THE FOUNDATION FOR STRATEGIC ENVIRONMENTAL RESEARCH

Gamla Brogatan 36–38
111 20 Stockholm, Sweden
Telephone +46 8 791 10 20
Fax +46 8 791 10 29
mail@mistra.org
www.mistra.org

The value of environmental and social issues to real estate investors

Outcomes of a workshop for investment professionals and academics hosted by the Mistra Sustainable Investments Platform

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Outcomes of a workshop for investment professionals and academics hosted by the Mistra Sustainable Investments Platform

Gordon Hagart, Ivo Knoepfel
onValues Ltd.
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Executive summary

This report summarises key findings of a workshop on environmental and social issues in real estate investments that took place on 12 June 2008. The workshop was organised by Mistra as part of its Sustainable Investments Platform. The report includes an introductory chapter on the relevance of environmental and social issues from the point of view of real estate investors, as well as a summary of the most interesting findings from the workshop presentations and discussions.

Workshop participants believe that E&S issues will increase in importance in the future due to, among other factors, rising resource prices, regulatory incentives aimed at combating climate change, and the renewed market focus on fundamentals after the real estate boom years. Participants noted that the financial costs and benefits of resource efficiency investments are not evenly distributed among different actors (owners, tenants, developers, other agents) and that this represents an important (but not insurmountable) barrier to investments in this area.

Participants also highlighted the fact that resource efficiency is not the only value driver. Better locations, increased occupant comfort, brand and reputation leading to higher building values, occupancy rates and rental yields can all make significant contributions to increasing the return and reducing the volatility of real estate investments (and should be explained better by developers).

Workshop participants also discussed possible roles for academics and regulators in supporting the sustainable real estate investment case.

Background

This invitation-only workshop, the fourth in a series of annual events[1], was held in Stockholm, Sweden on 12 June 2008. The workshop brought together a group of leading investment professionals (asset owners, asset managers and other service providers) and academic researchers to review the current understanding of the financial impact of environmental, social and governance (ESG) issues on real estate investments.

The workshop was hosted by Mistra, The Foundation for Strategic Environmental Research, as part of its Sustainable Investments Platform. The Platform exists to foster innovation and collaboration between academic researchers and financial industry practitioners. The workshop's goals were to provide actionable ideas for industry practitioners, and to prioritise research issues for the academic community. Mistra's interest in this subject comes from both its role as a long-term investor and its mission to contribute to solving major environmental problems through applied research.

The day began with a guided tour of the headquarters of Naturvårdsverket, the Swedish Environmental Protection Agency. These offices in central Stockholm were extensively retrofitted to ensure best-in-class resource efficiency and a healthy working environment.

An introduction to sustainable real estate

Rising resource prices, tougher national and international regulations, shifting tenant demands, and the opportunities presented by new building materials and technologies are all increasing the financial materiality of ESG issues to the real estate investor.

Looking just at climate change, in Europe buildings account for around 40% of all energy consumption and 25% of CO_2 emissions[2]. Globally, according to the Intergovernmental Panel on Climate Change (IPCC), residential and commercial buildings are responsible for approximately 8% of all anthropogenic greenhouse gas (GHG) emissions, with transport accounting for a further 13%. Significantly, real estate has been identified by the IPCC as having the largest 'economic mitigation potential'[3] of the major emissions sources — far in excess of the potential of energy supply, forestry and industry. The IPCC estimates that even without any financial penalty for GHG emissions (i.e. a zero carbon cost), 30% of projected emissions by 2030 can be avoided with net economic benefit.

Such calculations explain why national resource use policies increasingly focus on this sector. It is widely believed that a series of value drivers, including regulatory frameworks and incentives, cost reductions and tenant demand, will lead to rewarding investment opportunities for real estate investors.

[1] Previous Mistra workshops considered ESG issues as they relate to: academic financial research, fixed income investments and emerging markets investments

[2] Source: European Commission EPBD Buildings Platform

[3] Economic mitigation potential is an expression of the scale of GHG reductions that could be made for a given level of carbon price (expressed in cost per unit of carbon dioxide equivalent emissions avoided or reduced)

Real estate allocations

According to OECD data, pension funds typically allocate between 1% and 15% of assets to direct or indirect real estate investments, with Finland, Italy and Switzerland generally having the highest allocations. In contrast, high-net-worth individuals and families tend to invest a greater proportion of their wealth in real estate, on average around 20%[4]. A number of trends indicate that the real estate allocations of institutional investors may grow in the coming years, despite the turbulence currently radiating from the US and other real estate markets:

- Moves to adopt strategic asset allocations that are more like the diversified multi-asset strategies used by the largest US endowments (i.e. less dominated by listed equity and fixed income) seem likely to result in higher allocations to real estate
- The stable, long-term returns associated with well-diversified real estate portfolios match the long-term liabilities of insurance companies and pension funds well
- Real estate investment trust (REIT) legislation has recently been introduced (France, Germany, Japan, UK) or is pending (Germany, Italy) in some of the largest capital markets, offering liquid and tax-efficient exposure to professional and retail investors alike. As of June 2007, the global listed REIT market was valued at USD 764bn, with non-US REITs surpassing US REITs in volume for the first time[5]

Given the growing weight of this asset class, it is important that investors and their agents assess the potential impact of sustainability trends on their real estate portfolios.

The case for analysing ESG issues

According to a comprehensive 2005 survey of US architects, engineers and contractors by McGraw-Hill, there is an average of 2% higher initial cost in the case of energy-efficient buildings, but the value of the financial benefits from higher yields, higher liquidity and capital gains over the lifetime of the buildings outweighs the initial additional costs.

The survey highlighted the following financial benefits:

- An average expected decrease in operating costs of between 8% and 9%
- An average increase in building value expected to be around 7.5%
- Occupancy rate expected to increase by 3.5%
- On average, rental yields expected to increase by 3%
- Average ROI expected to improve by 6.6%

Moreover, a growing number of case studies show that the financial appeal of sustainable real estate goes beyond the savings related to more efficient resource use. Commercial and residential tenants seem willing to pay a premium for better links to public transport systems and the healthier working and living environments resulting from the use of natural materials, natural light, controlled ventilation, and high-quality heat and sound insulation.

Investments in sustainable real estate may also generate goodwill with the regulator and other parties. Tax credits, speedier regulatory procedures, reduced insurance premiums and positive reputational effects have been cited as benefits. Additionally, projects that invest in the (re-)development of brownfield sites or depressed neighbourhoods can act as a catalyst for the revaluation of a whole area, resulting in value release for the investor.

[4] Sources: Organisation for Economic Co-operation and Development (OECD), Capgemini / Merrill Lynch World Health Report 2007
[5] Ernst & Young Annual REIT Report 2007

The missing link

So why are environmentally-friendly new buildings and retrofits still rare in our cities? Apart from the long turnover times of building stock, one of the key barriers identified by the IPCC to realising sustainable real estate's potential was the availability of financing.

Investors such as pension funds and their asset managers have a crucial role in deciding not only which new building projects are financed, but also whether existing buildings are refurbished to higher environmental standards. Many real estate asset managers and research providers are currently developing internal capacities that will ultimately lead to investable strategies in sustainable real estate. Initiatives such as the UNEP Finance Initiative Property Working Group (PWG) have been instrumental in catalysing these efforts and in putting asset owners in direct contact with service providers.

The Mistra workshop sought to test the validity of the sustainable real estate investment case with leading industry practitioners, and to build bridges to academic experts in this field.

Selected insights from the workshop

Workshop participants were asked to structure their discussions around the following questions:

- How strong is the financial case for sustainable real estate?
- Are real estate investors aware of sustainability issues? If not, why not? What role is there for regulators?
- What opportunities currently exist for making sustainable real estate investments?
- How can interested investors collaborate with their peers on these issues?
- What should be the priorities for future academic research, and how can the industry help academics?

The following insights emerged from the discussions. It should be noted that the thoughts collected here are incremental insights on top of the basic case for sustainable real estate.

The fundamentals of sustainable real estate

- ESG information can be used both to de-risk a broadly diversified portfolio (lower risk premiums because of higher liquidity and less volatile market values) and to create more concentrated alpha-generating / satellite strategies
- The market currently seems to be inefficient with respect to ESG information, which is good news for active real estate managers. The window of opportunity is still open
- In some countries (e.g. Sweden and Switzerland) average building energy-efficiency is already quite high. Additional efficiency gains can be costly. But there are still important reputation and brand drivers that make sustainable real estate financially attractive

Nils Kok, Universiteit Maastricht

Results

Eco-investment real estate sector is not only 'doing good'

- Green label pays on U.S. commercial property market
  - Rent increases with 2%
  - Effective rent – corrected for occupancy rate – increases with 6%
  - Sales price increases with 16%

- Is this rational?
  - Engineering effect
  - Signalling value label (reputation corporate tenant or…hype)

- So…who's willing to pay the premium?
  - Oil industry – 60% of total industry office space is green
  - (Investment) banks
  - And…government agencies – most notable EPA

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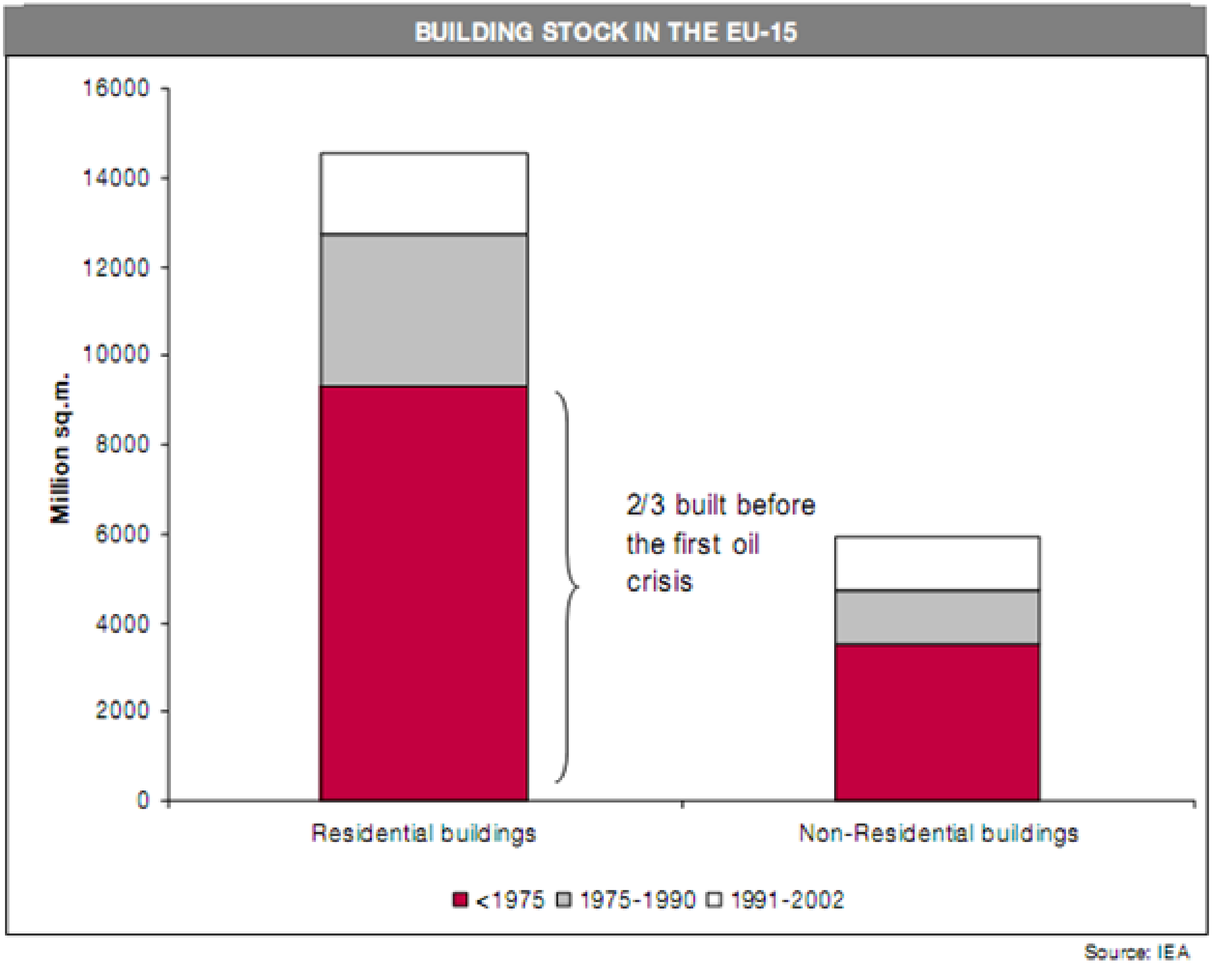
Existing buildings

- Investors should not only look towards best-in-class new buildings — they are rare and the 'green premium' may already be priced in
- Indeed, <u>an important opportunity to add value</u> may lie in analysis of the ESG characteristics of <u>existing building stock, including the potential to retrofit old 'brown' buildings</u>. The most cost-effective measures generally involve bringing poorly-performing assets up to a reasonable level, as opposed to moving median assets towards the gold standard
- For investors with environmental in addition to financial objectives for their investments, it also makes sense to concentrate on the 9/10 of the energy-use and GHG emissions 'iceberg' represented by existing building stock
- Pension funds should not forget the often considerable opportunities to reduce energy costs in buildings they own directly (e.g. many church pension funds have large direct real estate portfolios)

Source: CA Cheuvreux / International Energy Agency (IEA)



Location, location, location

- The old adage that the three most important considerations when investing in real estate are 'location, location and location' should be borne in mind when considering the ESG characteristics of buildings. Discussions often focus on the intrinsic qualities of buildings (such as energy efficiency), at the expense of important extrinsic value drivers such as location
- Long-term and ESG-related location issues that may be important include: distance to workplaces and access to reliable public transport, increased flood risk due to climate change (coastal and low-lying areas), local air and water pollution levels, locations that may in the future experience extremes of temperature and the associated heating and cooling costs, and proximity to regions of political tension / conflict
- Owners may also be willing to pay a premium for sustainable real estate due to indirect benefits such as reduced tenant turnover, or the fact that capital expenditure on energy-saving measures may be paid back at the time when leases are renewed because they put the owner in a stronger negotiating position
- Finally, brand / reputation can be an important motivator for some owners and tenants, and therefore an explanation for the sustainability premium

Paul McNamara, PRUPIM

Implications for property values

REAL ESTATE
INVESTMENT
MANAGEMENT

Factor	Investment Implications	Impact on 'non-green' buildings
Tenants prefer green to non-green buildings	Over time rental differentials emerge between green and non-green buildings	**Rental growth lower, depreciation higher**
	Non-green assets take longer to re-lease at lease end	**Longer interruptions to cash-flow, higher risk premium**
Non-green buildings are more costly to run (energy costs)	Less money available for rent in non-green buildings	**Rental growth slower**
Other investors prefer 'green' buildings over 'non-green buildings'	Non-green properties take longer to transact	**Greater illiquidity and opportunity cost, high risk premium required**

- **Lower rental growth, faster depreciation, higher risk premia all lead to higher yields and lower values over time for non-green assets**
- **As differences in value emerge, non-green assets underperform**

Part of the M&G Group PRUPIM

The more it matters, the more values and performance will be affected

Participants also mentioned a number of other ESG-related risks and opportunities that are often overlooked:

- In parallel to the equity domain, where ESG data are sometimes used as a proxy for management quality, owners and tenants may be using the environmental performance of an asset as a proxy for building quality
- The healthiness of living / working environments, including the extent to which more attractive and functional offices increase employee satisfaction and productivity, has not received much attention
- The quality of the governance of listed real estate investment companies can be evaluated using similar techniques to listed equities[6]

[6] In 2008 the European Public Real Estate Association (EPRA) released a study of the governance practice of listed real estate companies in the FTSE EPRA/NAREIT Europe Index. The study identified four key governance issues: the percentage of executive compensation linked to performance, the independence of the supervisory board, the existence of auditing mechanisms, and the level of public disclosure from the firms' annual reports

Blockages to greater investor interest

So why is the interest of real estate asset owners and their agents in sustainable real estate not stronger? Participants offered the following suggestions and solutions:

Awareness

- Despite the importance of real estate to the climate change and broader sustainability debates, the building sector is not heavily mediatised. Therefore the asset class has not been a priority for asset owners when thinking about ESG issues
- Developers haven't done a good job so far in explaining the value drivers, such as increased comfort and employee productivity
- There is also a lack of investor empowerment — these difficult issues have rather been outsourced by investors to technocrats (architects and engineers)
- Other actors and agents in the investment chain must also be engaged. For example, the owner clearly has an important role to play at the time of major refurbishments (every five years or so), but there are also many smaller changes in the hands of managing agents that can be significant over the lifetime of the building

Market dynamics

- In recent years real estate prices seemed to be on an inexorable march upwards, and nobody in the investment chain was particularly worried about sustainability issues. However the 'double whammy' of falling asset prices and soaring energy costs have brought these issues sharply into focus
- The market psychology seems to be moving away from a momentum / speculation mindset back towards looking at the fundamentals. This should be positive for the consideration of ESG issues. Real estate investors will become more risk-aware and choose investments more carefully (they will also have more opportunities to cherry-pick assets in the current climate)
- Until recently energy costs were only a small fraction of total operating costs, and therefore not on the radar screens of owners or tenants

Agency issues

- A formidable barrier. Real estate generally does not have the shared risk and return of the equity model. Real estate owners rather sign away their ownership rights to tenants for a fixed period of time
- This has important implications for the propensity of owners to invest in improvements to existing stock. For instance, when an owner makes capital expenditures in energy efficiency a significant part of the benefits (reduced operating costs) accrue not to him but rather to the tenant
- Changes to leasing arrangements e.g. the adoption of net leases[7] (which are common in e.g. Australia) could help to align better the interests of owner and tenant in improving the sustainability of the building
- As with other asset classes, mainstream real estate asset managers sometimes feel threatened by colleagues wanting to launch sustainable strategies (as clients might come to the conclusion that the standard offer is financially sub-optimal or damaging to the environment). Real estate managers are not clear how best to position themselves — is this a niche / theme fund, or an investment approach to be applied to all assets under management?

[7] Gross leases (pass-through/ full-service leases) generally include all charges with the exception of the utility expenses. A net lease refers to a lease where the lessee is responsible to pay not only the basic rent for the space but also a pro-rata share of the building operating expenses (taxes, insurance, maintenance, etc.)

- Mainstream professionals also sometimes lack the knowledge and the incentives to try new management techniques. They also assert a lack of demand from clients. However this latter point is increasingly not true[8]
- It was noted that many real estate asset managers come from a surveying / building background, as opposed to a traditional asset management background. The application of the capital asset pricing model (CAPM) and other elements of portfolio science to real estate is reasonably recent
- Listed real estate investment companies may feel threatened by these issues (they were conspicuous by their absence from the workshop). They are concerned that if they manifest an interest for such issues they may expose their own poor ESG performance and open the door to tighter regulations
- However, national and international real estate company associations such as EPRA have recently moved these issues much higher up the agenda. In countries where large families are significant real estate owners, such as Sweden, there is increasing pressure from younger generations to consider some of the long-term challenges that owners will face

On the role of the regulator

None of the participants thought that greater regulation / government incentives were a 'sine qua non' for the growth of sustainable real estate. However, they did offer the following comments on possible interventions:

- Governments have a role to play, but they must avoid heavy-handed measures
- Helpful mechanisms could include tax incentives and expedited approval of sustainable building projects
- Stronger support of labelling schemes was a recurrent theme of the discussions. Regulators could bring greater assurance to existing energy efficiency standards[9]
- Others went further to suggest that a credible international labelling system for energy efficiency, GHG emissions and other elements of real estate sustainability would be a crucial catalyst for investors. Mandatory reporting standards (e.g. disclosing energy-related expenses) were also mentioned
- Compulsory participation of industries linked to real estate in the European Union Emission Trading System (EU ETS) would go a long way to promoting this issue with investors. COP15 in Copenhagen in 2009 was cited as a key forum for bringing investors' concerns to politicians

Investment and collaboration opportunities

Some smaller investment vehicles dedicated to sustainable real estate have been launched, with capacities generally of the order of USD 100m to 500m. Another approach mentioned was selectively funding new construction products through existing real estate funds and mandates.

However, there was widespread support for the idea that new energy-efficient projects and buildings with best-in-class-certified buildings (e.g. BREEAM, LEED) could not meet the demand from investors for sustainable real estate. That is to say that investment strategies built exclusively on the highest performance sustainable buildings would be capacity constrained. Participants pointed to the improvement of existing portfolios of 'brown' buildings as a possible solution:

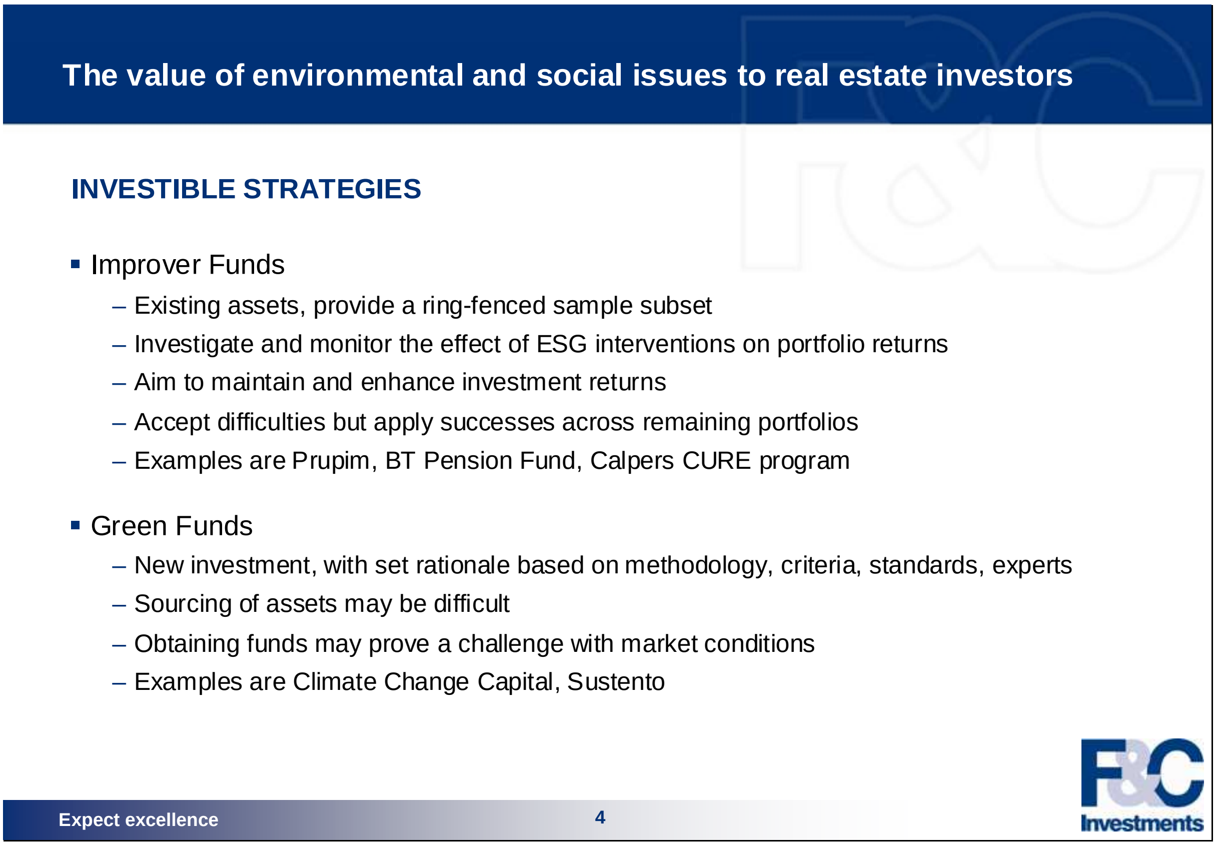
- Many asset managers and their clients are seeing 'improver portfolios' as the most obvious first steps to take. This takes an existing diversified portfolio and looks at low-cost means to improve the sustainability of the assets held

[8] One large real estate manager present said they were seeing a strong demand from large asset owners for sustainable real estate products

[9] Some real estate managers present complained that when they had their properties environmentally benchmarked by more than one consultant the results differed greatly

- Improver portfolios can make divestments of underperforming assets and investments in new best-in-class assets, but generally focus upgrading the lowest-performing existing assets. The asset manager usually aims to take only steps that will not harm the diversification or the liquidity of the portfolio
- Improver portfolios therefore allow asset owners to replace their core real estate portfolios with a more sustainable approach, and get round the problem of the lack of capacity in funds that only target energy-efficient new builds

Andrew Szyman, F&C Property Asset Management



Collaboration

- There are many good collaborative and knowledge-sharing programmes in which investors can participate, from local 'benchmarking clubs' to global initiatives
- Representatives of the UNEP Finance Initiative Property Working Group sent out an invitation to Nordic investors and pension funds to join the Working Group
- Some suggested that there were perhaps too many sustainable real estate initiatives, with the result that the space is overwhelming for outsiders who wish to get involved. Some consolidation may be required

Strengthening the links with academia

Participants expressed strong support for the research being done in this space by the European Centre for Corporate Engagement (ECCE) (Eichholtz, Kok, Quigley, et al.), which was presented by Nils Kok of Universiteit Maastricht. Specific suggestions on the future research agenda included:

- Terminology: avoid creating a whole new vocabulary around sustainable real estate. Issues should be described using existing investment terms and indicators
- Ideally the ECCE work would be rolled out beyond the US office market to other large real estate markets and types (i.e. include residential and retail)[10]
- The research should look not only at the price premium of top-rated assets against the mean, but also at whether there is a discount on the least sustainable assets. It may be that the greatest opportunities lie at the worst-in-class end of the scale
- A crucial element is the net present value (NPV) impact of various sustainable real estate approaches. Clearly a lot of impact can be had at no or low cost, but there may also be high-cost interventions that nonetheless have a positive value over the time frames considered by long-term investors
- NPV calculations would benefit from sensitivity analysis for different carbon and energy price scenarios
- A welcome outcome would be a toolkit to help investors to prioritise the steps that can be taken in terms of their financial materiality
- Research is needed to understand systemic and behavioural issues in a more academic, less anecdotal way. This may involve engaging legal and behavioural finance experts. The effectiveness of different regulatory interventions would also be an interesting field of study
- Finally, any improvements in the way both academics and practitioners communicate their findings to politicians could have major benefits for the regulatory environment in which investors will operate

A two-way street

The academics present also sent a request to industry practitioners (asset managers and owners, owner associations such as EPRA and the national associations) for greater access to their data. They asked especially for any in-house case studies done on whether retrofits have had a positive value impact.

[10] ECCE is planning to extend the research to the office market in Australia, Japan and the UK, as well as to the UK residential market

Appendices

About the host

Mistra
The Foundation for Strategic Environmental Research
Gamla Brogatan 36–38
111 20 Stockholm
Sweden
Tel: +46 8791 1020
Fax: +46 8791 1029
mail@mistra.org
www.mistra.org

Mistra, the Foundation for Strategic Environmental Research, aims to make a difference in the field of sustainable development. The Foundation achieves this by funding groups in the academic community that contribute to solving major environmental problems through applied research. Each year Mistra invests approximately SEK 200 million in the research programmes it supports.

The entirety of Mistra's endowment, which is currently valued at SEK 3.5 billion (USD 580m), is invested using external asset mangers that explicitly take account of environmental, social and governance issues.

Event conceptualisation and facilitation

Gordon Hagart and Ivo Knoepfel
onValues Ltd.
Josefstrasse 59
CH-8005 Zurich
Switzerland
Tel: +41 43 344 9493
Fax: +41 43 344 9492
info@onvalues.ch
www.onvalues.ch

Agenda

Thursday, 12 June 2008
Mistra, Stockholm, Sweden

09:30 Optional guided tour of one of Sweden's most environmentally-friendly office buildings (Naturvårdsverket, Valhallavägen 195, 106 48 Stockholm)

12:15 Buffet lunch, registration

13:00 Welcome; framing the issues

- Eva Thörnelöf, Deputy Managing Director, Mistra
- Gordon Hagart, Senior Consultant, onValues

13:15 Discussion 1: the fundamentals of sustainable real estate

- Nils Kok, Universiteit Maastricht: academic work to date and the current research agenda
- Paul McNamara, PRUPIM: assessing and improving an existing portfolio
- Plenary discussion to address:
  - ➔ Measuring the environmental performance and broader sustainability of real estate
  - ➔ The financial benefits of sustainable real estate

14:15 Break-out sessions

- Two groups to work on:
  - ➔ Are real estate investors giving enough attention to sustainability issues? If not, why not?
  - ➔ Challenging the strength of the financial case: are subsidies / regulation required?
  - ➔ Identifying areas for further academic research

15:15 Coffee break

15:45 Discussion 2: getting involved and getting invested

- Dominik Bollier, Credit Suisse Group: vehicles for institutional investors
- Andrew Szyman, F&C Property Asset Management and UNEP FI PWG: collaborating with other owners and managers
- Plenary discussion to address:
  - ➔ The universe of suitable underlying investments (new and existing stock)
  - ➔ Expected risk and return characteristics

17:00 Closing discussion

- Ivo Knoepfel, Managing Director, onValues
- Possible contributions from the academic community and next steps for owners and managers

17:30 Adjourn and aperitif reception

Participants

Organisation	Name	Position	Country
AP2	Carl Rosén	Head of Corporate Governance, AP2 and Chairman, AP1–AP4 Ethical Council	Sweden
Climate Change Capital	Esme Lowe	Managing Director, Real Estate	UK
Credit Suisse Group	Dominik Bollier	VP, Environmental Business Group (EBG)	Switzerland
EPRA — European Public Real Estate Association	Gareth Lewis	Director of Finance	Netherlands
Ethix SRI Advisors	Ulrika Hasselgren	President	Sweden
F&C Property Asset Management	Andrew Szyman	Sustainability Manager	UK
Fastighetsägarna Sverige	Per-Åke Eriksson	President	Sweden
Limestone Investment Management	Otto Vaarmann	Portfolio Manager, Real Estate	Estonia
Mistra	Eva Thörnelöf	Deputy Managing Director	Sweden
Norwegian Government Pension Fund — Global (NBIM)	John Howchin	Senior Analyst, Corporate Governance	Norway
onValues	Gordon Hagart	Senior Consultant	Switzerland
onValues	Ivo Knoepfel	Managing Director	Switzerland
Prudential Property Investment Managers (PRUPIM)	Neil Fatharly	Global Marketing Director	UK
Prudential Property Investment Managers (PRUPIM)	Paul McNamara	Director, Head of Research	UK
Svenska kyrkan	Gunnela Hahn	Head of Socially Responsible Investment	Sweden
The Central Church Fund of Finland	Magdalena Lönnroth	Project Manager, Investment	Finland
Umeå University	Lars Hassel	Professor of Accounting	Sweden
Universiteit Maastricht	Nils Kok	Research Fellow	Netherlands

Further materials

Presentations by the following institutions can be downloaded from the Mistra website, www.mistra.org

- F&C Property Asset Management: Andrew Szyman
- Naturvårdsverket: Åsa Söderberg, Björn Södermark
- onValues: Gordon Hagart
- PRUPIM: Paul McNamara
- Universiteit Maastricht: Nils Kok