased properties (new and existing) to have an EPC rating of C or higher by April 1, 2027, and B or higher by April 1, 2030. Non-compliance could lead to considerable capital expenditure for building owners to enhance energy efficiency, along with fines ranging from 10-20% of the building's value.

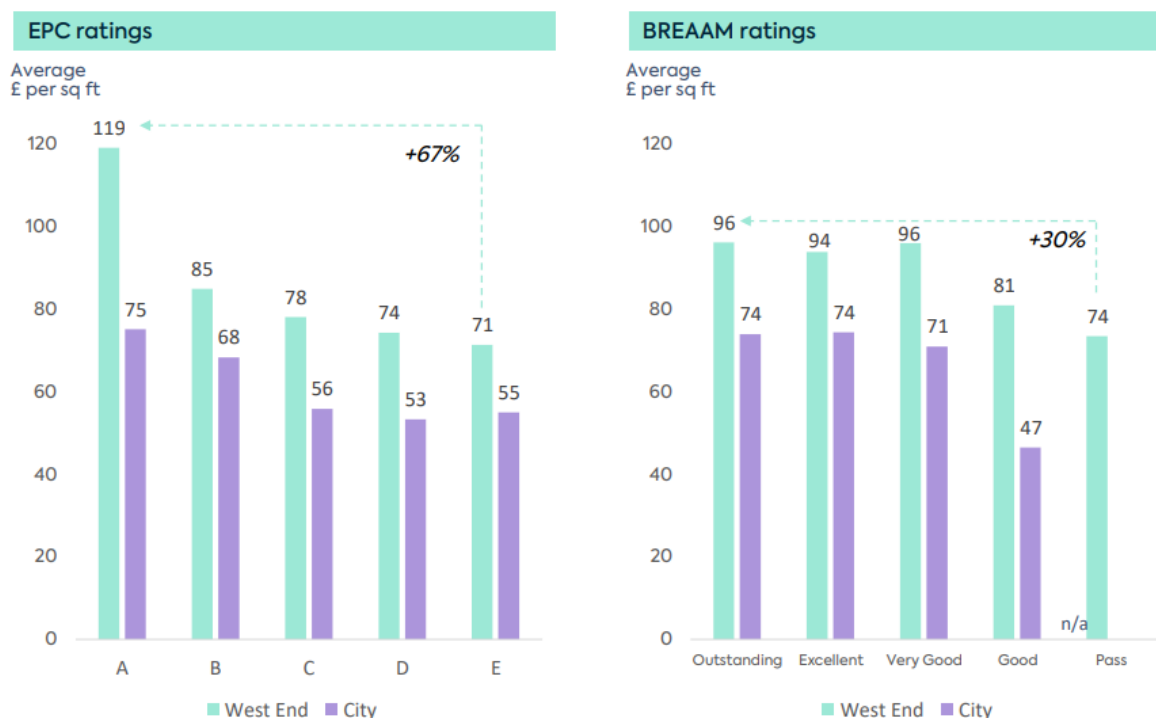
In the US, ESG-related regulations are becoming more stringent, not only in the real estate industry but across various industries. For instance, the Securities and Exchange Commission announced new requirements for public companies to disclose emissions data in July 2023. Additionally, New York City will begin evaluating carbon fines under Local Law 97 starting in 2024, potentially penalizing landlords with assets exceeding pre-set emissions limits.

The cost implications for less energy-efficient or non-compliant buildings are considerable. To reach the 2050 goal, real estate owners with subpar energy efficiency credentials will need to invest capital towards retrofitting or redeveloping their existing assets. This may include transitioning from fossil fuel electricity to renewable energy sources, installing high-quality double-glazed windows, energy-efficient lighting, heating, ventilation, and air conditioning systems, and reducing water consumption.

While the demand implications for non-compliant and less energy-efficient buildings are significant, energy-efficient buildings stand to benefit from the drive towards the net-zero objective. Commercial real estate tenants now not only consider the potential disruptions to their operations but also stakeholder and reputational implications when leasing space. Therefore, investing in less efficient real estate assets becomes increasingly difficult to justify.

Conversely, owning energy-efficient buildings offers numerous benefits. According to the International Renewable Energy Agency (IRENA), renewable capacity added since 2000 has resulted in reduced costs compared to fossil-fuel electricity. As evident from the South African real estate market and equally transferable to the global real estate market, optimising energy and water consumption, and powering buildings through renewable energy sources, can lead to lower utility bills and consequently, lower operating costs overtime. Moreover, real estate assets with higher energy efficiency credentials have been shown to command rental premiums, which further enhances net operating income and support asset value appreciation.

The chart below compares office buildings with varying energy efficiency credentials in terms of rental rates. For example, an office building with an EPC rating of “A” in the West End of London commands a rent per square foot premium of c.67% compared to a building with an EPC rating of “E”. Similarly, a survey conducted by Jones, Lang and Lasalle (JLL) Asia Pacific in 2021, revealed that c.62% of Hong Kong companies are willing to pay a rental premium for sustainability certified buildings.



Source: Great Portland Estates Plc 2023 Investor Presentation

*The combination of the benefit stemming from lower operating expenses and the higher rental rates that energy efficient buildings have been shown to command, effectively translates into higher net operating income which in turn supports asset value appreciation, and an enhanced positive contribution to maximizing shareholder returns.*

In an ever-changing global economy, the significance of owning efficient real estate assets cannot be understated. Efficient real estate is becoming increasingly vital as society addresses climate change and its environmental footprint. Developers and investors are recognising the benefits of sustainable practices, both in terms of environmental stewardship and the inherent economic advantages. The sustainable real estate theme is growing globally and presents manifold benefits that extend beyond financial returns.



Glacier Research would like to thank Ofentse Thlabi, Gugu Ndlangisa and Zinathi Mafumana for their contribution to this week's *Funds on Friday*



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Ofentse officially joined Catalyst Fund Managers in March 2022. She is a Chartered Financial Analyst (CFA) charter holder. After completing her Bachelor of Science degree in Property Studies (Honours), awarded in the First Class (distinction) from the University of Cape Town, Ofentse started her career at Old Mutual Property as an Investment Analyst in the direct property space. Thereafter she worked as an Asset Manager and in various roles across Investec Property Fund over a 5-year period. Ofentse is currently a member of the Association of Black Securities and Investment professionals (ABSIP).



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Gugu joined Catalyst Fund Managers in June 2022 as an Investment Analyst. He started his career at Standard Bank as a Model Risk Auditor. Before joining Catalyst Fund Managers, he worked for Fairtree Asset Management as an Equity Analyst as part of the Global Real Estate team. Gugu holds an MCom (Finance) from the University of Johannesburg as well as a Bachelor of Economic Science and a BSc (Hons) in Applied Mathematics from the University of the Witwatersrand.





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Zinathi joined Catalyst Fund Managers in February 2020 as an investment graduate. She completed her Bachelor of Commerce in Finance as well as her postgraduate degree in Business Finance (BCom Hons) from the University of KwaZulu-Natal. She has been appointed as Catalyst Fund Managers' ESG Lead.