Green Is Good:
Sustainable Office Outperforms in Class A Urban Markets

August 2021

As investor interest in ESG strategy rises, LEED-certified office space provides a key indicator of comparative performance

Introduction

Across the commercial real estate (CRE) investment landscape, ESG-focused funds have been growing in popularity across institution types. ESG refers to an investment strategy which seeks equivalent or higher returns while simultaneously making a positive impact in three areas: environmental, social and governance. In 2020, the average size of closed private capital funds with ESG commitments increased to $1.4B, a 16.9% increase over the previous year. **By 2023, 80% of investors intend to incorporate ESG into their strategy.**[1] As demand for ESG-committed assets has grown, a key question has arisen: do these assets perform better than their non-ESG peers? If so, is it possible to quantify this difference?

Of the three ESG categories, investors have focused primarily on environmentally aligned assets, mostly due to the existence of straightforward reporting metrics and the applicability of new sustainable technologies. To illustrate this, in AFIRE's 2021 survey of cross-border investors, they asked respondents to rank ESG criteria by importance—four of the top five were related to environment. While sustainability strategies include a wide array of energy, water and waste tracking, we wanted to utilize green certifications as an indicator of commitment to positive environmental impact. The most prominent of these certifications are LEED, BREEAM and ENERGY STAR.

We analyzed LEED-certified buildings delivered over the 2010-2020 period and compared them to non-certified buildings controlling for class and CBD/suburban location. We found that on average LEED-certified buildings received higher rents than otherwise comparable buildings at the cost of somewhat lower occupancy. The combined effect, measured by revenue per available square foot ("RevPAF"), showed that LEED-certified buildings have generated greater cash flows on average. In other words, **green is good for office building owners.**

[1] The Rise of ESG, Preqin: https://www.preqin.com/esg/rise-of-esg

In part two of this series, we will explore the extent to which this cash flow premium is reflected in office sale pricing.

Key Findings

LEED-certified buildings have consistently achieved higher rents compared to their non-LEED counterparts. Since 2015, rents for LEED-certified buildings averaged $4.13 or **11.1% higher rent** than non-LEED certified buildings.

Attaining ESG commitment through LEED certification does come at a higher cost through construction or renovation. Research has shown that construction costs to attain LEED certification can increase between 7.43% to 9.43%.

LEED-certified assets outperform during recession-recovery periods, outpacing RevPAF growth of non-LEED assets by at least 49 percentage points during both the post-GFC and COVID-19 periods. Additionally, LEED-certified assets have trended towards having lower vacancy than their non-LEED counterparts in the wake of COVID-19.

The pandemic accelerated tenant demand for ESG assets. Since Q1 2020, non-LEED occupancy in the U.S. has fallen from 90% to 88%; yet the occupancy rate for LEED-certified assets has increased from 90% to 92% over the same period.

LEED-certified assets held a 21.4% higher average market sales price per square foot over non-LEED buildings during the past three years.

Sustainable assets are still fairly niche, with **LEED certification accounting for just 2.5%** of the total urban office inventory in the United States. However, the inventory is growing rapidly with LEED-certified buildings making up 46% of urban deliveries in the last 10 years.

Background on LEED and Other Green Certification Systems

During the 1990s, as concern for environmental disasters and climate change rose, rating systems to gauge the environmental impact of buildings became established. First of these was **BREEAM**, or the Building Research Establishment Environmental Assessment Method, which originated in the United Kingdom in 1990. The goal of this global certification program was to rank buildings on a host of different variables, such as energy and water use, health and wellbeing, pollution, transport, materials, waste, ecology and management processes. The **LEED** green building program, which stands for Leadership in Energy and Environmental Design, was established shortly after in 1993 through the U.S. Green Buildings Council. While LEED also takes a holistic approach to ranking across water and energy efficiency, site sustainability, transportation and region-specific goals, the certification is ultimately distilled to a straightforward ranking system: Platinum, Gold, Silver and Certified. Another prominent certification system is **ENERGY STAR**, developed by the EPA to specifically rank the efficiency of energy use for commercial buildings, as well as a host of other commodities and assets.

For our analysis, we selected LEED as the differentiating certification, given that our dataset included comprehensive tracking information for LEED certification. Investors looking to expand their commitment to sustainability utilize different certifications based on region, asset type, reporting metrics and a host of other factors.

Performance of LEED-certified Office vs. Non-LEED-certified Office

The goal of our study was to separate out the effect of LEED certification on office building performance. To do so, we needed to control for other major factors that drive variability in performance without narrowing our data set to the point of irrelevance.

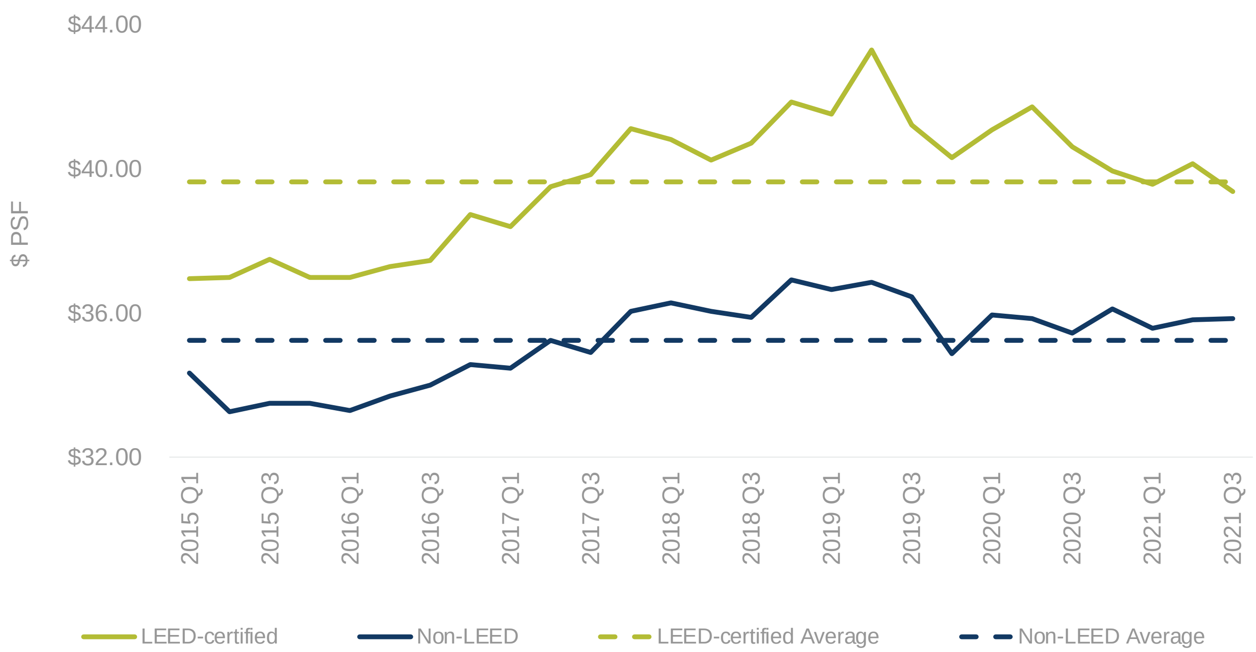
These assets represent a primary target of ESG-committed funds; include a relatively high number of LEED-certified assets; and the newly delivered assets are fairly uniform in building design. We then proceeded to compare the performance of LEED-certified and non-certified buildings.

LEED buildings have consistently achieved higher rents compared to their non-certified counterparts. The rent advantage is significant. Since 2015, rents for LEED-certified buildings averaged $4.13 or 11.1% higher rent than non-LEED-certified buildings.

Dataset Parameters:

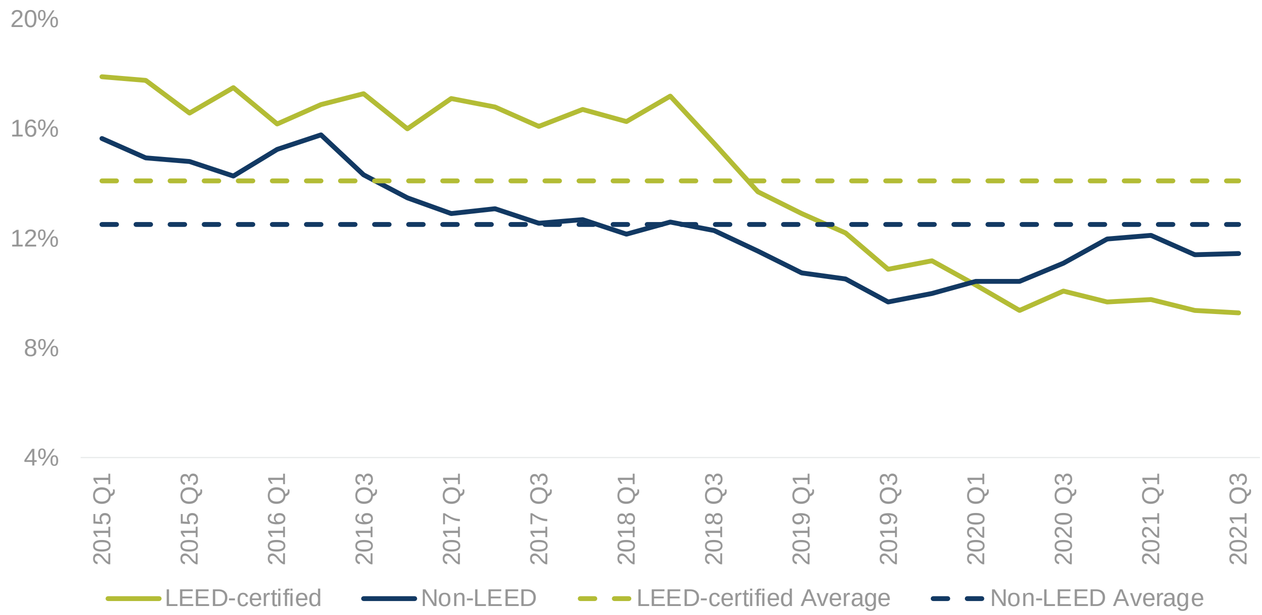
- CoStar 4/5 star assets
- Urban & CBD assets only
- Assets delivered between 2010 and 2020

LEED-certified vs Non-LEED Full Service Rent PSF Overall



Source: CoStar, Cushman & Wakefield Research

LEEDcertified vs Non-LEED Vacancy

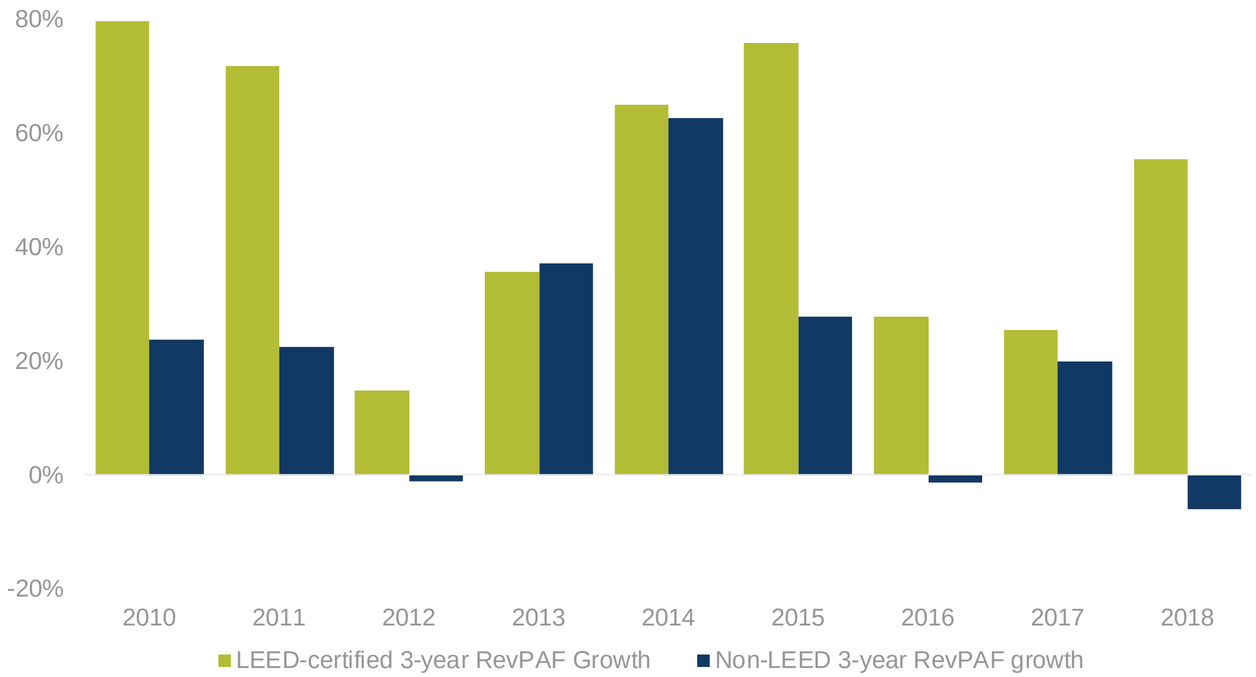


Source: CoStar, Cushman & Wakefield Research

Higher rents have historically been accompanied by higher vacancy rates in the same period. The average vacancy for LEED-certified buildings was 1.6 percentage points or 12.5% higher than non-LEED buildings. However, this pattern may be a thing of the past. Since 2018, vacancies have fallen sharply for LEED-certified buildings with the result that LEED vacancy fell below non-LEED immediately preceding the beginning of the pandemic. The outperformance of LEED-certified buildings has only widened since then, displaying resilience as the larger office sector has faced headwinds.

In order to control for the effects of the different timings of delivery and lease up of new buildings, we compared the performance over time of different delivery vintages. Specifically, we asked how RevPAF, which combines the effects of occupancy and rents into a single metric, compared for LEED-certified and non-LEED during the run-up to stabilization and post-stabilization, which we conservatively distinguish as three years post-delivery.

3-year RevPAF Growth by Vintage



Source: CoStar, Cushman & Wakefield Research

Out of the eight years surveyed, LEED-certified buildings outperformed non-LEED in the first three years of asset life, averaging 29.6 higher percentage points of RevPAF growth. Intriguingly, the performance difference was strongest at the beginning of the decade, 2010-2012. During this period, LEED-certified buildings strongly outperformed the non-LEED set. This suggests that in the market softness during the immediate post-GFC era, newly delivered LEED-certified assets had more resilient revenue streams. Throughout the middle of the decade, 2013-2014, RevPAF growth was fairly even between the two sets. This would align with the notion that, as the office market reheated and vacancies fell, amenities such as LEED certification became less of a differentiator as more fundamental factors such as supply and demand drove pricing. Entering the next two years, LEED-certified performance once again became noticeably stronger, as office deliveries grew across markets and tenants began to race for high-quality assets that would act as differentiators for the purposes of employee recruitment and retention.

The assets that delivered in 2017-2018 have hold periods that intersect with the COVID-19 pandemic and its extraordinary effect upon the office leasing market. In both years, RevPAF growth for LEED-certified buildings exceeded that of the non-LEED. The 2018 RevPAF growth, which has a hold period extending into 2021, had the highest percentage point difference (61.4%) of any vintage analyzed, including those following the GFC. This would further support the thesis that **LEED-certified assets outperform particularly during recessionary periods.** This passes the smell test in other ways. For example, ESG strategies are more common among larger tenants that have been resilient to the COVID-19 pandemic, namely FAANG and other major tech companies. According to MSCI, in 2021, information technology companies made up the largest portion of ESG funds at 20%, with Alphabet, Ecolab, Thermo Fisher Scientific and Microsoft being the most commonly held.[2]

[2] MSCI, The Top 20 Largest ESG Funds – Under the Hood: https://support.msci.com/documents/10199/4c7371c2-015a-cced-4eb6-fa0afb8a36a7

LEED-certified assets have historically continued to achieve higher RevPAF post-stabilization as well. Looking at delivery vintages from 2010 to 2016, the certification premium has averaged between 7% and 27%. Therefore, not only do certified office buildings outperform during the stabilization period, salient to developers and short-term holders of office properties, but they also generate higher cash flows for longer term, core holders.

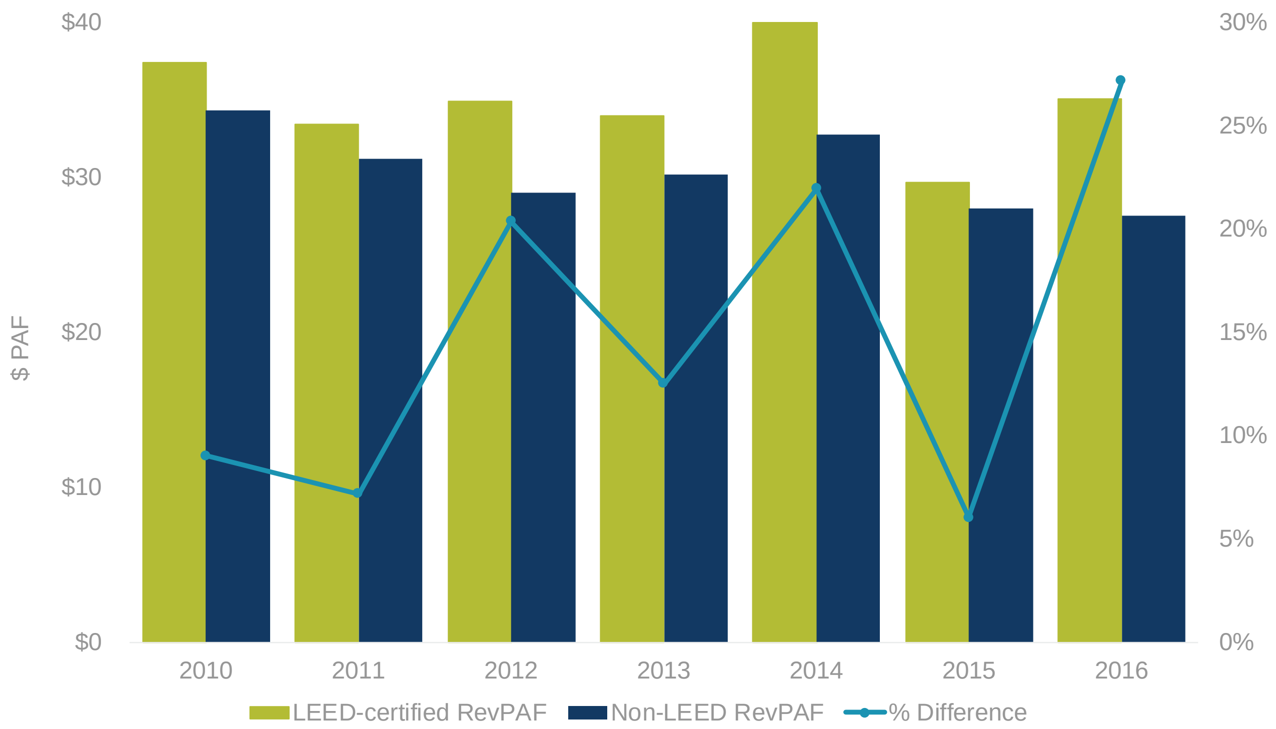
Sustainability Comes at a Higher Cost

Certification by LEED, BREEAM, ENERGY STAR or other sustainability-ranking mechanisms often requires additional costs to execute, both in construction and through the actual certification process. A 2018 study from Düzce University found that LEED-certification resulted in 7.43% and 9.43% cost increases, for gold and platinum certification levels, respectively.[3] Certification fees scale with the size of a project. As of this writing, a 500,000 square foot (sf) new construction office building in New York would require between $31,200 to $42,000, depending on the services selected. Certification also increases soft costs, with architecture and engineering firms often charging higher fees when it comes to sustainable projects.

However, these additional costs are also born out through exit values for the buildings set. LEED-certified assets held a 21.4% higher average market sales price per square foot over non-LEED buildings during the past three years. Further details and insights on construction costs and exit values will be analyzed in a future piece.

[3] Uğur, Latif Onur, and Neşe Leblebici. "An Examination of the Leed Green Building Certification System in Terms of Construction Costs." Renewable and Sustainable Energy Reviews, Pergamon, www.sciencedirect.com/science/article/abs/pii/S136403211730847X.

Average Post-Stabilization RevPAF by Vintage



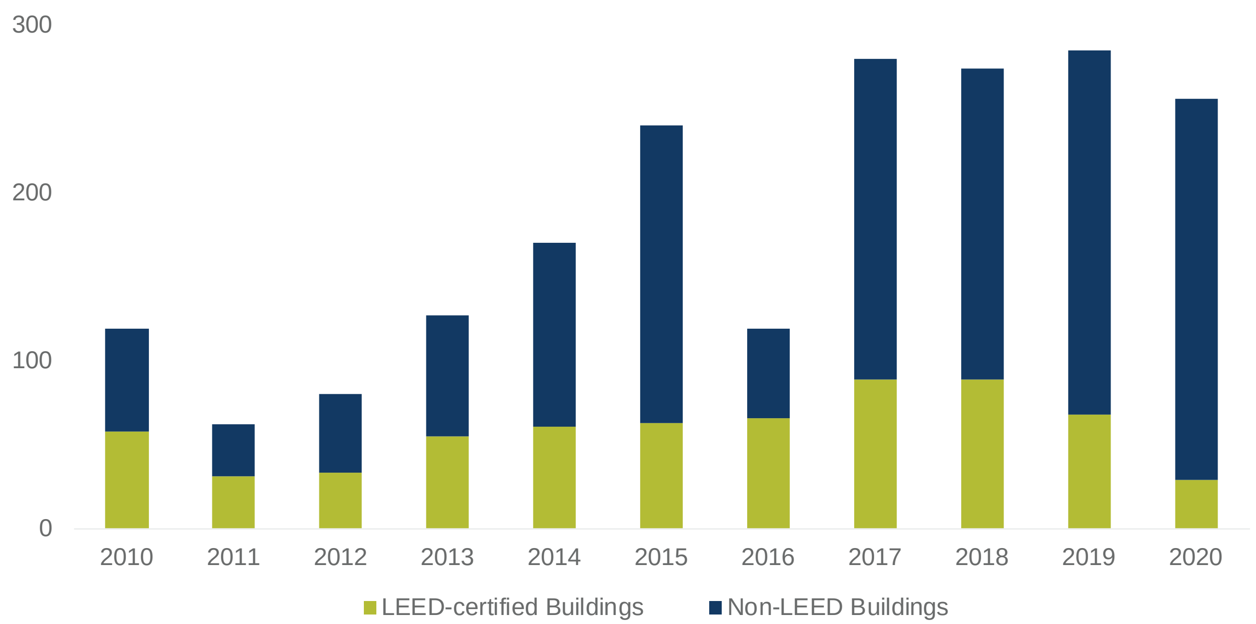
Source: CoStar, Cushman & Wakefield Research

Sustainable Office Has Potential to Offer Investors Opportunity at Scale

The United States has approximately 301 million square feet (msf) of LEED-certified Class A urban office space across 1,216 buildings. This represents just under a third of all Class A urban space. The proportion is set to grow as LEED-certified buildings have accounted for 46% of deliveries in the last 10 years. In sum, investors who choose to make sustainability a key focus of their institutional office strategy face a market with significant and growing investment opportunities, though not so much that the LEED or sustainability premium is likely to be commoditized soon.

The substantial number of non-LEED assets still in the market also suggest that there is an opportunity for investors to convert and upgrade existing stock to build out a more sustainable portfolio.

LEED vs Non-LEED Number of Office Deliveries



Source: CoStar, Cushman & Wakefield Research

Conclusion

As interest grows for ESG-committed assets in both the investor and tenant community, questions have naturally risen as to the performance of these assets to like-kind non-ESG assets. **While the definitions of satisfying ESG strategy and choice of performance metrics shift across institutions as the space grows**, the most established benchmark of LEED certification can provide a valuable reference point for investors. Likewise, Class A urban office has been a well-studied, data-rich asset sub-category which has been an early mover in the environmental space.

Our findings suggest that there exists a strong premium of 11% in rents for ESG-committed assets which can attract similarly ESG-minded tenants. Going green creates a win-win scenario for both owners seeking higher rents and tenants seeking to satisfy their own ESG strategy requirements.

These tenants have proven to be more resilient in economic downturns, supported by LEED-certified buildings that are able to achieve a lower vacancy than non-LEED in the post-pandemic world. Going forward, investors should understand changing expectations and standards when it comes to environmental impact. BREEAM recently updated their certification and rankings system and LEED is currently in the final stages of preparing a launch of a new certification and ranking system of their own. ESG-minded tenants will likely have higher expectations as their policies become more stringent and their office locations and footprints shift in the post-COVID-19 world.

While LEED and other certifications are good differentiators that showcase better performing assets, these are ultimately benchmarks for working to attain larger strategy goals such as reducing the carbon footprint of a portfolio, reducing greenhouse gas emissons and achieving net zero. Certifications represent one step towards fulfilling sustainability goals, and complete strategies also include consistent tracking of energy, water and waste. The landscape of sustainability tools is vast and provides numerous avenues for investors seeking strong returns and a commitment to positive environmental impact.

The benefits of "going green" extend to exit pricing for this dataset as well, with LEED-certified buildings performing 21.4% higher in terms of average market sales price per square foot. In part two of this series, we will investigate in further detail the pricing premium dynamic for LEED certification as well as other factors to consider for high quality, urban office buildings in the U.S.

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