

Toward Sustainable and Responsible Property Investment Indices

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Introduction

Sustainable and responsible investing are two terms that describe the practice of incorporating extra-financial factors into investment decision making (Krosinsky and Robins 2008). Socially responsible investing emerged in the 1960s to reconcile investors' financial and ethical objectives (Schueth 2003) while sustainable investing emerged more recently to put private capital to work in socially and environmentally sound directions (French 1998). Following Krosinsky and Robins, 'sustainable and responsible investing' (SRI) can be used as a catch-all to describe these closely related styles.

SRI is getting larger all the time, currently involving about 12% of all managed funds in the USA (Social Investment Forum, 2010). One measure of the scale of SRI is the number of signatories to the UN Principles for Responsible Investing, which say that investors should give appropriate consideration to environmental, social and governance issues (PRI, n.d.). Worldwide, over 800 institutions, managing more than \$15 trillion in assets, have signed them, including many leading US real estate investors (see Table 1).

A decade ago, Mansley (2000) predicted that SRI would transform the property sector since it lies at the frontlines of so many social and environmental concerns. His vision was echoed more recently by the guest editor of a special issue of the *Journal of Property Investment and Finance* on SRI who wrote that property has a role to play in every category of corporate responsibility (Roberts, 2009).

Exactly what constitutes Sustainable and Responsible *Property* Investing (SRPI) is by no means settled, but the ideas most commonly proposed promote more compact, resource-efficient and socially inclusive city regions (Haughton 1997). For investors and

developers, this translates into specific types of properties that can increasingly be distinguished in the market including (but not limited to) those that are green, energy efficient, affordable, infill, historic, walkable and transit-oriented.

A 2007 survey of real estate executives found that most would increase their allocation to SRPI if it met their investment criteria, but they worried about the lack of financial information and whether it would conflict with their fiduciary obligations (Pivo 2008b).

TABLE 1: US Signatories to the Principles for Responsible Investing with Significant Real Estate Positions or Consulting

1. Bentall Kennedy
2. BlackRock, Inc.
3. California Public Employees' Retirement System
4. California State Teachers' Retirement System
5. CBRE Investors
6. Connecticut Retirement Plans and Trust Funds
7. General Bd. of Pension & Health Benefits United Methodist Church
8. Henderson Global Investors
9. Illinois State Board of Investments
10. JP Morgan Asset Management
11. LaSalle Investment Management Inc.
12. Los Angeles County Employees Retirement Association
13. Maryland State Retirement and Pension System
14. Multi-Employer Property Trust
15. New York City Employees Retirement System
16. New York State and Local Retirement System
17. Principal Real Estate Investors
18. Prudential Real Estate Investors
19. Russell Investments
20. SEIU Pension Plans Master Trust
21. State Universities Retirement System of Illinois
22. The Townsend Group
23. TIAA-CREF
24. UBS Global Asset Management
25. United Nations Joint Staff Pension Fund

This raises a central question. What can be done to allay investors' financial concerns about SRPI and foster capital flows to the sector? Part of the answer could well be a new suite of financial indices that track SRPI development costs, operating expenses, incomes, risks and returns and allow investors to make comparisons to other investments. That could go a long way, in our view, to addressing informational deficiencies, reducing uncertainties, building legitimacy, fulfilling fiduciary obligations and attracting more capital to sustainable and responsible urban development.

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How the Indices Could Foster Sustainable Urban Development

Improving Market Information

A crucial assumption about market efficiency is that actors have full information. Imperfect information can cause beneficial transactions to be foregone (Scorsone and Weiler 2004).

A recent market survey found substantial uncertainty about the costs and benefits of energy efficient buildings (Galuppo and Tu 2011). Given that energy efficiency is one of the most widely discussed types of SRPI, uncertainty must pervade the SRPI market.

The idea that poor information leads to underinvestment motivated the work by McGreal et al. (2006) that inspired the UK IPD Regeneration Index. As the authors put it:

“...information on investment property performance has suffered from the lack of transparency in regeneration/urban renewal areas. Indeed, weak and confused market signals in these areas have often perpetuated many misconceptions regarding investment returns and risks, which have often led to opportunities in these areas being by-passed, notably by some of the largest institutional real estate investors.”

“Weak and confused signals” could also impede SRPI. Studies find persistent rent premiums for LEED, ENERGY STAR, transit oriented, redevelopment, and walkable properties (Miller et al. 2008, Eichholtz et al. 2010, Pivo and Fisher 2010a, 2010b, Wiley et al. 2010, Fuerst and McAllister 2011). And persistent premiums, especially when they produce excess profits for developers, could indicate that price signals are not getting through to those who would normally respond by increasing supplies. If that is the case, then new indices could improve information flows and attract more interest in SRPI projects.

Improving Credibility

Geltner and Ling (2001) have written about how indices can attract capital to real estate by supporting research that builds credibility for the asset class. As they put it:

“Real estate suffers from a lack of respect and credibility relative to stocks and bonds. A research index of sufficiently high quality would attract more academic research, which over the longer run would build up the fundamental knowledge base about the asset class. The

existence of such a knowledge base, as well as the prevalence of asset class research at the most prestigious universities, probably tends in itself to add to the credibility and prestige of an asset class, and to the comfort level of mainstream investors.”

Even more to the point,

[more credibility would] “lead, we predict, to increased capital flows to the asset class” (Geltner and Ling 2007).

They cite as a case in point the University of Chicago’s Center for Research in Security Prices (CRSP) which in the early 1960s provided the data needed for research on equities, which they claim helped equities gain the legitimacy it needed to enter institutional core portfolios that had previously focused on bonds.

Thus, new indices could support new research that could mitigate uncertainty, build credibility and legitimize SRPI.

You Get What Investors Measure

Henneberry and Roberts (2008) have reported how the portfolios of UK property investors are biased toward London even though they found that London has lower risk-adjusted returns and liquidity. They explain this by the presence of a “cultural economy” in which:

*“... the material practices that constitute economic discourse do not just operate and characterize markets and economies, they **are** markets and economies.”* (emphasis in original).

The particular “material practice” they are concerned with is portfolio benchmarking; in particular the IPD UK index:

*“...which **every** interviewee...identified...as the **primary** influence on the geographical diversification decision”* (emphasis in original).

Henneberry and Roberts argue that since any differences between the performance of the IPD index and a portfolio are attributed to the skill of the portfolio manager, there is an incentive for managers to mimic the index portfolio, especially since underperformance can threaten their income or job security. As a result, the index creates a “centering effect” and a “herd instinct” making it difficult for individual managers to shift the index constituents. As a result, when an index becomes the industry standard it tends to promote “restrictive and conservative” investing that follows and replicates it.

Therefore, to the extent SRPI departs from the property types and locations used to compute currently popular indices, it will be more difficult for fund managers to shift their portfolios toward SRPI. If, however, new indices demonstrate that SRPI can equal or beat conventional portfolios, then managers could re-center their focus on SRPI with much less risk to their competitive positions and personal circumstances.

This argument fits the views of others who also claim that what gets built is shaped by risk-averse investors. Peiser (1990) also used the “herd instinct” metaphor to describe how investors approach real estate, which leads, he says, to the “Give Me One That Looks Like That” syndrome. As a result, Leinberger (2005) finds developers limit themselves to just 19 standardized products even though new alternatives are needed to create better cities. Guy (1998) also wrote about how investors encourage standardized buildings with excessive air conditioning and other forms of over-specification, making it harder to implement sustainable architecture.

So, new indices could help lower the risk for fund managers who want to shift their investment style to embrace SRPI principles and practices.

Ranking, Screening and Benchmarking

If SRPI indices were created, then environmental and social performance (ESP) information would be needed to determine whether properties should be constituents of the indices. But if this information were also used to rate or score the overall ESP of firms or portfolios, then it could encourage capital flows to SRPI in three additional ways. It could help investors screen property funds or firms, it could increase the salience to fund managers of concerns raised by stakeholders, and it could give managers a new way to benchmark their management practices.

Screening

Assume that based on an SRPI rating of publicly traded REITs and REOCs investors who were committed to SRPI refused to own certain equities. Heinkel et al. (2001) have shown how in theory this would lower these firms’ stock prices because their investment risk would then be spread over the fewer remaining neutral investors who would require higher returns. As the number of SRPI investors grew, the required returns from the unacceptable firms would grow as well. This process would increase the cost of capital to the firms with lowered share prices. If they acted rationally, then the less responsible firms would respond by increasing their ESP if the cost of reform was less than the increase they faced in the cost of capital.

Mackey et al. (2007) also considered how supply/demand relationships for socially responsible vs. traditional firms could affect their share price. In their view, when the demand for socially responsible investments exceeds the supply, the share price of socially responsible firms will rise, giving them a lower cost of capital. In that case firms can increase their share price by improving their environmental and social performance to the point where they become attractive to socially responsible investors. A rating index could help firms and investors better understand the supply side of this equation, possibly stimulating firms to adopt SRPI practices if it appears that supplies for SRPI investors are scarce relative to demand (e.g. if there are few property firms that score well on an SRPI rating index).

Sharfman and Fernando (2008) take another approach to the link between social responsibility and capital markets by theorizing that the cost of capital should be lower for firms when investors perceive them as having better environmental risk management. If a firm takes actions that lower the risk of litigation or exposure to hazards, investors should accept lower risk premiums on its equity. That could lower the firm’s cost of debt capital, increase its debt capacity, or reduce its cost of equity capital. In the property sector, environmental risks could include building safety issues, exposure to pollutants, and exposure to natural hazards. An SRPI rating that indicated lower or higher exposure to risks could, therefore, affect the cost of capital to property companies, inducing them to reduce exposure to such risks if as Heinkel et al. (2001) argue, the benefits in the form of lower capital costs were greater than the costs of reform.

So, new ESP information on firms could induce some investors to avoid poorly and favor highly rated firms and that could induce managers to reform their practices, shifting capital toward SRPI.

Stakeholder Salience

According to Neubaum and Zahra (2006) “executives understand that long term performance depends on maintaining viable relations with stakeholders because they give the firm what’s needed to gain and protect advantage.” But not all stakeholders receive the same level of attention from managers. Mitchell, Agle and Wood (1997) proposed a theory of stakeholder salience, which argues that managers focus more on stakeholders with attributes of power, legitimacy, and urgency. If this is true, then an ESP firm or fund rating system could increase the salience and therefore the impact of stakeholders by increasing the legitimacy and power of their claims. If there was a more broadly agreed upon, rationally based rating system then claims for reform based on that system could be viewed

as more legitimate and hence more salient to managers. A rating system could also increase stakeholder power by facilitating coordinated claims among the stakeholders. Thus, a widely accepted ESP rating system could give institutional investors and other stakeholders a more legitimate and therefore more influential tool for promoting SRPI practices among fund managers.

Benchmarking

Benchmarking is the practice of comparing the performance metrics of one business to others firms, norms, standards or best practices. It is often used by firms to identify their strengths and weaknesses and motivate improvements. An SRPI rating that allows property firms to benchmark their ESP to their competitors, industry leaders, or standards could encourage improvements that would have a material effect on the built environment. There are a variety of reasons why managers might be concerned about a low rating for their firm. It could diminish its reputation (Liston-Hayes and Ceyton 2009, Doh et al. 2009), weaken its ability to recruit and retain loyal, creative staff (Aguilera et al. 2007), or reduce its capacity to differentiate its products, avoid risks, avoid fines, and reduce expenses (Mackey et al. 2007, Lyon and Maxwell 2008).

So, to recapitulate the case, a new suite of indices could foster capital flows to SRPI by redressing weak or wrong market signals, supporting research that builds credibility, relaxing the “herd instinct” among investors, and providing social and environmental ratings that could be used to screen investments, strengthen stakeholder salience and facilitate benchmarking.

A Demonstration

To demonstrate what SRPI indices might look like, a SRPI rating system and financial indices for office properties was produced using information compiled from several sources.

Information on financial performance was obtained from the National Council of Investment Fiduciaries (NCREIF), a source of information based on property-level data submitted by its members, which include tax-exempt institutional investors and investment managers. Properties owned by contributing members are included in the pool, and added or removed as the members buy or sell holdings. For this demonstration, we selected all stabilized office properties that were in the NCREIF pool for at least one quarter from 2001-2010.

Information on the social and environmental merits of the NCREIF properties was imported from other sources, matched to the properties using addresses and geo-codes. The issues addressed and data used were

identified in prior studies (Pivo 2008a, 2009). Unfortunately, some pertinent data (e.g. water use, recycling or historic designation) are unavailable at the national level. That is a problem that will need to be addressed in order to build the best possible indices.

For this demonstration, nine criteria were used to identify sustainable and responsible properties:

- 1) Whether a property was ENERGY STAR labeled, according to the US EPA.
- 2) Whether a property was LEED certified according to the US Green Building Council.
- 3) Whether a property was TRANSIT ORIENTED, defined as located within ½ mile of a fixed-rail transit station, according to the US Bureau of Transportation Statistics.
- 4) Whether a property was ACCESSIBLE, defined as being in a census block group with higher population densities and lower work-based journey to work times, based on 2000 US census data.
- 5) Whether a property was in a WALKABLE location, as determined by Walk Score.
- 6) Whether a property was in or near an URBAN REGENERATION area, defined as any Enterprise Community, Enterprise Zone or Renewal Community listed by the US Department of Housing and Urban Development.
- 7) Whether a property had LONGEVITY, defined as being built before 1950. This was a proxy for historic value and embodied energy and determined from property age data provided by NCREIF.
- 8) Whether a property was *not* built on PRIME FARMLAND according to the USDA Natural Resource Conservation Service.
- 9) Whether a property was *not* located on CRITICAL HABITAT for threatened or endangered species, according to the US Fish and Wildlife Service.

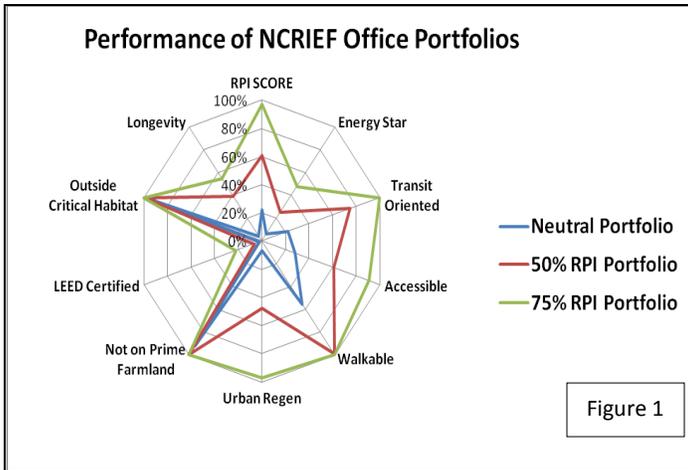
For each property, a determination was made as to whether or not it met each criterion. The percentage of criteria that was met by a property was defined as its “Sustainable and Responsible Property (SRP) Score”.

The social and environmental information was then used to build sample SRPI portfolios. One approach used was to include any property with an SRP Score of at least 50 or 75%. About 20% of the total sample qualified for the 50% Portfolio (i.e. 20% of the total sample met half the SRP criteria). About 5% qualified for the 75% Portfolio.

To understand the composition of the portfolios with respect to each criterion, the percentage of buildings in each portfolio that met each criterion was computed along with the unweighted mean RPI score for each portfolio as a whole. The results are displayed on

the radar plot shown in Figure 1, along with a comparison to the same measurements for all NCREIF office properties (i.e. the “Neutral Portfolio”).

A typical NCREIF office property had an SRP Score of about 20 while properties in the 50% and 75% portfolios had SRP scores of about 60 and 95, respectively. It is notable that a small share of the



buildings in any of the portfolios was LEED certified even though much higher shares met other SRP criteria. This suggests that only using LEED to define SRPI would exclude many properties that have other merits of interest to investors. In general, Figure 1 is a way to reveal some of the strengths, weaknesses, and composite performance of the NCREIF pool in relation to priority ESP issues.

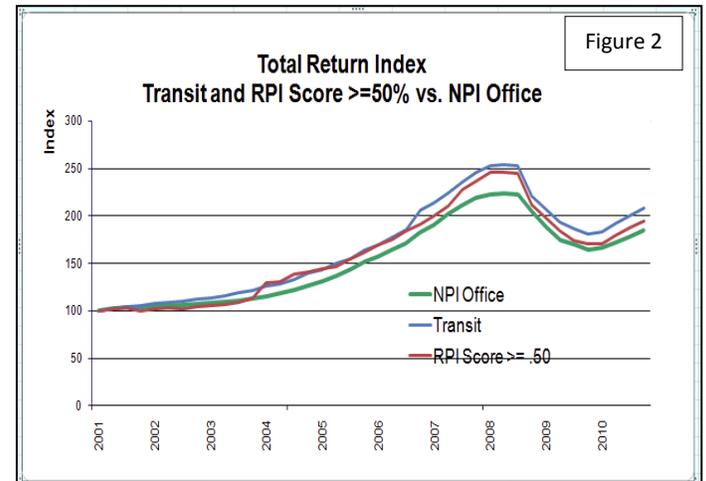
This was not the only way the SRPI portfolios could have been built. Another approach could be to create separate portfolios for each specific type of RPI feature, such as a purely Energy Star or LEED portfolio. This approach seems rational if the goal is to help investors who are looking for information on specific types of buildings. Other possible approaches include:

- using negative and/or positive screens to exclude buildings with undesired features and include those with some or all of the desired ones,
- including any building with at least one meritorious feature, such as a portfolio composed of properties that are LEED *or* Energy Star *or* transit oriented and so on,
- or developing a multi-criteria scoring system and including only those properties that score in the top quartile or decile of the distribution.

The next and final step was to produce the financial indices. That was done for the 50% RPI portfolio and a “pure type” portfolio only comprised of transit-oriented properties. The index used here was Total Return, to match the primary indicator published by NCREIF, although as noted above, other measures such as income

and development cost would also be useful. The results are given in Figure 2 and compared to the NCREIF Property Index for Offices, which represents the SRPI neutral portfolio.

Each line in Figure 2 shows the index built on total returns with a starting point of 100 in the first quarter of 2001. The returns are based on the mean total returns per quarter, weighted by the market value of its constituent property. Total return is the sum of Income and Capital Value returns. Income Return measures returns from net operating income while Capital Value Return reflects changes in market value from one period to the next.



The indices illustrate how two specific SRPI portfolios performed over time, how they compare to each other, and how they compare to all office investments. Two caveats should be mentioned, however. First, mean value weighted indices do not control for changes in the composition of the portfolios over time. That can be corrected using repeat sales or hedonic indices (Dorsey et al. 2010). Second, it is possible that the higher returns for any given portfolio could be explained by attributes of the portfolio other than the SRP criteria. For example, if the transit oriented portfolio was comprised of properties in outperforming regions, then the higher returns might not be due only or at all to the SRP features. In fact, prior work suggests that if these differences were controlled, there would be no difference in total returns produced by the neutral and SRPI portfolios (Pivo and Fisher 2010a).³

³ Pivo and Fisher did find, however, that SRPI properties had higher incomes and values and lower cap rates and that a developer could earn higher profits if additional costs to develop SRPI property did not extinguish its higher values.

Conclusion

Global progress toward sustainable development depends on leadership from real estate developers, asset managers and investors. But under what conditions will they be more likely to act in sustainable, responsible ways? Campbell (2007) makes the case that institutional conditions, such as industry self-regulation, independent monitoring, business norms, and stakeholder engagement, may be important, but only as mediators of more basic economic forces. Unfortunately, our current indices and appraisal practices do little to reduce the uncertainty around SRPI. New indices could reveal that SRPI is positive, neutral or negative for returns. If it is positive, then fiduciaries should embrace it. If it is neutral, then its social benefits still make it a good idea. Even if it turns out to be negative for returns, then at least that will be known and the discussion can turn to whether public incentives are worthwhile. Regardless of the outcome, it seems the time has come to establish new SRPI indices.

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