#### SOCIALLY RESPONSIBLE PROPERTY INVESTMENT – BASICS AND TRENDS

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## **Summary**

Actors in property and construction markets can make an important contribution to sustainable development through the design and construction of high-quality buildings, effective facilities' management and through the modernisation of the existing buildings stock. Great progress has been made in the application of innovative building products, materials and systems, in the development of design strategies and planning tools as well as in the development and application of building assessment methods. These progresses have been presented at previous conferences within the worldwide series of 'Sustainable Building' conferences.

However, equally important for the successful implementation of sustainable building practices is the task of integrating sustainability issues into property professionals' profitability analyses, risk assessments and investment decision making. This results in an approach to the issue of sustainable development through decision making PROCESSES and with strong focus on the financial interests of the actors concerned. In general, the approach of taking responsibility towards the environment and society while doing business (i.e. CSR - corporate social responsibility and SRI - socially responsible investment) has therefore emerged in the wider business environment. Translated to the property sector and to buildings as a separate asset-class this approach is termed 'socially responsible property investment'.

On the basis of typical procedures for the conception and assessment of socially responsible investments it is possible to develop investment strategies and appropriate investment products for the property sector. This can strengthen the demand for and lead to a broader market penetration of sustainable buildings. One precondition, however, is the development and application of methods and instruments that allow for both describing, assessing and communicating the contribution of buildings to sustainable development as well as for expressing and communicating the economic advantages of applying sustainable building and management practices.

# 1 From CSR and SRI to SRPI

## 1.1 Terms, definitions and basics

Within the process of property investment decision-making, increasing attention is being given to the growing interest and responsibility that the property industry is taking towards society and the environment. The property industry is also becoming aware of the need to actively communicate this attitude to the wider public, as well as seeing the increasing demand for property assets and investment opportunities that are in compliance with the principles of sustainable development or that follow ethical maxims as a major opportunity. The growing acceptance of social responsibility by organisations, corporations and other actors does not only impact on investment, planning and financing PROCESSES but also on the demand for and the provisioning of PRODUCTS (e.g. buildings, property investment products, financing and insurance products).

Socially Responsible Property Investment (SRPI) can be seen as one facet of a general trend towards Social Responsibility. The terms Social Responsibility or Corporate Social Responsibility (CSR) are used by organisations, investors and companies to commit themselves to the protection of social and environmental interests. CSR (sometimes referred to as 'good' corporate governance) is defined as an open and transparent business practice that is based on ethical values and respect for employees, communities, and the environment. It is designed to deliver sustainable value to society at large, as well as to shareholders (US SIF, 2006). CSR impacts on all business activities including investment policies. Such policies and investment practices can be grouped under the term Socially Responsible Investment (SRI). Socially Responsible Investment as a strategy and Socially Responsible Investing as a process characterise the behaviour of investors which do not only focus on mere economic aspects of an investment but also follow ethical principles and take into account environmental and social aspects. Such investors either avoid

investments into particular companies and products or they systematically select and support other companies and products through their investment. In addition, such investors sometimes use their shareholder rights in order to positively impact on the development of a particular company. A framework for this is provided by the Principles for Responsible Investment (PRI, 2006).

In a general sense SRI can be viewed from the viewpoint of two groups of actors, those who act as investors and those who communicate both their positive attitude towards taking social responsibility as well as the environmental and social advantageousness of their products and services. In between these two groups rating agencies and analysts act as mediators who assess the contribution of companies and products to sustainable development. The issue of SRI appears to attract a growing number of corporations, financial institutions and private investors worldwide since there is a growing awareness that ignoring environmental and social concerns within investment decision making can be financially risky. This is also perfectly valid for the property industry and therefore the notion of socially responsible property investment (SRPI) has recently emerged on property investment agendas.

Pivo and McNamara (2005, p. 129) defined responsible property investing as a business practice that is aimed at 'maximising the positive effects and minimizing the negative effects of property ownership, management and development on society and the natural environment in a way that is consistent with investor goals and fiduciary responsibilities.' This definition implies that a responsibility towards the environment and society does not only exist for those who buy property assets or property investment products, but also for those who are concerned with the facilities and portfolio management. However, it also becomes clear that actors are particularly keen on following socially responsible property investment approaches if this can be combined with the minimization of risks and an improvement in financial performance (see Chapter 2).

#### Current activities - an overview

The approach of taking responsibility towards the environment and society during all business activities is currently emerging to an independent stream within the general business environment. A new international standard on Social Responsibility (ISO 26 000<sup>1</sup>) is currently under development which is intended to serve as a guideline and provide a universal basis for introducing and implementing social responsibility into corporations and organisations; the standard will be available by 2008 at the earliest.

In this context banks, insurance agencies, institutional investors and other actors currently 'discover' buildings as an important asset-class for socially responsible investments and are therefore intensively engaged in questions relating to sustainable design, construction and management of buildings. On the one hand they aim contributing to environmental protection and sustainable development but on the other hand they also expect a reduction of risks and an improvement of market opportunities and investment returns. Under the roof of UNEP FI<sup>2</sup> numerous banks have committed themselves – initially in a very broad sense – to an integration of sustainable development principles into their own business processes. Concerning largescale project financing an assessment of impacts on the environment and society has already been made a precondition for granting a loan through the adoption of the so-called Equator Principles<sup>3</sup>. Also several other initiatives are directly concerned with questions relating to investments into energy efficient and environmental friendly projects (green buildings). These initiatives include, for example, the Green Building Finance Consortium<sup>4</sup>, the Property Working Group at UNEP FI<sup>5</sup>, the UNEP Sustainable Building Construction Initiative<sup>6</sup> as well as the World Business Council for Sustainable Development<sup>7</sup>.

The examination and discussion of the economic advantages of sustainable buildings has lead to several methodological questions and problems. For example, effective ways for taking sustainability issues into account within property valuation, rating and risk analysis techniques need to be found. Current research projects concerned with the monetary valuation of property assets are, for example, the Sustainable Property Appraisal Project<sup>8</sup> as well as the Vancouver Valuation Accord<sup>9</sup>. Also the umbrella organisation of property valuation associations in Europe (The European Group of Valuers' Associations, TEGoVA<sup>10</sup>) took up the topic and integrated the criteria 'ecological sustainability' into their proposed property rating system (TEGoVA, 2003). An explanation of the rationale and initial suggestions for reflecting sustainability considerations in property valuations and risk analysis have been addressed, for example, in Lützkendorf and Bachofner (2002), Sayce et al. (2004) Lützkendorf and Lorenz (2005), McNamara (2005) and Lorenz (2006).

www.iso.org/sr

<sup>&</sup>lt;sup>2</sup> www.unepfi.org

www.equator-principles.com

www.greenbuildingfc.com

www.unepfi.org/work\_streams/property/index.html

www.unepsbci.org

www.wbcsd.org / see Energy Efficiency in Buildings

www.sustainableproperty.ac.uk

<sup>9</sup> www.aicanada.ca; www.aicanada.ca/e/pdfs/VAN-VAL-ACCORD-2007.pdf

<sup>10</sup> www.tegova.org

Questions concerning the methodological basics for assessing buildings' contribution to sustainable development are currently topics of standardisation activities at international (ISO TC 59 SC 17 Sustainability in Building Construction) and European level (CEN TC 350 Sustainability of Construction Works). At the moment, these standardisation activities are predominantly focused on the description and assessment of a building's environmental performance. The following Figure 1 provides the conceptual approach of CEN TC 350 for describing and assessing building performance with regard to the three dimensions of sustainable development ('Integrated Building Performance').

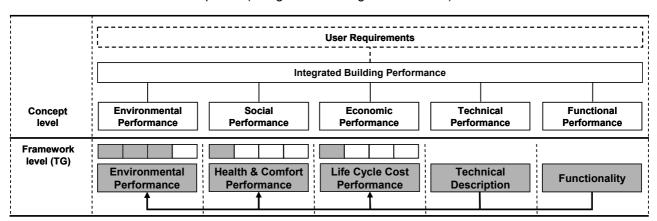


Figure 1: Components of an Integrated Building Performance (CEN, 2007)

In the area of European standardisation a clear trend can be observed towards assessing buildings' contribution to sustainable development by taking into account both environmental, economic and social aspects as well as aspects of functional quality. For the evaluation of environmental and economic aspects the assessment shall mainly be based on the results of quantitative assessment methods (Life Cycle Assessment, LCA and Life Cycle Costing, LCC).

Due to the growing interest in sustainable buildings - both among public authorities for demonstrating leadership as wall as among private and institutional investors - the demand for reliable assessment methods and certification systems is growing constantly at the moment. The recent work of Fowler and Rauch (2006) provides an overview on common assessment tools (BREEAM, CASBEE, GBTool, Green Globes, and LEED). Furthermore, information on assessment tools can also be found in the results of former research projects (IEA Annex31, 2001). Assessment tools are also under continuous review of the European Thematic Network on Practical Recommendations for Sustainable Construction (PRESCO 11). It needs, however, to be noted that these tools do not yet completely comply with the requirements concerning complexity and back-up by LCA and LCC which result from current standardisation activities. Furthermore, most of these tools can be considered as regional or national approaches which show major methodological differences. Up to date the only assessment approach suitable as a basis for a worldwide application is represented through the SBTool 12 which has emerged from the former GBTool and which has been developed under the leadership of the International Initiative for a Sustainable Built Environment (iiSBE<sup>13</sup>). This is because the SBTool opens up the possibility for a comparison of assessment results across regions due to the use of a harmonised set of assessment criteria and of national/regional benchmarks and weighting factors. However, from the authors' point of view the development of appropriate assessment methods and tools is far from being completed because or despite of the wide range of different approaches available in the marketplace.

#### 1.3 Market potential for SRPI

The untapped market potential for socially responsible property investment products can be estimated on the basis of the current volume of SRI markets: The most recent estimates on the volume of the institutional European SRI market report a market size of up to € 1.03 trillion by the end of 2005 (Eurosif, 2006) while the size of the European retail SRI market has been estimated to be around € 34 billion by the end of the second quarter of 2006 (Avanzi SRI Research, 2006). While SRI in Europe has grown rapidly over the last few years, the US market is more mature. According to the US Social Investment Forum (US SIF, 2006) SRI assets in the US grew more than 258% from US\$ 639 billion in 1995 to US\$ 2.29 trillion in 2005 (representing 9.4% of all assets) The largest share of SRI assets (US\$ 1.5 trillion) in the US were found in separate accounts (i.e. portfolios privately managed for individuals and institutions); assets in screened retail funds and other pooled products rose to US\$ 179 billion in 2005; this represents a 15-fold increase compared to US\$ 12 billion in 1995.

<sup>11</sup> www.etn-presco.net

<sup>12</sup> http://greenbuilding.ca/down/gbc2008/SBTool/SBTool\_Notes\_Jan07.pdf

Astonishingly, the SRI community has not yet fully recognised the diversification benefits offered through investments in property assets. Apparently, none of the over 200 stated retail SRI funds in the US as well as none of the 388 funds in Europe offer investors a screened and professionally managed property portfolio. Furthermore, Gary Pivo (2005) stated that none of the over 300 REITs in the US makes social responsibility or sustainability an explicit goal. He goes on to argue 'that neither the real estate research firms that evaluate real estate funds nor the SRI screening firms that evaluate all kinds of companies collect or distribute information on the social or environmental practices of the many retail or institutional real estate investments that are offered in the USA. This is not to say that no real estate investment firms may be constructively engaged in these issues. But if they do exist, they're simply too hard to find' (Pivo, 2005, p. 17). The situation is very similar in Europe; only very few property investment firms or funds make sustainability an explicit goal. Given that an optimal share of property (direct or indirect investment) within a mixed-asset portfolio is somewhere between 10 and 20% (Sirmans and Worzala, 2003; Worzala and Sirmans, 2003), the retail SRI market as a whole is significantly under-allocated from the perspective of optimal asset allocation. Consequently, the untapped market potential for publicly offered sustainable property investment products is huge and can be easily calculated: it is simply 10 to 20% of the volume of the current retail SRI market; i.e. between US\$ 17.9 and US\$ 35.8 billion in the US and between € 3.4 and € 6.8 billion in Europe.

The same calculation cannot, however, be made for the institutional SRI market because little is known about the share of property owned by SRI-engaged institutional investors. However, given the worldwide lack of sustainable property investment products and given the fact that sustainable building is not yet a mainstream activity, it may be reasonable to assume that those buildings or property investment products owned by institutional investors may not be the most sustainable ones. Thus, if only 10% of the more than US\$ 3.3 trillion now in SRI (Europe and USA combined) is moved to sustainable property assets it would equal to approximately one half of the current free-float market capitalization of the FTSE EPRA/NAREIT global listed real estate index which was US\$ 686 billion at the end of 2006.

# 2 Benefits of sustainable buildings and of SRPI

Within the recent discussion on energy efficient, environmentally friendly or sustainable buildings their positive contribution to saving natural resources and to limiting impacts on the environment has gained most attention. Also their contribution to safeguarding cultural values and to improving health, comfort and quality of life of occupants and users has been emphasized. However, economic aspects have played a subordinate role only (e.g. if considered at all, through an examination of life-cycle costs or in connection with the provision of affordable housing).

But from the viewpoint of socially responsible property investments the focus on the benefits of sustainable buildings is changing or expanding respectively. For example, the following questions are gaining importance: If and to what extent do sustainable buildings contribute to safeguarding and improving cash flow and property values, to reducing property risks and to enhancing image and reputation of owners, users and investors? And how is it possible to measure, communicate and empirically proof these financial benefits?

In this context it seems appropriate to note that investigating the description and assessment of the financial advantages of sustainable buildings poses a methodological problem: By accepting the triple-bottom-line approach to sustainable development the economic dimension already is intrinsically tied to the assessment of a building's sustainability; i.e. financial advantages would already be one precondition for such an assessment. Indeed, current European standardisation activities (CEN TC 350) specify life-cycle costs as an assessment criterion; but they do not cover criteria like income, value, and development or stability of value. However, the authors do not consider this as a solution; instead, the problem could be solved by adopting the following proposition. Sustainable buildings can be regarded as investment objects and investment decision making can be strongly influenced by socially responsible investment principles. The provision of buildings (e.g. housing estates) at affordable costs for third parties could be seen as merely an economic aspect; but it can also be identified as one aspect of taking responsibility towards society. So, the safeguarding of financial advantages (self-interest) can be compared to the degree of responsibility towards society and the environment. In the end, these financial advantages may just directly result from taking this social responsibility.

Sustainable property assets offer a range of features which make them superior to conventional assets. From the authors' point of view, there are no adverse side effects of applying sustainable development principles to the investment in, development and management of property assets. Indeed, the application of sustainable development principles particularly lends itself to cope with the nature of property investments which traditionally require pursuing medium- to long-term investment strategies. Taking sustainability issues into consideration, results in countless win-win situations for the actors of property markets. The authors consider a situation advantageous if an identical cash-flow scenario or profit can be realised with lower environmental impacts and added value for society.

Detailed studies on the financial advantages of sustainable buildings are, however, barely available (outstanding examples include Katz, 2003; Katz et al., 2003 and RICS, 2005). Within the current discussion emphasis is placed on the reduced costs for energy and water; furthermore, huge effects are also expected through occupant productivity gains due to good indoor air quality and high user satisfaction (see for example Kampschroer and Heerwagen, 2005). The following Figure 2 represents the authors' view of the effects and benefits of sustainable buildings. It is also shown that an evaluation of economic benefits is always influenced through the perception of the individual actor concerned. The authors attempt to assign the different effects and benefits to investors, users, society and the environment. Furthermore, interdependencies and interactions between different effects are indicated.

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Figure 2: Effects and benefits of sustainable buildings

## 3 SRPI – Strategies and Products

In general, socially responsible property investing can be realised either through direct or indirect investment. From the authors' point of view, socially responsible property investing can encompass four main investment strategies. In the case of indirect property investment, all known indirect investment forms could be used to offer private and institutional investors the opportunity to invest in sustainable buildings. This would mean investing only into such property investment products that are committed to one ore more these four main strategies which are:

- Selection / Screening: Purchase and/or disposal of property assets that meet / don't meet predefined environmental and social performance requirements;
- Build and operate / Build and sell: Investments into new building projects that are designed, constructed
  and subsequently managed according to the requirements of sustainable buildings;
- Optimisation: Investments into the existing building stock in order to systematically improve sustainability performance; and
- Cause-based investment: Investments into community projects such as affordable housing and urban revitalisation or into property projects that support urban infill, preservation of historic buildings, etc. in order to foster sustainability at large.

What becomes clear from these strategies is that the scope of targets and goals of socially responsible property investment can be focused on both single buildings and their immediate surroundings as well as on broader urban development and community level issues. This makes it difficult to determine whether a property investment can actually be classified as socially responsible or not. Furthermore, a distinction can be made between investment strategies and products that directly increase the market share of sustainable buildings and those that do not. For example, while pursuing the selection / screening strategy an open-end fund provider could identify all buildings within his portfolio that fulfil the requirements for sustainable buildings (it is, indeed, not impossible that existing funds do contain sustainable buildings) and offer a specialised fund made up exclusively of these buildings. But this approach does not result in the creation of new sustainable buildings; there are no direct benefits for the environment and society. While in contrast the offering of sustainable project development funds (build and sell strategy) can make a direct contribution to the protection of natural resources and environmental relief. These projects can be tailored to fulfil the requirements for sustainable construction and management right from the pre-design phase. However, since project development funds regularly sell the buildings short after completion the question remains if a high sustainability performance can also be maintained during the subsequent occupation and management phase.

In terms of implementing the principles of sustainable development pursuing the build and operate strategy appears particularly advantageous. For example, the compilation of BOT (build-operate-transfer) or PPP (public-private-partnership) models into distinct funds could represent an attractive SRPI product. In this regard, relatively long contractual arrangements (30 years or more) provide an excellent basis for safeguarding a high sustainability performance also during the occupation phase.

Also the introduction of energy performance certificates within the EU (European Commission, 2002) opens up the possibility for effectively pursuing a selection / screening strategy and for offering specialised funds that focus on one or more aspects of sustainable development; in this case on energy efficiency. Energy performance certificates will allow investors or fund providers to easily identify the most energy efficient buildings in the marketplace.

## 4 Summary and Outlook

The growing interest of private and institutional investors in socially responsible investments leads to an increased demand for sustainable buildings. On the one hand, the reason for this can be seen in a general trend for taking responsibility towards society and the environment within the scope investment decision making; on the other hand, however, this increased demand for sustainable buildings is due to the realisation that sustainable buildings can be associated with lower investment risks and significant economic advantages. Thus, the former motives of lower resource use and environmental protection are amended by financial interests – as a consequence, sustainability becomes a business model.

Private and corporate market participants are becoming more aware and informed of the quality and performance of the space they use and occupy. Furthermore, poor environmental and social performance is increasingly being seen as an investment risk, and a change in investment paradigms can be observed. Increasingly, investors no longer see a conflict between acting in a sustainable fashion and making a profit (see Figure 3). Going further, sustainable behaviour and responsible business practices are increasingly seen as a precondition for achieving better investment returns.

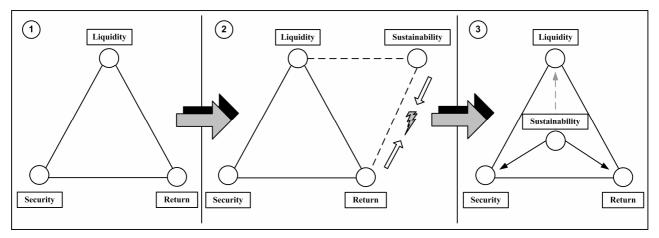


Figure 3: Changing investment paradigm

In order to strengthen this trend the following activities should be pursued:

- The contribution of buildings to sustainable development needs to be described, assessed and communicated. This process must be backed-up by scientific methods and basics. In the interest of credibility and reliability of assessment results a harmonisation of assessment methods is required. Preferentially, assessment methods should be developed and applied which are based on a combination of environmental (LCA) and economic (LCC) assessment approaches. Concerning the assessment of social aspects there is still further need for discussion in order to identify appropriate assessment indicators and to operationalise the assessment process.
- There exists an urgent need for finding effective ways for describing and empirically evidencing the economic advantages of sustainable buildings. One precondition for this is the consideration of major building characteristics and attributes (that are indicative of their environmental, economic and social performance) within building files/passports and subsequently in property transaction databases. Such an informational basis would allow for an application of methods such as hedonic pricing and finally for empirically evidencing the superior financial performance of sustainable buildings in comparison to their conventional counterparts.
- In contrast to the availability of various possibilities for socially responsible investments (e.g. almost 400 screened SRI funds in Europe) no adequate products and investment options exist for socially responsible *property* investments. It can be assumed that there is huge untapped market potential for such products and investment options. Therefore, the development and positioning of such products (e.g. sustainable property funds or green REITs) can be seen as one important way for increasing the demand for sustainable buildings in general.
- Finally, one major challenge consists in introducing the issue of sustainability to property related rating agencies, financial analysts, and valuation professionals and in integrating sustainability issues into their instruments and methods (i.e. property rating, risk analysis and property valuation).

In summary, the approach of socially responsible property investment combines environmental, societal as well as direct financial goals and is therefore suitable for facilitating market transformation and a much broader market penetration of sustainable buildings.

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## References

Avanzi SRI Research, 2006, *Green, social and ethical funds in Europe 2006* [online], Available at: <URL: http://www.avanzi-sri.org/pdf/complete\_report\_2006\_final.pdf> [Accessed at: 15 March 2007]

CEN, 2007, Sustainability of construction works – framework for assessment of integrated building performance – part 1: environmental, health and comfort and life cycle cost performances, standard under development

European Commission, 2002, *Directive of the European Parliament and of the Council on the energy performance of buildings*, 2002/91/EC, Official Journal of the European Communities, December, 2002, L1 pp. 65-71

Eurosif, 2006, *European SRI Study 2006* [online], Published by: European Social Investment Forum, Available at: <URL: http://www.eurosif.org/media/files/eurosif\_sristudy\_2006\_complete>, [Accessed at: 28 January 2007]

Fowler, K. and Rauch, E., 2006, *Sustainable Building Rating Systems Summary* [online], Pacific Northwest National Laboratory, Available at: <URL:

http://www.wbdg.org/ccb/GSAMAN/sustainable%20bldg%20rating%20systems.pdf >, [Accessed at: 28 March 2007]

IEA Annex31, 2001, Directory of Tools – A survey of LCA Tools, Assessment Frameworks, Rating Systems, Technical Guidelines, Catalogues, Checklists and Certificates [online], Available at: <URL: http://annex31.wiwi.uni-karlsruhe.de/INDEX.HTM>, [Accessed at: 15 January 2005]

Kampschroer, K. and Heerwagen, J.H., 2005, *The strategic workplace: development and evaluation*, Building Research & Information, Vol. 33, No. 4, pp. 326-337

Katz, G., Alevantis, L., Berman, A., Mills, E., Perlman, J., 2003, *The Costs and Financial Benefits of Green Buildings - A Report to California's Sustainable Building Task Force* [online], Available at: <a href="http://www.usgbc.org/Docs/News/News477.pdf">http://www.usgbc.org/Docs/News/News477.pdf</a>, [Accessed at: 16 May 2007]

Katz, G., 2003 *Green Building Costs and Financial Benefits* [online], Available at: <a href="http://www.cap-e.com/ewebeditpro/items/O59F3481.pdf">http://www.cap-e.com/ewebeditpro/items/O59F3481.pdf</a>, [Accessed at: 16. May 2007]

Lorenz, D., 2006, *The Application of Sustainable Development Principles to the Theory and Practice of Property Valuation*, Dissertation, Karlsruher Schriften zur Bau-, Wohnungs- und Immobilienwirtschaft, Band 1, Universitätsverlag Karlsruhe, Karlsruhe

Lützkendorf, T. and Bachofner, M., 2002, *The consideration of ecological quality in the valuation and funding of buildings – a methodological overview*, Proceedings of the International Sustainable Building Conference, Oslo, 2002

Lützkendorf, T. and Lorenz, D., 2005, Sustainable Property Investment: Valuing sustainable buildings through property performance assessment, Building Research & Information, Vol. 33, No. 3, pp. 212-234

McNamara, P., 2005, Sustainable Property Investment – Balancing the Commercial Pressures of Today with the Realities of the Future [online], Presentation held at the RICS Valuation conference 2005, 29 December 2005, London, Available at: <URL: http://www.rics.org/NR/rdonlyres/DAF0FD53-23F1-4A56-B05A-739A4A41E77B/0/PaulMcNamara.pdf>, [Accessed at: 01 February 2006]

Pivo, G., 2005, *Is There a Future for Socially Responsible Property Investments?*, Real Estate Issues, Fall 2005, pp. 16-26

Pivo, G. and McNamara, P., 2005, *Responsible Property Investing*, International Real Estate Review, Vol. 8, No. 1, 2005, pp. 128-143

PRI, 2006, *Principles for Responsible Investment* [online], Published by: UN Environment Programme Finance Initiative in cooperation with UN Global Compact, Available at: <URL: http://www.unpri.org/files/pri.pdf>, [Accessed at: 28 April 2006]

RICS, 2005, *Green Value – Green buildings, growing assets* [online], Published by: The Royal Institution of Chartered Surveyors, Available at:

<ur>URL: http://www.rics.org/NR/rdonlyres/93B20864-E89E-4641-AB11-

028387737058/0/GreenValueReport.pdf >, [Accessed at: 18 November 2005]

Sirmans, C. F. and Worzala, E., 2003, *International Direct Real Estate Investment: A Review of the Literature*, Urban Studies, Vol. 40, No. 5–6, pp. 1081–1114

Sayce, S., Ellison, L., Smith, J., 2004, *Incorporating Sustainability in Commercial Property Appraisal: Evidence from the UK*, Proceedings of the 11th European Real Estate Society Conference (ERES 2004), Milan, 2004

TEGoVA, 2003, *European Property and Market Rating* [online], Published by: The European Group of Valuers Associations, Available at: <URL: http://www.tegova.org/reports/EPMR.pdf>, [Accessed at: 10 January 2004]

US SIF, 2006, Report on Socially Responsible Investing Trends in the United States – 10 Year Review [online], Published by: US Social Investment Forum, Available at:

<uRL: http://www.socialinvest.org/areas/research/trends/SRI\_Trends\_Report\_2005.pdf>, [Accessed at: 28 February 2006]

Worzala, E. and Sirmans, C. F., 2003, *Investing in International Real Estate Stocks: A Review of the Literature,* Urban Studies, Vol. 40, No. 5–6, pp. 1115–1149