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Sustainability indices in emerging markets: impact on responsible practices and financial market development

Antonio Vives [a] & Baljit Wadhwa [b]

[a] Department of Civil and Environmental Engineering, Stanford University, Stanford, CA, 94305, USA

[b] Global Environmental Facility, World Bank, Washington, DC, 20433, USA

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Sustainability indices in emerging markets: impact on responsible practices and financial market development

Antonio Vives[a]* and Baljit Wadhwa[b]

[a]*Department of Civil and Environmental Engineering, Stanford University, Stanford, CA 94305, USA;* [b]*Global Environmental Facility, World Bank, Washington, DC 20433, USA*

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Sustainability indices are generally created to serve as benchmark for sustainable investment. In all markets, but particularly in emerging markets, these indices can also contribute to stimulate responsible practices in companies that want to be part of the index and those that are already members. Furthermore, they can contribute to the deepening of the capital markets, not only by serving as a benchmark, but also by developing interest in responsible investment on the part of foreign and domestic institutional investors. To play these roles, the admission, selection and removal process of companies into sustainability indices must have particular characteristics. For example, there should be a relatively large stock of eligible companies. Furthermore, the investment environment in the capital markets must also be relatively developed for investors to appreciate the long-term value of responsible companies and analysts must have the right incentives to promote responsible investments. Under certain conditions, the indices can also help to attract foreign capital, seeking international diversification, to the local capital markets. Even though there are more than 50 general and specialized sustainability indices, there are only seven associated with stock exchanges in developing countries: South Africa, Brazil, Egypt, Indonesia, China, India, Turkey and Mexico. This study analyses the conditions that make for effective sustainability indices in promoting capital market development and responsible practices and the impacts that corporations and investors can expect. This study includes, as an example, evidence from an evaluation of the impact of the BM&FBovespa Sustainability Index in Brazil. We also include recommendations for the design of sustainability indices in emerging markets.

Keywords: sustainability indices; socially responsible investment; corporate social responsibility; sustainability; financial markets; stock exchanges; emerging markets; Brazil

Introduction

Sustainability indices are, in general, created to serve as benchmark for 'sustainable investment' – a term that covers a range of concepts and asset classes including the use of environmental, social and governance (ESG) information in portfolio development and shareholder voting policies to carbon trading and clean-tech investment. Historically, sustainable investors were driven by 'values' and focused on screens to remove companies that were viewed as having negative environmental or social impact. Recently, corporate sustainability has become a critical aspect of a company's business strategy to address changing expectations in regulatory, consumer and other stakeholder expectations. Moreover, as companies began to realize business benefits

*Corresponding author. Email: antoniov@cumpetere.com

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from their responsible practices, investors also put growing emphasis on 'seeking value' having realized that a company's sustainability strategy may result in better risk-adjusted returns if and when the market realizes the benefits of sustainable companies.

Interest in sustainable investing is expanding driven by natural resource scarcities, impacts of climate change, the need for greater transparency and consumer demand. Today it is a global market worth several trillion dollars. One of the tools to single out companies that integrate sustainability into their strategies and operations is the development of sustainability indices. Today, while there are more than 50 general and specialized sustainability indices, there are only eight sponsored by developing countries' stock exchanges: South Africa, Brazil, Mexico, Egypt, Indonesia, China, India and Turkey.[1] Of these, only two have been in place 5 years or more; the others were created in the in 2009–2011.

Sustainability indices can have an impact on the development of emerging financial markets in general and socially responsible investments (SRI) in particular. They can also contribute to the adoption and deepening of sustainability (corporate social responsibility, CSR) practices in companies. In this study, we explore these two effects by presenting first a brief overview of socially responsible investment, the existing indices in emerging markets and their expected impact. Later we present the summary of an in-depth analysis of the case of Brazil's sustainability index. We conclude with lessons learned from this analysis for the design and review of sustainability indices to enhance their impact on financial markets and sustainability practices.

Corporate social responsibility, sustainability and ESG

There are many different terms used to refer to responsible practices. In corporations, responsible practices are often referred to under the banner of CSR. Recently, 'sustainability' is being used more and more for its simplicity and its all-encompassing meaning. In investment analysis non-financial metrics are referred to as ESG factors. In this context, the term ESG refers to the criteria that are used in the analysis and selection of investments. The issue of governance has had historical emphasis due to its importance to all investors, while the environmental and social issues hold significant weight for socially responsible investors. Strictly speaking, CSR are the strategies (including governance) used by firms to achieve financial, social and environmental sustainability, the likelihood of which is analysed using ESG criteria. In this study we use the three labels, depending on the context.

Business has traditionally contributed to society, particularly in times and with segments of society that demonstrated strong needs, like in the case of pervasive poverty, immigration, natural disasters and the like. Company actions represented an extension of the spirit of individual 'solidarity', framed in the context of 'philanthropy' (love for mankind). In mid-twentieth century, after the world wars, these ideas developed further and many companies began to see a responsibility towards society, some still out of solidarity but others out of enlightened self-interest that a developed society could be good for business.

Corporate responsibility can take many different forms and includes different stakeholders, from employees and customers all the way to communities and the natural environment. The degree of action involving each stakeholder is often related to strategic corporate activities and the impact of the corporation. This has also evolved into responsibility not only to mitigate or compensate for negative impacts, but also to further positive impacts and create 'social value' through the corporation's activities. This can range from ensuring products and services do no harm to people and environment to ensuring that they contribute to the society's development.

Within these basic ideas, there are very large variations in company behaviour, depending on the context in which they operate, the strength of existing regulations and enforcements, existing civil society, media and financial markets and particularly the relative power and willingness of consumers or client to exercise their consumer rights as provided in national legislation.

CSR in the second decade of the twenty-first century is a management strategy that not only includes the management of impacts on society but also tries to capture the potential benefits from responsible action. This concern for a triple bottom line, that is, for the financial, social and environmental results is an approach to integrating parts of a company's operations and seeing that all these parts are intimately related, at least in the medium and long term. Corporations cannot abstract themselves from their impact on the environment and society.

Regardless of whether it is due to a concern for the good of society or because responsible behaviours are expected to lead to better returns (through risk mitigation, better use of resources, access to markets or more demand for their shares), demand for companies to behave responsibly has increased among many stakeholders, not the least of which – socially responsible investors. These investors can contribute to create a virtuous circle where their actions/investments, and those of other stakeholders, increase the demand for responsible practices, which in turn increases the returns of the firms.

But the realization of better competitiveness through sustainability practices does depend on the actions of stakeholders - the transmission mechanism from responsible practices to better performance. Stakeholders, in turn, require accurate information about the company and the market to move smoothly. In many developed countries, the conditions are conducive, but in most emerging markets, information and subsequent related actions by stakeholders may be lacking, thus creating a gap between risk and reward for the responsible efforts of companies (Vives and Peinado-Vara 2011).

Socially responsible (sustainable) investment

Socially responsible or sustainable investment (SRI) refers to investments that consider ESG factors in the inclusion of securities in the portfolio. Some investors make decisions based on their own due diligence, others use information from ESG rating institutions, some from information derived from indices and others buy funds that have been prepared based on some of these methodologies. The true market for SRI is hard to accurately pinpoint given the diversity of definitions and methodologies used to define sustainable investment. Most statistics of SRI are simply based on the value of funds that allege use of some form of ESG criteria to review the holdings, although for some funds it may mean the use of very light sustainability criteria.

Global initiatives promoting ESG and CSR are beginning to influence some of the factors in the investment supply chain. Asset owners (primarily based in developed markets) and global managers have signed up to voluntary global standards such as the Principles for Responsible Investment (PRI) and the United Nation's Global Compact (GC). Companies in emerging markets have also started to sign up to the Carbon Disclosure Project (CDP) and use the principles of the Global Reporting Initiative (GRI), in their sustainability reporting. In order to demonstrate global levels of SRI, some commentators rely on the value of assets under management by the signatories of the Principles of Responsible Investment sponsored by the United Nation Environment Programme – Financial Initiative, UNEP-FI.

These principles commit signatories, among other things, to consider ESG criteria in the selection and advising on investments. According to the 2011 PRI Annual Report (UNEP 2012), over US$ 30 trillion of assets have been signed up to the Principles. Nevertheless, it must be pointed out that signatories only commit to consider but not necessarily to actually assure that investments have been made based on ESG criteria. In fact, a recent proposal sponsored by UNEP-FI proposes that signatories 'commit' to incorporate the criteria in their decision making, not just 'consider' them (UNEP 2009). For this reason, the amount of assets under management by PRI signatories is not necessarily the most accurate measure of the extent of actual SRI.

In the case of emerging markets, a 2009 global survey of asset managers, conducted by the International Finance Corporation (IFC) and Mercer, found that sustainability investing in emerging markets was over US$300 billion.

According to the study, asset managers preferred to use their own methodology in integrating sustainability factors into investment decisions. However, investment firms rarely have enough staff to conduct the research needed to incorporate ESG decisions into emerging market investment decisions. Many analysts who work in the field lack the knowledge, education and skills to apply sustainable criteria to evaluate companies. For instance, when asked in the 2009 study, asset managers recognized a need to build internal research and engagement resources.

The same study also reinforced the need to take climate change into account when evaluating investments. Investor interest is growing in other 'scorecard' efforts, such as the CDP which requests greenhouse gas emissions data and climate change strategy information from companies on behalf of 551 institutional investors with US$71 trillion of assets under management.

The growth of the CDP indicates increasing investor interest in how well companies manage their carbon impacts and the risks that climate change poses to their businesses. In 2010, CDP initiated a Water Disclosure Project, illustrating increasing investor focus on how companies manage water impacts.

In addition to environmental issues, compared with global emerging market managers, local emerging market managers saw social issues as an important indicator of the quality of management and a source of insight into a company's outlook. Labour standards, for example, in 'dirty industries' were cited by local managers as issues of potential concern. This was especially true for investment managers Mercer interviewed in South Korea and Brazil.

The recent financial crisis revealed the critical inter-relatedness of global economic sustainability and underscored the importance of transparency and accountability in all markets. Most analysts currently devote a disproportionate amount of time to scrutinizing published financial statements, earnings estimates, price/earnings ratios and other traditional sources of company data. Non-financial information is harder to assess but enable analysts to review impact on a company's long-term prospects. As investor interest in emerging markets flourishes, there is a growing awareness of the importance of ESG practices in the investment process. Asset owners, fund managers and publicly traded emerging market companies are all paying more attention to sustainability issues, even in a harsher business climate (Table 1).

Standards are difficult to define in the developed world in terms of what constitutes socially responsible investments and this is even more difficult in developing country markets. Some funds, indices and investors use simple negative screening criteria, excluding companies with significant participation in gambling, weapons, tobacco and alcohol. Some use negative screening as a first pass and further select from the remaining universe subjecting them to a positive screening, that is, due diligence on their sustainable practices. But even within these practices there is a wide variation of accepted practice. Most indices base their selection of eligible companies on

Table 1. Voluntary disclosure.

	PRI signatories	CDP	GRI 2010
Brazil	46	47	134
China	11	17	61
India	3	42	24
South Africa	31	65	53
Turkey	6	12	19

Source: Websites of UN-PRI (www.unpri.org), CDP (www.cdp.org) and GRI (www.gri.org).

ESG criteria however, the details of each criteria and weighting attached to each criterion vary widely. Sustainability indices and sustainability ratings institutions can be faulted for referring to the concept of sustainability as if it were uniform and universal. In fact, every sustainability index and rating system uses different criteria, and thus what constitutes a 'sustainable' company will vary between marketplaces. This complicates comparison between inclusion in different indices. A company's inclusion in a sustainability index cannot be considered a guarantee that the company is 'sustainable' or even a responsible corporate actor.[2]

ESG information about emerging market assets is in general, limited in scope and coverage. The underlying reasons are the difficulty of codifying sustainability information in these markets due to the complexity of issues, unreliability of disclosures and high costs associated with collecting and verifying data. These aspects pose challenges for analysts unfamiliar with this context. Furthermore, sustainability information based on corporate disclosure without independent verification may create noise, cause adverse selection and inflate the demand for larger companies which already have preferential access to finance in emerging markets.

Sustainability indices in developed and emerging markets

Interest in sustainable investing in general, and in emerging markets specifically, has created a potentially positive dynamic for emerging markets sustainability indices. The number of emerging markets sustainability indices has grown significantly in recent years. In mid-2009, according to the World Federation of Exchanges, there were more than 50 sustainability indexes in the world, across their 52 member exchanges (World Federation of Exchanges 2009), with a significant growth in the last 3 years, particularly in specialized, as opposed to global, indexes. In late 2011, there were only eight sustainability indices in developing markets associated with stock exchanges.[3] The oldest ones in developing markets are those of the South Africa Stock Exchange, created in 2004 and the Sustainability Index, ISE, of the BM&FBovespa, the Sao Paulo stock exchange, created in late 2005. The other six indices are more recent, China (Shanghai, 2009), Egypt (2010), Indonesia (2009), India (2008), Turkey (2011) and México (2011). This list does not include proprietary indices developed by asset managers and advisory services like Calvert, Domini and KLD, among others, or indices not associated with a specific stock exchange.

In developed markets most indices are not associated with specific stock exchanges. The better-known ones like the Dow Jones Sustainability Index and the FTSE4Good Index are global indices that have families of sub-indices based on countries or regions, but all these indices are created and managed by private institutions, unrelated to a stock exchange, even though in some cases the stocks included in some sub-indices do trade in a single stock exchange.

Table 2 lists the major sustainability indices in developing countries, together with some of the characteristics of the market in which they operate.

The relevance of sustainability indices in emerging market stock exchanges depends on current country-level business characteristics. In general, however, the strategy for the creation of a sustainability index falls into three broad categories (World Federation of Exchanges 2009):

- Raising ESG awareness and standards among listed companies;
- Information products and services for sustainable investors; and
- Specialized markets for specific SRI niches.

In emerging markets, sustainability indices not only highlight 'sustainable' companies, but can also foster improvements in these companies. Moreover, sustainability indices contribute to stimulate responsible practices in the companies that want to be part of the index. Furthermore, they can contribute to the development of the capital markets, not only by serving as a benchmark, but also by developing interest in responsible investment on the part of asset owners, including institutional investors.

More recently, a 2011 study[4] by the IFC also explores the rapid expansion of sustainability indices in emerging markets and the potential of these indices to support broader sustainability efforts. It looked at 17 emerging market indices (the seven listed above plus South Korea and other specialized or multi-country indices), comparing and contrasting business models, sustainability objectives and construction methodologies, and identifying obstacles in establishing a viable business model. It concluded that beyond serving as a cost-effective way for investors to identify companies with sustainability performance and/or disclosure, sustainability indices could play an important role in supporting and driving broader corporate sustainability efforts. However, as outlined in the report, index providers and other stakeholders must address a number of challenges in order to generate market traction. Although the evidence for impact of inclusion in a sustainability index is limited, there is information on the conditions necessary to enhance corporate sustainability in emerging markets.

At the most basic level, index providers need to clearly communicate to investors the intent of the index, how the index assesses a company's sustainability performance and what it means for their investments. While there is some transparency in the market today, index providers have an opportunity to more clearly communicate about their sustainability framework and the ESG categories, metrics and indicators used.

Communicating how the index analyses sustainability in more detail will help investors and other stakeholders to understand what aspects of sustainability are emphasized and how the index providers relate sustainability analysis to company performance. Such transparency would make it possible for investors to be more sophisticated in how they use the data provided, honing in on the factors that they consider most important. Along with communicating how the index assesses sustainability, the index provider should communicate not only the performance (which many indices communicate today), but also how the index compares to a broad market index regarding sector weights, market capitalization and other factors that affect stock market risk and return.

Given that mainstream investors are increasingly looking for sustainability indices with risk-adjusted returns that are in line with, or outperform, the market, indices should seek to address investor needs in the design and construction of the index.

Sustainability indices and responsible practices

Sustainability indices are expected to contribute to the development of socially responsible investments and in turn to better practices in companies. In emerging markets this is expected to contribute to the attraction of foreign portfolio investments and the development of the financial markets, allowing for the creation of investment vehicles and providing more liquidity to the market. At the individual level of the companies, sustainability indices are expected to contribute to the adoption of sustainability practices in order to be selected and stay in the index, which in turn is expected to produce better access to the financial markets, more liquidity in the stock market and possible better returns for shareholders.

Capital markets can influence responsible practices if companies believe that their practices would be valued by investors, for instance, by increasing demand for the marketable securities (equity and debt), thereby increasing its price and reducing the cost of capital or by increasing their liquidity in the markets, eventually increasing the demand and access to financial markets. This could be called financial influence. Capital markets can also influence company practices through shareholder activism, demanding changes in sustainability practices, in particular on governance, through activist investors' participation in resolutions in annual meetings. This could be called investor advocacy influence.[5]

While there is a generalized perception that a corporate sustainability strategy can result in better financial performance for a company, it has not been proved conclusively on a statistical basis. There have been hundreds of studies analysing the relationship between some measures of CSR and performance in the stock market. There is no consensus, with studies showing a positive relationship, some showing no relationship at all and even some showing negative relationships (Margolis and Walsh 2001). Most of the studies have to use partial measures or CSR as here is no definition that can encompass all activities and be measurable. Proxies have to be used that limit the generalization to other cases. Furthermore, the causality of the relationships is still to be proven: are profitable companies responsible or does responsibility lead to profitability? The answer seems to be 'it depends', on a case-by-case basis.[6] This is not to say that specific firms do not profit form specific responsible practices; however, the general question: 'does responsibility lead to profitability' cannot be unequivocally answered.

Other studies have analysed the relative performance of companies included in sustainability indices with comparable companies included in general indices. López, Garcia, and Rodriguez (2007) performed this analysis for European firms in the Dow Jones Sustainability Index and the Dow Jones Global Index and found that those in the Dow Jones Sustainability Index (DJSI) underperformed those in the DJGI, presumably because of the higher costs of responsible practices, which were not rewarded by the market.

One possible mechanism through which sustainability indices can lead to responsible practices is if the inclusion or exclusion of a company from the index was to alter the financial returns on the company's stock. If this was the case, companies would be keen to improve these practices to be included or avoid being excluded from the index.

Another study using the DJSI for European stocks (Consolandi et al. 2008) found that inclusion and exclusion for the index did have a positive and negative impact, respectively, with the negative impact of exclusion stronger that the positive of inclusion.[7] The authors posit that this is due to the fact that inclusion is a confirmation of something known and exclusion represents 'bad news'. Their explanation is that 'This suggests that the reaction is limited to few subjects, most of which have a positive view of CSR, mainly SRI investors. Financial markets are still confused about the importance of SR and the sign of its impact on financial performance so that the operators not directly involved in managing SRI funds are unlikely to react to this sort of news.'

This analysis is confirmed in a study on inclusions and exclusions by socially responsible Calvert Investment funds, used by SRI investors (Doh et al. 2008). The Doh study states that the 'good companies' that will eventually be added to the index share the 'good' information with their shareholders, while the companies that might be deleted, do not share the 'bad news' of the deterioration of sustainability performance, and it comes more of a surprise to the market. The inclusion or exclusion from an index may not provide additional information to the market if the events are well known by the investment community. To have an effect, the inclusion/exclusion would have to contain new information. The study also finds that the decline from deletion is lower for companies that previously had a strong sustainability reputation.

A more recent study used the North American stocks in the DJSI (Robinson, Kleffner, and Bertels 2011) analysed both the short-term and the intermediary impact on firm returns of being included or removed from the DJSI. 'The results provide evidence that being added to the DJSI results in a sustained increase in a firm's share price, suggesting that the benefits of being included on the DJSI outweigh the costs associated with applying. This article also notes a temporary decrease in the value of firms for the first 10 days after their removal from the

DJSI; however, this effect is eliminated within the next 10 trading days'. This paper also analyses if the increase in value is due to the fact that the company as added to an index (membership reputation) or it is due to the reputational effects of sustainability practices and conclude it is the latter. This paper provides the most comprehensive evidence of the value of membership in a sustainability index.

In terms of investor's impacts on company behaviour, there is a conflict of time horizons. Sustainability is a long-term issue, with the costs mostly in the short run and benefits achieved in the long run. Given the implicit relatively high discount rates of investors and the short-term ownership in most investors[8], it is not surprising that they exert a relatively low impact on company's sustainability practices. This is not to say that all shareholders are indifferent, but does point out that minority of those that are, face a difficult task.

In terms of overall performance, a study (Schroder 2007) analysed the performance on a risk-adjusted basis of 29 SRI indices with conventional benchmarks and concludes that 'SRI stock indices do not exhibit a different level of risk-adjusted return than conventional benchmarks. But many SRI indices have a higher risk relative to the benchmarks. The findings are robust to the use of different benchmark indices and apply to all common types of SRI'.

It would seem from these studies that the inclusion of a company in a sustainability index does lead to better returns, but that SRI indices do not provide better risk adjusted returns as a whole, when compared with conventional benchmarks, possible because SRI indices seem to have a higher level of risk (presumably are less diversified).

The risk adjusted comparison is not a simple task. An important element in SRI development is the use of sustainability indices as benchmarks for performance evaluation of SRI portfolios. A recent study (Le Sourd 2011) has shown that performance evaluation using a sustainability index with either a market cap or sustainability score weighing (the common ways) gives an advantage to the SRI funds. These indices represent a potential underperformance, as it is possible to construct a sustainability index that is closer to the risk-return efficiency frontier. By its simple construction, indices are not optimized in the risk-return sense. By using an efficient sustainability index the performance bar is raised. The paper compares the performance of SRI funds with the EuroStoxx Sustainability Index and with an optimized SRI index and concludes that fewer SRI funds beat optimized SRI indices than the EuroStoxx sustainability index.

Although the study does not address it, it can be inferred that for the purposes of comparing the performance of SRI in general versus the broad market, to assess if 'sustainability pays', one should use an optimized sustainability index, that by definition should be on the efficiency frontier (at least of the market for equities). By definition, the sustainability index will represent a less diversified portfolio than the total market, so that the comparison must be made on a risk-adjusted basis or with an optimized sustainability index. The important lesson from this is that in order to enhance their returns, sustainability indices should be optimized in a risk-return sense.

In the case of developing markets the comparison would be even less flattering, as the sustainability indices will even be less diversified that the market (a smaller set of sustainable companies being available to be included in the index) and the sustainability indices would be less close to the efficiency frontier. This means that for sustainability indices to be used as benchmarks, it would be desirable that they should be as diversified as possible and weighed to as to approach portfolio efficiency. This might contribute to the development of passive SRI investment, as the sustainability index would be a better-performing, risk-adjusted, portfolio.

In the case of emerging markets, there have been very few studies on the performance of indices and companies included in them. There are two in Brazil worth mentioning. There is an often misquoted study that purports to show a positive relation between sustainability and returns for the Brazilian stock market. In fact, it only shows a positive relation between sustainability and market value (not market returns) and attempts to assess causality. It could be that market value (in essence size) determines sustainability. It is based on a very small portion of a business cycle, a boom period, between 2005 and 2007 and only for non-financials (Rossi 2009).

An analysis in this same market was carried out (Bogea, Campos, and Camino Blasco 2008) to assess the impact on company returns of the inclusion in the BM&FBovespa Sustainability Index of Brazil, as a proxy for sustainability (the index is discussed later in this article). The analysis did not find any evidence of abnormal returns, either positive or negative. The market does not seem to value such inclusion. The authors warn that this does not mean that responsible practices do not lead to value creation. On the basis of the evidence presented later in this study, we may hypothesize that the market for SRI in Brazil is not developed and as such, it is indifferent to such information. It could also be the case that the inclusion did not give the market any additional information that it did not have, as the companies are well known in the market. It is a relatively small market after all.

On the issue of the financial benefits of CSR, a 2011 study (Cheng, Ioannou, and Serafeim 2011) finds that CSR strategies lead to better access to finance, because of stakeholder engagement and transparency that reduce perceived risk. The effect is larger for social and environmental issues than for governance ones. The study used data from countries around the world, including some developing ones. Ye and Zhang (2011) studied the impact of responsible practices on the cost of capital for Chinese firms and found a U-shaped relationship: the cost of capital seems to decrease as companies adopt more responsible practices, but eventually increases again if they appear to the financial markets as 'too' responsible. These results have to be taken in the context of underdeveloped financial markets. In a study on the impact of CSR on the risk premium on European corporate bonds, Mentz (2010), found that 'based on an extensive data panel the risk premium for socially responsible firms – according to the classification by SAM Group – was, ceterius paribus, higher than for non-socially responsible firms… although not significant'.

One study that analysed the working of the transmission mechanism between responsible practices and returns is Ioannou and Serafeim (2010). Using as a sample of US firms over 16 years the study found that 'Socially responsible firms receive more favorable recommendations in recent years relative to earlier ones, documenting a changing perception of the value of such strategies by the analysts. Moreover, … find that firms with higher visibility receive more favourable recommendations for their CSR strategies and that analysts with more experience, broader CSR awareness or those with more resources at their disposal, are more likely to perceive the value of CSR strategies more favorably'. This has obvious implications for the relationship between companies and their analysts and underscores the need to enhance the appreciation of analysts of responsible practices, an issue that is also considered critical based on the case study described below.

In conclusion, there are prerequisites for sustainable investments to emerge and take root in an emerging economy: the size and depth of the stock market, the size and competitiveness of the local investment industry, and the stock of responsible companies. These conditions which are the norm in developed markets and are staring to apply in emerging markets.

The case of Brazil

For a more in-depth case study, a review of BM&FBOVESPA's Indice de Sustenabilidade Empresarial (ISE) was tasked with examining the role of ISE on corporate sustainability behaviour. It was anticipated that corporate sustainability leaders would show superior performance and that, consequently, the inclusion of a company in a sustainability index would stimulate demand for their shares, and potentially increase their price. In order to be included in a sustainability index, companies have to demonstrate the quality of their sustainability practices, a process that could improve the company's competitiveness and could lead to an enhanced reputation (in both the financial and the product and services markets).

Background – the index

The BM&FBovespa Corporate Sustainability Index, ISE, was launched in December 2005. The Index was developed and maintained by the Center for Sustainability of the Fundaçao Getulio Vargas. This followed the creation by BM&FBovespa of the Novo Mercado in 2000, a market where shares of companies with high standards of corporate governance trade. At the same time, it also created the Corporate Governance Stock Market Index (ICG) that tracks companies listed in the Novo Mercado at the highest levels of compliance.

Witnessing the interests in issues of social and environmental responsibility and instigated by the lack of a SRI benchmark, a group was created and later supported by the IFC to develop a sustainability index, to expand and include the issues of corporate governance. At the time of its creation, the only sustainability index in developing countries was in Johannesburg, South Africa, created in 2004.

In order to construct the index, the most liquid shares (about 200, compared to an early goal of 150) that traded in at least 50% of sessions, are invited to complete an extensive sustainability questionnaires which covers the following dimensions:

- General (transparency, corruption, management policies)
- Nature of the operations/product;
- Corporate Governance;
- Social (labour, human rights);
- Economic/financial (management, policies, legal compliance, performance);
- Environment (policies, programmes, performance).

For the 2011 index, a new dimension has been added, climate change (policy, management, performance, reporting). The questionnaire develops 45 indicators for the first five dimensions and between 10 and 17 for the environmental dimension (this indicator varies according to the type of company). It has around 150 questions. The new climate change dimension adds six indicators and 22 more questions.

The questionnaire has been developed by not only looking at best practices, but also in consultation with stakeholders, including the companies themselves. The questionnaire has been designed to be usable for all types of firms in all sectors (with the exception of the environmental dimension which is tailored by industry).

Of the companies that submit the questionnaire, a number of companies are selected as candidates, based on a cluster analysis of the responses to determine the best performers in the group, and the quality of the supporting documents that are submitted at the request of the evaluators (originally, no supporting evidence was requested, but after realizing that companies might not have been totally honest in their responses, the process became more strict in 2006). These tentative selections are submitted to the Advisory Board that makes the final decision.[9] The Board consists of representatives of nine institutions representing capital markets, pension funds, the Government, financial analysts, Ethos[10], UNEP, the PRI and the IFC). As can be seen by this process, ISE uses positive screening and does not eliminate, a priori, any sector or company.

The final selection has to consider some diversification goals regarding size and sector, for example, no company can be more than 25% of the index and no sector can be more than 15%. The percentages of company participation in the index are determined in proportion to the participation in the broad market. At the beginning, in 2005, 121 were invited, 63 responded and 28 were selected. For the 2011 version, 183 were invited only 53 responded and 34 were selected. One of the problems that the index has faced has been to maintain a good number of members. The ISE index was originally designed to have up to 40 companies, but this goal has not yet been reached. The number of respondents has been declining, as some companies interviewed perceive that the benefits of membership may not be worth the effort.

These constraints of liquidity, sectoral representation and diversification are important considerations of the index if it is to be used as a benchmark for the construction of broad SRI portfolios. Specialized indices can be constructed that concentrate on one or several sectors or on some special issue. But the sustainability index for a stock exchange should be a generalized index, and it is expected to reasonably represent the market. Nevertheless, these self-imposed constraints of selection rigour may limit that ability.

Sustainability in Brazil

It is worthwhile to note that the ISE was developed and is operating in one of the most conducive emerging markets for sustainability. For example:

- Brazil has the most financial institutions as members of the Equator Principles of any developing country; with eight out of a total of 68 members, as of September 2010.
- The evolution of company membership in Instituto Ethos, the leading institution promoting responsible practices in Brazil (and Latin America) has increased continually, from 200 companies in the year 2000 to almost 1,400 in 2010 (860 in 2005, when ISE was created).
- In a 2010 survey of the 100 most sustainable companies in the world, three were from Brazil. In 2005, when the survey started, there were none from Brazil.
- In terms of signatories of the Global Compact, in 2006 there were 92 from Brazil out of nearly 3,200 (about 3%) and in 2010 the number had jumped to 354 out of 7,700 (about 5%).
- In terms of sustainability reports reported to the GRI, Brazil is also the developing country with the most reports, reaching 134 in 2010, up from 12 in 2005.
- The number of institutions signatories of the Principles of Responsible Investment has reached a level of 44 from Brazil out of a total of 821 worldwide.
- Brazil has seven companies in the Dow Jones Sustainability Index in 2010, up from three in 2005, one of which was ‘best in class’.

Stock market

Brazil has two stock markets, one in Rio do Janeiro, the Bolsa do Valores de Rio do Janeiro and the BM&F Bovespa in Sao Paulo, which is by far the largest, where all types of financial products are traded, including derivatives (it is tied with the Chicago Board Options Exchange as the largest in terms of number of options contracts traded). The sustainability index was developed for the Sao Paulo exchange.

In 2011 there were 373 stocks listed in the BM&F Bovespa with a capitalization of US$1,500 billion, with annual trading valued at US$626 billion. There is a significant concentration in terms of large stocks. The two largest stocks constitute 22% of the capitalization (Petrobras and Vale, both with about 11% each), while the top 10 constitute 55% (by comparison, in the NYSE this figure is 16% and in Spain 38%). This concentration can have a large impact on the composition of the index and rebalancing if some of the large stocks are not included. During 2009 and 2010, the two largest companies were not included, leaving out the top 22% of the market. When Petrobras went out the 2008–2009 index, its capitalization dropped from R$1,023 million to R$374 million (at the time R$1.0 equivalent to US$0.6), a significant drop, that would have caused a very significant rebalancing in any portfolios tracking the index. A significant increase would happen when Vale was included in the index in 2010–2011.

In terms of performance, the value of ISE at the end of August 2010 was US$ 426.56 million, 33.36% of BM&FBovespa's market capitalization of US$ 1,278.58 million. Even though the ISE index differs significantly from the (all market) BM&FBovespa Index, it tracks it relatively well. Nevertheless, since its inception through August 2010, ISE has grown a bit less, 91.06% versus BM&FBovespa's 104.11%, a cumulative underperformance over almost 6 years of 15 percentage points, a little over 2% per year. This comparison of performance is not risk adjusted, under the implicit assumption that both 'portfolios', ISE and BM&FBovespa would be equally risky, which may not be true.

The study

In order to evaluate the impact of the creation and operation of the ISE on corporate sustainability practices and SRI market development, the IFC, which had originally supported the creation of the index, commissioned a review study, carried out in mid-2010.[11] The study included 194 online questionnaires with 51 responses (26% response rate), comparison of the evolution of 40 KPIs (social, environmental and governance) based on publicly available information for 35 companies and 15 interviews with companies and market participant to supplement and corroborate some of the findings. To ascertain the impact of the index and isolate as best as possible external events, companies were divided into four groups: (1) companies that were always in the index; (2) companies that were in, but went out and had not returned; (3) companies that were in, went out and went back in; and (4) companies that were never in the index. By natural restrictions groups 2 and 3 were very small. In terms of questionnaires, group 1 included 13 responses, and for group 4, 29 responses. The following sections present the major results.

Impact on responsible practices

From the desk research on publicly available information, it was concluded that the ISE had a considerable impact on the corporate sustainability practices of companies, member companies as well as those that were never part of the Index. The ISE served as a reference guide for initiation of sustainability practices as well as for their continuous improvement. Almost all of the respondents of group 1 said they improved their sustainability practices as a result of their participation in the ISE: 86% of the companies perceived an improvement in their environmental and governance performance, while 57% of the companies noted an improvement in their social performance. Several companies in groups 2, 3 and 4 noted the importance of simply participating in the ISE admission process, as it provided companies with a better understanding of sustainability issues and materiality to the company and their limitations regarding corporate sustainability practices.

The main conclusions that can be reached from analysis of the online questionnaires are

- Most companies believe that the index had a significant impact on the development of sustainability in Brazil;
- Most companies believe that the relevance of the index will increase over the next 5 years;
- The expectations of benefits from being part of the index are very high;

- As a result of being in the index, most companies report increases in sustainability practices (better governance, environmental and social performance);
- Many companies believe that being part of the index does produce benefits;
- These beliefs may be more a matter of perception based on positive publicity than actual results, particularly as they refer to increases in competitiveness, in the stock price and access to capital (and the liquidity of the shares as gleaned from the interviews with financial market operators);
- Most companies appreciate the management of the process, particularly the provided feedback, even those companies that are not admitted to the index. Nevertheless, there are dissatisfactions with the questionnaire, transparency of the process, communications and relations with applicants. Also, better dissemination of the index and of the benefits of sustainability to the public and investors is desired;
- The consequences for being ejected from the index relate mostly to negative publicity, but do not seem to translate into other losses[12];
- If stakeholders (particularly financial markets and customers) do not react to the sustainability practices of companies, frustration may set in and the index may suffer as a desirable venue for companies;
- If in the future the discrepancy between results and expectations is realized, there is a high potential for disappointment as to the benefits of the index. This means that the index and its management must be enhanced (see the sets of recommendations below).

To supplement and corroborate the information from the questionnaires, 15 companies and institutions were interviewed in the months of August and September of 2010. Given its small size, the sample is not meant to be representative, but it was felt to be illustrative of the opinions of persons involved in the management of sustainability within the interviewed companies. The main findings of the interviews are as follows:

- The creation of the index did raise the awareness of sustainability issues in Brazil in the years following its launch;
- The ISE questionnaire is used as a self-examination tool of practices and as a road map for improvements;
- The effort to be part of the index enables internal sustainability champions to obtain support from other parts of the company;
- Being in the index allows a company to differentiate from its competitors, although this does not necessarily give the company a competitive advantage;
- The impact of the index was heavily dependent on the context and on the reaction of stakeholders. It is very different for highly visible companies than for companies that operate in niche markets;
- Companies put an emphasis on the issues that are more visible to their stakeholders: environmental and corporate governance. There is a relative neglect of social issues, apart from community involvement and personnel policies;
- None of the companies reported any impact on liquidity of the shares, and no impact was reported on stock prices following companies' announcement of their ISE's membership.[13]

From the interviews, the impression obtained was that belonging to ISE was something that simply had to be done, it allowed the company to further its sustainability practices, but did not seem to add value to the company. The problem may be that the market does not yet appreciate the monetary value of sustainable practices.

Impact on financial market development

Brazilian fund managers, institutional investors and middle-class savers have been early converts to the business case for considering environment and social considerations as well as corporate governance in their investment strategies. Brazil's first 'socially responsible' retail mutual fund was launched in 2001, the same year as the Novo Mercado, as a corporate governance index by Banco Real ABN AMBRO (now Santander). Later, in 2004, Banco Itau created the Social Excellence Fund (Fundo Itau Excelencia Social), but it was not until the creation of ISE in December of 2005, that there was a significant increase in the number of socially responsible funds, as ISE greatly enhanced the interest of asset managers in sustainable investment. After the inception of the index, eight new funds were created.

The assets in the sustainability funds are relatively concentrated in the largest two funds, which together manage almost US$410 million, over 70% of the assets. These two funds were created before the inception of ISE. The remaining eight funds, created after ISE, manage only US$171 million. These failed to grow, partially because of the lack of knowledge on the sell side and the lack of demand by investors, but also partially because the index did not become an investable index and has yet to become a benchmark for measuring sustainable portfolio performance. For many years, the index was missing the largest Brazilian companies (extractive industries) and has had a significant member company turnover, which detracts from its attractiveness to SRI investors.

It must be noted that funds are included in these SRI statistics if the funds consider ESG factors, not necessarily that investee companies can be considered sustainable according to the criteria used in ISE or other world indexes. The definition and criteria of SRI funds are diverse and probably overestimate the value of the market.

There still is no pension fund or asset manager that tries to replicate ISE, nor are there any index funds in the market based on ISE, in spite of the fact that three funds use the name ISE. The funds use ISE as a reference, but not as a benchmark either to replicate parts or all in their portfolios or to assess their performance. For instance, one institutional investor recently announced that it has started to include social and environmental consideration in stock selection in the asset management programs (using a questionnaire of 25 questions, not ISE's criteria). Nevertheless, they state that ISE Index is the factor that made their funds possible. As an indicator of the use of ISE, they state that if a company they have in their portfolio is not in the ISE, the company is not rejected, only the relative allocation is reviewed.

This relative underdevelopment is in spite of the fact that in Brazil 18 investment managers and 17 asset owners (pension funds) are signatories of the UNEP Principles on Responsible Investment, PRI[14], which is one of the largest numbers in emerging markets. Asset managers reported some interest by foreign investors in SRI in Brazil, but none reported managing any foreign SRI assets.

The main impact of ISE on the financial markets seems to have been the awareness raising in its early days, and the continued interest of a handful of pension funds and asset managers, but this awareness has not translated into a growing interest from mainstream analysts and retail investors. There does not seem to be any incentives for the market operators to include ESG criteria in their investments. There does not seem to be any demand from the market and the interest is mostly on the supply side, and even this is limited by lack of awareness and training on these issues by investors and analysts resulting in SRI in Brazil occupying a small niche market.

From the regulatory side, there has been some progress. For instance, Resolution 3792 of 24 September 2009 of the *Conselho Monetário Nacional*[15] requires pension fund administrators to state if they '…are observing or not principles of social and environmental responsibility'.

However, they are not required to report on their investment policies and their implementation, only to report if they take them into consideration or not.

Limitations of the study

This case study is limited to the specificities of Brazilian context and thus its results cannot be wholesale extrapolated to other cases. Going forward, it would be desirable to compare this study with one that examines the other long-standing index, the Johannesburg Stock Exchange, to get richer conclusions. Nevertheless, even with these limitations, some lessons are learned that can help to enhance the effectiveness of sustainability indices in emerging markets

Enhancing sustainability index impact

The effectiveness of sustainability indices on sustainable practices and of financial market development through socially responsible investments depends on the whole ecosystem for sustainability existing in the country. Sustainability indices have to be seen as one of the elements in the market for responsibility. In the absence of a supporting environment, these indices will have a short-term impact. Upon creation they will excite the interest of the largest firms to belong to the index as a reputational objective and will promote the creation of SRI funds, but these impacts can be short lived unless supported by a parallel development of the ecosystem for sustainability. In the following sections we outline the recommendations to enhance the effectiveness of sustainability indices in emerging markets.

Recommendations for impact on sustainability practices of corporations

The impact of the index on company practices is determined by internal and external factors. Internal factors are the actions of managers and employees as a result of wanting to be, or being, a member of the index. They are the ones that will initiate and sustain change in responsible practices. This change can be induced by the requirements of being in the index. In this sense, the index methodology can have a determinant impact, as we discuss below. An entrance sustainability questionnaire can be used as a guide to assess for materiality and take action and the feedback they get from analysts as a tool to promote improvement.

Although these internal factors are a necessary condition, they are not sufficient. If the external market does not react to company efforts, that is, if companies do not see reinforcing feedback from the markets, the less committed companies will lose interest in the index. For the relatively larger and committed firms, this feedback may be of lesser importance. The financial products and services markets need to get a better appreciation for companies that are members of an index and the companies, led by the index promoters, need to have an information campaign on the benefits of being in the index, even including a sustainability label that members can use on their products and advertisements.

Recommendations for the improvement of impact on financial markets

In order for the indices to attract more interest from the financial markets, they have to become a benchmark for SRI, both to select companies to invest and to measure performance. Until the indices become a benchmark that can be tracked and products based on it can be issued, impact on the financial markets will be limited.

For this, indices need to have a relatively large number of stocks, so that a change from year to year does not imply a significant rebalance of the portfolios tracking the index.[16] This is even more important in markets where there is a significant concentration of value in a small number of stocks as it tends to happen in emerging markets.

In order to increase the potential number of members, the index may have to select companies based on specific sustainability practices that are material for their sectors and markets, not to expect that all companies can have responsibility practices in all areas. Even though it may be counterintuitive, the index may have to start with basic requirements in order to attract attention from the markets and progressively strengthen them. This would allow the index to be more diversified which would enhance its usefulness as a benchmark and be an incentive for companies to improve their practices.

The selection methodology must be adapted to avoid relatively large turnover in member companies. It is unlikely that sustainability practices deteriorate so much in any given year that they have to be 'uninvited'. The decision to exclude a company from an index should be based on medium term trends and the occurrence of significant but avoidable events, that can be clearly articulated and related to the market. This would help stabilize the index.

There is a strong need to educate financial analysts and institutional investors on sustainability issues. They are a key part of the mechanism that converts sustainability practices into competitive advantage in the financial markets. If they ignore sustainability issues, these issues will become irrelevant to those markets. This is particularly important in the early stages of a sustainability index, where most market participants still concentrate on financial and governance risks and returns and less on environmental and social risks.

The active involvement of institutional investors, particularly pension funds is very important. They are becoming important players in the financial markets. Their active involvement, together with financial analysts and asset managers in general can start a virtuous circle. They can be stimulated through regulations requiring the disclosure of their policies on sustainable investment, as it is done in developed markets like the United Kingdom and other European countries. These reporting requirements should be given prominence in the funds' reports.

Of the emerging markets stock exchanges listed in Table 2, not one require ESG criteria for listed companies. It is suggested that the stock exchange issues guidelines for voluntary adoption of ESG practices and reporting.[17] Ideally, stock exchanges should mandate the reporting of ESG practices as a condition for listing, but the impact of such a requirement may be too challenging for many of the already listed companies and an the intermediate step of issuing voluntary

Table 2. Emerging stock markets with sustainability indices.

	Index created	Companies in the index	Market Cap Billions US$	# Stocks listed	Transactions Billions US$/year
Brazil BM&FBovespa	2005	38	1,545	381	867
China, Shanghai S.E.	2009	100	4,487	894	2,716
Egypt, Egyptian Exchange	2010	30	84	228	38
India, National S.E.	2008	50	1,597	1,552	798
Indonesia, Indonesia S.E.	2009	25	360	420	119
Mexico, Bolsa Mex. de Valores	2011	23	454	427	119
South Africa, Johannesburg S.E.	2004	74	925	397	340
Turkey	2011	NA	307	339	410
NYSE[a]	No index	No index	13,400	2,238	17,796

Source: World Federation of Exchanges database, stock exchanges websites.
[a]The NYSE as such does not have a sustainability index. Being the largest market, it is included in the table only for comparison purposes.

guidelines may be more palatable. The stock exchanges must move to mainstream ESG practices, not just have an index with a few companies. For a stock exchange, it does not speak well to claim that of the hundreds of liquid companies, like the case of BF&MBovespa, only a few dozen can be ascertained as having sustainability practices while, most likely, the others do not, or that it is difficult to find 23 companies among the 123 listed to launch the sustainability index of the Mexican stock exchange in 2011.

If the financial markets show more interest in sustainability practices, companies will likely also show more interest.

Recommendations for index methodologies

Sustainability questionnaires, their evaluation according to some criteria and the feedback are the key elements of index methodology. Questionnaires must strike a balance between comprehensiveness and simplicity. Comprehensive questionnaires can be used by the companies as a self-assessment tool of their practices and to determine potential areas of improvement. But the companies that tend to participate are normally subject to more demands for questionnaires and they tend to fall into fatigue, leading to a drop of interest in companies to participate, or limit the potential membership to those that have significant managerial resources to respond.

In terms of the criteria, as mentioned, there is also a need for a balance between rigour and practicality. Selection must be rigorous, not everybody can be admitted, as this decreases confidence in the index, but if it is too rigorous, there will be too few companies and that will reduce the effectiveness of the index. Criteria should be relevant and tailored to the specific companies, according to the issues that are material for them. Not all companies have to have responsible practices in all areas. Companies could be admitted in the index, even if there are some deficiencies in non-material areas. The goal would be to keep the rigor of the questionnaires but introduce flexibility in their assessment. This would also allow for a larger number of companies. Obviously investors would have to be educated on what it means to belong to the index.

Review of companies for admittance must also include verification of the information supplied. Most indices rely on the information provided by the companies in the questionnaire. While this information may be reliable, there is the inevitable bias in the responses. Some external verification must be carried out, either by asking for corroborating documentation or by independent verification. These verifications should also keep a practical approach to avoid overwhelming the companies. It might be better to have rigorous checks on basic information than to have no checks on extensive requirements.

Even though it may be a costly process, companies should be provided with feedback on their relative performance in the process, areas where they have improved and areas where they should improve. In the case of the BM&FBovespa index, this proved to be one of the features most appreciated by companies. It can act as motivation for completing the information required.

There are some issues that are structural and cannot be avoided by methodology design. In the case of Brazil, the heavy concentration in the market, particularly the largest two companies, both in the extractive industries, poses a diversification constraint. In other markets it could be the concentration of companies in a few sectors (for instance extractive, utilities, financial). The design of the criteria and the selection process must take these realities into account. There may be a need for a balance between rigour and effectiveness.

Closing remarks

While building on the experiences of developed markets, emerging market indices remain at an earlier stage of market development and face challenges, such as lack of transparency in their construction, that impede their ability to align with sustainable investor needs and the potential of indices to demonstrate the materiality of corporate sustainability. However, despite these limitations indices can play an important role in encouraging responsible corporate practices.

Emerging markets stock exchanges should launch sustainability indices, but with the proper design to enhance impact on sustainability practices and financial market development, recognizing the market is still in early stages of development. The recent financial crisis also suggests that investor demand may be decreasing. In order to encourage the continued development and growth of sustainability indices so that they might continue to impact corporate sustainability strategies, investors and index providers should use their leverage to promote reforms.

Among the improvements necessary is the need for greater transparency of how does an index provider analyse a company's sustainability performance. In all markets it is important to encourage new investors to engage companies on the issue of sustainability reporting.

The financial products and services markets needs to get a better appreciation of what it means to be a member of the index, and companies need to capitalize on the benefits of being in the index, even including a sustainability label that members can use on their products and advertisements (currently companies often can and do mention that they are in a sustainability index, but are not taking full advantage with the general public).

The Brazil case study highlighted the lessons learned on index design and supporting reform needed for sustainability indices to have an impact on member company's sustainability practices, on financial market development and on socially responsible investment.

Additional research and support are needed in emerging markets to understand how a company's sustainability efforts can translate into financial performance and investment outcomes, which in turn could drive the effectiveness of sustainability indices.

Notes

1. For the purposes of this study, we exclude South Korea, which is normally classified as an emerging market, but given its relatively developed financial markets, it is not as relevant for less developed market seeking to introduce and deepen sustainability indices.
2. There have been many cases of companies shown to be irresponsible that have been included in sustainability indices, the most visible recent case being BP, excluded after the Gulf of Mexico oil spill.
3. These numbers do not include indices developed by private investment management and advisory firms. In this study, we do not include as part of developing markets some countries classified as emerging markets like South Korea.
4. Assessing and Unlocking the Potential of Emerging Market Sustainability Indices (International Finance Corporation (IFC), 2011a. See also Vives 2010 for a critical analysis of the informational content of sustainability indices.
5. These two categories are developed in Waygood (2011). The broader description of the 'transmission mechanism' is presented in Chapter 10 of Vives and Peinado-Vara (2011).
6. For a complete but dated meta-analysis of studies see Margolis and Walsh (2001). For more recent evidence, particularly on the issue of causality see Schreck (2011).
7. Similar results were found by Cheung (2011) for the date of inclusion/exclusion, but not for the date of the announcement. This paper also found that liquidity also bounces on that date.
8. While this may be influenced by day traders, the average holding period for shares traded on the NYSE is about four months (the Economist, 6 August 2011, p. 62).
9. For the index methodology see www.bmfMB&FBovespa.com.br/Pdf/Indexes/ISE.pdf.
10. Ethos is the leading institution promoting corporatge responsibility in Brazil.
11. The full study has not been published (Steward RedQueen 2010), but a summary is available in IFC (2010).
12. The very public and acrimonious spat, reported extensively in the Brazilian press, when Petrobras was not admitted into the index in 2009, after several years of being part, illustrates that the major consequences related to negative publicity. The International Finance Corporation has carried the most comprehensive studies on sustainability indices in emerging markets. See IFC 2011a and 2011b.

13. This is consistent with a statistical study undertaken to assess the impact of the admission announcement to the Index on stock prices, where it was found that no statistically significant impact could be shown. See Bogea, Campos and Camino Blasco (2008).
14. PREVI, the pension fund of the Banco do Brasil is one of the signatories and has as many assets under management as the other 17 and, between them, have 60% of the pension assets in the country. PREVI is a national leader in the pension fund industry on ESG issues, and it carries its own ESG analysis, relying on ISE only as a reference.
15. See www3.bcb.gov.br/normativo/detalharNormativo.do?N=109082281&method=detalharNormativo.
16. In its first try, the sustainability index of the Mexican Stock Exchange could only find eleven companies that would qualify as members of the index. Efforts were made to expand this and in the end it was launched in late 2011 with 23 companies. This is a good beginning but it may still be a low number to have an impact on financial markets. See Bolsa Mexicana de Valores 2011. For an analysis of the possibility of socially responsible investment in other Latin American countries, see Vives 2012.
17. In the recent conference 'Sustainable Stock Exchanges 2010 Global Dialogue', held in Xiamen, China, held 8 September 2010, some investors presented a discussion report making this recommendation (Responsible Research 2010). See also EIRIS 2010 and Ionnou and Serafeim 2011.

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