

ESG in focus: The Australian evidence

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ABSTRACT: In this study, I examine longitudinally how Australian Securities Exchange (ASX) 300 firms are responding to environmental, social, and governance (ESG) issues by leveraging a database from an independent ratings agency. ASX300 firms are improving ESG performance overall, as predicted. Further, over the 2002-2009 timeframe, performance on the governance dimension improved at a greater rate than environmental or social performance. Lastly, I predicted that high impact industries would demonstrate overall improved ESG performance relative to medium or low impact industries, yet the hypothesis was rejected. Results are discussed along with implications and future research directions.

Keywords: Australia, environmental, ESG, governance, social, institutional theory, stakeholders

The global financial crisis (GFC) has shaken markets worldwide, triggering an economic crisis requiring extraordinary levels of government intervention and causing widespread social consequences (Nicholson, Kiel & Kiel-Chisholm 2011). The GFC has raised concern over firms' accountability, their ethical behaviour, their risk oversight, and their ability to manage strategically a broad array of stakeholders. However, the GFC also heightened the fact that the world is rapidly changing. Economies are inescapably interconnected. Globalization and a shifting political landscape are combining with significant changes in populations, urbanization, resource utilization, climate change, and employee and consumer attitudes. With the rapid rise and influence of NGOs on corporate accountability, companies now operate in a more transparent environment than ever. Importantly, the GFC has focused attention on how firms address their responsibilities to shareholders and stakeholders alike, which is leading to growth in the incorporation of environmental, social, and governance (ESG) considerations by institutional and individual investors (Boerner 2010; Mănescu 2011). In this paper, I seek to explore ESG performance by using a longitudinal database of Australian firms, covering the years 2002-2009.

In researching the topic, the evidence suggests that existing studies on ESG issues are limited. First, virtually all research attempts to prove relationships between ESG and financial performance. While there are many motivations to pursue this line of inquiry, confounding factors likely render causality as indeterminate (Yegnasubramanian 2008). Second, several studies assessing ESG rely on the much used KLD database. Unfortunately, the governance dimension of the KLD database appears to lack a robust assessment of dimensions considered critical in the literature. Third, many studies pick and choose amongst the various ESG dimensions, with the environmental dimension receiving particular attention.

This undermines the investment communities' shaping of the issue (cf. Delmas & Blass 2010; Levine & Chatterji 2006), whereby all ESG dimensions are systematically and simultaneously used to assess risk profiles of firms. Fourth, the majority of ESG research uses US, and, to a lesser extent, UK data (Renneboog, Horst & Zhang 2008). This limits our understanding of ESG profiles to a very select few countries.

While having improved our understanding of ESG, the contributions of previous research are limited. In addressing these limitations, I aim to make three contributions to the literature. First, many existing studies focus or isolate on a single dimension of ESG. There is growing consensus that the three dimensions are not mutually exclusive and that good governance and sustainability cannot be separated (Brandão 2009; King 2011). Therefore, this gap is addressed by examining all three dimensions together. Second, ESG research is heavily weighted towards exploring relationships with financial performance. However, little research systemically examines changes over time within and between all ESG dimension in a sample of firms or across industries. Through the use of various statistical procedures, this study explores differences and time-based changes across all ESG dimensions in 11 industries, and by high, medium, and low impact industries. Lastly, in this study, Australian firms are studied, thereby expanding the international perspective.

THEORETICAL FRAMEWORK AND HYPOTHESES

I rely on institutional theory to explore the research topic. Institutional theory focuses on the influence of the societal or cultural environment on organizations (DiMaggio & Powell 1983). As suggested by Scott and Meyer (1994), assumptions, beliefs, and expectations exist in society which determine the implementation of organizational practices within firms. They argue that organizational practices are not adopted on the basis of efficiency or an optimal input-output balance, but because they correspond to institutionalized expectations. The focus is on the legitimacy which is awarded to organizations by the institutional environment (Scott & Meyer 1994).

In the case of Australia, institutions are shaping the organizational field such that business firms would be expected to respond to ESG issues. Perhaps one of most high profile formal mechanisms was

the introduction of the *ASX Principles of Good Corporate Governance and Best Practice Recommendations* (“ASX Principles”) in 2003. Like many western countries, in light of the collapse of Enron and the dot com crash, and the scandals of HIH Insurance and OneTel, regulators in Australia sought to take decisive action to “clean up” corporate governance of its listed companies. The ASX Principles contain 27 recommendations based on eight key principles of good corporate governance. Although compliance is voluntary, the ASX Principles are designed to improve the way firms are governed, including accountability and transparency. However, corporate governance is not the only area of institutional focus in Australia.

A focus beyond corporate governance can be found, for example, in the Australian *Corporations Act of 2001*. Section 299 (1)(f) requires companies who are “subject to any particular and significant environmental regulation” to report on performance in relation to such regulation. However, more recent institutional focus expands beyond the natural environment. For example, in 2007, the Commonwealth released a major report on corporate social responsibility (Parliamentary Joint Committee on Corporations and Financial Services 2006). In the report, the Committee addressed business response to corporate social responsibility and sustainability. Of particular interest is the emphasis on firms’ treatment of all stakeholders, where the expectation is that responsibilities beyond shareholders (i.e. environmental and social responsibilities) are fulfilled, so that all stakeholders are treated fairly and equitably.

Another driver bringing attention to ESG issues is the growth of shareholder concerns for sustainability. In Australia, the country has been called a “share-owning democracy” (Hanson & Tranter 2006: 24). Specifically, the percentage of the population in Australia who hold shares is the highest in the world (Hanson & Tranter 2006). However, what is more revealing is the degree to which Australian shareholders value ESG issues, with a high percentage suggesting they would sell their shares where firms neglect social (e.g. use of child labour) and environmental (e.g. neglecting environmental degradation) responsibilities (Hanson & Tranter 2006). Further, investment in socially responsible mutual funds is outgrowing the broader market of managed portfolios in Australia, 10 percent to 7 percent, respectively (Pérez-Gladish, Benson & Faff 2012).

Given that Australia has one of the highest shareholding publics in the world—a shareholding public who expect response to CSR and sustainability—and evidence of regulative, normative, and cognitive institutions that exhibit expectations related to ESG issues, there are likely observed ESG performance improvements in Australian firms over time. Therefore:

Hypothesis 1: Over time, firms in Australia will demonstrate improvement in ESG performance.

I have pointed out institutional attention to ESG issues in Australia. However, one might expect that *equal* attention might not be possible, or at least that one dimension of ESG might receive more attention than the other dimensions. While my goal is not to ascertain whether or not ESG issues are mutually exclusive with respect to institutional focus, there does appear to be some evidence to suggest that the *governance* dimension might be receiving a higher level of attention in Australia.

As noted, the ASX Principles are directly aimed at corporate governance. And while there are recommendations that reference environmental or social aspects, they appear to be treated with minimal consideration, and even vagueness. For example, Recommendation 3.1 (Principle 3) recognizes the legal and other obligations to all legitimate stakeholders. While this could be interpreted to mean proactive response to environmental and social issues, relative to the explicit considerations for governance issues, the meaning remains somewhat vague or at least less precise. In the case of the Parliamentary Joint Committee on Corporations and Financial Services report released in Australia in 2006, of those recommendations targeted specifically at business, many are corporate governance related. Similarly, the *Corporations Act of 2001* is Australia's principle legislation regulating companies. A search on the terms “environmental” and “social” in the document returned only one reference (Section 299 (1)(f), as noted above), while a search on the terms “directors” and “board” returned nearly 400 references.

Much regulatory reform in the business context in Australia focuses on corporate governance and shareholder rights and protection. While some reforms and institutional recommendations incorporate material issues related to the environmental and social dimensions of ESG (e.g. ASX Principles, *Corporations Act of 2001*), they remain vague or underdeveloped relative to their governance counterpart. Further, in light of the corporate scandals of the early 21st century and the recent GFC, corporate

governance failures tend to be more closely tied to these events than environmental or social failures of business in Australia, and therefore relatively speaking, has seen more institutional pressure to improve.

Therefore:

Hypothesis 2: Over time, any improvement in Australian firms' ESG performance will be reflected more greatly in the governance dimension than in environmental or social dimensions.

Lastly, one might expect that some industry sectors would receive greater focus with respect to ESG issues than others. In the case of Australia, there is evidence to suggest that industries not only view ESG issues differently, but face different pressures to respond to them. In their work, Black et al. (2011) find that the supply chain is the priority issue for the telecommunications industry, while managing regulatory impacts and reducing environmental impacts are priority issues for mining and transport industries, respectively. Institutionally, as noted, governance is a relatively strong focus in Australia and all ASX listed firms are required to report on their governance practices under a comply or explain basis; an expectation therefore being that similar pressure to conform across all industries is present in Australia. However, there is evidence to suggest that institutional pressure to respond to ESG issues is higher in some industries in Australia than others. For example, the recent carbon tax introduced by the lower house of Parliament will establish the world's most broadly-based carbon-pricing scheme (and the most expensive). Generally, the carbon-pricing scheme will impact those industries that are large carbon polluters (e.g. energy, transportation, chemicals, mining, oil and gas) more than others (Maher 2012). In another example, a recent survey of Australian firms found that those in manufacturing industries (a high impact industry) tended to face more pressure to address various ESG issues than financial or professional services industries (considered medium and low impact industries) (Legendre 2008). Given the evidence, some industries will encounter more institutional pressure to respond to ESG risks than others. Therefore:

Hypothesis 3: High impact industries in Australia will reflect stronger ESG performance improvements over time relative to medium or low impact industries.

METHODS

Sample and data

The sample for this study consists of Australian Securities Exchange (ASX) 300 firms from 2002-2009. This timeframe is important for three reasons: 1) the fallout of the dotcom crash in 2000-2001 facilitated substantial institutional focus on corporate behaviour and transparency; 2) the 2007-2008 GFC further increased government and other concerned parties' attention to corporate behaviour and oversight; and 3) both the aftermath of the dotcom crash and the GFC increased attention to firms' responsibilities to strategically manage a broad array of stakeholders, including impacts on environmental and social systems. Hence, the 2002-2009 timeframe, as noted, saw considerable institutional focus on ESG issues.

To assess firms, the Sustainable Investment Research Institute (SIRIS) database was used. SIRIS (www.siris.com.au) is an independent research company that profiles indicators relating to environmental, social, and governance dimensions, and is part of a group of independent research institutions—including KLD in the US—that focus on ESG ratings. Further, SIRIS is listed as one of the top ESG ratings agencies in Australia (Ameer & Othman 2012). To construct assessment of each dimension, data is gathered by analysts from multiple sources, including company documentation such as annual reports, media and other third party reports, financial accounts, secondary databases, interviews with stakeholders, and correspondence with company representatives through interviews and surveys.

SIRIS offers “Sustainability Profiles” on individual companies, which delivers an assessment of ESG performance. Several indicators are used that measure each E, S, or G dimension (Appendix). In all cases, SIRIS provides scores for each indicator that make up E, S, or G dimensions, which are rated on a scale from zero (worst) to 100 (best). This type of rating scale is identical to other published research on ESG that uses third-party, independent research institutions, such as Sustainalytics (e.g. Surroca, Tribó & Waddock 2010). In order to derive a performance score, I took the mean for each year across all indicators for each E, S, and G dimension. While there are multiple options to assess ESG performance, use of an independent third party is appropriate—and even preferred (Graafland, Eijffinger & Smid 2004). Further, a risk of sample selection bias in this sample is minimal as SIRIS covers all firms listed in the ASX300.

The effect of common method bias is also likely minimal because I collected data for ESG, industry, and control variables from different sources.

To account for industry differences, I first grouped industries into the ASX classifications of consumer discretionary, consumer staples, energy, financials, health care, industrials, information technology, materials, property trusts, telecommunications services, and utilities. Next, each industry was allocated to a high, medium, or low impact group relative to ESG issues. For this grouping, the FTSE4Good Index Series Inclusion Criteria was used (FTSE Group 2010). Following the criteria, consumer discretionary, consumer staples, energy, industrials, and materials were categorized as high impact industries. Financials, health care, and utilities were categorized as medium impact industries. Lastly, financial and property trusts, information technology, property trusts, and telecommunications services were categorized as low impact industries. While the FTSE4Good Index might not be a perfect indicator of industry classification, I argue that it serves as a reasonable proxy for industry-level pressures for institutionalization of ESG in the context of this study. For measurement, high impact industries were coded 3, medium impact coded 2, and low impact coded 1.

Lastly, in an effort to account for their confounding effects, I was mainly interested in a firm's size, profitability, and slack resources, all of which have been found to affect ESG performance. Firm size was measured by total assets and total revenue. Firms that are more profitable or have more slack resources are likely to have a higher ability to invest in ESG, therefore, return on assets (ROA) was used to measure profitability and cash was used to measure slack, as it is the most liquid of resources. Data for the control variables were collected from the FinAnalysis database and company annual reports.

RESULTS

In order to compare the variables of interest, some firms had to be eliminated because they were not included in the ASX listing across the eight year period under study. This was mainly due to acquisitions and delistings. Hence, the final sample size is 249. Descriptive analysis is presented in Tables 1 and 2. Table 1 shows minimum and maximum ratings, means, and standard deviations for the ESG dimensions. Table 2 demonstrates that the firms in the sample come from 11 different industries, with the majority of

firms in the materials industry (24.4 percent of firms). Prior to testing the hypotheses, analysis of variance (ANOVA) tests were conducted to compare high, medium, and low impact industries on total assets, total revenue, ROA, and slack resources. No differences were found for total assets ($p = .322$), total revenue ($p = .454$), or ROA ($p = .423$). However, differences were found in slack resources ($p = .017$). Therefore, results need to be viewed in light of this finding.

For hypotheses tests, first, using t-tests, I examined whether firms are demonstrating improvements in ESG performance over time, by comparing the years 2009 and 2002. For the environmental dimension, the mean difference is significant ($t = 16.64, p = .000$). For the social dimension, the difference in means is significant ($t = 18.93, p = .000$). A difference in the governance mean is also significant ($t = 20.90, p = .000$). I also compared means on two separate time periods (2005 to 2002 and 2009 to 2006), and with the exception of the environment dimension for the 2005 to 2002 comparison, all dimensions demonstrated statistically significant differences. The general ESG performance trend is upward and improving over time, therefore hypothesis one is supported.

As for hypothesis two, to assess whether firms are improving governance performance at a greater rate than the environmental or social dimensions, I used t-tests, comparing 2002-2009 means. Corporate governance performance is significantly better than environmental performance, demonstrating a statistically significant difference ($t = 13.02, p = .000$). Similarly, corporate governance performance demonstrated a statistically significant difference ($t = 15.56, p = .000$) relative to social performance. Hence, hypothesis two is supported. I also segmented the sample by industry type (high, medium, low impact) and found statistically significant differences between governance and environmental and social performance in all cases.

Finally, hypothesis three predicted that high impact industries would demonstrate stronger improvements in ESG performance over time relative to medium or low impact industries. For assessment, ANOVA tests were computed. Table 3 presents the results, including means (standard deviations) and tests of significance. The results suggest that only for the social dimension ($F = 6.89, p = .001$) do high impact industries demonstrate better performance than medium or low impact industries.

Given that there are two out three dimensions with no statistically significant differences, hypothesis three is therefore rejected.

DISCUSSION

This study examined the extent to which ASX300 firms, over an eight year period, are demonstrating environmental, social, and governance (ESG) performance by using data from a third-party, independent ESG ratings agency. That improvements in ESG performance was found over the time period (hypothesis one) is not necessarily surprising, given institutional focus on ESG issues in Australia. However, I note, based on the SIRIS rating's methodology, mean scores on each dimension appear to be relatively low (Table 1). Further, high standard deviations in each dimension (Table 1) points to substantial differences in the extent to which firms in the sample are demonstrating ESG performance. As for concentration on ESG risks and potential trade-offs firms face, confirmation of hypothesis two suggests that corporate managers may be channelling more attention to improving corporate governance, particularly given increased institutional focus on this dimension in wake of the fallout of the dot com era and the recent GFC. Surprisingly, high impact industries, or those industries that would be expected to face higher institutional pressure to respond to ESG risks, did not demonstrate higher performance on governance or environmental dimensions, relative to medium or low impact industries, but rather only on the social dimension. These findings have theoretical and practical implications.

Implications

The findings of this study suggest that institutional forces might be responsible for the growing diffusion of organizational practices that lift ESG performance in Australian firms. However, a more subtle finding suggests that the extent to which firms in the sample address *equally* ESG at a high level is questionable, as indicated by the relatively low mean performance and high standard variations. Following such findings, the extent to which institutional theory has explanatory power has been challenged in the literature.

Critics of institutional theory suggest it lacks attention to why differences appear to exist in the rate or levels at which firms fully adopt organizational practices, despite experiencing the same

institutional pressures (Ashworth, Boyne & Delbridge 2009; Greenwood & Hinings 1996; Oliver 1991). Critics of institutional theory further suggest that firms are portrayed as passive pawns, adapting willingly to institutionalized expectations (Greenwood & Hinings 1996; Mayer & Whittington 1999; Oliver 1991). In their work, Greenings and Hinings (1996) suggest that institutional theory is not known for adequately explaining the “black box”, or how internal dynamics and characteristics might affect acceptance or rejection of institutionalized practices. Scholars have thus suggested that variance in the degree to which organizational practices become institutionalized may be due to differences in firm strategy, culture, and the propensity for risk-taking (Fennel & Alexander 1989; Greenwood & Hinings 1996; Judge & Zeithaml 1992; Scott 2001).

The first implication of this study, therefore, suggests that while institutional pressure to address ESG risks in Australia appears to be present, the rate and strength at which ESG performance is demonstrated might not be fully explained by institutional expectations, but rather by internal firm characteristics. For example, in a study of Australian firms, Galbreath (2010a) finds that the choice of firm strategy impacts on corporate social responsibility (CSR) performance. More specifically, Galbreath (2010a) finds that firms that pursue prospector and defender type strategies demonstrate higher levels of CSR performance than firms pursuing analyser and reactor type strategies. In another study, Galbreath (2010b) finds that firms that have a formal strategic planning process in place tend to demonstrate high levels of CSR performance. He also finds that firms who foster a humanistic culture tend to perform well on CSR. Factoring in such results, previous studies seem to suggest that internal dynamics and characteristics likely play a role in firm response to institutional pressures, including how they respond to ESG. By more closely exploring institutional pressures and internal firm dynamics, and by building synergies between institutional theory (DiMaggio & Powell 1983) and the strategic choice perspective (Child 1972, 1997), researchers are likely to enrich our understanding of how and why the rate and strength at which firms demonstrate ESG performance varies.

The second implication focuses on trade-offs. In trade-off situations it is difficult to successfully achieve two or more desirable objectives simultaneously. The findings of the present study suggest that

while there is evidence that institutional pressures do exist in Australia that are focusing attention on all aspects of ESG issues, at the corporate level, the governance dimension appears to be receiving the most attention. This, in part, might be explained by the fact that listed companies in Australia are required to demonstrate whether or not they are responding to the *ASX Principles of Good Corporate Governance and Best Practice Recommendations*. Here, although response to the ASX Principles is voluntary, the force of institutional pressure and the isomorphisms that drive adoption of organizational practices in this area might be more fully present. Alternatively, that response to environmental and social dimensions appears to lag the governance dimension in this sample, could suggest that because businesses operate with scarce resources, they lack the ability to address equally all three dimensions. This would, to some extent, challenge theorists such as Hahn, Figge, Pinske, and Preuss (2010), who suggest that prominence must not be given to any one ESG dimension in order for a firm to be sustainable. A better understanding of how and why firms make trade-offs in responding to ESG risks is therefore warranted.

As for managerial implications, responding to ESG risks is increasingly becoming an expectation of institutional and individual investors (Boerner 2010; Mănescu 2011), and, although this study did not test the relationship, recent evidence suggests that better ESG performance is likely to increase firm economic performance (Isachenkova 2012). Hence, given that there is considerable variation in the degree to which firms in this study demonstrate ESG performance, managers would be advised to consider their internal strategies, and even their values (Galbreath 2012), in order to assess how environmental, social, and governance investments might lead to competitive advantage, while contributing to sustainable development. From a narrower perspective, high impact industries particularly face high pressure to act as stewards of the natural environment. Yet, in this study, firms in high impact industries do not appear to demonstrate a significant difference in how they are addressing environmental issues after accounting for firms in medium and low impact industries, and social and governance dimensions. Therefore, there appears to be an opportunity to more closely examine new technology and technical systems and processes that might lead to an improvement in responding to the impacts of their economic activities on the natural environment.

Limitations and suggestions for future research

This study is not without limitations. First, the selected sample is contained to a relatively narrow group of large Australia firms. Use of a broader sample, including small and medium-sized firms, could yield different results. Second, while eight years of data were used, the specific timeframe (2002-2009) is limited. Other timeframes could produce results that diverge from those presented in this study. Third, that the study did not examine the relationship between ESG performance and firm economic performance is a limitation, given the substantial focus on this topic. However, confounding factors likely render causality as in-determinant (Yegnasubramanian 2008) and other types of research should therefore be considered, such as that explored in this paper (cf. Galbreath & Shum 2012). Lastly, this study examines only Australian firms and hence, generalizability is limited. Yet, because the majority of ESG studies are conducted with US and UK data, this study expands international insights into a growing research stream.

As for future research directions, scholars have the opportunity to study internal dynamics of firms as they face institutional pressure to adopt organizational practices. For example, according to Galbreath (2012), we know little about how individual values shape the extent to which firms embrace or disavow response to social responsibilities. Further, other research could examine the interaction between institutional pressures and internal firm dynamics, such that insight is expanded into “push-pull” scenarios, determining whether institutional pressures or internal dynamics are more important (or equally important) in the diffusion of organizational practices. Future research is also needed to provide a better understanding as to whether or not there are underlying mechanisms that influence trade-offs in responding to ESG risks. Lastly, given that there were observed improvements in ESG performance over time, future studies could examine the institutional context more closely to determine whether regulative, normative, or cognitive institutions exert the most influence over firm adoption rates of organizational practices, and whether or not there are interactive effects among the three institutions in the process.

REFERENCES

- Ameer R & Othman R (2012) Sustainability practices and corporate financial performance: A study based on the top global corporations. *Journal of Business Ethics* 108: 61-79.
- Ashworth R, Boyne G & Delbridge R (2009) Escape from the iron cage? Organizational change and isomorphic pressures in the public sector. *Journal of Public Administration Research and Theory* 19: 165-187.
- Australian Securities Exchange Corporate Governance Council (2003) *Principles of good corporate governance and best practice recommendations*. Australian Securities Exchange, Sydney.
- Black L, Marais M, Allender J, Lambell R, Malinda N, Sweeney T & Bice S (2011) *The state of CSR in Australia*. Australian Centre for Corporate Social Responsibility, Melbourne.
- Boerner H (2010) Sustainable and responsible investment: The revolution is on. *Corporate Finance Review* 14: 39-41.
- Brandão CEL (2009) Corporate governance, strategy and sustainability. Presentation to 4th Sustainability Summit: Asia 2009, 25-26 November. Available at http://www.sustainabledevelopment.in/events/4thsustainabledevelopment-2009_Presentations/Day1/Carlos.pdf.
- Child J (1972) Organizational structure, environment and performance: The role of strategic choice. *Sociology* 6: 1-22.
- Child J (1997) Strategic choice in the analysis of action, structure, organizations and environment: Retrospect and prospect. *Organization Studies* 18: 43-76.
- Delmas M & Blass VD (2010) Measuring corporate environmental performance: The trade-offs of sustainability ratings. *Business Strategy and the Environment* 19: 245-260.
- DiMaggio PJ & Powell WW (1983) The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review* 48: 147-160.
- Fennel ML & Alexander JA (1989) Hospital governance and profound organizational change. *Medical Care Review* 46: 157-187.

- FTSE Group (2010) *FTSE4Good Index Series Inclusion Criteria*. FTSE Group, London.
- Galbreath J (2010a) The impact of strategic orientation on corporate social responsibility. *International Journal of Organizational Analysis* 18: 23-40.
- Galbreath J (2010b) Drivers of corporate social responsibility: The role of strategic planning and firm culture. *British Journal of Management* 21: 511-525.
- Galbreath J (2012) Are boards on board? A model of corporate board influence on sustainability performance. *Journal of Management & Organization* in press.
- Galbreath J & Shum P (2012) Do customer satisfaction and reputation mediate the CSR-FP link? Evidence from Australia. *Australian Journal of Management* in press.
- Graafland JJ, Eijffinger SCW & Smid H (2004) Benchmarking of corporate social responsibility: Methodological problems and robustness. *Journal of Business Ethics* 53: 137-152.
- Greenwood R & Hinings CR (1996) Understanding radical organizational change: Bringing together the old and new institutionalism. *Academy of Management Review* 21: 1022-1054.
- Hahn T, Figge F, Pinske J & Preuss L (2010). Trade-offs in corporate sustainability: You can't have your cake and eat it. *Business Strategy and the Environment* 19: 217-229.
- Hansen D & Tranter B (2006) Who are the shareholders in Australia and what are their ethical opinions? An empirical analysis. *Corporate Governance: An International Review* 14: 23-32.
- Isachenkova N (2012) Disclosure of environmental, social and governance (ESG) performance and firm value. Academy of Management Annual Meeting Conference Proceedings. Academy of Management, Boston, MA.
- Judge WQ & Zeithaml CP (1992) Institutional and strategic choice perspective on board involvement in the strategic decision process. *Academy of Management Journal* 35: 766-794.
- King ME (2011) Governance, strategy sustainability are inseparable. Presentation to The Institute of Internal Auditors Norway, Oslo, 29 May. Available at http://www.iaa.no/filestore/Om_NIRF/Internrevisjonskonferanser/2011_Oslo/MervynKingsndag.pdf.

- Legendre A-L (2008) *Drivers for corporate social responsibility and sustainability practices in Australia*. Green Capital and CSR Sydney, Sydney.
- Levine DI & Chatterji AK (2006) Breaking down the wall of codes: Evaluating non-financial performance measurement. *California Management Review*, 48: 29-51.
- Maher S (2012) Biggest polluters face being named. *The Australian* 11 January: 2.
- Mănescu C (2011) Stock returns in relation to environmental, social and governance performance: Mispricing or compensation for risk? *Sustainable Development* 19: 95-118.
- Mayer M & Whittington R (1999) Strategy, structure and 'systemness': National institutions and corporate change in France, Germany and the UK, 1950-1993. *Organization Studies* 20: 933-959.
- Nicholson G, Kiel G & Kiel-Chisholm S (2011) The contribution of social norms to the global financial crisis: A systemic actor focused model and proposal for regulatory change. *Corporate Governance: An International Review* 19: 471-488.
- Oliver C (1991) Strategic responses to institutional processes. *Academy of Management Journal* 16: 145-179.
- Parliamentary Joint Committee on Corporations and Financial Services (2006) *Corporate responsibility: Managing risk and creating value*. Commonwealth of Australia, Canberra.
- Pérez-Gladish B, Benson K & Faff R (2012) Profiling socially responsible investors: Australian evidence. *Australian Journal of Management* in press.
- Renneboog L, Horst JT & Zhang C (2008) Socially responsible investments: Institutional aspects, performance, and investor behaviour. *Journal of Banking & Finance* 32: 1723-1742.
- Scott RW (2001) *Institutions and organizations*. Sage, Thousand Oaks, CA.
- Scott RW & Meyer JW (1994) *Institutional environments and organizations*. Sage, Thousand Oaks, CA.
- Surroca J, Tribó JA & Waddock S (2010) Corporate responsibility and financial performance: The role of intangible resources. *Strategic Management Journal* 31: 463-490.
- Yegnasubramanian A (2008) *Environmental, social and governance: Moving to mainstream investing?* Business for Social Responsibility, San Francisco.

APPENDIX

ESG dimensions and how firms are rated by SIRIS

Dimension	Indicators
Environmental	<ul style="list-style-type: none"> ▪ Firms are rated on the extensiveness to which they incorporate environmental management programs in their operations, and achieve environmental quality program certifications (e.g., ISO14000). ▪ Firms are rated on the extent to which they demonstrate management over materials, energy, and water consumption and their use of renewable energy. ▪ Firms are rated on the extent to which they demonstrate management of CO₂/GHG emissions and evidence of CO₂/GHG emission reductions. ▪ Firms are rated on how well they manage post-consumer and solid wastes and their waste emission impact on water and land.
Social	<ul style="list-style-type: none"> ▪ Firms are rated on the extensiveness of occupational health and safety programs, reductions in health and safety incidents, extensiveness of employee training, evidence of gender diversity of total workforce, and health and safety accreditation (i.e., Australian and New Zealand Occupational Health and Safety Standard 4801). ▪ Firms are rated on the extensiveness of their corporate donations and community engagement, and the extent to which they uphold human rights and fair trade practices in their business practices. ▪ Firms are rated on the extent to which they improve product quality, use life cycle assessments, and achieve quality accreditations (i.e., ISO 9000).
Governance	<ul style="list-style-type: none"> ▪ Firms are rated on the extent of board independence, including separation of CEO and chairperson roles and appointment of outside directors. ▪ Firms are rated on the presence and independence of audit, nomination, and remuneration committees. ▪ Firms are rated on the extent to which they formally address bribery and corruption and support whistle-blowers. ▪ Firms are rated on the extent to which they link board pay to E&S performance and offer performance incentives to non-executive directors. ▪ Firms are rated on the extent to which they formally address both board and company codes of conduct. ▪ Firms are rated on the extent to which they report and disclose vital board and company information (e.g., director profiles, director salaries, director share holdings, remuneration reports, political donations, CSR/sustainability report). ▪ Firms are rated on the extent to which they demonstrate protection of minority shareholder rights.

TABLES

Table 1. Descriptive statistics

Statistics	ENV 2002	ENV 2003	ENV 2004	ENV 2005	ENV 2006	ENV 2007	ENV 2008	ENV 2009	Rate of improvement 2002-2009
Minimum	4.00	2.00	2.04	2.08	2.05	3.92	4.08	4.59	+1.98%
Maximum	28.50	40.00	38.29	42.88	50.15	61.98	61.50	59.92	+11.20%
Mean	2.42	5.76	6.16	3.25	4.81	11.28	12.64	16.23	+31.24%
S.D.	4.86	6.36	6.45	8.01	9.21	14.62	15.69	15.98	

Statistics	SOC 2002	SOC 2003	SOC 2004	SOC 2005	SOC 2006	SOC 2007	SOC 2008	SOC 2009	Rate of improvement 2002-2009
Minimum	0.83	0.86	1.28	1.72	2.59	3.45	4.31	4.66	+27.95%
Maximum	30.77	35.58	36.54	44.23	41.35	66.35	75.00	69.23	+12.28%
Mean	7.00	7.32	5.38	8.30	10.29	15.85	19.87	21.31	+17.24%
S.D.	5.72	6.48	7.06	7.86	8.08	15.00	15.86	16.09	

Statistics	GOV 2002	GOV 2003	GOV 2004	GOV 2005	GOV 2006	GOV 2007	GOV 2008	GOV 2009	Rate of improvement 2002-2009
Minimum	2.94	4.41	5.15	5.88	7.35	8.82	15.44	19.12	+30.67%
Maximum	19.12	25.00	25.00	26.47	45.73	45.73	66.47	75.00	+21.56%
Mean	7.56	11.86	13.61	15.34	23.88	25.91	42.79	50.29	+31.09%
S.D.	3.31	6.33	7.43	8.12	15.77	16.50	21.35	13.99	

ENV = Environmental; SOC = Social; GOV = Governance

Table 2. Industry statistics and classifications

Industry	Percent of companies	Industry classification for Hypothesis 3 test	
Consumer discretionary	10.8	Consumer discretionary, consumer staples,	High impact (3)
Consumer staples	4.7	energy, industrials, materials	
Energy	9.2		
Financials	11.5	Financials, health care, utilities	Medium impact (2)
Health care	4.4		
Industrials	14.6	Information technology, property trusts,	Low impact (1)
Information technology	3.1	telecommunications services	
Materials	24.4		
Property trusts	11.2		
Telecommunication services	1.4		
Utilities	4.7		
Total	100%		

Table 3. Industry differences

Industry	N	Mean ENV 2002-2009	Mean SOC 2002-2009	Mean GOV 2002-2009
Low Impact	82	13.11 (15.02)	13.63 (13.94)	29.53 (27.61)
Medium Impact	14	11.20 (12.11)	7.01 (8.09)	37.63 (21.64)
High Impact	153	16.06 (14.36)	18.76 (14.50)	33.85 (24.54)
		F = 1.567	F = 6.886	F = 1.299
		<i>p</i> = .211	<i>p</i> = .001	<i>p</i> = .274