ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) TRENDS IN THE GLOBAL REAL ESTATE SECTOR - 2019

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In the course of compiling its annual Global Emerging Trends in Real Estate 2018[1] report, the Urban Land Institute (ULI) found that the only 'certainty' in its mainstream real estate sector outlook for 2019 was 'uncertainty'. The ULI analysis points at a complex, multi-layered series of overlapping trends, with unpredictable results, rather than a few strong narratives, at least in terms of traditional drivers of value. Unlike traditional, mainstream factors, environmental, social and governance (ESG) trends on the other hand - while also overlapping - may present a stronger, more predictable narrative in the next two to three years, and even further ahead than that. In the wake of concerning developments related to climate change in particular, there has been a renewed focus on sustainability in the building and construction industries. As calls to curb carbon emissions and control environmental impacts can only rise in the coming years, more and more investors and building managers and developers will make sustainable practices a core part of their business.

Real estate has been proactive on sustainability issues for many years and importantly, not just as a matter of self-interest or social responsibility; the sector is moving ahead to advance its sustainability performance, regardless of the direction of national and international policies. And the sector is starting to look beyond climate and energy related issues. The advent of the UN's Sustainable Development Goals (SDGs)[2] and a series of global megatrends may require the sector to think differently about how it approaches sustainability. In turn, investors and analysts in the real estate industry may need to broaden their horizons when developing ESG metrics in order to fully capture these new sustainable development challenges. The executive summary which follows, based on a full ESG trends report produced in partnership by La Française Forum Securities (LFFS) and Global Property Research (GPR) , examines the ways in which sustainability issues and megatrend themes will play a role in shaping the real estate market agenda. The report proposes some key areas of ESG focus, looking first at recent trends and the current state of play, and then discussing how these same trends may evolve over the medium to longer term. What should become clear is that a traditional approach to ESG – with a narrow focus on energy primarily, and related climate change issues, together with an increasing reliance on data driven models – may not be sufficient to understand and analyse future real estate company performance and stakeholder demands in relation to sustainable real estate.

EXECUTIVE SUMMARY

A top-down approach to sustainable real estate analysis

The investment thesis underpinning the introduction of ESG factors into LFFS and GPR analysis of listed real estate companies is intended to reflect the complex and evolving sustainability challenges in the sector in the medium to longer term. We take a *top-down approach* and build indicators linked to the following aspects of sustainability, which we believe will be among the main drivers of value, risk and opportunity for listed real estate. They represent a series of global megatrends that will shape the future real estate landscape:[3]

- **Urbanisation and town planning:** fuelled by both overall population growth and internal and external migration. The UN projects a global urban population of 5 billion by 2030, with 90% of the growth coming from Asia and Africa;[4]

[1] https://europe.uli.org/wp-content/uploads/sites/127/ULI-Documents/ETRE_2018_global.pdf

[2] https://sustainabledevelopment.un.org/sdgs

[3] IPCM White Paper (2017) – Future Proofing Listed Real Estate, Dr. Matthew Kiernan

[4] UN Department of Economics and Social Affairs

- **A shift in economic centres of gravity and dynamism:** from the developed markets of the OECD countries to the rising economies of China, India, and the rest of Asia; by 2050, six of the largest seven economies in the world will be found in emerging markets;[5]
- **Changing societies and demographics:** with particular needs for housing, health care, transportation, recreation, and social services;[6]
- **Technological innovation and design:** in construction methods and materials, smart cities, smart buildings, energy production and use, and so on. And in addition to green design, the need for healthy buildings will grow;
- **Closer collaboration with key stakeholders**, notably tenants, employees, local communities and regulators: whether in their capacity as regulators and policy-makers, or as key internal and external partners;
- **The globalisation and intensification of real estate competition:** The larger real estate companies are both expanding their property portfolios and extending their activities into new countries and regions;
- **New market forces affecting 'strategic governance':** Market trends are also changing, with new ways of shopping affecting retail for example, and diversification in real estate investing with interest in alternative real estate such as data centres. And linked to town planning and urbanisation, local communities want more integrated and sustainable living spaces;
- **Rise of ESG standards and regulations:** The real estate sector is awash with certification schemes and regulatory controls and targets, especially for climate change and building design, their coverage will continue to grow and new standards will be introduced;
- **Growing concerns about sustainability:** concerns about issues such as climate change, energy, biodiversity / land use, water and waste, have now expanded beyond government and civil society, and have also become a central preoccupation for institutional investors.

As it happens these nine megatrends intersect well with a number of SDGs that have been identified as highly relevant to real estate. The World Green Building Council has mapped Sustainable Development Goals[7] (SDGs) to areas where real estate can make a contribution, and finds that nine of the SDGs can be transposed to the real estate sector. As can be seen in the graphic below, there is a nexus between the megatrends referred to above and the SDGs, with a number of shared themes covering issues such as sustainable cities and modern community / urban needs, global green and social partnerships, occupant health and well-being, and sustainability concerns around economic value, climate, energy, water stress, bio-diversity and waste.

[5] PWC (2017) Shift of Global Economic Power
[6] United Nations (2017) World Population Prospects: the 2017 Revisions
[7] https://www.worldgbc.org/green-building-sustainable-development-goals

An ESG rating model with a focus on qualitative assessments

Our research model aims at using a series of ESG indicators that evaluate the overall *"strategic management quality"* and leadership of both real estate investment trusts (REITs) and real estate operating companies (REOCs). REIT and REOC performance on these ESG indicators can reveal important insights about the value drivers listed above, and in turn help to assess a company's ability to manage sustainability themes, at the strategic and operational / implementation levels. In our view, real estate companies demonstrating sustainability leadership tend to be more forward-looking, agile, adaptable, innovative, and sensitive to changes in the marketplace than their peers. By taking a top down approach to creating ESG indicators, our aim is to focus on the way that sustainable development is harnessed and implemented through a range of primarily qualitative factors such as corporate culture, board diversity (in terms of people and thought processes), management skills and foresightedness, communication, stakeholder engagement and responsiveness to change.

While our ESG rating models do take into account data driven indicators, covering energy, carbon emissions, water use etc., we consider that an emphasis on, and analysis of, the qualitative aspects of sustainability has as much, validity than largely quantitative approaches, if not more so. A reliance on ESG data and tick box responses to forms and questionnaires may not provide a complete interpretation of performance on value drivers and risks and opportunities, which are based on SDG and megatrend narratives. Data also tend to be backward rather than forward-looking. In the table below, we link megatrends and SDGs together and then highlight some of the key ESG performance indicators (KPIs) used in our SRES rating model to assess company performance on megatrends and related SDG themes. Some of the KPIs are familiar to typical ESG rating models for real estate, others aims at being more innovative, for example looking to see if a company is responding to a megatrend theme such as health and well-being. For example, real estate companies specialising in healthcare, assisted living or retirement homes may be well-placed to meet a growing social need, which, if provided in a way that takes into account other sustainability themes like sound energy and climate management, could be an attractive investment proposition. Likewise, looking at the goal of sustainable cities, companies which take a holistic approach to ESG management will be ones which understand how their real estate offering can be integrated into a city's overall urban plan, which may include good access to public transport, electric car charging points, provision of green spaces, modern ambient design and so on.

Megatrends	SDGs	Selected LFFS / GPR SRES KPIs
Urbanisation / town planning New economic centres Changing societies / demographics	Sustainable cities; Decent work / economic growth; Responsible consumption	Locations; Modern portfolio / planning; Transport considerations; Philanthropy; Community development / support
Technological innovation / design; Real estate competition; Market forces / 'strategic governance'	Industry innovation; Decent work / economic growth	Green building design / materials; Human capital; Responsiveness; Board; ESG strategies / communication
Collaboration with key stakeholders	Partnerships for SDGs	Relationships with key stakeholders
ESG standards / regulations	Health & well-being; Climate action	Building health; Certifications; Social needs; Green Awards; Green leases
Concerns about sustainability (Climate, energy, biodiversity, Water, Waste)	Life on land; Affordable clean energy; Climate action; Responsible consumption	Energy and Climate management; Water and Waste management; Use of renewable energy; Land use / green vs brownfield sites

Materiality of environmental factors, current focus may be outmoded

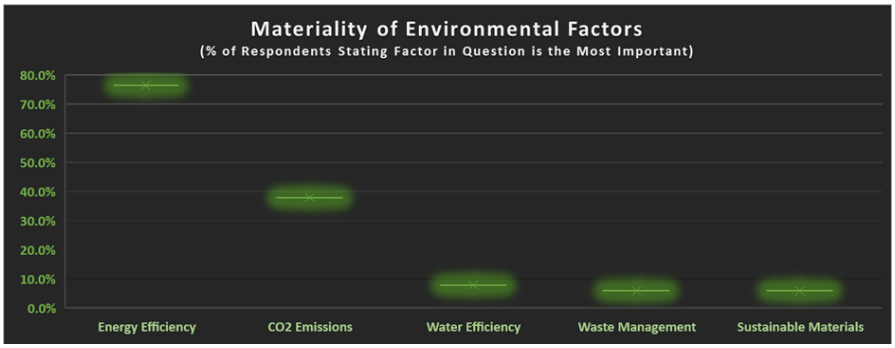
Over the past 18 months LFFS has undertaken a survey among listed real estate companies and polled their opinion on most important environmental value drivers; some 70 firms responded to the questionnaires we distributed. The results were as follows:

- 76.5% of survey respondents said energy efficiency is the most important consideration in assessing environmental factors, which is in line with similar studies on KPI materiality prior to our own research on these issues, e.g. Cushman & Wakefield report published in 2013[8].
- Some respondents rated more than one environmental factor as being the most important.

[8] Cushman & Wakefield, US Investor Survey, The Ownership View of Sustainable Real Estate

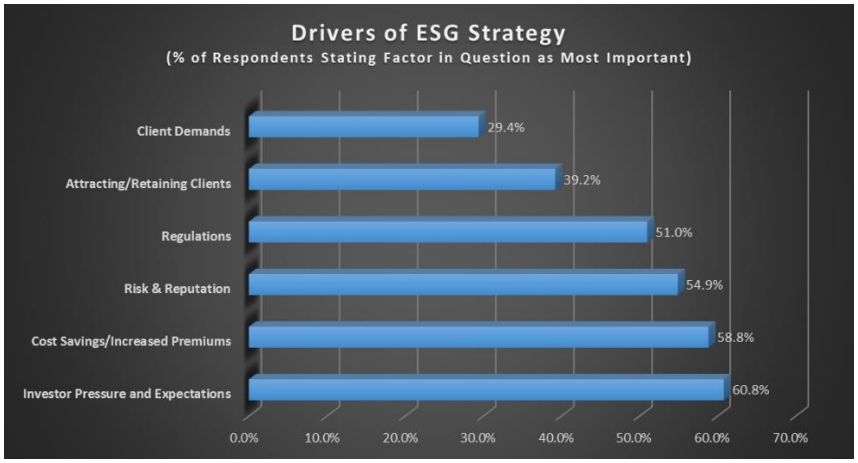
- Given the high proportion of companies aiming for BREEAM/LEED certification, it is somewhat surprising that so few see use of sustainable building materials as important (one objective of BREEAM for example is the life cycle process as it relates to environmental design and construction, including refurbishment).
- Water consumption has historically been very high in buildings and demand will increase significantly as urban areas across the globe develop. Water abstraction rates are at record and highly unsustainable levels, exacerbated by climate impacts such as those seen recently in Cape Town[9] which will lead to rising costs. It is therefore also surprising that there is such a shallow focus on water efficiency, an area where cost reductions can be captured.

The prevailing view in the real estate sector over the past five years or so would seem to be that energy and climate change / carbon management represent the most material environmental value drivers. More recently, a number of reports are suggesting that other ESG issues will become more material, as will be discussed below.



Drivers of ESG strategy, several motivating forces

Our survey respondents found it difficult to isolate particular value drivers for their ESG commitments, with half or more giving a fairly equal weight to four value drivers in particular, as shown in the chart below. The client demand side seems somewhat underrated, indicating that tenants are not driving the process behind the development of corporate social responsibility (CSR) approaches. Cost savings / increased rental premiums and risk reduction and reputation enhancement received the highest average rankings from the survey respondents, with an average ranking closer to 1 than other factors (respondents were asked to rank a list of value drivers as most important, second most important and so on). Investor expectations seem to be a universally important factor behind the need to improve CSR, with over 60% of respondents citing this factor as the first or second most important driver as can be seen in the chart. This result concerning the role of investors is also consistent with the Cushman & Wakefield report finding.



[9] http://www.bbc.co.uk/news/av/world-africa-42866178/why-cape-town-is-shutting-off-its-water-supply

While it is highly likely that investor pressure, risk reduction and reputation enhancement, coupled with tightening regulatory environments and the need for cost reduction programmes, will all continue to exert influence on CSR practices, new ESG themes are emerging alongside existing ones that will in our view require ESG rating models to be more broadly-based, progressive and flexible in nature. These new research themes, together with several established ones, are listed below and they link to the megatrends and SDGs referred to above. Each of these headings features in our ESG rating models.

Environmental

- **Certifications and Standards:** Since the establishment of the BREEAM series of ratings in the 1990s, hundreds of green-building rating systems have evolved across the world. The current estimate is that more than 600 different systems exist, with the US Green Building Council's LEED system having the largest global coverage. More and more builders and cities are realising how much is to be gained from adopting green standards. In the United States (US) for example, the percentage of commercial office space certified by LEED or Energy Star had risen to 38% by 2017 from less than 5% in 2005[10]. LEED certified buildings can reduce carbon emissions by 34% and consume 25% less energy than their conventional counterparts which can give builders and operators a competitive edge. There is now an expectation that all green buildings will continue to demonstrate leadership long after they are constructed and occupied. Closely related to health and wellness trends is the development and introduction of the WELL standard and certification, which has significantly taken off in recent years. The main goal is to combine and introduce best practices in design and construction that will improve the mood, sleep patterns, nutrition, fitness, and performance of building occupants. Use of community ratings is a new phenomenon that is emerging as an option for the largest and highest-profile new developments, which incorporates not just buildings but public spaces such as squares, parks and streets.
- **Green Design and Materials:** As lowering operating costs and improving occupant health become more widely prioritised and accepted, the value of green buildings increases as well. The percentage of owners reporting that new green buildings have an asset value more than 10% greater than traditional buildings has nearly doubled since 2012. In addition, most architects and contractors also appear to recognise that environmentally friendly building creates a higher asset value. The USGBC 2018 Smart Market Report[11] found that global green building activity continues to rise, with significant increases expected in 19 countries over the next three years. Importantly, nearly half of survey respondents expect that the majority of their projects in the next three years will be green buildings. New commercial construction remains the biggest driver of global green building by far, notably in markets like China and the UAE. However, more than 50% of the USGBC report respondents from five countries (including the US) say green retrofits are in the pipeline, compared to a 37% global average – suggesting that existing buildings and operational benchmarking will provide significant opportunities for growth.
- **Energy Demand and Climate Change:** Average energy consumption per person in the global buildings sector remains practically unchanged in the past three decades despite the fact that building energy upgrades represent the single largest source of low-cost emissions reductions and create significant equity benefits by reducing energy poverty. Global building-related CO_2 emissions have continued to rise by nearly 1% per year since 2010. This slow progress does not go unnoticed by regulators and real estate companies will have to do better. At COP21 in Paris, leading organisations in the property sector pledged to play their part in reaching the 2˚C climate goal by moving towards net-zero new buildings by 2020, and net-zero refurbished buildings by 2030. Currently, buildings account for close to 40% of the world's greenhouse gas emissions and 36% of all energy consumption. In a report co-authored by the International Energy Agency (IEA)[12], UNEP warned that *"dramatic action will be needed by governments, cities and business if the global buildings and construction sector is to cut its carbon footprint in line with international agreements."* By 2050, the global floor area in buildings is expected to double to more than 415 billion square meters, and buildings' energy demand may increase by as much as 50%. As assets with useful

[10] https://www.wri.org/blog/2018/06/qa-what-future-green-building

[11] https://www.usgbc.org/articles/world-green-building-trends-2018-data-technology-and-benchmarking

[12] https://www.worldgbc.org/sites/default/files/UNEP%20188_GABC_en%20%28web%29.pdf

lives average 50-100 years, buildings lock in decisions today like few others, especially in high-growth regions like India, China and Africa. China is undergoing massive urbanisation, which could increase buildings' energy use by 40% in the next 15 years. To keep global temperature increase to even 2˚C requires an entirely different level of ambition. The IEA 2-Degree Scenario requires that building-related CO_2 emissions drop by 85% from current levels by 2060. The World Green Building Council is advocating for all buildings to emit zero net emissions by 2050.

- **Water Use and Waste Management:** A UN World Water Development Report[13] has warned that the global demand for fresh water would exceed supply by 40% in 2030. A 2014 study of the world's 500 largest cities has also estimated that one in four are experiencing a strain on water supplies. By 2050, more than five billion people could suffer water shortages as a vicious combination of climate change, increased demand and wasteful inefficiencies place the world's water supply under threat. The UN has warned that just seven years from now, there will be 1.8 billion people experiencing absolute water scarcity, where natural water resources are unable to supply demand. Two-thirds of the world will be water-stressed enough to see demands exceed supply for certain periods of the year. Due to a combination of climate change, human action and population growth, water shortages are predicted to become increasingly common in major cities as well as rural nations. Many major cities across the world at risk of running out of water, including London and Tokyo. London is by far the most surprising capital city facing water shortages. The Greater London Authority says the city's water supply is close to capacity and is likely to have problems by 2025 and "serious shortages" by 2040 if alternative sources are not found. Those alternative sources may exist already in the form of better water management, with waste water from sources such as rooftop rainwater collection, cooling towers, showers, sinks, toilets and urinals being collected and treated in a centralised water treatment centre. From there, the recycled water can recirculate through a separate pipe system to serve non-drinkable uses in buildings, like drip irrigation and toilet flushing. Such a system can reduce a building's drinkable water consumption, saving up to 30,000 gallons of fresh water a day in a typical high-rise office block. While there seems to be far less focus on waste than there does for energy / climate and water, there is demand for greater waste diversion practices that can be attributed to customer demands for using sustainable waste handling practices. These include increasing regulatory pressures from national and local governments to ban construction and demolition waste from landfills, improved diversion and recycling rates as well as green building certification.

Social

- **Occupant and Tenant Health:** As green building becomes more common, certification becomes more of an expectation in many markets. Linked to this, while client demands and environmental regulations remain top motivators, creating healthier buildings has emerged as an important trigger for green building globally. According to the USGBC study referred to above, improving occupant health ranks first among social drivers for green building, followed by encouraging sustainable business practices and improved worker productivity. The growing importance of occupant health reinforces the USGBC survey results, which found that employees working in LEED-certified green buildings were happier, healthier and more productive than those in non-certified or conventional office buildings. Not so long ago, the idea of promoting health and well-being would have been dismissed as irrelevant to the real estate industry, yet nearly half of respondents (43%) to the PwC survey believe it will have a significant impact on strategies over the coming five years. As it turns out, the survey puts health and well-being almost on a par with such long-established drivers of the industry as sustainability and energy efficiency. Building owners and facility managers know better than anyone that a property's most important stakeholders are its occupiers, and buildings that work smarter for their tenants and provide an ideal occupant experience offer bottom-line benefits, such as lower vacancy rates, higher energy efficiency and increased tenant demand. In order to compete with today's state-of-the-art buildings, catering to both occupants and also to employers is crucial. Businesses are dealing with an increasingly difficult situation of skilled labour shortages and need to show how they can attract talent partly by having inspiring places to work.

[13] http://www.unwater.org/publications/world-water-development-report-2018/

- **Employee Recruitment and Management:** A key building block of any strategy to adapt to new demands in any sector is to hire people with the right skill sets, i.e. those that can help to deliver the sustainable real estate challenge, and manage ESG risks and opportunities. Somewhat concerning, therefore, is the fact that just 43% of real estate CEOs in a recent PwC survey were re-thinking their human resource function, compared to a global average of 60%. This sentiment was revealed by interviewees of the PwC Global Emerging Trends in Real Estate report,[14] showing that the real estate sector may be falling behind other sectors when it comes to the importance placed on human capital. On a more positive note, the 2017 Americas Occupier Survey,[15] which had participation from 176 corporate real estate executives, heavily cited enhancing the workplace experience for employees as the top priority, including implementing amenities and services and promoting a healthy environment, while prudently managing their real estate portfolios in light of economic uncertainty.
- **Urban Planning and Community / Tenant Relations:** As a result of climate change, the number of natural disasters and extreme weather events has grown significantly in the last few years, and continues to grow. These circumstances have shone a light on the need for a change in the building industry, more specifically the need for creating stronger and more resilient infrastructure. Design and construction plans for buildings are now being made or re-made with resilience in mind, or rather, with resilience as their central and most crucial design factor. The goal is to prepare for the future and take precautionary measures from the very beginning of the project, to create a building, a district, or even an entire city whose infrastructure will stand firm against natural and other disasters. A program called 100 Resilient Cities[16] has made developments and contributions towards this aspect of the real estate sector. It operates around the world, helping cities be more prepared for such risks, and becoming more resilient in all aspects of the urban landscape – physically, economically and socially. One new development is that of simulation software that can create accurate "digital twins" of entire cities and is enabling planners, designers and engineers to improve their designs and measure the effect changes will have on the lives of citizens. A digital twin is a virtual representation of physical buildings and assets but connected to all the data and information around those assets, so that machine learning and AI algorithms can be applied to them to help them operate more efficiently. In a competitive housing market, apartment landlords and builders have been engaging in an arms race for new amenities. Fancy gyms and rooftop access are more commonplace nowadays, so today's cutting-edge multifamily developments include movie theatres, dog runs, communal gardens, and access to co-working space. As landlords go looking for new selling points to attract downtown / city centre renters, smart home and service-economy firms are also rising to the challenge.

Governance

- **ESG Strategies and Management:** The PwC survey highlights opportunities in new asset classes and sub-sectors within the real estate sector. Some 70% of survey respondents believe that achieving target returns will require a widening of the definition of traditional real estate to include real assets and related service businesses. Investing in infrastructure need not mean traditional assets, such as railways or utilities. Rather, whole new investable asset classes are opening up to service the digital economy, including 5G infrastructure, data centres and charging points for electric, and - increasingly - autonomous vehicles, all of which provide a social return to consumers through better connectivity or the environment in terms of lowering carbon emissions. Some are moving into alternative or niche areas, like student accommodation, which require more operational expertise. Others are going down the value-added, build-to-core or development route. Many of these new sub-sectors and the companies within them already fall within traditional real estate benchmarks, such as logistics, digital infrastructure and logistics REITs. In terms of sectors identified by respondents as having the best prospects for investment and development, six of the top 10 sectors represent some form of residential offering. With the retail sector in flux, the standard long-term agreement is making way for shorter deals and even pop-up leases. And this trend looks

[14] https://www.pwc.com/gx/en/industries/financial-services/asset-management/emerging-trends-real-estate/europe-2019.html

[15] https://www.cbre.com/research-and-reports/Americas-Occupier-Survey-Report-2017

[16] https://www.100resilientcities.org/

to be true across sectors. There is demand for more flexibility among a range of occupiers as the PwC survey reports - so that they can respond to changing residential and commercial needs. This requires more intensive asset management and investment.

- **Leadership in ESG Innovation and Technology:** One of the biggest challenges for real estate is technology driven disruption. But it is notable that the recent PwC CEO Survey showed that real estate executives are less concerned with changing the way they run their businesses in the face of disruptions of all kinds, such as cyber threats and technological change, compared to global CEOs in other industries. Only 10% are worried about speed of technological change compared to a 38% global average. This may be another weakness and disconnect within the real estate sector and potentially linked to the out-of-step real estate CEO views regarding human capital referenced above. Corporate culture, resilience, adaptability and ESG governance are therefore emerging as important drivers of sustainable development in the real estate sector. Change must be led from the top and permeate across the company through initiatives such as ESG strategy development, embedding, training and communication. On the residential side, social media will continue to influence millennials' home-buying habits. This generation relies heavily on online reviews and social media presence to make purchasing decisions. A strong online reputation for real estate is a must in catering to this market. Show-casing homes on social media – particularly Instagram – is essential for appealing to millennial clients, who may well have expectations linked to energy efficiency and location near public transport hubs. Adaptability and responsiveness to the new world order have to become part of a company's ESG armoury.

This report has been written on behalf of La Française Forum Securities (LFFS) and Global Property Research (GPR). LFFS is a global boutique firm owned by Groupe La Française dedicated to investments in publicly listed real estate equities on behalf of institutional and high net worth investors. GPR provides services for leading financial institutions with top of the line benchmarks. All index products use an extensive and unique proprietary database of global listed property and infrastructure companies. Both LFFS and GPR offer strategies for ***Sustainable Real Estate Securities (SRES)****.*

For further information on our approach to sustainable listed real estate investing and access to the full report please contact:

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