A Comparative Analysis of Frameworks for Evaluating Corporate Sustainability Performance and Frameworks for Guiding Corporate Sustainability Practices: To What Extent Do These Frameworks Align?

by

Jeyalathy M. Sivanesan

A thesis
presented to the University of Waterloo
in fulfilment of the
thesis requirement for the degree of
Master of Environmental Studies
in
Geography

Waterloo, Ontario, Canada, 2011

Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Jeyalathy M. Sivanesan

Abstract

Increasing evidence of the positive correlation between sustainability performance and financial performance of companies has motivated the proliferation of tools that seek to assess corporate sustainability performance and provide guidance to companies on sustainable business practices and sustainability reporting. Despite the growing number of tools for evaluating, rating and ranking the sustainability performance of companies, the assessment methodologies and frameworks of these tools have not been fully disclosed, leaving both (socially) responsible investors and companies with little publicly available information and understanding of the sustainability issues that are relevant to business practices.

This research is an exploratory study seeking to gain greater insight into corporate sustainability assessment as it is practiced within the capital markets. The research specifically examines the extent to which three prominent stock market sustainability indexes, the Dow Jones Sustainability Indexes, the FTSE4Good Index Series and the Jantzi Social Index, represent the sustainability performance of companies. The study involves a comparative analysis of sustainability criteria, and an examination of the extent to which the concept of sustainable development and the theoretical perspectives on sustainability assessment are reflected in the assessment frameworks of the indexes. Furthermore, a secondary question addressed in this study is the extent to which the Global Reporting Initiative's G3 Guidelines and the ISO 26000 standard influence the sustainability criteria used in the indexes' assessment frameworks. The significance of this secondary question is to understand the extent of alignment between tools which provide guidance on sustainable business practices and tools which assess corporate sustainability performance.

A significant finding of this research is the lack of standardization amongst the assessment and guidance tools on the core sustainability issues that are relevant to businesses across all industry sectors. While all of the tools generally follow the same model of organizing sustainability criteria according to environmental, social and economic themes, within each of

those themes, a wide spectrum of issues are covered, with poor consensus amongst the tools on the core indicators that are relevant to business practices. An additional finding is that while the theoretical perspectives on sustainable development and sustainability assessment are evident in the indexes, there is significant margin for improvement in terms of developing indicators which are future-oriented and focus on a long-term perspective, as well as incorporating the notion of context in performance metrics.

Acknowledgements

First and foremost, I extend deepest gratitude to my husband, Suthan, and my daughter, Asha Isabel for their unending patience and support during the course of conducting research and while writing this thesis. I thank Suthan for engaging me in thought-provoking discussions about my research, which helped me think critically on various topics. I also greatly appreciate his encouragement and advice on all matters, academic and beyond, during the course of pursuing this Master's degree.

Secondly, I extend heartfelt gratitude to my father, Sinniah Mahalingam, and my mother, (Late) Vigneswary Mahalingam, for their love, support and encouragement throughout the years, and for inspiring me to pursue my dreams. Without them, I would not have achieved all that I have today. I also thank my extended family for all of their help and support, and making it easier for me to complete this thesis.

Next, I extend sincere appreciation to my supervisor, Dr. Blair Feltmate, for giving me the opportunity to conduct this Master's research under his supervision and to make a contribution to the field of corporate sustainable development. I thank Blair for sharing his knowledge and industry experiences on diverse topics relating to corporate sustainable development. I thank him for our interesting discussions and for always encouraging me to look beyond my own research focus, by inviting me to attend courses and seminars, all of which helped to broaden my own understanding of the subject. I also thank him for his continuous and invaluable feedback during the research and writing phases of this thesis. Blair has been instrumental in my academic and personal growth, and for this, I am deeply grateful to him.

I would like to thank my thesis committee members: Dr. Olaf Weber and Ms. Julie Desjardins for their careful reviews of several drafts of my thesis, and for their advice, comments, suggestions, and support. I thank Olaf for contributing his theoretical knowledge on topics including, sustainable finance, the link between sustainability performance and financial performance of firms, and socially responsible investing. I thank Julie for providing invaluable

industry perspective on topics including, corporate sustainable development and socially responsible investing. I am also grateful to her for encouraging me to think critically about my research and its applicability in practice.

I would also like to thank other members and organizations who contributed their time and knowledge, and provided data for this research. I thank Jantzi-Sustainalytics for making a key contribution to this research by providing confidential and proprietary data for analysis. I also thank Mr. Eugene Ellmen of the Social Investment Organization for meeting with me to discuss my research objectives and for providing relevant data.

Finally, I would like to acknowledge Dr. Paul Parker and Dr. Ian Rowlands from the Faculty of Environment, for their support and advice during the earlier period of my graduate studies.

Table of Contents

List of Figures

List of Tables

List of Abbreviations

AUM	Assets Under Management
Bovespa CSI	São Paulo Stock Exchange Corporate Sustainability Index
CDVC	Community Development Venture Capital
CICA	Canadian Institute of Chartered Accountants
CS	Corporate Sustainability
CSP	Corporate Social Performance
CSR	Corporate Social Responsibility
DJI	Dow Jones Indexes
DJIA	Dow Jones Industrial Average
DJSI	Dow Jones Sustainability Indexes
EIA	Environmental Impact Assessment
EIRIS	Ethical Investment Research Service
ESG	Environmental, Social and Governance
ESI	Ethibel Sustainability Index
FAO	Food and Agriculture Organization
FTSE	Financial Times Stock Exchange
GHG	Greenhouse Gases
GPI	Genuine Progress Indicator
GRI	Global Reporting Initiative
IISD	International Institute for Sustainable Development
ILO	International Labour Organization
ISO	International Organization for Standardization
IUCN	International Union for Conservation of Nature
JSE SRI	Johannesburg Stock Exchange Socially Responsible Investment
JSI	Jantzi Social Index
NDA	Non-disclosure Agreement
NGO	Non-government Organization

NYSE	New York Stock Exchange
OECD	Organization for Economic Cooperation and Development
PSR	Pressure-State-Response
RI	Responsible Investing
SAM	Sustainable Asset Management
SD	Sustainable Development
SEA	Strategic Environmental Assessment
SI	Sustainability Investing
SIO	Social Investment Organization
S&P / TSX	Standard & Poor's / Toronto Stock Exchange
SRI	Socially Responsible Investing / Investment
TBL	Triple Bottom Line
UN	United Nations
UN PRI	United Nations' Principles for Responsible Investing
WBCSD	World Business Council for Sustainable Development
WCED	World Commission on Environment and Development

Confidentiality of Data

The data on Jantzi's sustainability indicators are provided by Jantzi-Sustainalytics under non-disclosure agreement (NDA), and therefore, are used in this study, solely for analytical purposes, but have not been published in this thesis. Compliance with the NDA includes, but is not limited to the following contractual requirements, extracted from the NDA, Part A – Non-Disclosure, Article 2 – Confidential Information:

Between Jantzi and the Consultant, Jantzi is the owner of the Confidential Information, and no interest, license or other right in or to the Confidential Information is granted to the Consultant or implied simply by the disclosure of the Confidential Information.

The Consultant will:

(a) not use, manipulate or exploit any Confidential Information for any reason whatsoever other than as authorized by Jantzi to promote and advance the business of Jantzi (including any affiliated companies);

(b) use no less than a reasonable degree of care to protect the Confidential Information;

(c) not remove any confidentiality, copyright or other proprietary rights notices from any Confidential Information;

not disclose any Confidential Information to any third party (other than an employee of Jantzi) without first ensuring that that party and Jantzi have entered into an applicable non-disclosure agreement; and

(d) notify an officer of Jantzi immediately upon becoming aware of any unauthorized copying, disclosure or use of any Confidential Information by any person and make a commercially reasonable effort to minimize the effect of any such use or disclosure.

The Consultant will comply with any policies or procedures established by Jantzi from time to time and pertaining to: (i) security; (ii) the protection of information resources; and (iii) the protection of personal information and privacy.

Chapter 1: Introduction

1.1 Summary of Research Objectives

"Corporate sustainability ratings are going mainstream, but how they work in practice remains somewhat of a mystery" (SustainAbility, "Rate the Raters, Phase Three", 2011). In 2010, the think tank and consultancy firm, SustainAbility, inventoried more than 100 ratings, rankings, indices and awards (as compared to only 21 being in existence in 2000 of the 108 inventoried in 2010) that seek to measure, compare or reward corporate sustainability performance. While these ratings generally publish the results of their evaluations of companies with the aim of driving competition among companies to improve their sustainability performance and/or disclosure, and helping to inform the decisions of target audiences including investors, prospective employees and consumers about where to invest and work and what to purchase, the ratings methodologies and processes are often not fully disclosed for competitive reasons (SustainAbility, "Rate the Raters, Phase One – Look Back and Current State", 2010; SustainAbility, "Rate the Raters, Phase Two – Taking Inventory of the Ratings Universe", 2010). This lack of transparency consequently weakens the credibility of the ratings process. With corporate sustainability assessment becoming mainstream and impacting more companies and a broader range of stakeholders, it therefore becomes even more crucial to gain visibility and insight into the sustainability assessment process. Therefore, the key objectives of this research are to address the following questions:

(1) To what extent do the stock market sustainability indexes represent the sustainability performance of publicly traded companies?

(2) To what extent and in what ways are the approaches for assessing corporate sustainability, (as carried out in the context of the stock market sustainability indexes), similar and different from the tools that seek to provide guidance on sustainability

reporting and advance sustainability practices within the corporate sector? In other words, to what extent do the two sets of tools align?

The following sections of this chapter are divided into three main segments: (1) Sections 1.2 to 1.4 provide context for the main research objectives, by specifically presenting background information on sustainable development from a corporate perspective, an overview of the business case for sustainable development, and a brief summary on responsible investing; (2) Section 1.5 outlines the central topic of this research – corporate sustainability assessment – and presents the key questions to be addressed by this research; (3) Section 1.6 concludes this chapter with a discussion of the rationale for this research.

1.2 Drivers of Business Sustainability

Taking action towards sustainable development is no longer a matter just for global institutions such as the United Nations (UN), or for national governments alone. The 1992 Rio Earth Summit, culminating in the adoption of Agenda 21 – an action plan for achieving sustainable development – mobilized the collective participation of business and industry in addressing sustainability issues (Food and Agriculture Organization of the United Nations, "Earth Summit and Agenda 21", 2007). Since then, the concept of sustainable development has reached greater levels of awareness within the corporate sector, often encompassing a spectrum of terms, including corporate (social) responsibility (CSR), corporate citizenship, corporate accountability, corporate ethics, triple bottom line (TBL) of environment, economy and society, responsible business and corporate sustainability (CS), to name just a few (Industry Canada, "What is Corporate Social Responsibility?", 2009). With mounting evidence of the positive correlation between environmental and social performance and financial performance, more and more companies are integrating environmental, social and governance (ESG) factors into fiduciary responsibility, in order to meet the needs of a broader set of stakeholders, including employees, customers, and the wider society, in addition to

shareholders (Notat, “Integrating Social Factors into Investment”, 2011; Clements-Hunt & Lawal, 2003; Heemskerk, Pistoria, & Scicluna, 2002).

The growing attention to sustainable development in the corporate sector is being driven in part by a combination of forces, including, as noted by Industry Canada (2009):

- “Globalization – with its attendant focus on cross-border trade, multinational enterprises and global supply chains – is increasingly raising CSR concerns related to human resource management practices, environmental protection, and health and safety;
- Governments and intergovernmental bodies such as the UN, the Organisation for Economic Co-operation and Development (OECD) and the International Labour Organization (ILO) have developed compacts, declarations, guidelines, principles and other instruments that outline social norms for acceptable conduct;
- Advances in communications technology, such as the Internet, cellular phones and personal digital assistants, are making it easier to track corporate activities and disseminate information about them. Non-governmental organizations now regularly draw attention through their websites to business practices they view as problematic;” (Industry Canada, “Why Has CSR Become Important?”, 2009).

In addition to the factors listed above, the widespread attention to sustainable development within the corporate sector is also driven by a better understanding and appreciation for the additive value of sustainable development. More and more companies are recognizing the benefits of pursuing sustainable development, as will be further discussed in the following section.

1.3 The Business Case for Sustainable Development

At the corporate level, one of the key driving forces behind the penetration of sustainable development into industry sectors is the growing evidence of the business case for sustainable development. By taking responsibility for environmental, social and economic impacts within corporate decision-making, companies are engaging in sustainable development as a means of creating added value and generating not only short-term, but also long-term benefits (Hohnen, 2007). In fact, a number of studies conducted by researchers in academia and within industry itself have found compelling evidence in support of the business case for sustainable development (Ambec & Lanoie, 2008; Feldman, Soyka, & Ameer, 1996; Hart & Ahuja, 1994; King & Lennox, 2001; Klassen & McLaughlin, 1996; Sinkin, Wright, & Burnett, 2008; Waddock & Graves, 1997). Furthermore, findings from a number of literature review studies that have surveyed the body of research examining the link between corporate sustainability and financial performance have also confirmed that a significantly higher percentage of studies point to a positive association between a company's sustainability performance and its financial performance, compared to studies showing a negative association or even no definite association at all (Margolis & Walsh, 2003; van Beurden & Gosling, 2008; Molina-Azorín, Claver-Cortés, López-Gamero, & Tarí, 2009; Salzmann, Ionescu-Somers, & Steger, 2005). Some of the key benefits for companies pursuing sustainable development include: customer attraction and retention, access to markets and ease of operational start-ups, discounted loan rates, operational efficiency, and the support of media and non-governmental organizations (NGOs) in addressing activist pressures and positively influencing public perceptions about the firm (Feltmate, 2009; Hohnen, 2007). Industry Canada (2010), notes that a number of Canadian firms are reaping the benefits of their CSR activities. Some examples follow:

- Since developing and implementing an initiative called Purpose and Core Values, which emphasizes people, the environment, the community and ethics, Husky Injection Molding Systems Ltd. reports that it has been able to procure government permits faster than before. Furthermore, its $4.2 million investment in environmental and health and safety

programs has led to savings of $9 million, as well as fewer injuries and lower absenteeism among employees (Industry Canada, “Are Firms Benefiting from CSR Activities?”, 2010).

- Since putting into place effective sustainability practices and having taken steps to work with local communities, Suncor Energy Inc. is reaping rewards in the form of increased community acceptance of its plans for expansion (Industry Canada, “Are Firms Benefiting from CSR Activities?”, 2010).
- Impressed by Falconbridge's sustainability and operations track record, Société minière du Sud Pacifique approached the firm to develop a ferro-nickel plant in New Caledonia, an environmentally sensitive island (Industry Canada, “Are Firms Benefiting from CSR Activities?”, 2010).

Despite the growing recognition of the business case for sustainable development, there is on-going debate within the academic community about whether the short and long-term benefits outweigh the costs for companies pursuing sustainable development, and whether sustainability initiatives simply alleviate various risks for the company or actually create and enhance value for the business and for its stakeholders. There are studies which have found no relationship between sustainability performance and financial performance (McWilliams & Siegel, 2000), or have found mixed and/or negative impacts, where markets undervalue sustainable development in the short-term, although conceding that firms ignoring sustainable development may destroy the opportunity to create long-term value (Hassel, Nilsson, & Nyquist, 2005; Hillman & Keim, 2001; Freedman & Jaggi, 1992).

Table 1 provides a more comprehensive list and in-depth descriptions of the potential benefits for companies pursuing sustainable development.

Table 1. Key Benefits for Companies Pursuing Sustainable Development
(Source: Feltmate, 2009; Hohnen, 2007)

Key Benefits	Description of Benefit
Customer attraction / retention	Customers are increasingly concerned regarding harm that a company's practices might cause from environmental, economic or social perspectives. To retain or gain customers, which will ultimately affect share price, companies are increasingly adopting recognized business practices that demonstrate corporate citizenship.
Access to markets / ease of operational start-ups	A company that carries a positive brand as a sustainable development practitioner will often be welcomed into communities, and therefore will realize the revenue and share price benefits associated with expanded operational and market access. Conversely, companies seen as environmental, economic or social pariahs will generally not be welcomed into communities, and they may suffer the associated share price impact resulting from diminished market access or operational delays.
Address media / activist pressures	Non-governmental organizations (NGOs) can affect public perceptions of business. These perceptions may influence customers' buying practices, product switching and operational start-ups, which in turn may influence share price. To gain or retain the support of these organizations, a company must demonstrate its commitment to sustainable development and it must engage NGOs to identify potential omissions in practices.
Discounted loan rates	Many banks employ environmental managers to assess the environmental risk associated with lending capital for mergers and acquisitions, mortgages, etc. Companies that are

	positioned as sustainable development practitioners may be perceived as presenting less risk, and, accordingly, banks may charge them lower interest rates on borrowed capital. This will generally have a positive impact on share price. Also, as banks are increasingly concerned with issues of lender liability, the success of a company in securing a loan, at any cost, is affected by the sustainable development practices of the company.
Reduced insurance premiums	Insurance companies are including sustainable development and environmental risk in their underwriting process. Sustainable development companies that are not self-insured will generally receive a risk-reduced rate on premiums, which can translate into savings that can have a positive impact on share price.
Operational efficiency	Eco-efficiency (a contraction of ecological and economic efficiency) means doing more with less. For example, an eco-efficient company will reduce energy inputs, material requirements and waste production per unit of production. In turn, the company will retain more cash for alternative applications that can have a positive impact on share price.
Due diligence regarding partnerships/acquisitions	Due diligence requires that the sustainable development performance of partners or acquired companies be assessed, since engaging in a relationship with a company that has a negative reputation can result in potential liabilities. A company that carries the "sustainable development brand" is more likely to be engaged as a partner and derive associated benefits. Similarly, if a company is to be acquired, a sustainable development brand can command a premium in share price.
Legal due diligence /	Despite best efforts, for any company accidents can and will

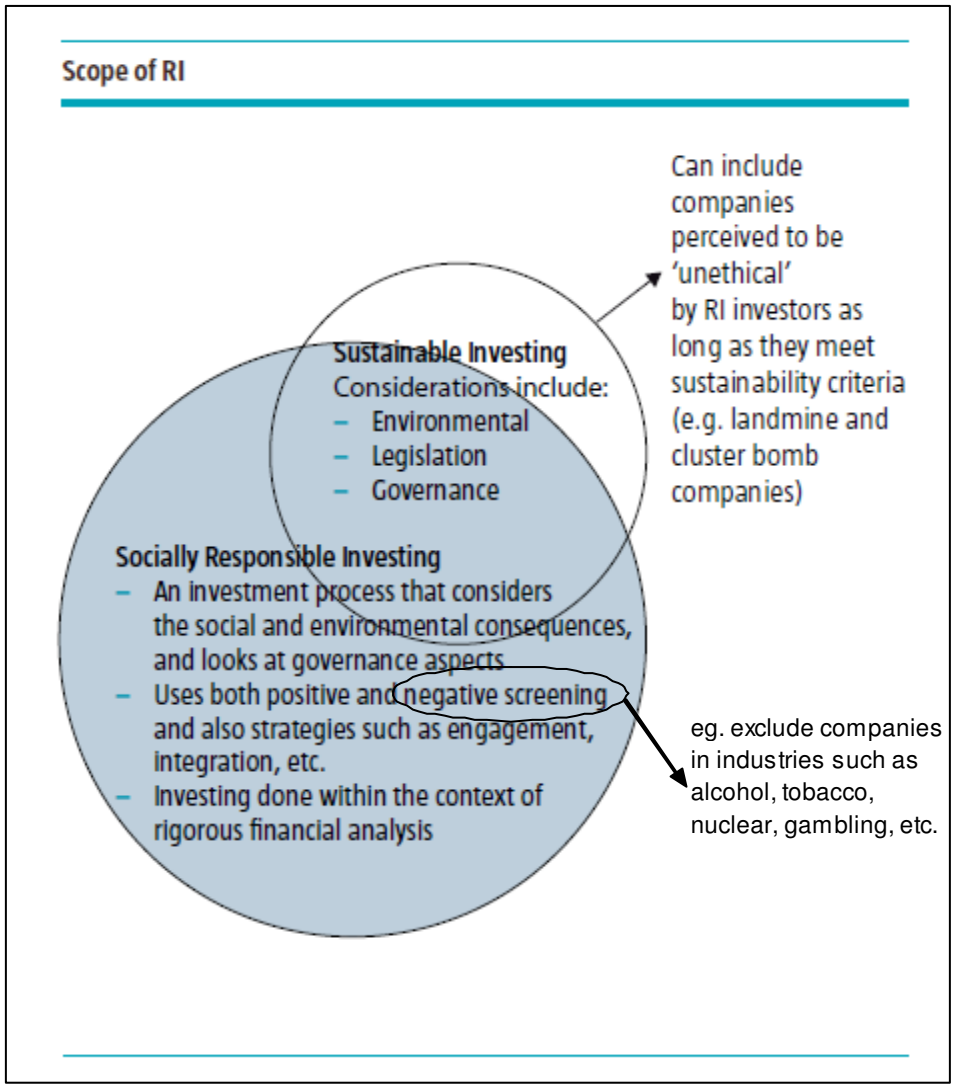
assurance	occur - e.g., spills, air borne exceedances, etc. In such cases, from the perspective of legal liability, companies with a track record of exemplary environmental, economic and social performance will generally be viewed more favourably by authorities than companies bearing a poor reputation. Similarly, from the perspective of assurance, companies with "high standing within a community" will generally encounter a more understanding, and perhaps forgiving, public response versus companies that function at or below minimum performance standards.
Employee satisfaction / retention / productivity	Companies that are practitioners of sustainable development report that most employees welcome challenges associated with environmental, economic and social stewardship. Accordingly, employee job satisfaction scores generally increase within one to three years following the initiation of sustainable development programs, employee productivity increases, and the service time of employees increases, thus lowering start-up training costs. All of these factors can have a positive influence on share price appreciation.
Industry self-regulation	When industry and government share expertise regarding the application of sustainable development best practices, practical and cost-effective self-regulatory programs and/or legislation will often result. History shows that sustainable development programs resulting from collaboration between industry and government are generally preferable, from a share price perspective, to programs developed through isolated efforts.
Facilitate divestitures	Companies with a positive sustainable development record will generally realize a higher valuation for shareholders upon sale. Increasingly so, due diligence requires the assessment of

	sustainable development, prior to divestiture, as a factor for inclusion in valuation.
Sustainable development investment funds	A large (and growing) number of mutual and pension funds apply sustainable development assessment criteria to portfolio construction. Corporate sustainable development programs can facilitate a company's inclusion in funds, thus resulting in a positive impact on share price.

1.4 Responsible Investing

Along with growing recognition of the business case for sustainable development within academia and industry sectors, responsible investing (RI) has become another driving force behind the widespread penetration of sustainable development into the corporate sector. While there is no consensus on the definition, responsible investing, also referred to by alternate terms, including, socially responsible investing (SRI) and sustainability investing (SI), takes into consideration environmental and social consequences, as well as governance aspects, (ESG), in the selection and management of investments (Robeco & Booz & Company, 2007; Social Investment Organization, "Fact Sheet #1: What is Socially Responsible Investment?"). As per the majority of literature in the investment industry and in academia, where the terms SRI and SI are deemed synonymous with RI, this study will also use the terms interchangeably. With SRI, both individual and institutional investors base their investment decisions on a set of personal and societal values, but also seek to identify companies with better long-term financial performance by balancing the risk-return profile posed by ESG issues (Calvert Investments, "Sustainable and Responsible Investing: What is SRI?", 2010; Social Investment Organization, "Fact Sheet #1: What is Socially Responsible Investment?"). Figure 1 illustrates the general scope of responsible investing.

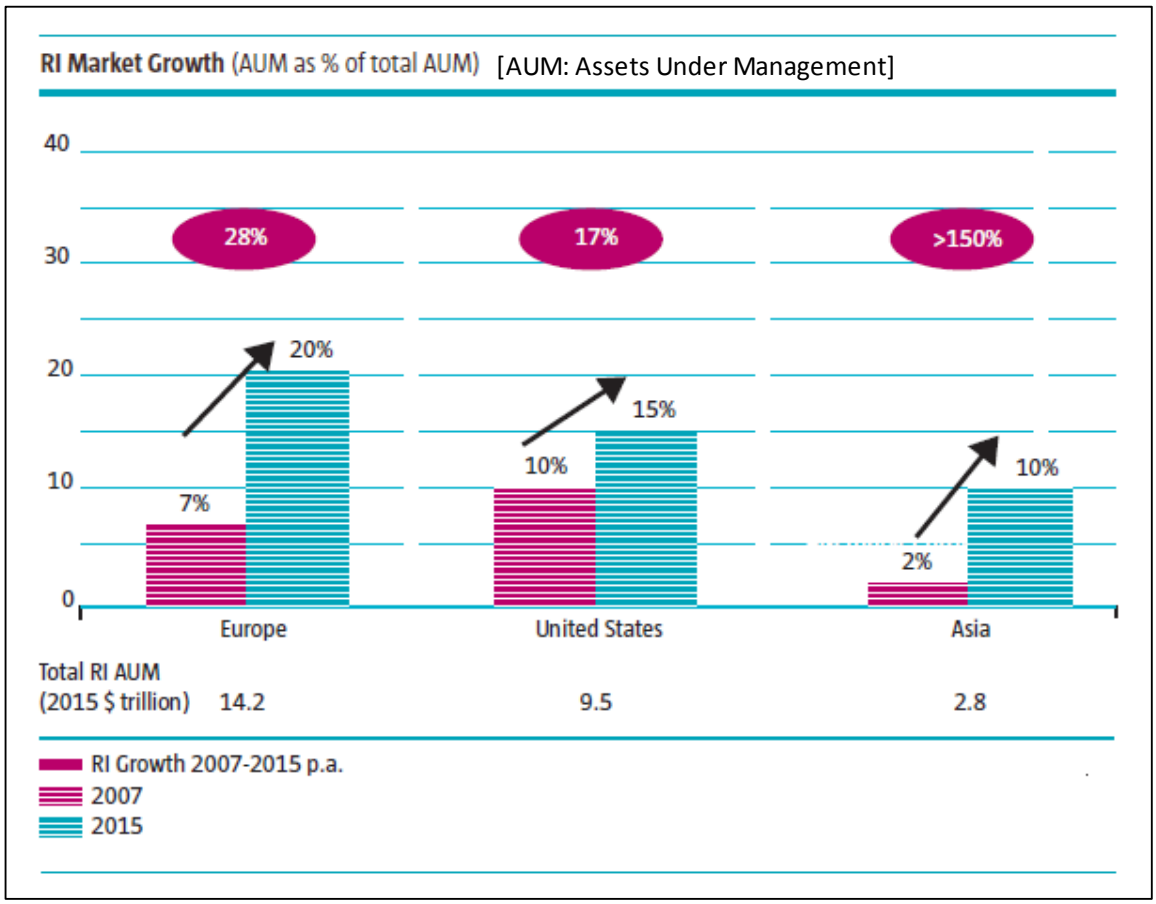
Figure 1. General Scope of Responsible Investing
(Source: Adapted from Robeco & Booz & Company, 2007, p. 4)



According to a 2007 study by Robeco & Booz & Company, responsible investing is gaining significance in the investment world, and is projected to become mainstream within asset management by the year 2015. Factors driving the growth of RI include: increased social awareness, rising media attention and regular press coverage (on company activities involving environmental and social issues), increasing prices of energy and raw materials putting enormous economic pressure on companies and pushing demand towards alternative

sources, changing legislation (favouring socially responsible investing) such as mandatory carbon dioxide (CO_2) reductions, and technological innovations, (particularly in environmental technology) (Robeco & Booz & Company, 2007). The study projected the growth of responsible investing in three major markets throughout the world – Europe, the United States and Asia. Figure 2 illustrates the projected growth of RI in these markets.

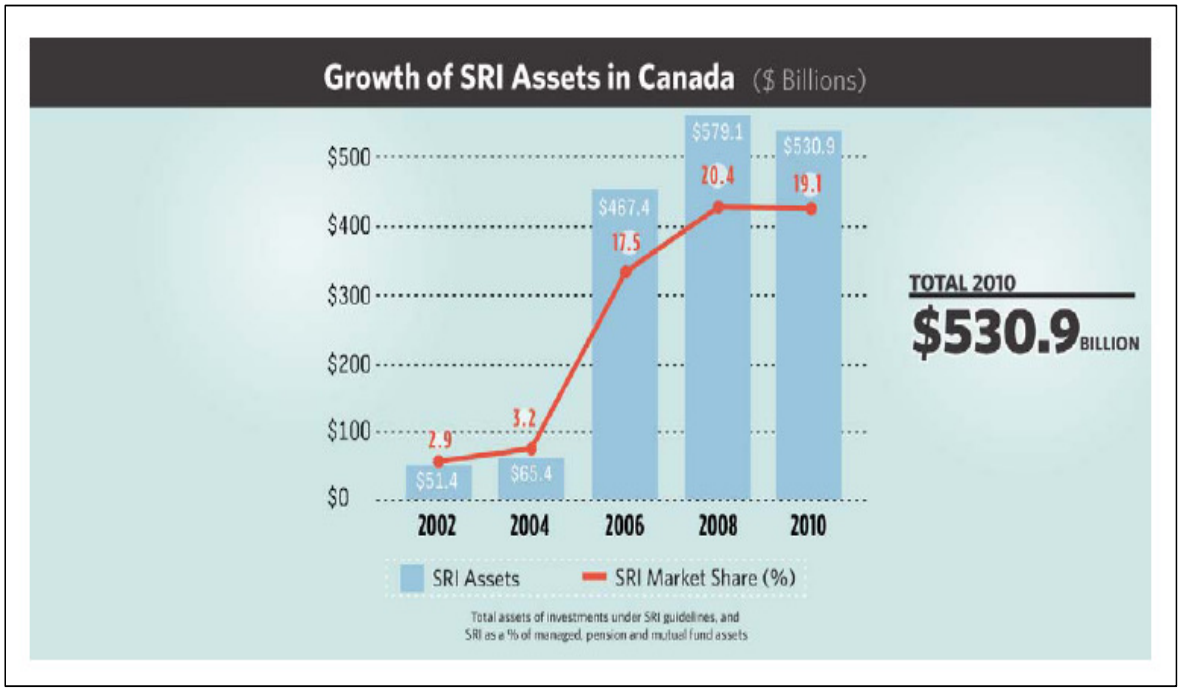
Figure 2. Projected Growth of Responsible Investment by 2015 and the Percentage of Assets Under Management Tied to Responsible Investment
(Source: Robeco & Booz & Company, 2007, p. 8)



More recently, the Social Investment Organization (SIO) published a study in May 2011, which provides a comprehensive survey of socially responsible investing in Canada. Based on

historical data, specifically over the period from 2002 to 2010, the findings indicate that SRI has been gaining momentum in Canada as well. Figure 3 illustrates the growth of SRI in Canada from 2002 to 2010, both in terms of total Canadian assets invested according to SRI guidelines and the percentage market share of SRI.

Figure 3. Growth of Socially Responsible Investing in Canada from 2002 to 2010
(Source: Social Investment Organization, 2011, p. 8)



Socially responsible investing was first formally practiced by religious investors who avoided companies in specific industries including tobacco, alcohol, and gambling (Calvert Investments, "Sustainable and Responsible Investing: What is SRI?", 2010). More recently, however, SRI has evolved beyond basic avoidance or negative screening to encompass a number of strategies, including: positive screening, community investing, socially responsible lending, integrating ESG considerations into traditional financial management, and shareholder advocacy (Social Investment Organization, "Fact Sheet #1: What is Socially

Responsible Investment?"; Calvert Investments, "Sustainable and Responsible Investing: What is SRI?", 2010). Table 2 outlines these SRI strategies in further detail.

Table 2. Investment Strategies Based on Social Responsibility Guidelines
(Source: Social Investment Organization; Calvert Investments, 2010)

SRI Strategy	Description of Strategy
Positive Screening	promotes the concept of sustainable development by selecting "best of sector" companies based on their positive contributions to society and the environment. "Social investors know there are no *perfect companies*. The screening process attempts to identify companies that are well-managed, that produce socially useful products and that treat their employees, suppliers, customers and the environment in which they operate well" (Social Investment Organization, "Fact Sheet #2: Screening Basics: Evaluating Investment Choices"). Investors focus on a variety of social and environmental issues, such as, labour relations, treatment of minority groups and women, community involvement, product safety and quality, ecology and environment, etc; (Social Investment Organization, "Fact Sheet #2: Screening Basics: Evaluating Investment Choices"). Positive screening essentially involves a stock picking activity, where individual and institutional investors apply a set of environmental, social and economic criteria in order to select companies to invest in.
Community Investing	consists of direct investments in projects that benefit specific communities or constituencies, especially in economically disadvantaged areas. Usually taking the form of loans or equity investments that can be either at or below market rates, community investment in Canada includes micro-enterprise lending, community development venture capital, non-profit lending, co-operative development, lending for social or affordable housing, and other economically targeted investments, often made by

	pension funds or institutions. Community investment helps to link local investors, consumers and business – embodying the philosophy of "think globally, act locally." The aim is to help generate a high "social return" in the form of local job creation, the development of local enterprise, the provision of affordable housing and the empowerment of workers and consumers, while generally willing to accept a slightly lower financial return as a result (Social Investment Organization, "Fact Sheet #3: What is Community Investing?"). While positive screening entails investing through stock picking, community investing involves two interlinked components: financing and investing. The financing component consists of providing direct funding to community development projects or to businesses in low-income areas (as opposed to stock picking), and is accompanied by the investing component, which creates an expectation of monetary returns and social benefits arising from the financing activity. For example, Community Development Venture Capital (CDVC) Funds invest in businesses in underdeveloped and low-income communities. While lenders typically require businesses to begin repayment immediately on fixed payment schedules, CDVC funds invest cash in exchange for an ownership interest in the business. As part owners, the funds are highly involved in ensuring that the businesses succeed since the return on investment depends on that success. The funds seek to produce double bottom line benefits by investing in companies which promise both solid financial and solid social returns (GreenMoney Journal, "Socially Responsible Investing: Reaching New Heights – Community Development Venture Capital, from the CDVC Alliance", 2011).
Socially responsible lending	the process of issuing loans to borrowers selected on social screens or community economic development. It is typically done by institutions (VanCity Savings and Citizens Bank are the most prominent institutions involved in this activity), but it can also be done by individuals as part of a

	community investment strategy (Social Investment Organization, "Fact Sheet #1: What is Socially Responsible Investment?"). Socially responsible lending also exhibits a duality, consisting of a lending component and an investing component. The lending aspect generates benefits for borrowers by providing much needed cash flow, but as noted in the box above, repayments often begin immediately on fixed schedules. The investing aspect generates benefits for lenders, as loans are repaid with interest.
Integrating ESG considerations with traditional financial management	Integrating ESG considerations with traditional financial management to bring a larger perspective to investment management and selection. It leads to an emphasis on investment in ESG leaders, rather than just a reliance on financial factors alone (Social Investment Organization, "Fact Sheet #1: What is Socially Responsible Investment?").
Shareholder advocacy (Calvert Investments, "Sustainable and Responsible Investing: What is SRI?", 2010)	(Also referred to as proxy voting and corporate engagement) - the process of using shareholder influence to help bring about positive social and/or environmental change within corporations. This can include corporate engagement (communicating with management on particular issues), filing shareholder resolutions and using the threat of divestment (selling shares and discontinuing investment in a company) to bring about positive change (Social Investment Organization, "Fact Sheet #1: What is Socially Responsible Investment?"). While the other strategies described above, specifically, positive screening, community investing and socially responsible lending are based on driving change from the outside and before the investment decision has been made, this strategy is based on driving change from the inside, because shareholders are already invested in a company, and then attempt to initiate change through direct engagement with the company. Shareholder advocacy is often used in cases where investors have been long term shareholders of a company stock, and want to remain shareholders, but also want their investments to align with their values.

1.5 Research Focus – Corporate Sustainability Performance Assessment

Through the various types of RI strategies, (socially responsible) investors and financial analysts are looking for evidence of good corporate governance, greater transparency regarding a company's financial and non-financial performance, as well as the risks and opportunities associated with a company's social and environmental impacts, in order to support their investment decisions, because these factors can significantly influence a company's overall performance (Heemskerk, Pistoria, & Scicluna, 2002). The growing investor demand for greater corporate responsibility and transparency in communicating non-financial performance data is placing pressure on companies to report on their environmental, economic and social impacts and the various initiatives undertaken to mitigate negative impacts, by publishing annual sustainability reports and via other communication mediums, including company websites (Adams, Hill, & Roberts, 1998 as cited in Sweeney & Coughlan, 2008). This growing trend towards sustainability reporting within the corporate sector has in turn fueled the drive to go one step further, beyond just reporting, to undertake sustainability performance assessments, which provide an avenue for benchmarking the performance of companies either against their own goals, against peers within the same industry sector or even across multiple sectors. There is a fine line between SD reporting and SD performance assessment, such that good reporting is a necessary first step in the ratings process, because assessments often depend on the information from sustainability reports. Therefore, consistent reporting from year to year, and from company to company would improve the reliability of the ratings process itself. For instance, the United Nations' Global Compact, "which today stands as the largest corporate citizenship and sustainability initiative in the world — with over 7700 corporate participants and stakeholders from over 130 countries" (UN Global Compact, "Overview of the UN Global Compact", 2010) has been widely criticized because there is no assessment mechanism, rather, it relies on corporate self-reports (BusinessWeek July 12, 2004 as cited in Chatterji & Levine, 2006). Thus, sustainability performance assessments are a way of auditing companies on their environmental, social and economic performance, thereby closing the loop between simply

reporting on their activities to then being held accountable for their activities (Graafland, Eijffinger, & Smid, 2004).

To address the need for sustainability performance assessment at the corporate level, a growing number of ratings agencies are emerging globally. These firms offer a variety of services, including providing expert knowledge on sustainability trends within industry sectors, researching the sustainable development practices undertaken in the corporate sector, and developing proprietary frameworks or methodologies for screening, ranking and benchmarking the sustainability performance of publicly traded companies. The proprietary ratings and benchmarking tools are becoming increasingly complex, evolving from simply applying negative screens to eliminate companies in specific industries such as tobacco, weapons and nuclear power production, to a new generation of assessment tools that include the use of positive screens to promote the concept of sustainable development. The ratings agencies combine environmental, social and economic criteria with commercially-sensitive assessment methodologies to evaluate and rank the sustainability performance of companies, and identify "best of sector" companies based on their positive contributions to society and the environment (Dow Jones Sustainability Indexes, "Corporate Sustainability Assessment", 2009; Social Investment Organization, "Fact Sheet #1: What is Socially Responsible Investment?").

Within the capital markets, ratings agencies have partnered with index providers to launch a series of sustainability indexes, which represent groups of companies deemed to be among the sustainability leaders within their respective industries. For instance, the ratings firm, Sustainable Asset Management (SAM), has partnered with Dow Jones Indexes to publish and license the Dow Jones Sustainability Indexes (DJSI), (Sustainable Asset Management, "Sustainability Investing", 2010). A license is required for using the indexes as a benchmark or as the basis for financial products and funds (Dow Jones Sustainability Indexes, "Licensing", 2010). Similarly, the Financial Times Stock Exchange (FTSE) index company has collaborated with the ratings and research firm, Ethical Investment Research Service (EIRIS), to create the

FTSE4Good Index Series (FTSE, "FTSE4Good Index Series", 2010; FTSE, "EIRIS", 2010). Other prominent sustainability indexes include the Jantzi Social Index (JSI) and the Calvert Social Index, both of which apply specific ESG and sustainability criteria to determine whether companies qualify for inclusion in the respective indexes (Sustainalytics, "Indexes", 2010; Calvert Investments, "The Calvert Social Index", 2010).

Sustainability indexes are a subset of conventional stock market indexes, the latter of which track the performance of a specific group of stocks that represent a particular market or sector of the stock market (U.S. Securities and Exchange Commission, "Market Indices", 2007). An example of a conventional stock index, the Dow Jones Industrial Average (DJIA), consists of only 30 "blue chip" stocks of American companies from various sectors such as financial, computer and retail services, "but is considered a barometer of the entire U.S. stock market" (Bortolotti, 2009, p. 1; U.S. Securities and Exchange Commission, "Market Indices", 2007;). Other examples include: the NYSE Composite Index, which tracks the price movements of all common stocks listed on the New York Stock Exchange, (U.S. Securities and Exchange Commission, "Market Indices", 2007) and the S&P / TSX Composite Index, which tracks the stock prices of about 228 Canadian companies (Standard & Poor's, "S&P / TSX Composite", 2010). A key difference between conventional and sustainability indexes is that with the former, companies are selected to the index based on some financial criteria or market capitalization (where the market capitalization is the "value of a corporation, determined by multiplying the current market price of one share of the corporation by the total number of outstanding shares" (U.S. Securities and Exchange Commission, "Market Capitalization", 2007)), while with the latter, companies are selected for inclusion based on a set of ESG and other sustainability criteria.

The proliferation of ratings agencies has been complemented by various approaches for assessing corporate sustainability performance, as well as the emergence of a diverse array of sustainability indexes. The composition of the indexes (ie. which companies are included in or excluded from the index) is directly influenced by the ratings agencies, as the research,

evaluations and ensuing company rankings feed into the inclusion-exclusion criteria of the indexes. While drawing upon standardized frameworks and guidelines for sustainability reporting and performance assessment, including the Global Reporting Initiative (GRI), Ceres, the United Nations' Principles for Responsible Investing (UN PRI), and the expertise of the World Business Council for Sustainable Development (WBCSD), most ratings agencies have developed proprietary assessment methodologies for evaluating and ranking the sustainability performance of companies. Key distinguishing factors amongst these assessment frameworks are the ESG and sustainability criteria, as well as the weightings assigned to each criterion. Due to such variations in the approaches to assessing corporate sustainability performance, one company may end up with two or more different sustainability performance rankings depending on which ratings agency conducted the evaluation, with the potential for significantly different scores such that it leads to inclusion in one index but exclusion from another (Heemskerk, Pistoria, & Scicluna, 2002). Therefore, although two sustainability indexes may display similar objectives and characteristics, the group of companies included within one index may be significantly different from the other. For instance, in a study evaluating the environmental performance of 15 firms in the chemical sector, Delmas and Blass (2010) found that the ratings of companies varied significantly depending on the criteria or indicators used for the evaluation, and the weights assigned to each of the indicators. These observations motivate the following questions: What does this difference in performance rating mean for the socially responsible investor, and for the company being evaluated? If results vary from one ratings agency to another, and subsequently from index to index, how does one gauge the true sustainability performance of a company? Furthermore, as tools for guiding corporations towards sustainability become established global standards, what remains unclear is the extent to which these tools can effectively influence the assessment methodologies of the ratings agencies, and thereby push for greater consolidation among the various assessment approaches. This could in turn, improve the consistency among different sustainability indexes in representing companies with high track records in sustainable development and corporate (social) responsibility. During the course of this research, which commenced in early 2010, it became evident that

the assessment methodologies used in selecting companies to the sustainability indexes are often partially or entirely classified as commercially-sensitive information. Moreover, no studies have been found that compare the tools for assessing sustainability against the tools for guiding sustainability practices, focused specifically at the corporate level. Therefore, this research aims to shed light on the nature of corporate sustainability assessment as practiced within the capital markets, by comparing and contrasting the assessment frameworks used in selecting companies to the sustainability indexes.

The primary research question states as follows:

To what extent do the stock market sustainability indexes, (henceforth referred to simply as sustainability indexes), represent the sustainability performance of publicly traded companies?

This research will undertake a comparative analysis of the sustainability assessment frameworks used in selecting companies for inclusion in the following sustainability indexes: Dow Jones Sustainability Indexes, FTSE4Good, and the Jantzi Social Index. The comparisons will specifically focus on the sustainability criteria against which companies are evaluated, as well as the weightings assigned to each criterion. The analysis will seek to identify similarities and differences among the sustainability criteria, and to understand the overall philosophies and rationales behind the assessment frameworks of the indexes. Furthermore, the analysis will examine the extent to which the concept of sustainability or sustainable development, as established in the existing body of literature, is reflected in these assessment frameworks. Finally, the analysis will examine the extent to which the theoretical perspectives on sustainability assessment are applied within the assessment frameworks of the sustainability indexes, and more broadly, within the capital markets. In carrying out the comparative analysis, this research will implicitly consider the indexes' objectives and perspectives regarding the concept of sustainable development, and the extent to which those

perspectives influence the sustainability criteria and weightings used in evaluating corporate sustainability performance.

In addition to the primary research question stated above, a secondary question to be addressed in this research states as follows:

To what extent and in what ways are the approaches for assessing corporate sustainability, (as carried out in the context of the sustainability indexes) similar and different from the tools that seek to provide guidance on sustainability reporting and advance sustainability practices within the corporate sector? In other words, to what extent do the two sets of tools align?

Tools for guiding organizations on sustainability, specifically, the Global Reporting Initiative (GRI), and the International Organization for Standardization's ISO 26000 standards will serve as the benchmark instruments against which the assessment frameworks of the sustainability indexes are compared. The comparative analysis will specifically focus on the sustainability criteria used in the two sets of tools (ie. the sustainability indexes and the guidance tools).

The Global Reporting Initiative (GRI) is a network-based organization that has developed a widely used sustainability reporting framework, which sets out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance (Global Reporting Initiative, "About GRI"). The ISO 26000, published in 2010, is an international standard that aims to encourage voluntary commitment to social responsibility and provide guidance on concepts, definitions and methods of evaluating corporate social responsibility (International Organization for Standardization, "Social Responsibility", 2008). This secondary research question thus aims to address the extent of consistency between tools for assessing sustainability and tools that provide guidance on sustainability, particularly with respect to operationalizing (or implementing) corporate sustainability practices.

As the field of sustainability assessment, particularly corporate sustainability assessment is still at a nascent stage, this study is exploratory in nature, seeking to contribute to and advance the existing body of knowledge on sustainability assessment practices and gain insight into the challenges associated with sustainability assessment at the corporate level. As an exploratory study, this research seeks to develop a greater understanding of the extent to which the capital markets assess the sustainability performance of companies, the degree of variation and commonality amongst the different sustainability assessment frameworks, and the degree to which sustainability guidance tools influence the assessment methodologies.

1.6 Rationale for Research

As businesses and multi-national enterprises extend their spheres of operation and influence into diverse societies and vast geographic regions, taking responsibility for environmental, economic and social impacts are becoming imperative to creating long-term business success. As more and more companies seek to integrate corporate social responsibility and the concept of sustainable development into core business activities, approaches to measuring corporate performance must also adapt beyond considering only financial performance, to also include assessing performance in "issues which may be outside the direct control of the organization, that are difficult to characterize and often are based on value judgements rather than hard data" (Keeble, Topiol, & Berkeley, 2003, p. 150). While approaches to sustainability assessment and measurement of progress towards sustainability have been extensively researched, the predominant focus has been at the national, regional and community levels, in order to gain visibility and insight into the sustainability profiles of countries, regions and communities. Comparatively less attention has been given to understanding the nature of sustainability assessment at the corporate level, and the various approaches to operationalizing the concept of sustainable development within the business

context, thereby enabling corporations to take action towards sustainable development by monitoring and managing the environmental, economic and social impacts of corporate activities. A number of studies confirm this observation, including: Labuschagne, Brent, and van Erck (2005), Veleva and Ellenbecker (2000), and Tyteca (1998). Labuschagne, Brent, and van Erck (2005) note that "since the United Nations and national governments worldwide have been the driving force behind sustainable development, most frameworks… developed to assess sustainability have subsequently focused on a national, regional or community level… Far less work has been done on a company level to develop and implement sustainability performance assessment practices" (p. 374). Furthermore, as the topic of corporate sustainability assessment has been under-researched in the past, and is only recently emerging as a prominent field of inquiry, studies that specifically examine the assessment methodologies of ratings and benchmarking tools used in stock market sustainability indexes were rare or non-existent during the course of this research. A survey of the academic and industry literature on corporate sustainability assessment revealed two recent studies, which also carried out comparisons of a variety of ratings and benchmarking tools, including some prominent sustainability indexes and / or their associated assessment frameworks. The two studies are:

(1) Analysis and Comparison of Methodologies for Corporate Sustainability Assessment – by L. Kinderyte, published in 2008; and
(2) Rate the Raters - by consultancy firm SustainAbility, which began the study in 2010, with projected completion date of early 2011.

While those studies also compare some of the same indexes as proposed in this study, such as the DJSI and FTSE4Good, the studies either make only high level comparisons of the overall approach (as in Kinderyte, 2008), or address a range of other pertinent issues, such as the poor transparency in ratings methodologies, the role of technology in the ratings game, and the conflicts of interest that arise from organizations that offer other services, in addition to ratings (as in SustainAbility, 2010). This study is distinct from the two studies identified

above, in three significant ways: (i) it examines the extent to which the concept of sustainability or sustainable development is reflected in the assessment frameworks used in the sustainability indexes; (ii) it draws upon theoretical perspectives of sustainability assessment to analyze the extent to which these perspectives are applied within the sustainability indexes, and more broadly, within the capital markets; and (iii) it examines the extent of influence that tools which provide guidance on corporate sustainable development have upon tools for assessing corporate sustainability. Therefore, this research aims to address this specific knowledge gap, and contribute to the existing the body of literature on corporate sustainability assessment.

Another underlying basis for this research is that an increasing group of stakeholders are demanding information on business activities which are relevant to financial performance, including investors seeking evidence of strong corporate governance, sound business strategy and effective risk management, customers asking about the origins of products, and employees looking to work for companies that visibly account for their responsibilities to society and the environment (Keeble, Topiol, & Berkeley, 2003). Furthermore, institutional investors and the "financial markets are demanding more and more information on companies' environmental and social performance because there is increasing evidence that good performance on these fronts translates into better overall performance" (Heemskerk, Pistoria, & Scicluna, 2002, p. 9). The 2002 study by Heemskerk, Pistoria, & Scicluna indicated that institutional investors, such as pension funds in major European and North American markets, were making investment decisions by taking into account the sustainability evaluations of companies. It is not certain, however, to what extent investors have followed through with this claim in practice, if at all. Nevertheless, in the wake of the recent global financial crisis which started in 2007, it seems that institutional investors are in fact integrating ESG analysis into investment decisions (Keefe, "Sustainable Investing and the Financial Crisis: How Long-Term Investing Can Replace Short-Term Bubbles", 2008). The following examples reinforce this claim: 75% of German institutional investors cited risk management as the main reason for adopting sustainable investment criteria; retail investors

in the United Kingdom have more money in green and ethical funds than ever before; and 70% annual growth in socially responsible investment assets in France (Grene, "Sustainable Investment Gains as Investors Seek Security", 2010). These investors use ESG information in a number of ways, including: to identify risk and return potential on investments, evaluate management quality, engage with companies on particular social and environmental issues, and develop customized investment portfolios (Canadian Institute of Chartered Accountants, 2010). This has sparked the need for companies to understand the breadth of responsibilities and the range of criteria upon which they are being evaluated by the investment community and the wider society with regard to sustainable development, in order to ensure long-term success. Moreover, as the number and variety of sustainability assessment frameworks proliferate in the capital markets and continue to grow in complexity, there is a need for investors to understand the key differences and similarities among the assessment methods, in order to facilitate more informed investment decision-making. To date, the assessment process has been closely guarded by ratings agencies for competitive advantage. Therefore, publishing information on the assessment process and frameworks will assist the companies being evaluated and the (socially responsible) investment community.

Finally, "sustainability assessment is being increasingly viewed as an important tool to aid in the shift towards sustainability" (Pope, Annandale, & Morrison-Saunders, 2004, p. 595). As such, it plays a significant role in driving companies towards integrating the concept of sustainable development into business practices. Furthermore, in a study examining the effects of social measures designed to evaluate the performances of individuals and organizations in response to increased demands for transparency and accountability, Espeland and Sauder (2007) found that "people change their behavior in reaction to being evaluated, observed, or measured" (p. 1). This finding may very well extend to the area of corporate sustainability assessment, suggesting that when companies are evaluated on their performance by a third party, they will often strive to be seen in a positive light by the evaluator, thus taking up the necessary initiatives in order to meet the evaluation criteria. Moreover, as the popular adage, "What gets measured gets managed" (Epstein, 2008, p.

142), the capability to measure an aspect or a subset of a larger entity suggests that one can discern the degree of progress with respect to that entity, thereby facilitating the possibility to address deficits and make improvements. Correspondingly, by understanding the concept of sustainable development as it applies to business practice, the specific criteria or indicators used to measure corporate sustainability performance, and the methods and protocols that define how to measure progress against the criteria, companies can better position themselves to address the negative impacts of corporate activities, thereby creating and enhancing organizational value beyond those benefits, which at present, are exclusively captured through financial metrics. This research therefore contributes towards a better understanding of how sustainability assessment methodologies can help steer companies towards greater environmental, economic, and social stewardship within their spheres of operation.

Chapter 2: Literature Review

2.1 Introduction

This research centers on the nature of sustainability assessment as it is practiced within the corporate sector. As such, it requires the consideration of a number of key concepts which form the foundation or backbone for this topic, and an examination of how these concepts relate back to the central topic of study. The body of literature reviewed in this chapter provides insight into the concept of sustainable development (or sustainability), as it is commonly understood at a global scale, followed by particular reference to the business context. Literature on the history and evolution of sustainability assessment is also reviewed, followed by a critical analysis of the various frameworks for sustainability assessment, and the challenges associated with assessing and reporting on sustainability performance, both from a broad perspective and in the specific context of the corporate sector. While an extensive body of literature touches on the aforementioned foundational concepts and on sustainability assessment in a general context, a comparatively smaller body of work was found that specifically focuses on sustainability assessment in the business context.

2.2 Interpretations of Sustainable Development

It has been argued that "how one defines sustainability largely determines how one goes about assessing it" (Ness, Urbel-Piirsalu, Anderberg, & Olsson, 2007, p. 506) and that assessing for sustainability "necessarily requires a clear vision of what sustainability means" (Pope, Annandale, & Morrison-Saunders, 2004, p. 595). Consequently, an understanding of the concept 'sustainable development' or 'sustainability' is fundamental to examining the central topic of sustainability assessment. According to Gibson (2001), the terms 'sustainable development' and 'sustainability' "have been used differently and there has been much debate about whether and how the usages have differed. But these debates are unresolved

and there is not even much agreement on which term is broader" (p. 9). As such, in Gibson's work (2001) and in the majority of the sustainability and sustainability assessment literature reviewed for this thesis, both terms are regarded as synonymous concepts and used interchangeably. Following in this lead, the terms sustainable development and sustainability are used synonymously, as applicable in this thesis.

The term sustainable development or sustainability, was first brought to worldwide attention chiefly through the work of the World Commission on Environment and Development (WCED, also known as the Brundtland Commission) (Gibson, 2001) in its 1987 report "Our Common Future", defining the concept as: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, "Our Common Future", 1987). Since then, alternative definitions and diverse interpretations of sustainable development and sustainability have been presented through international debate. Rowlands (2001) points out that while many of the definitions and interpretations of sustainability are presented in different forms, including ' 'circles', 'legs to a stool', 'principles', 'goals' or 'indicators', these are often unified by a common focus on three pillars or themes – namely, environment, economy and society.

Holmberg and Sandbrook (1992) present an interpretation of sustainable development based on 3 intersecting circles, consisting of the 'biological system', the 'economic system' and the 'social system', and claim that it involves a process of "trade-offs between (and within) [these different] systems" (p. 25). Furthermore, they make note of the element of *intergenerational equity* as a powerful and intuitive idea underlying the concept of sustainability, stating that, "our development is sustainable only to the extent that we can meet our needs without prejudice to those of future generations" (Holmberg & Sandbrook, 1992, p. 23).

Another interpretation conceptualizes sustainable development using the metaphor of 'legs to a stool' or the 'three-legged stool', thought this is somewhat contested. "If one of the legs is missing, the stool is not going to work, so we need to be sure all three legs are in good

shape" (Willard, 2002, p. 5)." This interpretation suggests that each leg of the stool - environmental stewardship, economic prosperity and social responsibility – must be present and given equal weight in order to advance sustainability. Conservation biologists, Dawe and Ryan (2003), however, claim that this is a faulty model of sustainability. "Like the current neoclassical economic model that has no connectivity to the biosphere (Daly 1996)—and thus places no value on biodiversity or the ecosystem functions that enable life itself— this model fails to encourage us to recognize our place within the biosphere… humanity can have neither an economy nor social well-being without the environment. Thus, the environment is not and cannot be a leg of the sustainable development stool. It is the floor upon which the stool, or any sustainable development model, must stand. It is the foundation of any economy and social well-being that humanity is fortunate enough to achieve. Therefore, it follows that the environment must be considered at a different, more significant level than either the economy or our social well-being because it is the source of both these necessities to humanity" (Dawe & Ryan, 2003, p. 1459).

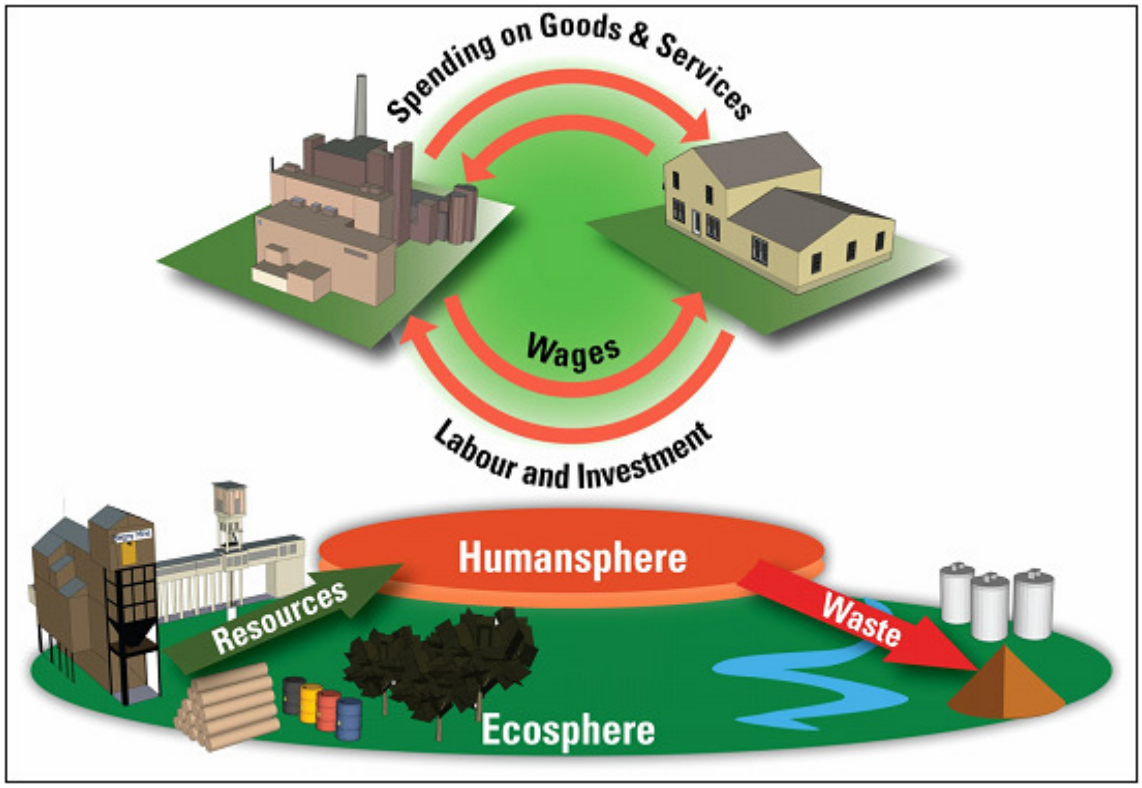
Using the 'principles' approach to defining sustainability, The Natural Step Framework advocates four system conditions for a sustainable society, stating that, "In a sustainable society, nature is not subject to systematically increasing:

(1) concentrations of substances extracted from the earth's crust
(2) concentrations of substances produced by society
(3) degradation by physical means
(4) and, in that society, people are not subject to conditions that systemically undermine their capacity to meet their needs" (The Natural Step, "The Four System Conditions").

While the first three conditions clearly emphasize the ecological (or environmental) aspect of sustainability, acknowledging human action as the primary cause of rapid changes in nature, the fourth system condition touches on the social and economic aspects of sustainability. Figure 4 depicts the relationship between industrial development and ecological

responsiveness, forming a broad interpretation of the four system conditions for sustainability advocated by The Natural Step Framework.

Figure 4. An Interpretation of The Natural Step Framework for Advancing Sustainability which Depicts the Relationship Between Industrial Development and Ecological Responsiveness
(Source: Adapted from The Natural Step Framework)



Applying a 'goals' oriented approach to defining sustainability, the U.S. National Research Council (1999) has stated that: "the primary goals of a transition toward sustainability over the next two generations should be to meet the needs of a much larger but stabilizing human population, to sustain the life support systems of the planet, and to substantially reduce hunger and poverty" (p. 31). Once again, the inter-generational component of sustainable development is evident in this definition, and is a critical aspect in setting goals, where it is

often necessary to express the time-horizon over which the objectives are to be achieved. Furthermore, the environmental element is evident by identifying what is to be sustained (ie. the life support systems of the planet). Meanwhile, the social and economic elements are apparent by identifying what is to be developed (ie. meeting the needs of the human population, and reducing hunger and poverty).

In terms of defining sustainability through the use of 'indicators', a number of organizations and initiatives advocate this approach as a way of operationalizing the concept of sustainability, because indicators can provide explicit criteria for driving action and enable the monitoring of progress toward sustainability. For instance, the Pembina Institute endorses the Genuine Progress Indicator (GPI), which defines sustainability in terms of 51 environmental, social and economic indicators, and is generally used to evaluate sustainability performance at the regional and community levels (Pembina Institute, "Genuine Progress Indicator"). Similarly, the Global Reporting Initiative (GRI) has developed a set of sustainability indicators in the areas of environment, economy and society aimed for the corporate sector. The Ecological Footprint is another sustainability indicator which measures how fast a human population consumes resources and generates waste compared to how fast nature can absorb that waste and generate new resources (Global Footprint Network, "Footprint Basics – Overview", 2010). This measurement framework can be applied at various scales, including global, national, city or community level, and for businesses.

Still, other interpretations of sustainability touch on the three pillars of environment, economy and society, but also emphasize the inter-linkages and interdependencies between these pillars. Gibson (2001) states that, "sustainability considerations clearly include socio-economic as well as biophysical matters and are especially concerned with the interrelations between and interdependency of the two. That means not just that human as well as ecological [or environmental] effects must be addressed but also that these two must be considered as parts of large complex systems" (p. 3).

Turning to the concept of sustainable development as it is understood within the business context, the 'triple bottom line' (TBL) is an often cited phrase. Coined by John Elkington in 1994, "the TBL agenda focuses corporations not just on the economic value that they add, but also on the environmental and social value that they add – or destroy" (Elkington, 2004, p. 3). Thus, "the TBL can be considered an interpretation of sustainability that places equal importance on environmental, social and economic considerations in decision-making" (Pope, Annandale, & Morrison-Saunders, 2004, p. 597). Another definition expresses business sustainability as "adopting business strategies and activities that meet the needs of the enterprise and its stakeholders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future" (International Institute for Sustainable Development, Deloitte & Touche, & World Business Council for Sustainable Development, 1992, p. 7). Extending the societal notion of sustainable development to the level of the firm, Bansal (2005) argues that corporate sustainability is achieved only at the intersection of the three principles of environmental integrity, social equity and economic prosperity, and "organizations must apply these principles to their products, policies, and practices in order to express sustainable development" (p. 199). Futhermore, Kinderyte (2008) brings into discussion the idea of corporate social responsibility (CSR) as "an entry point for understanding sustainable development issues and responding to them in a firm's business strategy" (p. 66), along with Hohnen (2007) stating that, "CSR is understood to be the way firms integrate social, environmental and economic concerns into their values, culture, decision making, strategy and operations in a transparent and accountable manner and thereby establish better practices within the firm, create wealth and improve society" (p. 4). In providing guidance on social responsibility to organizations (within and outside the business world) and industry sectors, the International Organization for Standardization (ISO) notes that, "the essential characteristic of social responsibility is the willingness of an organization to incorporate social and environmental considerations in decision-making and

be accountable for the impacts of its decisions and activities on society and the environment… [through] transparent and ethical[1] behaviour that:
(1) contributes to sustainable development,
(2) takes into account the interests of stakeholders,
(3) is in compliance with applicable law and consistent with international norms of behaviour, and
(4) is integrated throughout the organization and practised in its relationships" (International Organization for Standardization, 2009, p. 7).

A common theme underlying all of the interpretations of business sustainability (and CSR) discussed above, is that firms are responsible for the environmental, economic and social impacts of corporate activities and decisions. This in turn, affirms that businesses have a fiduciary responsibility to a broad range of stakeholders within society, including shareholders, employees, customers, and the local communities in which businesses operate. Another common element among the various interpretations is the emphasis on considering the inter-dependencies and inter-linkages among the environment, economy and society in a holistic manner, rather than focusing on each aspect in isolation. Moreover, implicit in these notions of business sustainability is the recognition that sustainable development must be integrated into the core of the company, and in all aspects of business interaction, from its organizational values and at the executive levels of decision-making, down to the day-to-day activities. Finally, the concept of business sustainability is further unified with the societal notion of sustainable development through an emphasis on intergenerational equity, where firms are not only responsible to present stakeholders but must also anticipate the needs of future generations of stakeholders in corporate decision-making.

[1] As per the ISO 26000 standard, ethical behaviour is characterized by honesty, equity and integrity, is in accordance with accepted principles of right or good conduct in the context of a particular situation, and is consistent with international norms of behaviour such as those laid down in the Universal Declaration of Human Rights.

2.3 Approaches and Frameworks for Sustainability Assessment

In the introductory chapter of this thesis, it was noted that sustainability assessment can be a means to determine progress on the path towards sustainability, and to understand where society stands in relation to where it wants or needs to get to. Yet, the notion of sustainability or sustainable development "means different things to different people" (Heemskerk, Pistoria, & Scicluna, 2002, p. 28) and is a "difficult concept to define in a way that is meaningful and sufficiently practical to allow it to be operationalised" (Pope, Annandale, & Morrison-Saunders, 2004, p. 598) "…the difficulty arises because sustainability is a concept like 'love', 'hope' or 'freedom', and as such tend to remain 'fuzzy' until applied in a specific context" (Government of Western Australia, 2002 as cited in Pope, Annandale, & Morrison-Saunders, 2004, p. 598). Against this backdrop, sustainability assessment is an emerging concept that attempts to deal with the question of how to measure sustainability (Waheed, Khan, & Veitch, 2009). As with the ever-changing and varied understanding of sustainability, the concept of sustainability assessment is also evolving, having been interpreted and applied in various contexts in the academic literature. As with the greater number of studies discussing sustainability in broad terms compared to those studies addressing sustainability in the business context, the majority of literature on sustainability assessment tends to focus at the general societal or national levels, with relatively fewer studies touching on assessment within the corporate context.

The theory of sustainability assessment has mainly evolved from the domains of environmental impact assessment (EIA), and more recently, strategic environmental assessment (SEA) (Pope, Annandale, & Morrison-Saunders, 2004; Sheate et al., 2001, 2003; Devuyst, 2000; Ness, Urbel-Piirsalu, Anderberg, & Olsson, 2007), and therefore, it is often considered to be "the next generation of environmental assessment" (Sadler, 1999, as cited in Pope, Annandale, & Morrison-Saunders, 2004, p. 598)(Pope and Annandale 2004). Marsden and Dovers (2002) indicate that there are two schools of thought regarding the relationship between environmental assessment processes and sustainability. In one case, it

is suggested that EIA and SEA processes serve as a basis which can be further extended to encompass broader sustainability concerns that include social and economic considerations, in addition to environmental ones (Marsden and Dovers, 2002; Gibson, 2001; Verheem, 2002; Devuyst, 2000). Gibson (2001) points out that, ‘‘environmental assessment processes. . . are among the most promising venues for application of sustainability-based criteria. They are anticipatory and forward looking, integrative, often flexible, and generally intended to force attention to otherwise neglected considerations’’ (p. 3), but also acknowledges that, ‘‘environmental assessments are not the only vehicles for specifying sustainability principles, objectives and criteria’’ (p. 26). In the alternate case, EIA is perceived to directly contribute to sustainability, reflecting the belief that “environmental impacts are at the core of sustainability concerns’’ (Sadler, 1999, as cited in Pope, Annandale, & Morrison-Saunders, 2004, p. 598) and ‘‘integrating the environment into strategic decision-making is an essential pre-requisite for moving towards sustainable development’’ (Sheate et al., 2001, p. 5). This view corresponds to a ‘deep green’ sustainability model, which is depicted as three concentric circles, with the inner representing the economy, the middle representing society and the outer representing ecology [or the environment] (Gibson, 2001). According to the ‘deep green’ model, the source and sink functions provided by natural resources are finite, and sustainability therefore implies living within the limits of natural systems (Sadler, 1999, as cited in Pope, Annandale, & Morrison-Saunders, 2004).

Two approaches to sustainability assessment, which are derived from EIA and SEA processes, are termed, EIA-driven integrated assessment and objectives-led integrated assessment, respectively, (Pope, Annandale, & Morrison-Saunders, 2004). Although these approaches were developed primarily for the purposes of assessing sustainability at the community or regional levels, they offer critical lessons which can be extended to the corporate context.

EIA-driven integrated assessment “aims to identify social and economic impacts of a proposal (in addition to traditional environmental impacts), and to compare these impacts with baseline conditions… to determine whether or not the impacts are acceptable” (Pope,

Annandale, & Morrison-Saunders, 2004, p. 601-2). The key objectives of this approach are to: "identify mitigation measures through which adverse impacts might be minimised or avoided" (George, 2001, p. 96), and "to ensure that impacts are not unacceptably negative overall, meaning that the guiding acceptability criterion for a proposal is that it does not lead to a less sustainable outcome" (Pope, Annandale, & Morrison-Saunders, 2004, p. 602). While in theory this approach can allow for greater transparency in examining the social and economic implications of proposals (Pope, Annandale, & Morrison-Saunders, 2004), a drawback found in practice is that jurisdictions tend to conduct three separate assessment processes to account for the environmental, economic and social impacts of projects or proposals, (Lee, 2002, as cited in Pope, Annandale, & Morrison-Saunders, 2004) rather than implementing a truly integrated form of assessment that considers the interactions and interdependencies among the three pillars of sustainability (George, 2001). The decoupling of assessment processes may lead to an increased occurrence of conflicting goals, while simultaneously reducing the likelihood of reconciling any conflicts, effectively weakening the possibilities for integrated assessment. Issues may become compartmentalized and consequently dealt with in silos, such that in addressing one particular issue, the resulting impacts on interconnected issues may be inadequately considered or wholly neglected.

Another significant limitation of the EIA-driven integrated assessment approach relates to 'trade-offs' between the triple bottom line categories, such as the risk of environmental standards being traded off against socio-economic factors. (Sheate et al., 2003; Jenkins, Annandale, & Morrison-Saunders, 2003; Gibson, 2001). With regards to the capital markets, the pursuit of healthy environmental and socio-economic conditions by the corporate sector would serve in their best interests, but economic growth is quite often prioritized over efforts to improve environmental and social conditions. Even if the likelihood of win–lose scenarios can be reduced by incorporating minimum acceptability thresholds into the TBL model, and requiring that any initiative at least meets these minimum thresholds, the possibility still exists that ''beyond these boundaries, one set of criteria are either unduly promoted or

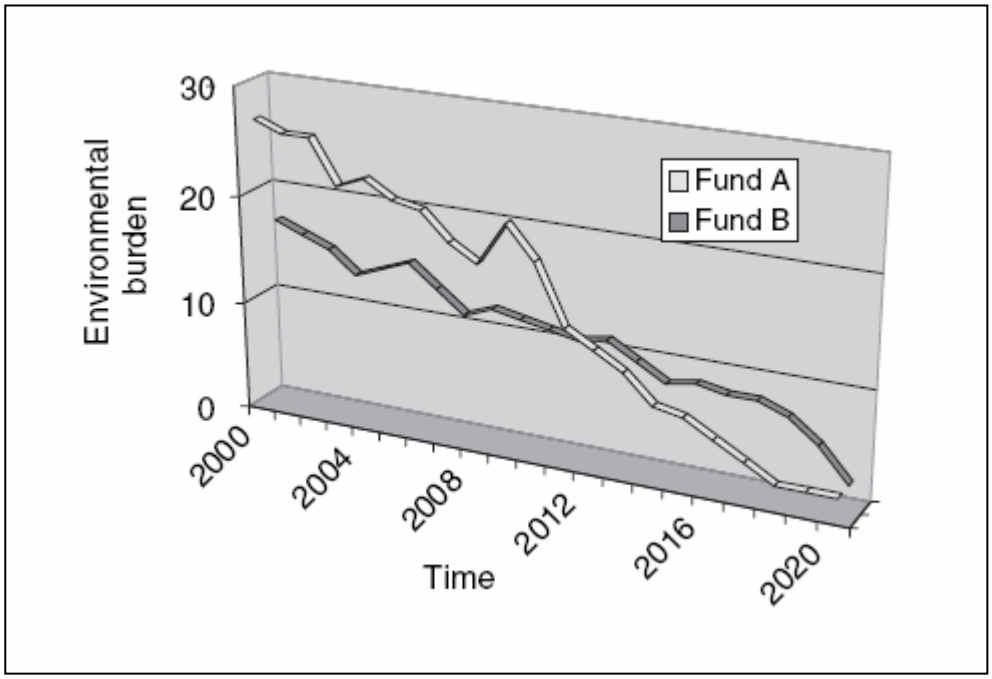
unduly discounted against the others'' (Sadler, 1999, as cited in Pope, Annandale, & Morrison-Saunders, 2004, p. 604).

Finally, as with traditional EIA, the integrated assessment model is "defined by reactivity, and tends to be 'applied' after a proposal has already been conceptualised" (Pope, Annandale, & Morrison-Saunders, 2004, p. 601). Thus, it reflects an ex-post assessment model, in which a project or proposal is assessed based on the impacts that arise *after* its implementation (Pope, Annandale, & Morrison-Saunders, 2004), or is based on examining past performance alone (Koellner, Weber, Fenchel, & Scholz, 2005). Consequently, this may limit or even prevent any scope for evaluating the potential for future desired outcomes or sustainable states, a priori. On the other hand, Ness, Urbel-Piirsalu, Anderberg, and Olsson (2007) consider impact assessment tools such as EIA as ex-ante, suggesting that these types of tools are used for predicting future outcomes. Regardless of whether the particular approach is classified as ex-post or ex-ante, the more significant point to be noted is that approaches to sustainability assessment are increasingly beginning to incorporate considerations about potential future performance rather than being based exclusively on past performance (Koellner, Weber, Fenchel, & Scholz, 2005). The temporal dimension, particularly focusing on ex-ante considerations, is critical in assessment approaches developed with the corporate sector in mind, because "investors… are looking for some combination of (1) accuracy in summarizing past performance, and (2) careful evaluation of current managerial actions likely to influence future environmental [as well as social and economic] performance" (Chatterji, Levine, & Toffel, 2009, p. 127). Investment decisions are therefore significantly influenced by the potential for future success. Koellner, Weber, Fenchel, & Scholz (2005) elaborate further on the importance of considering the time perspective in sustainability ratings, and address the issue of whether to assess current sustainability performance or projected future performance. The outcome of a sustainability performance assessment is strongly dependent on the time perspective chosen (Koellner, Weber, Fenchel, & Scholz, 2005), as illustrated through the following example. From Figure 5, looking at the year 2008 for instance, fund A had a higher environmental burden (eg. carbon dioxide (CO_2) emissions) than fund B. If,

however, the potential for improvement is higher in A, then over time, its burden can diminish below that of B (ie. the cumulative performance is represented by the integral over time, or equivalently, the area under each performance curve). Therefore, consistency over time is an important decision criterion, and combining past performance and projected future performance enhances the sustainability performance assessment (Koellner, Weber, Fenchel, & Scholz, 2005).

Figure 5. Environmental Burden of Funds A and B as a Function of Time and the Diminishing Environmental Burden of Fund A Over Time Due to Fund A's Higher Potential for Improvement

(Source: Koellner, Weber, Fenchel, & Scholz, 2005, p. 63)



Turning to the objectives-led integrated assessment approach, Pope, Annandale, & Morrison-Saunders (2004) describe it as, "a desire to achieve a particular vision or outcome defined by integrated environmental, social and economic objectives... [and thus] reflects a concept of sustainability as a goal, or series of goals, to which society is aspiring" (p. 604). In contrast

with EIA-driven integrated assessment, which focuses on minimizing negative impacts within the three pillars of environment, economy and society, the objectives-led approach goes further, to focus on evaluating the extent to which a proposal contributes to the goals or vision of sustainability (Pope, Annandale, & Morrison-Saunders, 2004). Gibson (2001) also points out that, "adopting contributions to sustainability as a key objective and test in environmental assessment clearly implies that minimization of negative effects is not enough. Assessment requirements must encourage positive steps — towards greater community and ecological sustainability, towards a future that is more viable, pleasant and secure" (p. 3). Pope, Annandale, and Morrison-Saunders (2004) outline a number of advantages to the objectives-led approach over the EIA-driven model. Firstly, because this approach "requires clearly defined environmental, social and economic objectives against which the assessment can be conducted" (Pope, Annandale, & Morrison-Saunders, 2004, p. 605), and because it "would require agreement on a broad set of objectives reflecting the needs of all stakeholders at the commencement of the process [or project proposal]" (Pope, Annandale, & Morrison-Saunders, 2004, p. 605), it is also "more likely to result in 'win–win win' outcomes between the three pillars of sustainability, and is therefore less likely to generate conflicts and trade-offs" (Pope, Annandale, & Morrison-Saunders, 2004, p. 605). Furthermore, "given the prevalent view that sustainability is about positive change rather than simply minimising the negative [impacts], objectives-led integrated assessment clearly has more potential to contribute to sustainability than EIA-driven integrated assessment" (Pope, Annandale, & Morrison-Saunders, 2004, p. 605). Gibson (2001) substantiates this argument, noting that, ''in most jurisdictions, the essential immediate effect of a shift to sustainability-based criteria is an expansion of central concern from avoidance of significant adverse effects to expectation of positive contribution to the achievement of sustainability objectives, however vaguely specified'' (Gibson, 2001, p. 25). Even so, an objectives-led approach does have its limitations, one of which is that because strategic objectives can often conflict with each other, it therefore requires that objectives be compatible and complementary with each other (George, 2001). This approach reflects an ex-ante model, in which a project or proposal

is assessed based on its potential to contribute to the defined goals of sustainability *before* its actual implementation (Pope, Annandale, & Morrison-Saunders, 2004).

Pope, Annandale, & Morrison-Saunders (2004) classify both EIA-driven and objectives-led integrated assessments as 'direction to target' approaches, meaning that they ask the question: Are we heading down the correct path or in the right direction in order to achieve sustainability? While the EIA-driven approach attempts to determine if the actions taken are acceptable and improve upon baseline conditions, the objectives-led approach does go one step further to define the sustainable state through a series of goals and evaluating the extent to which the actions taken, contribute towards the stated goals. It is argued, however, that these approaches do not go far enough to make a significant contribution to sustainability, as "both approaches avoid attempting to define a condition of sustainability that a proposal should be required to meet" (Pope, Annandale, & Morrison-Saunders, 2004, p. 606). In essence, these approaches fail to ask the questions: Where do we stand in relation to a sustainable state? And alternatively, how far are we from achieving sustainability? (Pope, Annandale, & Morrison-Saunders, 2004) These questions essentially seek to assess the 'distance from target', and thus require due consideration in addition to 'direction to target'. ((Fuller, 2002; Sadler, 1999), as cited in Pope, Annandale, & Morrison-Saunders, 2004).

Based on the concept of 'distance from target', Pope, Annandale, and Morrison-Saunders (2004) introduce an approach to assessing sustainability termed, 'assessment for sustainability', and define it as, "a process to determine whether or not a particular proposal, initiative or activity is, or is not, sustainable, and therefore effectively becomes a yes/no question. Instead of asking: Are we heading in the right direction? The alternative process allows us to ask: Are we there?... This notion of 'assessing for sustainability' implies that sustainability is a societal state, or a series of societal states, with particular characteristics or conditions, defined by sustainability criteria… One of the main implications for this conception of sustainability assessment is that it necessarily requires a clear vision of what

sustainability means. Further, this vision needs to be translated into context specific sustainability criteria. Sustainability criteria should effectively separate sustainable outcomes from unsustainable ones for the purposes of the assessment process, which would then ask whether or not these criteria have been met" (p. 607, 9).

The notion of context is a critical element in the process of sustainability assessment, and one which a number of studies and organizations have touched upon, including: Pope, Annandale, and Morrison-Saunders (2004), Heemskerk, Pistoria, and Scicluna (2002), and the Global Reporting Initiative (2006). Context, in this instance, is interpreted as taking into consideration the following questions (Heemskerk, Pistoria, & Scicluna, 2002; Global Reporting Initiative, 2006; Pope, Annandale, & Morrison-Saunders, 2004):

(1) What is a sustainable state in light of the particular geographical and cultural circumstances, and in relation to the spatial (regional, national, corporate, etc.) and temporal (years, decades, etc.) scales?
(2) Where do we currently stand in relation to where we want to get to?

For instance, according to the GRI's guidelines on sustainability reporting, the sustainability performance (of an organization) should be expressed in relation to the broader concepts of sustainability, by considering the performance of the organization "in the context of the limits and demands placed on environmental or social resources at the sectoral, local, regional, or global level… Reporting only on trends in individual performance (or the efficiency of the organization) will fail to respond to the underlying question" (Global Reporting Initiative, 2006, p. 11) [of how an organization positively or negatively impacts the economic, environmental and social conditions within a particular spatial scale].

To provide another example, assessing the sustainability of a community or a business by tracking progress year over year can provide valuable information as to whether or not improvements are taking place from one year to the next. If, however, there is no defined

'target' or defined state of sustainability, then it is impossible to compare the current state to the desired state and make an assessment of whether or not one is moving closer to or further away from sustainability. The importance of context becomes even more explicit in the following example. For instance, in water-intensive industries such as steel and textiles production, companies are often evaluated on the level of exposure to water related risks, and how these risks are managed. Therefore, companies within the same industry but located in different regions (eg. water rich nation of Canada versus drought prone areas of India) could face different water constraints. In this case, geographical context becomes an important factor in the evaluation.

Apart from the theoretical perspectives on sustainability assessment discussed above, an approach prominently referred to when speaking of sustainability assessment in the capital markets is known as 'best of sector' or 'best in class'. This approach entails rating the sustainability performance of a company in relation to the performances of other companies within the same industry sector. The approach involves a benchmarking activity, in which one company is selected as an industry leader in sustainability performance, and all the other companies in the sector are subsequently compared and ranked against the 'best of sector'. Thus, the sustainability assessment and ranking of any individual company is made in relation to the performance of other companies within the same sector. The main advantage of this approach is that companies are ranked only with respect to performance within their industry sectors, rather than competing across all sectors. This allows for consideration of sector specific issues in the assessment, thus improving the validity of the assessment itself. Furthermore, by evaluating companies within their respective sectors, this approach encourages companies in industries deemed controversial by many socially responsible investing standards, such as tobacco, mining, nuclear power generation and weapons manufacturing, to integrate sustainable practices within business processes and improve sustainability performance. On the other hand, one of the weaknesses of this approach is that the company ranked best of sector may simply be the best from a group of bad performers. This suggests that even companies that are not necessarily operating in a

sustainable manner may be deemed sustainability leaders within their respective industries, on the basis of comparison with sector peers. Indeed, a study by Delmas and Blass (2010) confirms that, "the 'best in class' approach runs the risk of including companies that might be the worst performers on some dimensions" (p. 254).

2.4 Developing Criteria or Indicators for Sustainability Assessment

The development of sustainability criteria or indicators is a significant component of the overall assessment approach, as indicators contribute towards operationalizing the concept of sustainability by enabling the characteristics of sustainability to be explicitly defined. Sustainability indicators are tools that facilitate performance measurement or assessment or can be applied for planning purposes (Hardi & Pinter, 1995). When using indicators as performance measurement tools, "actually measured values of indicators have to be compared to either an applicable target value (progress determined in absolute terms) or to previously recorded values of the same indicator (progress determined in relative terms or differentials)" (Hardi & Pinter, 1995, p. 19). When using indicators for planning purposes, "individual indicators by themselves do not have predictive capacity, they *become* predictive if they are properly linked to causes or impacts in spatial or temporal terms" (Hardi & Pinter, 1995, p. 19).

In general, three main approaches to defining sustainability performance criteria have been presented in the reviewed literature, and are known as bottom-up, top-down and pressure-state-response (PSR). In the bottom-up approach, a comprehensive indicator profile is established [often] without the guidance of key issue areas (Hardi & Pinter, 1995). Furthermore, criteria are generated on the assumption that the simultaneous achievement of environmental, social and economic goals defines a state of sustainability. This approach reflects a TBL conception of sustainability, where the objectives are defined in relation to baseline conditions (Pope, Annandale, & Morrison-Saunders, 2004). A number of drawbacks

have been cited with this kind of approach. Firstly, while this approach may allow for a comprehensive set of indicators, the possibility arises for data redundancy as the different indicators are used to convey similar information, and the vast number of indicators may shift focus away from the core issues by diverting limited time and resources towards the collection, monitoring and analysis of lower priority or unnecessary criteria. Secondly, there is the likelihood that indicators will be developed in an ad hoc or discretionary manner, rather than on the basis of issue relevancy and core concerns (Hardi & Pinter, 1995). Thirdly, in terms of defining objectives in relation to baseline conditions, it is often difficult to judge when the baseline conditions have been extended far enough to achieve the goal of sustainability (Pope, Annandale, & Morrison-Saunders, 2004). Furthermore, by dividing the concept of sustainability into the three pillars of the TBL, there is a tendency to create potentially competing interests rather than emphasize the inter-linkages and inter-dependencies among those pillars. This leads to difficulties in integrating the three dimensions of sustainability, and may promote trade-offs, often at the expense of the environment (Gibson, 2001; Sheate et al., 2003; Jenkins, Annandale, & Morrison-Saunders, 2003). Moreover, "the TBL can be considered a reductionist approach to sustainability, and that dividing the holistic concept of sustainability into three pillars as a starting point invariably runs the risk of the sum of the parts being less than the whole. This is particularly true if the interrelations between the three pillars are not adequately understood and described, and therefore sustainability is reduced to a consideration of separate environmental, social and economic factors, the sum of which is less than the whole, that is, sustainability" (Pope, Annandale, & Morrison-Saunders, 2004, p. 610). Despite the criticisms of TBL as a reductionist approach, (Waheed, Khan, & Veitch, 2009) note that it more easily facilitates decision-making through the use of multi-criteria decision-making techniques. This may result in the TBL or bottom-up approach to developing sustainability assessment criteria being favoured over other approaches, and therefore, being predominantly applied in practice.

In the top-down approach, also known as the principles-based approach to defining assessment criteria, sustainability is perceived as a state to which society aspires, and the criteria are then developed in accordance with this state or derived from sustainability principles (Pope, Annandale, & Morrison-Saunders, 2004; Gibson, 2001). Gibson (2001) and Pope, Annandale, and Morrison-Saunders (2004) have argued that the top-down or principles-based approach outweighs the bottom-up or TBL approach as it emphasizes the interconnections and interdependencies among the pillars, and thus helps to reduce the number of conflicts and trade-offs. Gibson (2001) describes the top-down approach as an alternative model to the bottom-up or TBL approach: "The alternative, which is perhaps only superficially different from the pillar approach, is to begin not with categories based on the usual general areas of concern (ecological, social, etc.) but with a list of the key changes needed in human arrangements and activities if we are to move towards long term viability and well-being" (p. 12). George (2001) also attests to the benefits of the principles-based approach over the TBL approach for developing sustainability assessment criteria, and presents an approach based upon the principles of sustainability as defined in the Rio Declaration and Agenda 21.

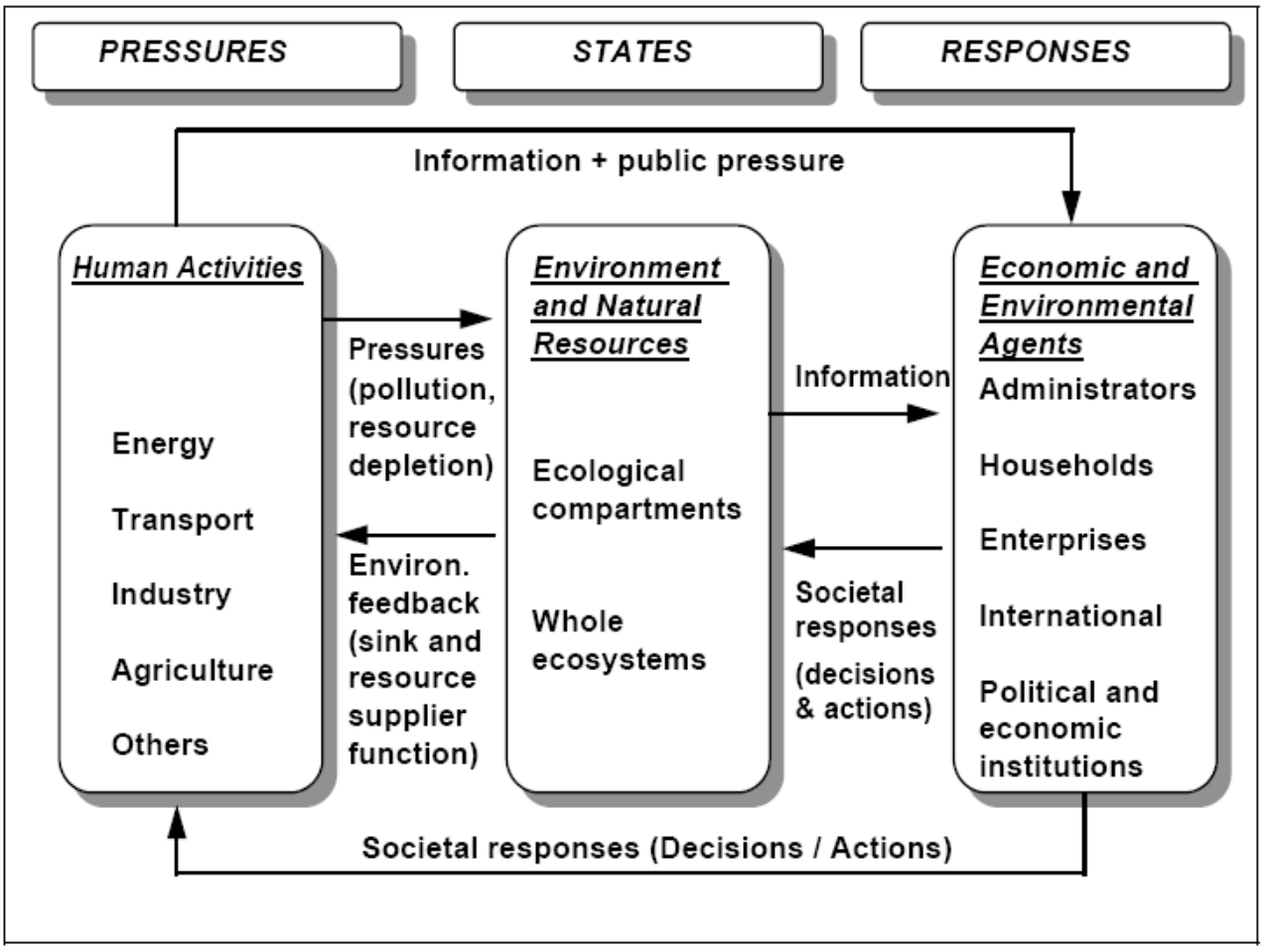
In the pressure-state-response (PSR) approach, a causal model is used to help guide the development of indicators in order to satisfy the cause-effect relationships. "In order to establish causal linkages to indicator development, connection has to be found between (***a***.) actions of society as source of impact (pressure), (***b***.) the condition of the environment influenced partly by human action (state of the economy, the environment or society), and (***c***.) the efforts and resources we as a society devote to offsetting or preventing undesirable combined effects of our actions and intrinsic environmental change (response).
In other words, measurement of sustainable development should be based on indicators which signal:
(***a***) the *pressure* that society puts on the environment (in the form of pollution and resource depletion);

(***b***) the resulting *state* of the environment (especially the incurred changes) compared to desirable (sustainable) states; and

(***c***) the *response* by human activity, mainly in the form of political and societal decisions, measures and policies" (Hardi & Pinter, 1995, p. 13).

Figure 6 illustrates the general framework of the PSR model for developing sustainability indicators.

Figure 6. General Framework of the Pressure-State-Response Model
(Source: Hardi & Pinter, 1995, p. 14)



In the PSR model, the first group of indicators represents the pressures exerted upon the environment and society, by conveying the causes of socio-ecological problems (such as activities depleting natural resources or discharging pollutants and wastes). The second group of indicators represents the resulting quality or state of the environment, ideally the changes in quality that can be attributed to human activities (such as the accumulation of greenhouse gases or the depletion of the ozone layer). The third group of indicators represents the measures taken by social institutions, organizations or individuals to improve the state of the environment or reinstate its previous balance (such as the introduction of regulations, the use of market instruments, increased enforcement, etc.) (Hardi & Pinter, 1995). Pressure related activities often generate risks that are not directly or immediately apparent, resulting in a delayed response or a case of addressing the symptoms rather than the source(s) of the risk itself. By systematically linking cause and effect relationships, (or in other words, connecting pressure or risk generating activities to social response), decision makers can improve their adaptive capacities, and anticipate and mitigate risks by identifying and targeting the source (Hardi & Pinter, 1995).

2.5 Criticisms and Challenges of Assessing Sustainability Performance

The process of assessing sustainability, both in theory and in practice, has been fraught with numerous challenges, mainly stemming from the broad range of views and varied interpretations regarding the concept of sustainability, and the extent to which it encapsulates the environmental, economic and social domains and the inter-linkages among them. Tools and approaches developed for the purpose of sustainability assessment and applied in different spatial and temporal contexts, including regional, national, community and corporate levels, and integrating both ex-post and ex-ante considerations, have attempted to quantitatively and qualitatively express the various aspects of sustainability in a consistent manner while seeking to reduce the subjectivity associated with measuring this

broad concept. This subsection discusses some of the main criticisms and challenges of measuring and assessing sustainability, from both the general and corporate perspectives.

"Measurement shows something by bringing it into existence, and at the same time making something else disappear. Measurement then acts as a screen and is never neutral" (Déjean, Gond, & Leca, 2004, p. 744). This observation is particularly relevant when it comes to the process of measuring or assessing sustainability, where "values and preferences are crucial. The underlying values particularly influence the criteria investigated and the selection of indicators" (Koellner, Weber, Fenchel, & Scholz, 2005, p. 65). Many of the approaches to assessing sustainability, including for instance, efforts to benchmark CSR have been criticized because of their tendency to disregard the complexity of measuring responsible behaviour (Graafland, Eijffinger, & Smid, 2004). Moreover, there is often a tendency to constrain the concept of sustainability by advocating or even imposing a specific line of thought, or to perceive the concept through a particular lens, consequently influencing the assessment process based on the particular lens through which sustainability is viewed. This is not necessarily a methodological shortcoming of the assessment process itself, but rather, an assessment framework based on a particular set of contextual factors. The risk associated with this design philosophy is that it poses some challenges when attempting to address the issues that are critical or relevant to a diverse group of stakeholders. For instance, the concerns of only a limited group of stakeholders may be addressed, leading to conflict about prioritization of issues and the subsequent marginalization of stakeholders whose concerns are inadequately resolved. One way to resolve this dilemma may be to identify the key stakeholders of the project, those who may be directly and most critically impacted by the outcomes of the project, and engage these stakeholders to identify the range of concerns and issues, in order to prioritize issue resolution. Furthermore, it has limited potential for transferability and applicability to a wider range of contexts.

The converse issue to setting boundaries on the concept of sustainability is that of broadening its scope indefinitely. "Under the umbrella of sustainability, very different

concepts are measured and therefore companies are rated in different ways" (Heemskerk, Pistoria, & Scicluna, 2002, p. 21). A study published by the Canadian Institute of Chartered Accountants (CICA) in 2010, found that a key issue regarding the quality of ESG information used in investment decision-making was the lack of standardized, comparable, sector-based metrics which would make comparability across companies more consistent. Highlighting the work of the GRI in developing a standardized template for collecting and presenting ESG information, the CICA study found that, "Although the GRI's sustainability reporting guidelines and accompanying protocols have aided in the standardization of ESG reporting, companies continue to report differing degrees of compliance with the GRI" (Canadian Institute of Chartered Accountants, 2010, p. 21). Similarly, the sustainability ratings agencies SAM and EIRIS, which service the DJSI and FTSE4Good indexes, respectively, apply a number of distinct criteria in evaluating and benchmarking the sustainability performance of companies, (as will be shown in later chapters of this thesis). This further demonstrates that in practice, (as in theory), the concept of sustainability takes on diverse interpretations, with different aspects of the concept being emphasized and prioritized in the various assessment tools and frameworks.

Another challenge of assessing sustainability performance is articulated in terms of corporate social performance (CSP). According to Rowley and Berman (2000), "CSP is a complex collection of factors that do not maintain the same meaning across contexts…" (p. 407), and therefore, social performance must be defined in relation to the contextual setting. Furthermore, Déjean, Gond, and Leca (2004) note that CSP incorporates several dimensions that cannot be reduced to a single, unique value. The criticisms about assessing sustainability and/or corporate social responsibility therefore stem from the assumptions that multiple factors can be reduced to a single dimension (monistic) and that all values are comparable (commensurable) (Graafland, Eijffinger, & Smid, 2004). These criticisms are further elaborated upon through the following example. "A benchmark method that expresses the quality of the CSR policy of companies by one single number is monistic in nature [by making an assumption] that it is possible to give a cardinal ranking to the realization of different

values by different actions. Values are, however, pluralistic in nature" (Graafland, Eijffinger, & Smid, 2004, p. 140). "Monism implies that every action can be measured on one single scale, because there is just one good. Hence, we can compare various actions and determine which action generates most value. Moreover, 'good' and 'bad' are symmetrical: one unit of 'good' can offset one unit of 'bad' and only quantity counts, not quality" (van Peperstraten, 1999, as cited in Graafland, Eijffinger, & Smid, 2004, p. 140). In attempting to address the issue of monism, where every aspect is measured on the same scale, Rowley and Berman (2000) bring to attention some of the issues and challenges to consider. Firstly, the question arises of "whether all the dimensions [indicators] comprising the [CSP] measure should receive the same weight" (p. 403). For instance, what level of importance and ranking should be given to the treatment of employees (eg. hours worked, equal opportunity policies, profit-sharing, etc.) compared to other issues such as air pollution practices, philanthropic and community involvement, or product recalls (Rowley & Berman, 2000)? Secondly, multiple dimensional studies do not necessarily rely on the same set of dimensions [indicators], hence leading to two main questions: "What are the appropriate dimensions [factors or indicators] required to build a comprehensive CSP measure? [and] How can we make comparisons across studies without a common measure?" (Rowley & Berman, 2000, p. 403)

In addition to the criticism regarding the presumed commensurability of values noted by Graafland, Eijffinger, and Smid (2004), the converse problem is the lack of comparability of many environmental [as well as economic and social] performance measures across different firms and over time (Chatterji & Levine, 2006). For example, "How should emissions of toxic materials be compared across industries?... If comparable measures were used, researchers could easily compare firms across several social responsibility metrics or track a single firm's performance over time. These types of analyses would help… to identify key issues in corporate social responsibility" (Chatterji & Levine, 2006, p. 33).

Another challenge that arises in sustainability assessment is trying to quantify performance based on data that is often descriptive and qualitative in nature (Rowley & Berman, 2000).

For instance, when several CSP dimensions are aggregated into a composite measure, how should the quantitative results be interpreted? (Rowley & Berman, 2000) If a firm receives a single CSP score based on the sum or average across multiple dimensions, what does that particular score actually mean? (Rowley & Berman, 2000) "Furthermore, how do you compare a firm that receives a *satisfactory* rating on all dimensions with a firm that receives *poor* ratings for half the dimensions and *excellent* ratings for the other categories? That is, a firm that treats all of its stakeholders "reasonably" well may receive a similar rating to a firm that is well above average in its employee policies but is well below average on pollution abatement. Thus, by aggregating multiple dimensions into a composite measure, much of the meaning and richness in the data is lost, and comparison across firms (and studies) is more difficult" (Rowley & Berman, 2000, p. 403).

Two other aspects often brought up in the context of sustainability assessment are reliability and validity. According to Chatterji and Levine (2006), "a measure is reliable if it provides the same answer when applied more than one time" (p. 32). While reliability is often achievable in the collection and analysis of financial data or other quantitative measures, it is much more difficult to achieve with performance measures based on qualitative, non-financial data and analysis. Chatterji and Levine (2006) illustrate this difficulty through the following example:

"If a questionnaire is filled out at different times, by different people, in different divisions of the same firm, the answers can vary widely. In addition, because many non-financial performance surveys cover a wide range of topics, it is unlikely that one individual in an organization will have all the necessary information at their disposal. Thus, in many cases the quality of survey responses depends on organizational efforts to coordinate information from many different sources" (p. 32).

The concept of validity refers to whether the measure identifies performance that is important to society (Chatterji & Levine, 2006). This is more difficult to assess than reliability (which just identifies whether the measure comes out the same each time it is used)

(Chatterji & Levine, 2006). For example, a metric indicating the number of minorities on the firm's board of directors is reliable, as different attempts to measure the minority representation on the board will likely result in similar answers (Chatterji & Levine, 2006). "A deeper question, which goes to the heart of the concept of validity, is whether this metric really tells us anything about whether minority employees at a particular firm face equal opportunities? It would be possible for a firm to have minority board members and still not treat their minority employees fairly" (Chatterji & Levine, 2006, p. 33). Furthermore, "the metrics that are easiest to report are not always the most informative. As a result, it is easy to imagine a situation where a firm reports superior environmental performance based on available measures, while it causes environmental damage in ways that are difficult to monitor. This issue presents a serious challenge to measuring non-financial performance" (Chatterji & Levine, 2006, p. 33).

Chatterji and Levine (2006) indicate that, "validity is also reduced because few non-financial performance metrics capture the social performance of suppliers and the supply chain" (p. 34). Using the case of Nike as an example, very different results are found when comparing the working conditions in its own facilities with those of its suppliers (Chatterji & Levine, 2006). For instance, by ignoring the emissions from their suppliers, firms can reduce their reported emissions, but not necessarily improve overall welfare (Chatterji & Levine, 2006). Furthermore, by monitoring the performance of only company-owned plants, companies may begin to import their products or shift their most polluting activities to suppliers based in nations with less stringent environmental laws and poor enforcement mechanisms, thereby contributing to increased global pollution (Chatterji & Levine, 2006).

With regards to assessing the sustainability performance of businesses, Heemskerk, Pistoria, and Scicluna (2002) outline some of the dilemmas specifically attributed to the corporate sector. One of the fundamental challenges in assessing sustainability performance at the corporate level deals with reconciling the diametrically opposing temporal characteristics between the theoretical concept of sustainability and the prevailing trend in the capital

markets. In theory, sustainability issues are often viewed over a long-term horizon, encompassing inter-generational considerations in the time scale of decades. The capital markets on the other hand, tend to operate on a much shorter cycle, where shareholders typically assess corporate value from quarter to quarter throughout the year. Thus, the fundamental dilemma is to resolve the question of how to reconcile long-term sustainability issues with short-term market fluctuations (Heemskerk, Pistoria, & Scicluna, 2002). As Chatterji and Levine (2006) note, "Exclusive reliance on short-term financial metrics provides incentives to take potentially unprofitable risks and to depredate hard-to measure assets such as employee skill or customer loyalty" (p. 31).

Another dilemma stems from the triple bottom line concept of sustainability, which is often understood to mean there are three equally important bottom lines (Pope, Annandale, & Morrison-Saunders, 2004). Within the corporate context, however, the predominant thinking on sustainability tends to take a market-oriented perspective, rather than a purely socio-ecological one. Therefore, as Heemskerk, Pistoria, and Scicluna (2002) point out, "Environmental and social considerations are crucial for today's corporations, and without a good performance in these areas, a company will probably not achieve long-term economic sustainability. Yet, financial losses will never be outweighed by even the best social score, and ultimately there is one bottom line that supports the other two, namely, the financial one. Without making profits, a company cannot survive for long" (Heemskerk, Pistoria, & Scicluna, 2002, p. 10). The challenge, therefore, is to understand how non-financial risks and opportunities can impact financial performance (Heemskerk, Pistoria, & Scicluna, 2002).

Two additional difficulties, originally associated with the debate on sustainability reporting (as per the study by Heemskerk, Pistoria, and Scicluna, 2002), but can also be extended to the subject of sustainability assessment within the corporate context, are somewhat inter-related. Firstly, the dilemma of addressing the information needs of different stakeholders. Since "all stakeholders do not have equal influence on a company, with some having a more direct influence than others" (Heemskerk, Pistoria, & Scicluna, 2002, p. 10), the question

arises of how to prioritize the information needs of different stakeholders, such as shareholders, employees, suppliers, customers and the local communities in which a business operates. The information provided through sustainability reports and assessment tools should help the different stakeholders judge the sustainability performance of the firm (Heemskerk, Pistoria, & Scicluna, 2002). Secondly, the issue of balancing the number of metrics with the level of detail to be captured by the metrics in order to allow for effective sustainability assessments, while simultaneously balancing the costs and resource burdens associated with collecting the necessary information. Chatterji and Levine (2006) note that, "even if many of the metrics are sensible, the proliferation of overlapping metrics on a single topic burdens managers and is costly to shareholders and consumers… For example,… few consumers can distinguish whether certifications from Worker Rights Consortium, Worldwide Responsible Apparel Production, The Clean Clothes Campaign, or Fair Labor Association best match their desire to avoid products made in sweatshops. In fact, each additional certification and corresponding acronym can actually decrease overall welfare, even while increasing the amount of measurement (and resulting costs)" (p. 31).

In conclusion, sustainability assessment is largely determined by the definitions and contextual interpretations of sustainable development or sustainability. On the basis that sustainable development (both in the general and corporate contexts) encompasses the three main pillars of environment, economy and society, with an emphasis on the inter-linkages and interdependencies among them, and considerations of the intergenerational timeframe, it follows that the various approaches to sustainability assessment must also include these key aspects. Two main frameworks for sustainability assessment have been presented in this chapter. EIA-driven integrated assessment focuses on minimizing or preventing adverse impacts within the three pillars of environment, economy and society, guided by the main criterion that actions should not lead to less sustainable outcomes. Objectives-led integrated assessment aims to go one step further, by defining a vision of sustainability through a series of goals and evaluating the extent to which the actions taken contribute towards that vision. Pope, Annandale, & Morrison-Saunders (2004) have argued that these two assessment

models are inadequate because they focus only on the question of whether we are heading in the right direction to achieve sustainability. They propose that the notion of context is a critical factor that must be considered in sustainability assessments, and thus, the central question to be addressed is, where do we currently stand in relation to a sustainable state, or how far are we from achieving a sustainable state. A significant component of the overall assessment approach involves the development of sustainability indicators or criteria, which define the aspects of sustainability such that the concept can be measured or assessed. Three different approaches to developing indicators have been presented in this chapter – namely, bottom-up, top-down and PSR – each with its own set of advantages and limitations. Finally, a number of criticisms and challenges associated with assessing sustainability performance have been discussed. These criticisms and challenges stem mainly from the fact that sustainability assessment processes encompass both quantitative and qualitative analyses, in which the latter is often fraught with subjectivity. While the topic of sustainability assessment is fairly broad in scope, the main aim in this chapter has been to present and discuss those literary sources which are relevant for developing a better understanding of sustainability assessment in the context of the capital markets.

Chapter 3: Research Methodology

3.1 Introduction

This chapter presents the research methodology undertaken to address the two central questions of this study, as stated in Chapter 1 and re-stated below. The methodology outlines the selection process and main reasons for selecting the particular sustainability indexes and guidance tools for study, and summarizes the key characteristics of these tools. It also includes a discussion of the data sources used, the data selection criteria, the conditions for determining data relevancy and a discussion on data organization and classification.

Primary Research Question:

> To what extent do the stock market sustainability indexes represent the sustainability performance of publicly traded companies?

Secondary Research Question:

> To what extent and in what ways are the approaches for assessing corporate sustainability, (as carried out in the context of the stock market sustainability indexes), similar and different from the tools that seek to provide guidance on sustainability reporting and advance sustainability practices within the corporate sector? In other words, to what extent do the two sets of tools align?

3.2 Index Selection Process and Data Collection

In order to address the primary research question of this study, several factors were taken into consideration in selecting the specific sustainability indexes for the study. Firstly, this study focuses on the indexes which track the sustainability performance of publicly traded

companies, as opposed to indexes which measure for instance, the sustainability of cities or regions. Secondly, while numerous stock market sustainability indexes have been launched, both in developed markets such as in North America and Europe, and in emerging markets such as in South Africa and Brazil, this study focuses on the more prominent and established indexes that have been in existence for at least the past five years (launched in 2005 or earlier). There are two main reasons for applying the second selection factor: (i) to ensure that the selected indexes and corresponding methodologies are well established in the capital markets; (ii) to ensure that there would be a degree of stability in terms of the index ownership, as well as the index construction rules and the sustainability criteria. Over the last decade, the landscape of sustainability-based financial products has been rapidly and continuously changing, for instance, with the emergence of new indexes replacing existing ones, or with new ownership of indexes brought about by mergers and acquisitions of investment and ratings firms. For example, over a 14-month time span, the ESG research and analysis firm, RiskMetrics, acquired Innovest Strategic Value Advisors in February 2009, then purchased KLD Research and Analytics Inc. in November 2009, and then itself was purchased by MSCI Inc. in March 2010. As a result of this series of acquisitions, the FTSE KLD Global Sustainability Index for instance, was replaced by the MSCI World ESG Index in 2010, with ownership changes also leading to modified index construction rules (MSCI, "MSCI to Transition the FTSE KLD Indices to New MSCI ESG Indices", 2010). Thirdly, since the study examines the sustainability criteria used by indexes in evaluating and ranking corporate performance, it was necessary to select those indexes for which ample data on sustainability criteria were published or could be readily accessed.

To begin the process of finding sustainability indexes for the study, an online internet search was carried out, resulting in the selection of the following sustainability indexes for preliminary review: the Dow Jones Sustainability Indexes (DJSI), FTSE4Good Index Series, Calvert Social Index, MSCI World ESG Index (formerly known as the FTSE KLD Global Sustainability Index), Jantzi Social Index (JSI), Walmart Sustainability Index, Ethibel Sustainability Index (ESI), the Johannesburg Stock Exchange Socially Responsible Investment

Index (JSE SRI Index), and the São Paulo Stock Exchange Corporate Sustainability Index referred to as the Bovespa CSI. The nine sustainability indexes identified for preliminary review were further researched by browsing relevant websites, including those of ratings firms, investment firms and the stock exchanges that manage the indexes. Table 3 lists the main websites used to research the nine sustainability indexes.

Table 3. Main Websites Used to Research the Sustainability Indexes

Index Name	Websites Reviewed
DJSI	http://www.sustainability-index.com/07_htmle/indexes/overview.html
FTSE4Good	http://www.ftse.com/Indices/FTSE4Good_Index_Series/index.jsp
Calvert Social Index	http://www.calvert.com/sri-index.html
MSCI World ESG Index	http://www.msci.com/products/indices/thematic/esg/
JSI	http://sustainalytics.com/indexes
Walmart Sustainability Index	http://walmartstores.com/sustainability/9292.aspx
ESI	http://www.ethibel.org/subs_e/4_index/main.html
JSE SRI Index	http://www.jse.co.za/About-Us/SRI/Introduction_to_SRI_Index.aspx
Bovespa CSI	http://www.ifc.org/ifcext/media.nsf/Content/IFC_Launches_Brazils_Sustainability_Index

The preliminary review determined which indexes satisfied the selection factors identified above, and the results are shown in Table 4.

Table 4. Indexes Reviewed Against Index Selection Criteria

Index Selection Criterion 1: Indexes track publicly traded companies	Index Selection Criterion 2: Index launched in 2005 or earlier (launch date)	Index Selection Criterion 3: Sustainability criteria published or readily available
DJSI	DJSI (1999)	DJSI
FTSE4Good	FTSE4Good (2001)	FTSE4Good
Calvert Social Index	Calvert Social Index (2000)	Calvert Social Index
MSCI World ESG Index	MSCI World ESG Index (2010)	JSI
JSI	JSI (2000)	ESI
Walmart Sustainability	Walmart Sustainability Index	JSE SRI Index
Index	(2009)	Bovespa CSI
ESI	ESI (2002)	
JSE SRI Index	JSE SRI Index (2004)	
Bovespa CSI	Bovespa CSI (2005)	

All the indexes selected for preliminary review satisfied the first selection factor of tracking the performance of publicly traded companies. With respect to the second selection factor, only the Walmart Sustainability Index and MSCI World ESG Index indicate more recent launch dates of 2009 and 2010, respectively. These two indexes were therefore eliminated from further review. The remaining seven out of the nine indexes selected for preliminary review have been in existence for at least the past five years as shown in Table 4. These seven indexes were then reviewed with respect to the third selection factor regarding the availability of sustainability criteria used in index construction. In order to investigate the ratings frameworks and search for data on the sustainability criteria used in constructing each of the seven indexes, the websites listed in Table 3 once again served as the main sources of information. Searches were conducted on each website to determine whether data on sustainability criteria were published or could be accessed via other means, such as by

directly contacting the firms managing the particular indexes. The findings indicate that the extent of disclosure on ratings methodologies and sustainability criteria vary extensively from index to index. All seven indexes provided a description of the overall ratings framework and highlight the main sustainability themes or categories under which companies are evaluated, including: environmental impact, product safety and impact, labour practices, community relations and corporate governance. In order to carry out this study, however, it was necessary to obtain data on the sustainability criteria or indicators at a level of detail that would allow each impact or action to be monitored and evaluated. Therefore, more in-depth searches were carried out on the websites, by not only browsing the relevant links provided in Table 3, but by also conducting searches within those sites using the following keywords: "sustainability criteria", "sustainability indicators", "ESG criteria", and "ratings criteria". These in-depth searches resulted in the following observations, which are also summarized in Table 5:

(i) For the DJSI, the Corporate Sustainabiliy Assessment Questionnaires used as part of the evaluation of companies are published and available for download from the website.

(ii) For the FTSE4Good Index, detailed index criteria documents are available for download from the website. The documents include general inclusion criteria, as well as specific documents on climate change, bribery, supply chain, breast-milk substitute, uranium mining, and nuclear power.

(iii) For the Calvert Social Index, the website provides a general description on the ratings framework and the main themes for sustainability evaluation, but data on the specific sustainability criteria are not available for public disclosure.

(iv) For the JSI, the website lists the major themes for sustainability evaluation, as well as some exclusionary indicators which are used to eliminate industries such as, nuclear, tobacco and weapon-related contracting. The website also provides a link to a downloadable ratings methodology document, which provides additional

information, but does not provide detailed information on the entire list of sustainability criteria used in evaluating corporate performance.

(v) For the ESI, the website provides links to downloadable documents which outline specific environmental, social and economic indicators used in evaluating corporate performance.

(vi) For the JSE SRI Index, the website provides links to downloadable documents on sustainability criteria. The sustainability criteria and ratings framework are modeled after the assessment framework of the FTSE4Good Index.

(vii) For the Bovespa CSI, the website provides links to downloadable documents, which include a general overview of the index and a detailed questionnaire used for collecting information from companies about corporate sustainable practices. The questionnaire covers the three main themes of sustainability –namely, the environment, economy and society. A fourth theme, indicated as corporate governance, is also included as a distinct entity from the other three. The criteria and ratings framework are based upon the assessment methodologies used by the DJSI, FTSE4Good and JSE SRI indexes.

Table 5. Disclosure Levels or Accessibility of Indexes' Sustainability Criteria

Index Name	Disclosure / Accessibility of Sustainability Criteria	Sustainability Criteria Source	Document Type
DJSI	High	website, downloadable documents	Questionnaire
FTSE4Good	High	website, downloadable documents	Inclusion criteria documents
Calvert Social Index	Low	website	Not applicable

JSI	Medium	website, downloadable documents	Ratings methodology
ESI	Medium	website, downloadable documents	Inclusion criteria documents
JSE SRI Index	High	website, downloadable documents, based upon assessment model of FTSE4Good index	Inclusion criteria documents
Bovespa CSI	High	website, based upon assessment models of DJSI, FTSE4Good and JSE SRI indexes	Questionnaire

The observations noted above and summarized in Table 5 indicate that the DJSI, FTSE4Good, JSE SRI and Bovespa CSI indexes have the highest levels of disclosure on sustainability criteria among the seven indexes investigated. Based on these results, and because the DJSI and FTSE4Good are found to be prominent indexes serving as a basis for the development of more recent indexes (including the JSE SRI and Bovespa CSI), these were selected for this study. Since the JSE SRI Index is closely modeled after the FTSE4Good index, its sustainability criteria were found to be nearly identical to that of the FTSE4Good index. Similarly, the sustainability criteria used in the Bovespa CSI was found to closely resemble its predecessors, the DJSI, FTSE4Good and JSE SRI. Therefore, including the JSE SRI and Bovespa CSI in a comparative analysis with the DJSI and FTSE4Good indexes would not lead to any significantly useful findings for this study. Therefore, the JSE SRI and Bovespa CSI were excluded from further study. The rationale behind this decision is that by selecting indexes with independently developed ratings frameworks and criteria, rather than comparing derivatives, a more heterogenous data set would be available for the study. The comparison of a broader set of criteria would be more representative of the corporate sustainability performance evaluations conducted within the capital markets.

Although the level of disclosure on sustainability criteria for the Calvert Social Index was low based on the website searches, this index was considered for further study pending the availability of detailed criteria. Thus, Calvert Investments (the firm managing this index) was contacted by phone to request for data on the specific set of sustainability criteria used in evaluating companies for the index. The response from the firm was that this data is not publicly disclosed and is only available to clients of the firm. Consequently, this index was excluded from further study.

For the JSI, the ratings methodology document available for download from the website provided brief descriptions of the sustainability criteria used for index construction. In order to consider this index as a candidate for further study, the firm managing this index (Jantzi Sustainalytics) was contacted for data on detailed criteria. An in-person meeting was setup at the firm's Toronto offices to discuss this research project, its main objectives and key goals, and explain the data requirements. Following this meeting, Jantzi Sustainalytics agreed to provide the set of sustainability criteria used in constructing the JSI, provided that a non-disclosure agreement (NDA) would be signed by the researcher and affiliates. The NDA authorizes that the criteria may be examined and analyzed for this study, but may not be published. Upon signing of the NDA, Jantzi Sustainalytics disclosed the data set on its sustainability criteria. This index was therefore selected for further study.

Although data on the sustainability criteria used in constructing the ESI is published, the level of disclosure is considered medium relative to that of the DJSI and FTSE4Good. Therefore, this index was excluded from further study.

In summary, based on the index selection process described above, the three stock market sustainability indexes selected for this study are the Dow Jones Sustainability Indexes (DJSI), the FTSE4Good Index Series, and the Jantzi Social Index (JSI). These three indexes provided ample data on the sustainability criteria used in evaluating corporate sustainability performance, and all have been unchanged in terms of ownership for at least the past five

years. Table 6 provides further details on each of these indexes. Table 7 lists the specific document sources from which the sustainability criteria of these indexes were extracted for analysis. Since this research does not focus exclusively on any particular industry sector or specific geographic location, the documents selected as information sources contain the general sustainability criteria that would be applicable to all industry sectors, globally. For instance, the FTSE4Good index series uses the general criteria documents listed in Table 7, as well as three additional sector specific criteria documents when evaluating companies in breast milk marketing, uranium mining and nuclear industries. These sector specific documents were not included in the analysis: Breast Milk Substitute Marketing Criteria, Uranium Mining Criteria, and Nuclear Power Criteria. Similarly, for the JSI, a single document contains both general and sector specific sustainability criteria, but only the general criteria were extracted for analysis.

Table 6. Key Attributes of Indexes Selected for this Study

Index Name	Dow Jones Sustainability Indexes	FTSE4Good Index Series	Jantzi Social Index
Description	- series of benchmark indexes covering global, European, Eurozone, North American, US, Asia Pacific and Korea.	- five benchmark indexes covering Global, European,US, Japan and UK; - four tradable indexes covering the UK, US, European and Global regions; - FTSE4Good Environmental Leaders Europe 40 Index focuses specifically	- market capitalization-weighted common stock index consisting of 60 Canadian companies that pass a set of broadly based environmental, social and governance (ESG) rating criteria.

		on European companies within the FTSE4Good universe that demonstrate leading environmental practices.	
Launch Date	1999	2001	2000
Owned / Managed By	Dow Jones Indexes & Sustainable Asset Management (SAM)	Financial Times & London Stock Exchange	Jantzi Sustainalytics
Affiliated Research / Ratings Agency	SAM	EIRIS	Jantzi Sustainalytics
Parent Index	Dow Jones Global Total Stock Market Index	FTSE Global Equity Index Series	S&P / TSX 60 S&P / TSX Composite
Industry Sectors Excluded	none	Tobacco Nuclear Weapons Whole Weapons Systems	Tobacco Nuclear Power Military Weapons

Table 7. Document Sources for the Sustainability Criteria of Indexes Under Study

DJSI	FTSE4Good	JSI
(i) SAM Research Corporate Sustainability Assessment Questionnaire – 2009 (Mixed)	(i) FTSE4Good Index Series Inclusion Criteria (ii) FTSE4Good Climate	(i) Global Environmental, Social and Governance Indicators

(ii) SAM Research Corporate Sustainability Assessment Questionnaire – 2009 (Specialized Consumer Services)	Change Criteria (iii) FTSE4Good Countering Bribery Criteria (iv) FTSE4Good Supply Chain Criteria	

3.3 Selection of Corporate Sustainability Guidance Tools

While the primary component of this research entails a comparative analysis of the sustainability criteria used by stock market indexes in evaluating corporate performance, a crucial and complementary component involves analyzing the extent to which these indexes align with some of the more prominent frameworks developed for providing guidance on corporate sustainability practices, reporting and assessment. The guidance tools examined in this study were brought to attention while researching the various sustainability indexes. These indexes often reference various guidance tools as the basis for the development of assessment frameworks. For instance, several sustainability indexes indicate that the ratings criteria used in the assessment frameworks are based on international laws and agreements, as well as codes, principles and (voluntary) standards established by international organizations, governments, non-governmental organizations (NGOs) and industry. These guidance frameworks include: the Universal Declaration of Human Rights, the International Labour Organization (ILO) Conventions, the UN Global Compact, the OECD Guidelines for Multinational Enterprises, the Global Reporting Initiative (GRI), Amnesty International`s Human Rights Principles for Companies, the International Organization for Standardization (ISO) 14001 Environmental Management System and ISO 26000 Guidance on Social

Responsibility. These guidance tools were further investigated while researching the sustainability criteria of the indexes, and the following two were selected for this study: the GRI G3 Guidelines (Sustainability Reporting Framework) and the ISO 26000 Guidance on Social Responsibility. The following paragraphs discuss the rationale for selecting these guidance tools for this study.

As briefly discussed in Chapter 1, there is a subtle distinction between assessing sustainability and reporting on sustainability. Good reporting is a crucial and necessary first step in the assessment process, because evaluations or ratings depend on the information from sustainability reports. Consistent reporting from year to year, and from company to company would therefore improve the reliability and comparability of sustainability assessments.

The GRI`s G3 Guidelines (henceforth referred to simply as GRI) were published in 2006, and form the third generation of a voluntary sustainability reporting framework. The guidelines are relevant to all organizations regardless of size, sector, or location. The GRI framework provides flexibility in terms of enabling organizations to determine the specific sustainability practices to report on and incrementally improve reporting practices over time. The framework appears to lean towards a bottom-up approach to indicator development. As described in more detail in Chapter 2, this approach tends to result in a highly comprehensive set of indicators for the three pillars of sustainability (the environment, economy and society), but often without the guidance of key issue areas (Hardi & Pinter, 1995). Despite some of the criticisms of this approach, such as indicator redundancy and the vast number of indicators to be monitored (discussed further in Chapter 2), the comprehensiveness of the indicator set was the primary reason for selecting this guidance tool as one of the two benchmarks used for comparing the sustainability criteria of the indexes.

Published in 2010, the ISO 26000 Guidance on Social Responsibility is an international standard providing guidance to organizations on social and environmental responsibility contributing towards sustainable development. As with the GRI, the ISO 26000 is a voluntary

standard relevant to all types of organizations in the private, public and non-profit sectors, regardless of size, and applicable to organizations operating in developed and developing countries. It differs from the GRI in a number of significant aspects. Although both tools provide guidance on the core subjects related to sustainability and social responsibility, the ISO 26000 standard extends beyond the GRI in three significant ways. While the GRI framework is characterized by a bottom-up approach to indicator development, as discussed earlier, the ISO 26000 standard appears to lean towards a hybrid of the top-down (or principles-based) and pressure-state-response (PSR) methods to indicator development, which are described in further detail in Chapter 2. Aligning with the top-down approach, the standard establishes seven principles of social responsibility which underpin the development of sustainability criteria, and provides guidance on translating these principles into effective actions. Simultaneously, the standard also draws from the PSR approach by providing guidance to organizations on identifying and engaging stakeholders. It explains the relationship between an organization, its stakeholders and society, and emphasizes that an organization must consider the impact of its activities on society and its stakeholders.

Along with the aforementioned differences from the GRI framework, other factors contributed to selecting the ISO 26000 as the second guidance tool for this study. Firstly, because ISO 14001 is an internationally recognized standard on Environmental Management Systems, it is reasonable to predict that ISO 26000 will, similarly, be an internationally recognized guidance document on social responsibility and sustainable development, particularly given ISO's international standing (ie. ISO is a network of the national standards bodies of 163 countries). Also, drafting of the ISO 26000 guidance document involved 450 participating experts and 210 observers from 99 ISO member countries and 42 liaison organizations. It included stakeholder representation from: industry, government, labour, consumers, non-governmental organizations, research, as well as geographical and gender-based balance of participants (International Organization for Standardization, "ISO 26000 Project Overview", 2011). This gives further reason to 'reasonably predict' that ISO 26000 will play a significant role in guiding best practices on sustainable development in the future.

Figure 7 shows a schematic overview of the ISO 26000, illustrating the link between the seven principles of social responsibility underpinning the sustainable development criteria, which are represented as “related actions and expectations”.

Figure 7. Schematic Overview of ISO 26000 Illustrating the Seven Principles of Social Responsibility which Underpin Sustainable Development
(Source: International Organization for Standardization, 2009, p. ix)

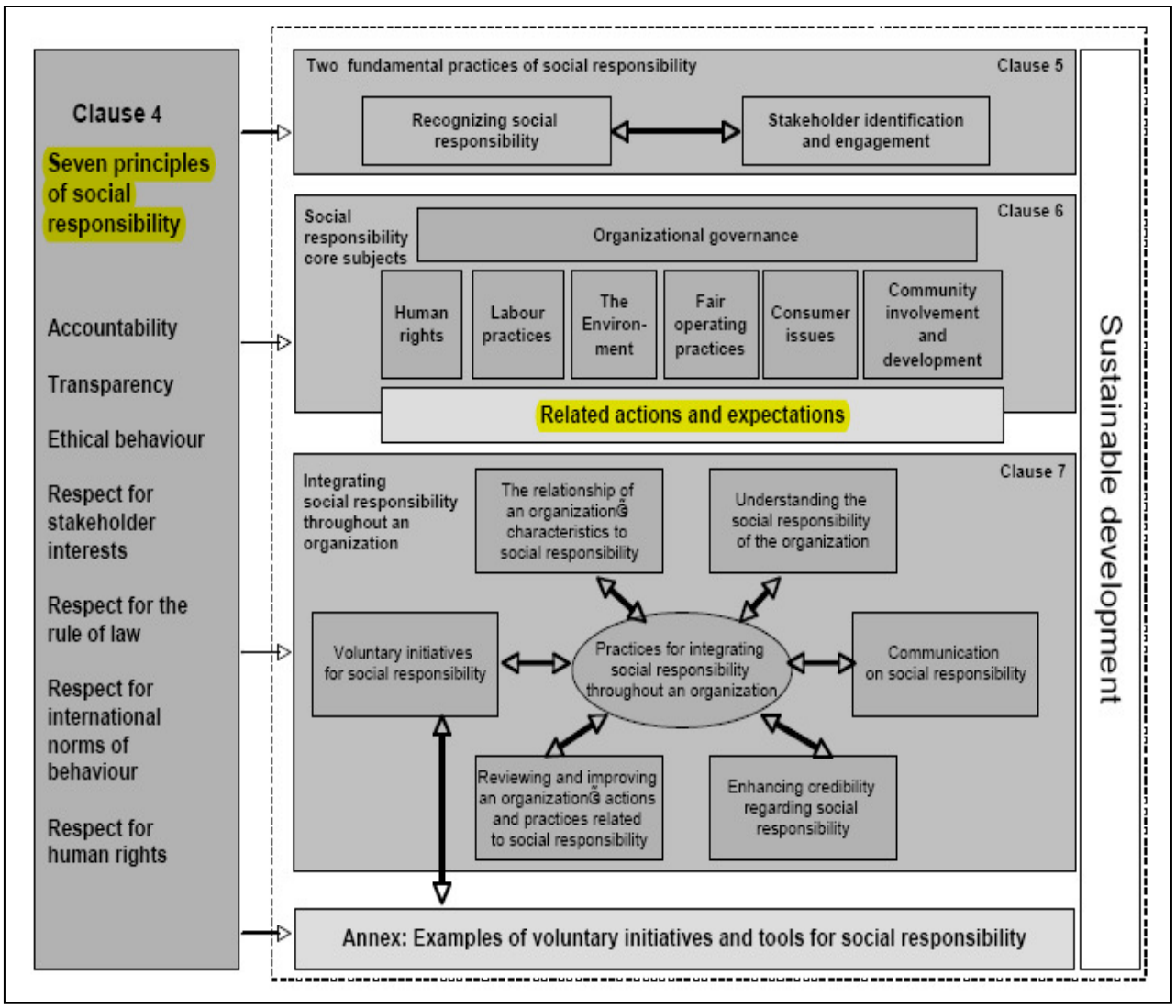


Table 8 lists the document sources from which the sustainability criteria of the GRI and ISO 26000 guidance tools were extracted for analysis. Once again, only the documents containing sustainability criteria that are applicable to all industries, globally, were examined in this study; all sector specific documents and criteria were excluded from analysis.

Table 8. Document Sources for the Sustainability Criteria of Guidance Tools Under Study

GRI G3 Guidelines
(i) Sustainability Reporting Guidelines (Version 3.0)
ISO 26000
(i) Draft International Standard - Guidance on Social Responsibility (2009)

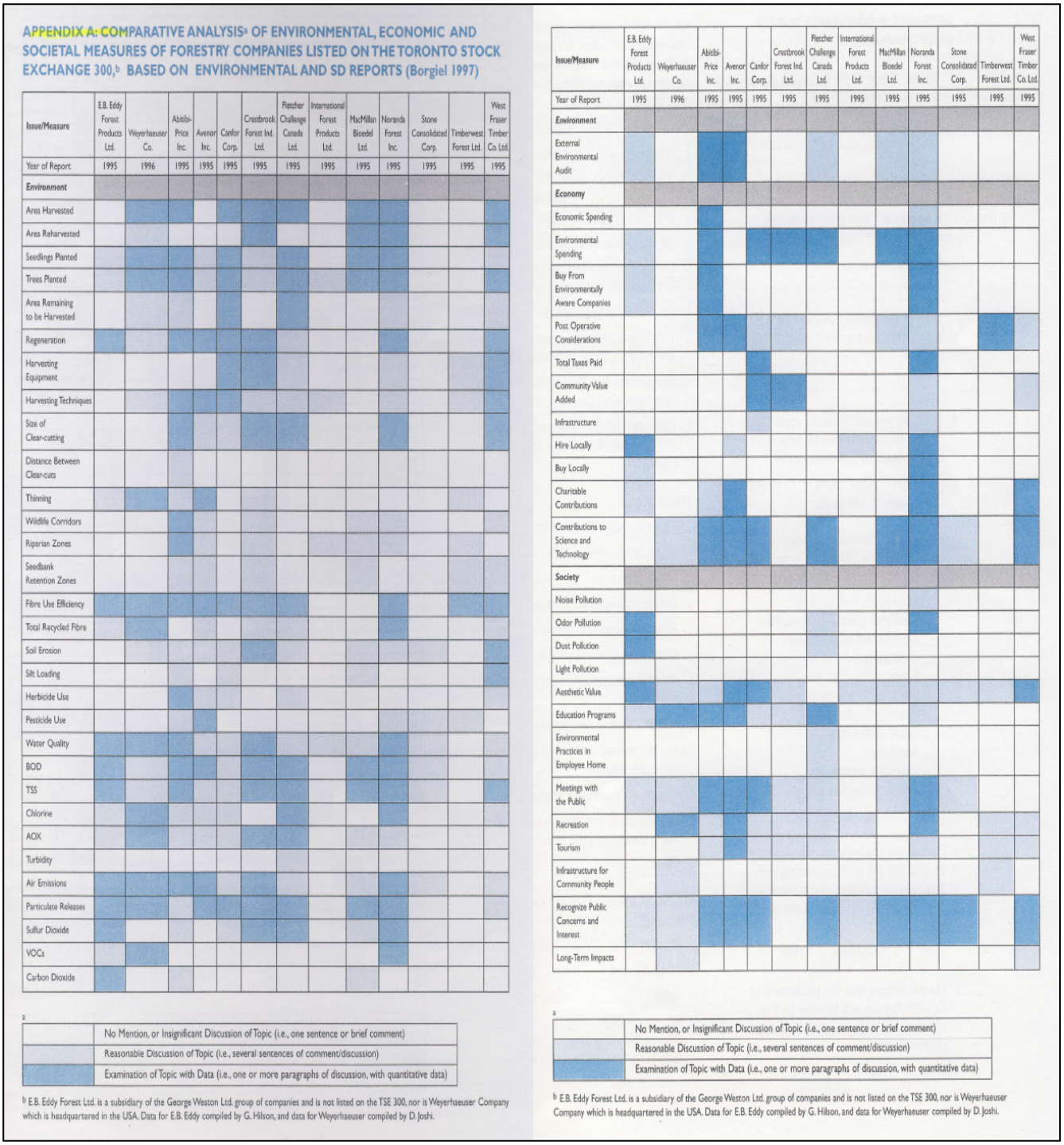
3.4 Data Organization and Classification

This section focuses on the processes of data extraction, organization and classification which were undertaken to prepare the data for analysis. It also includes a discussion of the various formats for grouping sustainability indicators based on examples found in the industry and academic literature. Additionally, this section presents the overall data classification schemes used by the three sustainability indexes and how these schemes were consolidated (ie. translated interpreted) in order to organize the data in preparation for analysis.

Organizing and grouping sustainability indicators facilitates in distilling the key elements from vast volumes of data in order to identify patterns and trends and generate meaningful conclusions through comparative analysis. Two formats for organizing the sustainability criteria to facilitate the comparative analysis were considered in this study. The first example draws from an industry study entitled, Writing and Evaluating Sustainable Development and

Environmental Reports, published in 1999 by CMA Canada in conjunction with AICPA and the Australian Society of Certified Practising Accountants. The study illustrates the use of a matrix to conduct a comparative analysis of the environmental, economic and social measures of forestry companies. A snapshot of this matrix is shown in Figure 8. Along the top row, the columns identify the forestry companies that are compared in the study, and along the left-most column, each row contains a specific environmental, economic and social indicator. Each company has been assessed against each of the criteria and the different shades of blue indicate the extent to which these criteria are addressed by the companies.

Figure 8. Format 1 – Matrix for Organizing and Classifying Sustainability Indicators Along Environmental, Social and Economic Dimensions
(Source: CMA Canada, 1999, p. 29)



APPENDIX A: COMPARATIVE ANALYSIS[a] OF ENVIRONMENTAL, ECONOMIC AND SOCIETAL MEASURES OF FORESTRY COMPANIES LISTED ON THE TORONTO STOCK EXCHANGE 300,[b] BASED ON ENVIRONMENTAL AND SD REPORTS (Borgiel 1997)

Issue/Measure	E.B. Eddy Forest Products Ltd.	Weyerhaeuser Co.	Abitibi-Price Inc.	Avenor Inc.	Canfor Corp.	Crestbrook Forest Ind. Ltd.	Fletcher Challenge Canada Ltd.	International Forest Products Ltd.	MacMillan Bloedel Ltd.	Noranda Forest Inc.	Stone Consolidated Corp.	Timberwest Forest Ltd.	West Fraser Timber Co. Ltd.
Year of Report	1995	1996	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
Environment													
Area Harvested													
Area Reharvested													
Seedlings Planted													
Trees Planted													
Area Remaining to be Harvested													
Regeneration													
Harvesting Equipment													
Harvesting Techniques													
Size of Clear-cutting													
Distance Between Clear-cuts													
Thinning													
Wildlife Corridors													
Riparian Zones													
Seedbank Retention Zones													
Fibre Use Efficiency													
Total Recycled Fibre													
Soil Erosion													
Silt Loading													
Herbicide Use													
Pesticide Use													
Water Quality													
BOD													
TSS													
Chlorine													
AOX													
Turbidity													
Air Emissions													
Particulate Releases													
Sulfur Dioxide													
VOCs													
Carbon Dioxide													

[a]

	No Mention, or Insignificant Discussion of Topic (i.e., one sentence or brief comment)
	Reasonable Discussion of Topic (i.e., several sentences of comment/discussion)
	Examination of Topic with Data (i.e., one or more paragraphs of discussion, with quantitative data)

[b] E.B. Eddy Forest Ltd. is a subsidiary of the George Weston Ltd. group of companies and is not listed on the TSE 300, nor is Weyerhaeuser Company which is headquartered in the USA. Data for E.B. Eddy compiled by G. Hilson, and data for Weyerhaeuser compiled by D. Joshi.

Issue/Measure	E.B. Eddy Forest Products Ltd.	Weyerhaeuser Co.	Abitibi-Price Inc.	Avenor Inc.	Canfor Corp.	Crestbrook Forest Ind. Ltd.	Fletcher Challenge Canada Ltd.	International Forest Products Ltd.	MacMillan Bloedel Ltd.	Noranda Forest Inc.	Stone Consolidated Corp.	Timberwest Forest Ltd.	West Fraser Timber Co. Ltd.
Year of Report	1995	1996	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
Environment													
External Environmental Audit													
Economy													
Economic Spending													
Environmental Spending													
Buy From Environmentally Aware Companies													
Post Operative Considerations													
Total Taxes Paid													
Community Value Added													
Infrastructure													
Hire Locally													
Buy Locally													
Charitable Contributions													
Contributions to Science and Technology													
Society													
Noise Pollution													
Odor Pollution													
Dust Pollution													
Light Pollution													
Aesthetic Value													
Education Programs													
Environmental Practices in Employee Home													
Meetings with the Public													
Recreation													
Tourism													
Infrastructure for Community People													
Recognize Public Concerns and Interest													
Long-Term Impacts													

[a]

	No Mention, or Insignificant Discussion of Topic (i.e., one sentence or brief comment)
	Reasonable Discussion of Topic (i.e., several sentences of comment/discussion)
	Examination of Topic with Data (i.e., one or more paragraphs of discussion, with quantitative data)

[b] E.B. Eddy Forest Ltd. is a subsidiary of the George Weston Ltd. group of companies and is not listed on the TSE 300, nor is Weyerhaeuser Company which is headquartered in the USA. Data for E.B. Eddy compiled by G. Hilson, and data for Weyerhaeuser compiled by D. Joshi.

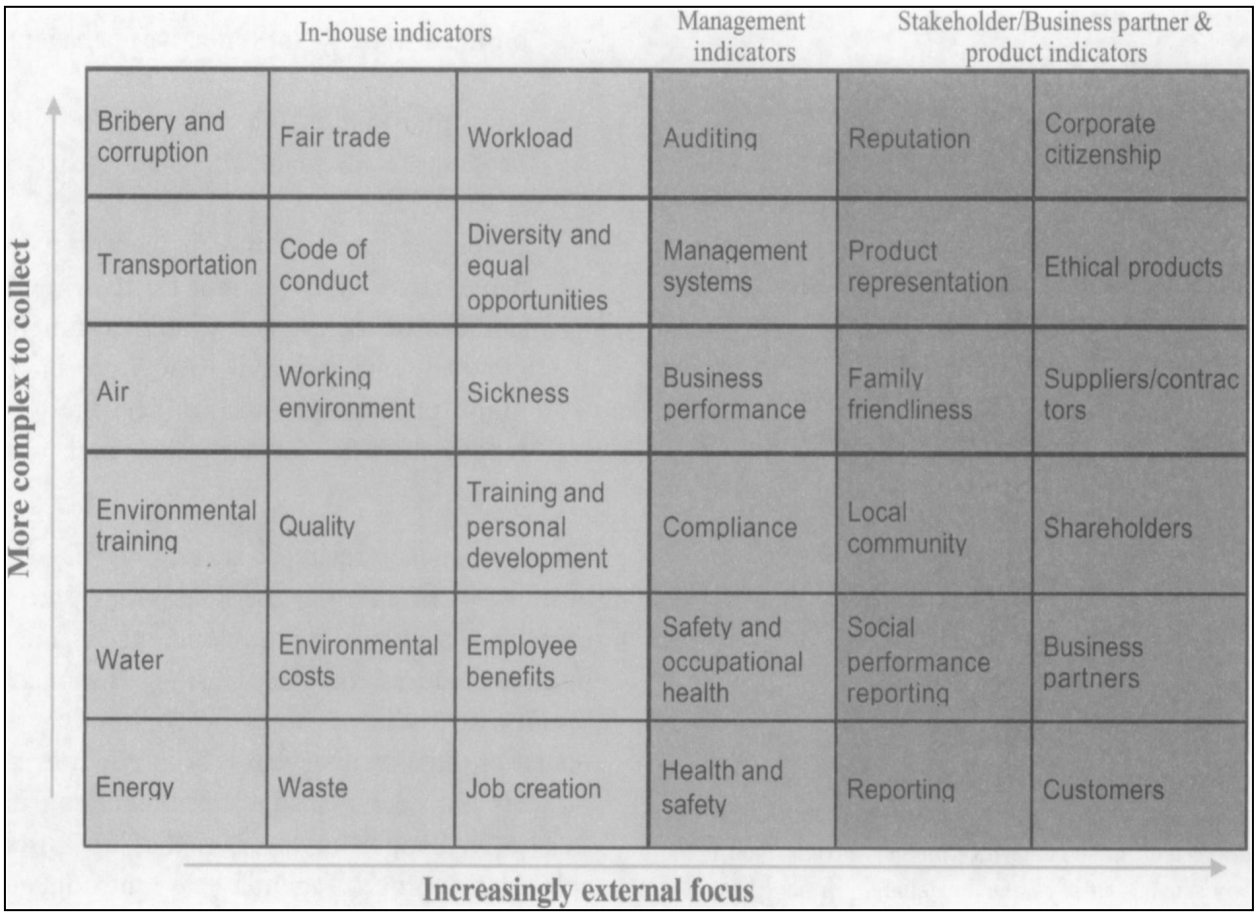
This type of matrix offers a powerful format for presenting large volumes of data for comparative analysis as required in this research. It offers a simple and fairly straightforward method for organizing and classifying data, while still preserving the data content without compromising data clarity. It can be used at a macroscopic level to detect patterns and trends quickly and easily, but can also be examined at a microscopic level to selectively focus on more detailed analyses.

The second format which was considered for organizing and classifying the sustainability data in this study draws from an academic study by Keeble, Topiol, & Berkeley published in 2003. This format again presents the data using a matrix as illustrated in Figure 9, but consists of a more elaborate and complex data classification process than the first example. As shown in the example, the indicators are arranged based on the level of complexity or the amount of effort required to collect information on them, and according to where they lie on a continuum of being internally focused within the company to being externally focused, and relating to stakeholders, for instance. While this format of data organization is more complex and potentially more time consuming to carry out than the format described previously, it offers a method of classifying and examining indicators from a company perspective, compared to the first example which emphasizes analysis along the three core sustainability themes of environment, economy and society. The following observations and questions are illustrative examples of using the arrangement of indicators shown in Figure 9 to examine impacts from a company perspective:

(i) To what extent does addressing externally focused indicators such as stakeholder relationships, (according to Figure 9), contribute to advancing a company's sustainability performance? For instance, the matrix in Figure 9 shows that collecting data on customers is easy, but the indicator is oriented towards an external focus from a company perspective. Therefore, this example brings into consideration the potential benefits to a company in prioritizing stakeholder relationships (such as customers) over a different issue.

(ii) In seeking to improve sustainability performance, companies often choose to address the 'low hanging fruit', which means addressing those issues which provide rewards with the least effort and lowest risks, before tackling more difficult or complex issues. Furthermore, collecting data on indicators relating to the 'low hanging fruit' is often easier than capturing data on more complex issues. For instance, initiatives to decrease energy and water consumption, and reduce waste output are often considered the 'low hanging fruit', compared to tackling issues such as corruption and bribery.

Figure 9. Format 2 – Matrix for Organizing and Classifying Sustainability Indicators Along a Company's Perceived Complexity Level and Degree of External Focus
(Source: Keeble, Topiol, & Berkeley, 2003, p. 151)



For this study, the matrix format discussed in the first example (Figure 8) was selected, primarily because of its simplicity and clarity in presenting data, as well as its capability to highlight patterns and trends from a broad perspective while also allowing for detailed analyses as necessary.

The final stage in preparing the data for analysis involved extracting the sustainability criteria from the relevant documents and populating the matrix. Since the selected matrix format is divided into the environmental, social and economic themes, the criteria were categorized according to these three major themes, even if the criteria in the original source documents were listed under a different theme. For example, in addition to listing criteria under the themes of environment, society and economic, the GRI also lists criteria under the auxiliary themes of human rights, labour practices and decent work, and product responsibility. Therefore, criteria under the human rights theme for instance, were placed under the major category of 'best fit', which is "social".

Another important aspect in populating the matrix was the process of scanning the documents (those listed in Tables 7 and 8) to specifically filter out the sustainability criteria from the surrounding text. To clarify this process, consider the following example: because the DJSI`s criteria are embedded in questionnaire documents sent out to the companies being evaluated, and not explicitly listed in a self-contained section, the entire questionnaire document was reviewed in depth to extract the criteria. This process required some level of interpretation to single out the specific criteria from the background information given for the benefit of the person using the document. Similarly, the processes of scanning, filtering and interpreting were also carried out extensively for the FTSE4Good criteria documents and the ISO 26000 document in order to extract the specific sustainability criteria.

Finally, the matrix was populated starting with the GRI and ISO 26000 criteria as these serve as benchmarks for the indexes, followed by the criteria of the indexes themselves. Once this process of populating the matrix was complete, the analysis of the data was undertaken.

Chapter 4: Results and Analysis

4.1 Introduction

This chapter presents the data examined for this study along with the corresponding analysis of this data. This analytical component contributes towards addressing the primary and secondary research questions stated in Chapter 1, and consists of the four segments outlined below. These segments are listed here as distinct entities solely for greater clarity, but during the analysis, the various segments were combined whenever applicable. For instance, the boundaries between the different segments can blur when the sustainability criteria of the three indexes are compared against one another and also compared against the guidance tools, therefore encompassing the first and fourth segments outlined below.

The four segments of analysis are:

(i) Comparative analysis of the sustainability criteria used by the three indexes – DJSI, FTSE4Good and JSI – in evaluating corporate sustainability performance;

(ii) Examination of the extent to which the concept of sustainable development is reflected in the sustainability criteria of the indexes;

(iii) Examination of the extent to which the theoretical perspectives on sustainability assessment presented in Chapter 2 are applied in the assessment frameworks of the indexes;

(iv) Comparative analysis of the extent to which the sustainability assessment criteria of the indexes align with the tools which provide guidance on advancing corporate sustainability practices and sustainability reporting.

4.2 Presentation and Organization of Data

The matrix shown in Appendix A presents a high-level comparison of the sustainability criteria of the guidance tools and sustainability indexes examined in this study. The columns of the matrix represent the two corporate sustainability guidance tools (GRI and ISO 26000), and the three stock market sustainability indexes (DJSI, FTSE4Good and JSI). The rows of the matrix represent the sustainability indicators arranged according to the three principal themes of sustainability – namely, environmental, social and economic. Each of these themes have been further divided into sub-topics that are labelled primarily based on the GRI's framework for data classification, because the GRI forms one of the main benchmarks for the comparative analysis. The cells marked in blue indicate that the particular sustainability indicators are included as part of the assessment frameworks of the guidance tools or the indexes. The cells marked in white indicate that those sustainability criteria are not considered in the assessment frameworks of the particular guidance tools or indexes.

Appendix B shows a detailed view of the matrix containing the specific wording of the criteria, as expressed in the various source documents identified in Tables 7 and 8 of Chapter 3. Since the sustainability criteria for the JSI may be examined and analyzed, but not published in this study, the cells containing the wording for the criteria are blanked out, but marked in blue. This makes it possible to gain insight into the general areas of sustainability covered by the JSI without disclosing the actual criteria.

A sweeping view of the matrix demonstrates that under the themes of environmental, social and economic, a wide range of topics are covered by the different indexes and guidance tools. Furthermore, it is evident that there are gaps in this coverage, as indicated by the white cells, suggesting that the indexes and guidance tools selectively focus on specific sub-topics within the three main pillars of sustainability. Under the environmental theme, the criteria are centered around inputs to an organization, in the form of resource consumption, and outputs of an organization, in the form of waste generation. Input indicators include

water and energy consumption, materials used in production processes and in end-products, including packaging material. Output indicators include the emissions of greenhouse gases (GHG), the generation of waste, including hazardous, effluents, solid waste. There are also criteria relating to impacts arising from operations, such as the habitats and species affected. An additional category of environmental indicators monitor an organization's ability to respond to and mitigate impacts. These criteria include evaluating the effectiveness of corporate-wide environmental policies and programs to reduce environmental impacts, as well as initiatives targeted towards addressing specific impacts, including for instance, the reduction of GHG emissions, the percentage of water recycled and re-used, and the percentage of energy derived from renewable sources such as solar, wind and hydro. Under the theme of social responsibility, the criteria are oriented towards the following key stakeholders of a company: employees, customers, the community in which operations are based and the wider society. The criteria focusing on these key stakeholders contribute towards assessing a company's potential for long term success, and therefore, align with the interests of shareholders and investors. Under the economic theme, two distinct groups of criteria are evident. The first group appears to directly impact the financial bottom line of a company, and includes the following specific criteria: revenues, operating costs and retained earnings, employee salaries, payments to and from governments and capital providers, donations and community investments, financial risks and opportunities associated with climate change and policies and practices on local hiring and procurement of locally based supplies. The second group of criteria relate to factors that indirectly influence an organization's financial bottom line. These factors include: infrastructure investments, the state of the local economy, corporate governance which deals with the structures and decision-making processes of an organization, corporate codes of conduct, risk and crisis management, customer relationship management, and brand management.

4.3 Analysis of Environmental Criteria

Focusing on the environmental theme, it is evident that the indexes do not include all the criteria recommended by the GRI framework or the ISO 26000 standard. Based on a tally of the number of environmental indicators that are covered by each of the three indexes, as represented by the cells marked in blue, the JSI covers the largest proportion, with 21 indicators out of a total 29 (approximately 72% coverage), while the DJSI and FTSE4Good cover only six and five of the total 29 indicators, respectively, (equivalently, almost 21% coverage by DJSI and 17% by FTSE4Good). A reason for the relatively higher level of coverage by the JSI may stem from the fact that the JSI indicators were only disclosed in general terms compared to the DJSI and FTSE indicators, which provide detailed information. For example, the DJSI's questionnaire documents from which the indicators were extracted, contain additional information that further explain and provide context about the indicators. Similarly, the criteria documents for the FTSE4Good index provide sufficiently detailed information about the indicators, allowing for a more precise alignment between its indicators and the benchmark indicators of the guidance tools. Therefore, the generality of criteria wording for the JSI has been a significant factor in contributing to the higher number of compatible matches with the benchmark indicators of the GRI and ISO 26000.

The following observations and analyses are based on a detailed examination of the criteria under the environmental theme.

(1) Indicators based on qualitative versus quantitative data analysis:
An inspection of the criteria under the environmental theme reveals that some indicators are more complex to monitor than others. For instance, criteria that require a qualitative analysis are often considered more complex to monitor and less reliable than those involving quantitative measurements, because the former deal with data that is subject to various interpretations, while the latter are based on numeric, fixed data. Yet, even in cases where quantitative measurements are applicable, it may be difficult to precisely assess a company's

impact and the corresponding actions taken to mitigate negative impacts. For example, the two criteria included in the GRI dealing with the preservation of biodiversity, (i) "Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk" and (ii) "habitats protected or restored", appear at first glance to require fairly straightforward quantitative measurements. Yet, the task of identifying and accurately tallying the plant and animal species and the habitats affected by a company's operations and activities is more complex than it seems. Factors that come into question are: What are the boundaries of a company's operations? Which subsidiaries and joint ventures should be included as part of the operations, for the purpose of reporting on these indicators? How do we distinguish one habitat from another for measurement purposes, when nature does not conform to human-created borders? Can we be sure that we have accurately identified all the different specifies affected by the operations? Considering that natural habitats constitute a complex web of ecosystems, each directly or indirectly connected to another, have we considered the 'snowball effect', where a single negative impact can lead to a chain reaction of further negative impacts affecting habitats beyond a company's defined operations. Although the GRI framework provides a set of protocols or rules which establish detailed procedures for measuring its indicators, including the two biodiversity indicators discussed above, in order to facilitate consistency in reporting and enable comparability across companies and industry sectors, this example nonetheless illustrates the complexity associated with tracking indicators that are based on quantitative measurements.

(2) Indicators on management and use of water and energy:

As shown in Appendix A, both the GRI and ISO 26000 guidance tools recommend the use of indicators to track water and energy consumption, water sources affected by water use, the percentage of water recycled and reused, and initiatives to reduce consumption. The FTSE4Good index, however, applies very limited environmental criteria in its sustainability assessments, and in fact, has no indicators tracking water and energy use, two of the most critical environmental resources. This result is surprising, considering that FTSE4Good is a

prominent and well established index that serves as a benchmark for several socially responsible financial and investment portfolios, and whose assessment framework has been duplicated by more recent sustainability indexes in developing markets such as South Africa and Brazil. In its defense, however, the FTSE4Good does include indicators evaluating the scope of corporate environmental policies and procedures for addressing environmental impacts. Therefore, the management and efficient consumption of these critical resources may be implicitly included as part of the policies, but without evidence of explicit indicators, it is difficult to provide a conclusive analysis. By comparison, the DJSI and JSI apply indicators tracking water and energy consumption. The JSI also includes indicators which track initiatives to reduce water and energy consumption and increase renewable energy use, as well as indicators that extend beyond a company's own operations and track corporate efforts to reduce water and energy consumption by customers.

(3) Indicators on emissions, effluents and waste:

The GRI and ISO 26000 guidance tools propose several indicators to track emissions of greenhouse gases (GHG) and ozone-depleting substances, as well as total waste generation, including hazardous waste, and initiatives to mitigate emissions and effluents. While all three indexes track GHG emissions, only the FTSE4Good and JSI indexes also include criteria to evaluate the scope of programs and initiatives for reducing GHG emissions, including strategies such as renewable energy use, fuel switching and investment in low carbon technologies. Furthermore, only the JSI also includes indicators for tracking and phasing out ozone-depleting substances. With regards to the generation and reduction of waste, including hazardous waste, the FTSE4Good index has no indicators explicitly listed in this area, but may be implicitly considered through the indicators which evaluate the scope of corporate environmental policies and procedures. The DJSI uses an indicator for capturing waste generation, but does not explicitly specify hazardous waste, and the JSI goes even further to also include indicators for evaluating programs and initiatives to reduce hazardous waste generation.

(4) Indicators on systems for ensuring compliance with environmental laws and regulations:
The GRI recommends this criterion as a core indicator in reporting on and assessing sustainability and all three indexes also include this indicator in assessing the sustainability performance of companies. While it would be surprising if this criterion was not considered in an assessment, because it specifies compliance with environmental laws and regulations which are set forth and enforced by the government, it also brings up the question of whether the indexes need to explicitly include this criterion in assessing sustainability performance, because at a minimum, companies must comply with laws anyway. Therefore, this criterion may not necessarily indicate that a company is going above and beyond the call of duty imposed upon it by laws and regulations, nor that it would be proactive in curbing its environmental impacts and addressing issues in the absence of such laws and associated penalties for violation.

(5) Indicators on the scope of corporate environmental policies and programs to address environmental impacts:
The comparative analysis results in an interesting finding with respect to indicators dealing with the existence of corporate environmental policies and programs to reduce environmental impacts.
While all three indexes include detailed criteria regarding the existence of corporate environmental policies and programs to address the environmental impact of corporate activities, the guidance tools do not provide any criteria specifically alluding to the evaluation of corporate environmental policies. The existence of corporate polices, procedures and action plans to address environmental impacts from operations, as well as third party certifications of these policies and processes are often considered to underpin decisions and actions at all levels of an organization, from executive to management to employee. Therefore, considering that this indicator represents a fundamental component of an organization's ability to address the environmental impacts from its operations, and since all three indexes apply this indicator in the sustainability assessments, it is imperative that the guidance tools include similar indicators.

4.4 Analysis of Social Criteria

(1) Turning to the theme of social responsibility, all indexes examined align with both guidance tools on the four specific indicators listed:

(i) Percentage of employees covered by collecting bargaining agreements. This relates to freedom of association, the recognition of independent trade unions, and the right of workers to form or join organizations to advance their interests or bargain collectively, without fear of reprisals, dismissals or discrimination.

(ii) Occupational healthy and safety incidents and impacts, dealing with the number of work-related injuries, fatalities, diseases, and other employee related health and safety controversies or incidents;

(iii) Employee skills development and career advancement training programs. The JSI uses broad wording for this indicator to track employee training of any kind, while the FTSE4Good includes more detailed criteria related to training, including indicators to track the time and money spent on training employees. The DJSI applies a more detailed set of criteria that includes evaluating a company's implementation of its skills mapping process, the extent and types of training provided to different employee categories, from executive to management to specialist groups to general employees, and the tools and processes adopted by a company to manage employee training and organizational learning.

(iv) Employee diversity and equal opportunity, with data regarding employee breakdown by gender, age, ethnicity, minority groups, etc. By revealing the extent of diversity throughout all levels within a company, from executive to employee levels, this indicator flags those companies that may have potentially discriminating hiring policies and practices.

What is the significance of alignment on these criteria? The most noticeable aspect of this alignment is that all four indicators deal with the treatment of employees, and relate to how

a company handles its employee-management relationships. These indicators deal with a company's internal critical resources or assets, which are its employee stakeholders, as opposed to those indicators relating to external stakeholders such as customers, community, society, shareholders. This alignment suggests that the treatment of employees is an area of high importance in corporate sustainability reporting and assessment. Considering that all three indexes and both guidance tools appear to place importance on the treatment of employees, it is surprising then that the indicator on conditions of work and social protection is only addressed by the ISO 26000 at an in depth level, and by the FTSE4Good and JSI to some extent, while the DJSI and GRI do not include specific criteria on this issue. This indicator is relevant to the treatment of employees as it deals with aspects such as, working hours, holidays, annual paid leave, decent wages in respect of work done, cost of living, work-life balance, compensation for overtime, maternity, paternity and parental leave. This is one of the more significant deficiencies with respect to the comprehensiveness of social responsibility criteria and therefore provides an opportunity for improvement.

(2) Indicators under the sub-topic of 'product responsibility':

Under the sub-topic of 'product responsibility', the criteria are focused on assessing the extent to which a company addresses its responsibilities towards its customers. These criteria track the following issues: customer health and safety, products and service labeling, customer satisfaction, marketing communications, customer privacy, respect for property rights (including physical and intellectual property), and non-compliance with laws and regulations concerning the provision and use of products or services. The results captured in Appendix A reveal that the three indexes align with the guidance tools on these criteria to significantly different extents. The JSI and DJSI cover the majority of issues identified above, with the exclusion of the last two issues concerning the respect for property rights and non-compliance regarding the provision and use of products or services. The DJSI also excludes coverage of criteria on marketing communications. The FTSE4Good index, however, does not include any criteria covering the issues listed above when evaluating the sustainability performance of companies. This is an unexpected result, considering that customers are not

just a key stakeholder group for all companies, but are the sole basis for a company's existence. The existence of a company is justified by its customers, because customers have a choice of whether or not to select the products or services offered by a company. There is very rarely a monopoly on the provision of products or services, as multiple companies compete for the same market. Furthermore, the FTSE4Good Inclusion Criteria document indicates that developing positive relationships with stakeholders is one of the five key areas that companies must address in order for eligibility in the index. Although the document does not explicitly specify customers as one of the stakeholders considered, this is an important stakeholder group for all companies. Therefore, the failure to include these criteria starkly contradicts the index's stated eligibility criteria and also suggests that in the FTSE4Good index, the importance of evaluating a company's responsibilities to its customers may be under-valued.

(3) Indicators under the sub-topic of 'human rights':

The criteria related to human rights are concerned with a range of issues, including the following: investment agreements that include human rights clauses, systems for screening suppliers and contractors on human rights, training of employees and security personnel on human rights issues relevant to business, human rights related discrimination incidents, freedom of association and collective bargaining, measures to eliminate child labour and forced or compulsory labour, commitment to indigenous rights, systems for resolving human rights related grievances, acknowledgment of civil and political rights, such as the right to freedom of opinion and expression, and recognition of economic, social and cultural rights. As shown in Appendix A, the two guidance tools include criteria that track the issues listed above, although the ISO 26000 provides more detailed information regarding these issues as well as the expectations on how companies should address such issues. With respect to coverage of human rights criteria by the three indexes examined, FTSE4Good demonstrates the highest coverage, compared to the DJSI and JSI. Of the thirteen human rights criteria listed by the guidance tools, FTSE4Good only excludes coverage of the first and the last three criteria identified above. The strong coverage on human rights by FTSE4Good contrasts

starkly with the weak coverage by the DJSI, which only covers two of the criteria identified above. These criteria are systems and practices for screening suppliers and contractors on human rights performance and freedom of association and collective bargaining. By comparison, the JSI includes criteria on commitment to indigenous rights and the evaluation of a company's human rights policy, in addition to coverage of the same criteria as the DJSI.

4.5 Analysis of Economic Criteria

As discussed earlier in this chapter, the economic theme consists of two distinct types of criteria, those that directly impact a company's financial bottom line, and those that indirectly influence the financial bottom line. A more in depth examination of the economic segment in Appendix A reveals a fairly distinct pattern of distribution of these two groups of indicators. The guidance tools, and to a greater extent, the GRI, are oriented towards indicators that have a direct influence on a company's financial bottom. These indicators include: revenues, operating costs and retained earnings, employee salaries, payments to and from governments and capital providers, donations and community investments, financial risks and opportunities associated with climate change and policies and practices on local hiring and procurement of locally based supplies. The guidance tools also include two indicators with indirect impacts on the financial bottom: investments in infrastructure development and the state of the local economy. With the exception of FTSE4Good, the other two indexes examined in this study, appear to be oriented towards indicators that indirectly influence an organization's financial bottom line. These indicators relate to the following factors: corporate governance which deals with the structures and decision-making processes of an organization, corporate codes of conduct, risk and crisis management, customer relationship management, and brand management. The FTSE4Good deviates from the DJSI and JSI, as it does not include any of the criteria that have an indirect influence on the financial bottom line. The FTSE4Good index is also weakly aligned with the guidance tools compared with the JSI, for instance, as it only covers economic criteria on employee wages and donations and

community investments. One of the reasons for the considerably fewer economic criteria included in the FTSE4Good index, compared to the DJSI and JSI is that the basis for eligibility in the index is focused on the following five areas, as indicated in the FTSE4Good Inclusion Criteria document: working towards environmental sustainability, developing positive relationships with stakeholders, upholding and supporting universal human rights, ensuring good supply chain labour standards and countering bribery. This suggests that there appears to be no explicit focus on the types of economic criteria considered by the other two indexes or by the GRI and ISO 26000 guidance tools.

4.6 General Observations Pertaining to Entire Data Set

In addition to the observations and analyses focusing on the individual themes of environmental, social and economic, more general observations pertaining to the entire data set captured in the matrix are presented and discussed in the following section. These observations relate to the various interpretations of sustainable development or sustainability and the theoretical perspectives on sustainability assessment presented in Chapter 2.

The first main observation relates to the comparability of individual sustainability criteria between the guidance tools and the indexes. As evident in the matrix of Appendix A, the guidance tools and the indexes do not necessarily cover the same topics or include all the same criteria in the respective reporting and assessment frameworks. The blue and white cells illustrate the variation in the topics and criteria covered by these two groups of tools. Even comparisons made between the two guidance tools or amongst the three indexes, illustrate the poor uniformity in terms of the issues considered for inclusion in the reporting, guidance and assessment frameworks. Furthermore, where one tool places importance on a particular subject area, and therefore includes criteria or indicators to track various aspects of a specific topic, another tool places less importance on that topic, or entirely excludes the

particular topic. For instance, while the two guidance tools and the indexes, DJSI and JSI, include criteria to track issues on product responsibility, including customer health and safety, product and service labeling, marketing communications and customer privacy, the FTSE4Good index omits the consideration of the entire topic. To note further examples: (i) while the FTSE4Good index places importance on evaluating the human rights issues relevant to business practices, the scope of the DJSI is comparatively limited on this topic; (ii) although the DJSI includes criteria for evaluating issues that indirectly impact a company's financial bottom line, such as corporate governance, corporate codes of conduct, risk and crisis management, customer relationship management, and brand management, the two guidance tools and the FTSE4Good index include significantly fewer criteria on these issues or no criteria at all. These observations highlight the following inter-related concerns: (i) the need for standardization, and (ii) the need for greater compatibility between the guidance tools and assessment frameworks.

The concern about standardization specifically refers to establishing which topics under the environmental, social and economic themes are to be regarded as core elements relevant to all industry sectors, and which may be optional or specific to a sector. Standardization is also critical with respect to the rules and protocols for reporting on sustainability practices and for assessing sustainability performance.

The standardization of sustainability criteria within reporting frameworks that are applicable across industry sectors, coupled with criteria within supplementary reporting frameworks for addressing sector specific issues, would provide a greater degree of convergence and consistency in the sustainability reports produced by companies. Reporting on a common set of issues across and within industry sectors, also suggests that companies must focus on addressing the same core set of issues. Furthermore, because sustainability reports serve as a key source of information for evaluating sustainability performance, consistent reporting from year to year and across companies would also provide greater consistency and improve comparability in the ratings process. The standardization of sustainability criteria among the

indexes would also mean that companies are evaluated on a common set of issues, which would in turn improve comparability across companies. Standardization of the sustainability criteria used in the assessment frameworks of the indexes would also lead to greater consistency in the performance scores of companies, alleviating instances where a single company may achieve contradictory ratings based on which index conducted the assessment.

While the standardization of topics or criteria constitutes one facet of improving comparability in reporting and assessment, a second facet relates to the standardization of rules and protocols which define the specific attributes or boundaries of the criteria. For instance, the GRI includes a set of protocols outlining the attributes of each criterion, such as whether the data on GHG emissions is to be collected at a single site or includes a company's subsidiaries located in different areas. As another example, the DJSI uses a questionnaire for collecting information from companies which is then used in its sustainability assessment. The majority of the questionnaire consists of multiple choice questions with predetermined responses, such that the largely closed-ended questions allow for easier comparisons between companies, as opposed to open-ended questions where the responses can vary significantly, thus making comparisons more difficult.

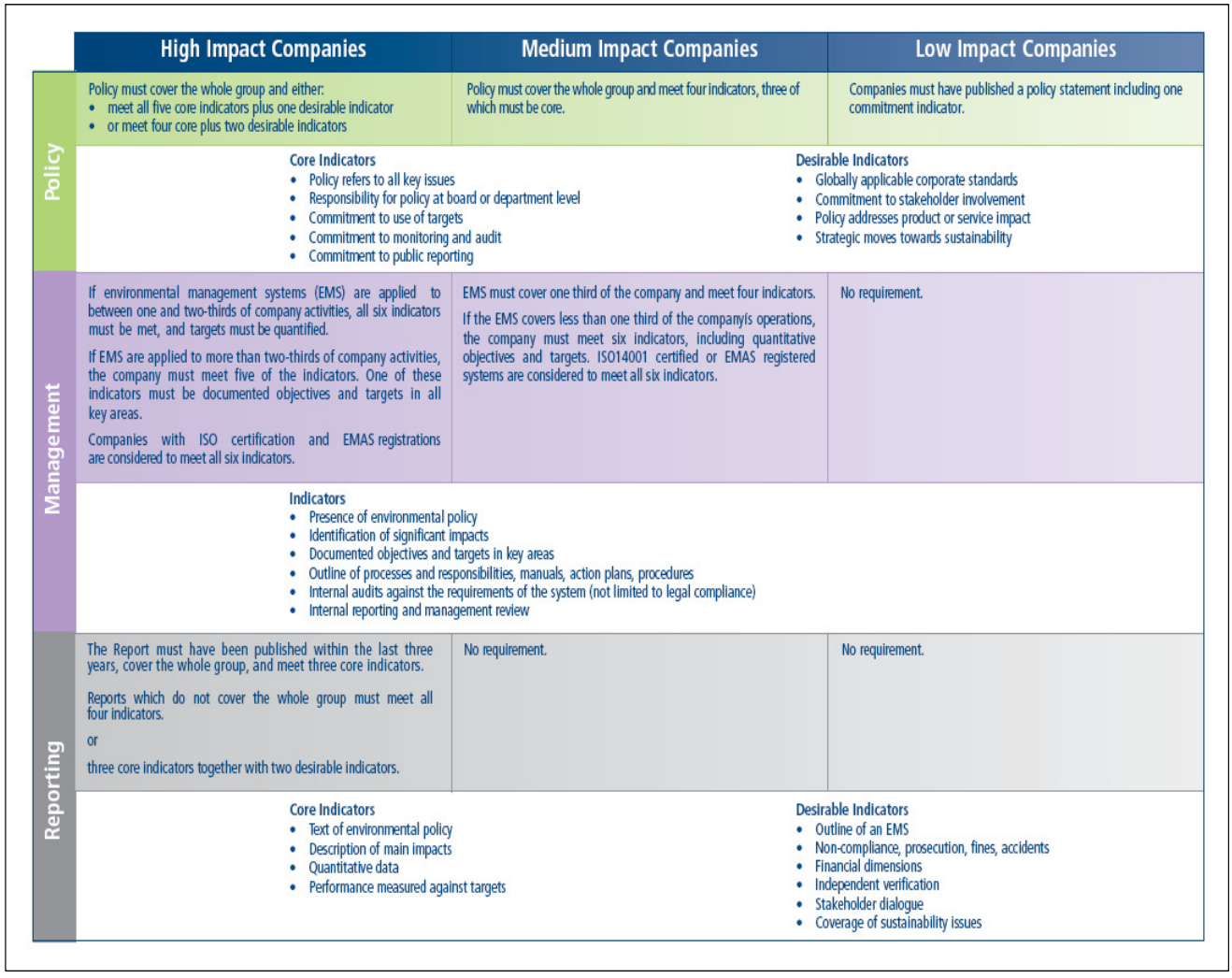
The need for greater compatibility between the sustainability guidance tools and assessment frameworks is important, particularly in terms of the sustainability criteria covered by these two groups of tools, in order to achieve convergence between the issues that companies are addressing and the issues that companies are being evaluated on. Improving the compatibility between reporting and assessment would reduce the time and resources a company must allocate to address the requirements set forth by multiple frameworks. Furthermore, because the ratings process often relies on information provided within sustainability reports generated by companies, improving the compatibility between reporting and assessment would help to ensure that the issues being reported on also address the data requirements necessary for assessment.

Despite the benefits of standardization described earlier, a contention arises because the need for standardization to facilitate comparability is offset by the need for flexibility to encourage innovation and diversity. For instance, a greater degree of flexibility in the topics covered by indexes may be necessary in order to create a variety of investment products that satisfy the diverse interests of (socially) responsible investors. Furthermore, since the field of socially responsible investing and the area of corporate sustainability reporting and assessment are still growing, a move towards standardization may stifle innovation in the development of sustainability reporting initiatives such as the GRI and ISO 26000, and in approaches to sustainability assessment within the capital markets.

The second observation relates to whether or not reporting practices and the quality and content of sustainability reporting should be considered as relevant factors in and of themselves, when assessing corporate sustainability performance. Although reporting on sustainability and assessing sustainability are distinct and separate activities, reporting is an essential precursor to assessment. The content and quality of reporting, including the level of detail and degree of clarity in conveying information is often crucial to forming accurate assessments. For example, the criteria documents of the FTSE4Good index are structured along the three dimensions representing a firm's corporate policy, management responsibility, and reporting content and quality. For each of the environmental and social issues covered by the FTSE4Good index, criteria are listed under these three dimensions. Therefore, the assessment framework for this index includes 'reporting' as one of the criteria in evaluating corporate sustainability performance. Figure 10 illustrates the structure and organization of indicators in the FTSE4Good documents. A dilemma that arises is the potential danger of inadvertently evaluating a company's reporting capabilities, systems and processes, rather than assessing its actual performance in addressing sustainability issues relevant to business practices. Does a lack of reporting on sustainability issues necessarily mean that a company is not incorporating sustainability considerations in its decision-making and in its operations? A company's reporting capacity and the content and quality of its sustainability reports do not necessarily translate to good performance in corporate

sustainable development. For instance, compared to larger and more established companies, smaller companies often have limited resources allocated towards reporting on sustainability efforts, but may still be tackling sustainability issues effectively, such as improving eco-efficiency in operations and production processes, or improving stakeholder relationships.

Figure 10. Structure and Organization of Sustainability Indicators in the FTSE4Good Criteria Documents
(Source: FTSE4Good Index Series Inclusion Criteria, p. 3)



The third observation relates to the importance of context when referring to sustainable development and sustainability assessment. The significance of context is discussed in detail in Chapter 2, Section 2.3, and briefly summarized here. Since the concept of sustainability or sustainable development "means different things to different people" (Heemskerk, Pistoria, & Scicluna, 2002, p. 28), it tends to remain 'fuzzy' until applied in a specific context (Government of Western Australia, 2002 as cited in Pope, Annandale, & Morrison-Saunders, 2004). The notion of context is a critical element in approaches to sustainability assessment as well, where it is often associated with pre-determined targets or establishes an overall benchmark for comparisons.

Examining the reporting frameworks of the guidance tools and the assessment frameworks of the indexes reveals that the notion of context is expressed in different ways. The GRI advocates that the sustainability performance (of an organization) should be reported in relation to the broader concepts of sustainability, by considering the performance of the organization "in the context of the limits and demands placed on environmental or social resources at the sectoral, local, regional, or global level" (Global Reporting Initiative, 2006, p. 11). The ISO 26000, on the other hand, expresses context in the form of expected actions that organizations should pursue in order to achieve progress on sustainability. The expected actions range from general approaches and specific actions to be undertaken in advancing an organization towards sustainability.

With respect to the indexes, the DJSI advocates that companies self-report on performance in relation to the goals and objectives established by the organization itself, as well as to report on the trends observed over time. The DJSI subsequently relies on pre-defined targets (set by the company itself) as benchmarks, mainly for evaluating the environmental performance of companies. An example of the DJSI's use of context in environmental indicators follows: "Total energy consumption + reduction target + explain trend and performance against target". This suggests that on the environmental front, the DJSI evaluates performance against the company's own stated goals and targets, while also examining the trends in

performance based on historical data. The GRI criticizes this manner of using context, stating that by "reporting only on trends in individual performance (or the efficiency of the organization) will fail to respond to the underlying question" (Global Reporting Initiative, 2006, p. 11) [of how an organization positively or negatively impacts the economic, environmental and social conditions within a particular spatial scale]. For evaluating performance on social responsibility, the DJSI incorporates the notion of context by tying its indicators to industry norms and standards which serve as benchmarks for comparison. For example, the DJSI's indicator relating to diversity and equal opportunity in the workplace is tied to the ILO's convention on non-discrimination and diversity. With regards to evaluating economic performance, the DJSI predominantly uses a multiple choice questionnaire format with a set of pre-defined responses for each indicator.

The DJSI's approach to assessing corporate sustainability performance appears to reflect particular attributes of both the EIA-driven integrated assessment and objectives-led integrated assessment approaches discussed in Chapter 2, Section 2.3. By examining trends over time, the DJSI appears to evaluate whether or not performance is improving (or deteriorating) over time and the extent of progress achieved with respect to a specific time reference. This aspect resembles an attribute of the EIA-driven integrated assessment which involves comparing impacts against baseline conditions to verify that impacts are not leading to less sustainable outcomes. By tying indicators on social responsibility to industry norms and standards, and outlining the possible expected outcomes for economic indicators, the DJSI appears to evaluate the extent to which a company's activities and operations in these areas contribute to the established goals and vision of sustainability, reflecting the principles of the objectives-led integrated assessment approach.

The use of context is also evident in the sustainability criteria of the JSI, but because the criteria are expressed in broad and general terms, it is unclear how that context is defined and used in the assessment framework. For example, specific JSI indicators request that companies report targets in addition to providing the current performance data. Yet, based

on the information available for this study, it is not clear which targets are expected, whether those defined by the company being evaluated or those established based on industry norms, standards and charters.

The FTSE4Good index also incorporates the notion of context in its assessment framework. With respect to environmental criteria, the index itself establishes the targets and subsequently evaluates the performance of companies against those targets. An example of the FTSE4Good index's use of context in environmental indicators follows: "At least a 5% reduction in carbon intensity over the last two years." This approach contrasts with the DJSI's method of evaluating environmental performance based on company declared targets. With respect to social criteria, the index uses a variety of approaches to defining context. It sets out targets and minimum thresholds, and also follows a similar approach to the DJSI, by using industry norms, conventions, and standards as the benchmarks for comparison. The following example illustrates the FTSE4Good index's use of context by setting targets and thresholds in social criteria. The FTSE4Good indicator on diversity and equal opportunity requires that more than 10% of managers should be women or the proportion of managers who are women or from ethnic minorities should exceed two fifths of their representation in the workforce concerned. The FTSE4Good index does not explicitly include economic criteria in its assessment framework. The few economic criteria covered by the index, as shown in the matrices of Appendices A and B, are in fact related to social responsibility, but also demonstrate relevance to particular economic indicators. By setting targets and minimum thresholds, and referring to industry norms, standards and conventions to define the goals and vision of sustainability, the FTSE4Good assessment framework appears to be oriented towards the objectives-led integrated assessment approach. As such, one of the strengths of the FTSE4Good assessment framework is that it encourages progression towards achieving the goals of sustainability, rather than focusing only on reducing negative impacts.

The fourth observation relates to consideration of the time perspective in sustainability assessments. Two main aspects relating to the time perspective are: (i) consideration of

potential future performance, and (ii) reconciling the long-term perspective that is characteristic to sustainable development with the short-term focus prevalent in the capital markets. These two aspects are also strongly interconnected, since the consideration of future performance often incorporates long-term planning, and vice-versa. With respect to the first aspect, approaches to sustainability assessment are increasingly integrating considerations about potential future performance and future outcomes, in addition to the standard practice of assessing past performance based on historical data. This is particularly relevant in the corporate sector, because a company's value in the stock markets is not only determined by its current profits but by expectations about its future earning ability (Heemskerk, Pistoria, & Scicluna, 2002). Investment decisions are therefore significantly influenced by the potential for future success, because "investors… are looking for some combination of accuracy in summarizing past performance, and careful evaluation of current managerial actions likely to influence future environmental [as well as social and economic] performance" (Chatterji, Levine, & Toffel, 2009, p. 127). While historical performance can provide some measure of reliability and predictability about potential future performance, it is still fraught with a high level of uncertainty. For example, the manner in which a company has responded to and managed a crisis in the past can offer valuable information about its ability to address similar situations in the future, or even to prevent similar negative outcomes in the future. Yet, indicators which explicitly consider and anticipate risks and opportunities can better evaluate potential future performance, thereby helping to strengthen the approaches to sustainability assessment.

An analysis of the data set for this study reveals that less than a handful of indicators are specifically oriented towards assessing a company`s future impacts, as well as evaluating the current measures taken to account for those future impacts. One group of future-oriented criteria are the GRI`s indicators for capturing and evaluating the financial risks and opportunities associated with climate change. Issues relating to climate change are generally based on a long-term perspective (in the order of decades or generations), where actions not only seek to address the impacts from past and current activity, but are also predominantly

focused on planning for future outcomes (encompassing mitigation and adaptation efforts). Further evidence of a future-oriented criterion comes from the indicator on initiatives to reduce GHG emissions. Although the DJSI and JSI include indicators dealing with GHG emissions, these are focused on capturing historical and current data in order to evaluate performance. The criteria from the GRI and ISO 26000 dealing with emissions also do not specifically include considerations about future performance. Only the FTSE4Good index explicitly demonstrates considerations about potential future performance in addressing GHG emissions. The future-oriented elements of the criteria state: (1) long-term strategic goal of significant quantified reductions of operational GHG emissions or carbon intensity improvement over more than five years, which should be publicly available; and / or (2) Short/medium-term management targets for quantified GHG operational emissions reduction over less than five years. The specific requirements of the indicator emphasize the need for companies to take a long-term perspective in considering future actions and outcomes for mitigating GHG emissions. The above examples demonstrate the importance of accounting for both time-related elements (ie. potential future performance and long-term perspectives) in sustainability assessments.

Turning to the second time-related aspect, approaches to corporate sustainability assessment must find a way to reconcile the long-term perspective intrinsic to sustainable development with the short-term focus predominant in the capital markets. The prevailing short-term perspective within the capital markets, often in the time scale of quarterly periods throughout the year, encourages companies to focus on performing to short-term goals and to compromise long-term rewards by seeking to maximize short-term gains. Therefore, one possibility for reconciling this dilemma could be through the use of indicators which track performance and monitor trends over several consecutive time periods (for example, over five or ten years), rather than exclusively assessing performance based on a single, shorter time period (ie. annually). As an example, GHG emissions are inextricably linked to climate change, a sustainability issue characterized by long-term implications. The DJSI's indicator on GHG emissions states that companies must provide data on the total direct GHG emissions,

the reduction target and an explanation of the trends and performance against that target. Although the indicator seeks to illustrate the trends and performance against a target, it does not explicitly specify the time period over which to track those trends and performance, allowing each company the discretion to choose the most suitable time duration. Therefore, although the indexes assess sustainability performance on an annual basis, where applicable, sustainability indicators must seek to capture performance data over longer periods, in order to strengthen the validity of sustainability assessments.

The fifth significant and final observation relates to the inclusion and exclusion of entire industry sectors in the sustainability assessment frameworks of the indexes. Although the DJSI does not explicitly exclude any particular industry sectors, the FTSE4Good excludes the tobacco, nuclear weapons, and weapons systems industries, while the JSI also excludes tobacco, as well as the nuclear power and military weapons industries. The exclusion of entire industries may therefore discourage companies within those industries from voluntarily pursuing sustainability initiatives to address negative environmental, social and economic impacts. Rather than excluding industries, the 'best of sector' or 'best in class' approach may be applied to encourage companies in such industries to tackle sustainability issues relating to business operations.

Table 9 summarizes the five key observations discussed in this section.

Table 9. Five Key Observations Based on Analysis of Sustainability Reporting, Guidance and Assessment Frameworks

Key Observation	Summary
(1) Need for standardization and improved compatibility between guidance tools	- Poor comparability between guidance tools and assessment frameworks on sustainability criteria could be addressed by improved standardization of tools. - Need for standardization of: (i) core sustainability criteria

and assessment frameworks; Standardization is offset by need for flexibility to encourage diversity amongst tools.	relevant to all industry sectors, and sector specific criteria; and (ii) rules and protocols for reporting on sustainability practices and for assessing sustainability performance. - Need for greater compatibility between guidance tools and assessment frameworks, in order to achieve convergence between the issues that companies are addressing and the issues that companies are being evaluated on. - Benefits of standardization are offset by the need to allow flexibility and diversity amongst various tools.
(2) Recognizing the distinction between reporting on sustainability performance and assessing sustainability performance	- Reporting on sustainability performance is an essential precursor to assessing sustainability performance. Should reporting practices and the quality and content of sustainability reporting be evaluated as part of assessing sustainability performance? - Potential danger of inadvertently evaluating a company's reporting capabilities, systems and processes, rather than assessing its actual performance in addressing sustainability issues.
(3) Significance of context in approaches to sustainability assessment	- Notion of context in sustainable development and sustainability assessment is often associated with establishing the following: - setting pre-determined targets or an overall benchmark for comparison; - examining trends over time, to evaluate whether or not performance is improving (or deteriorating) over time and the extent of progress achieved with respect to a specific time reference.

	- applying minimum thresholds, industry norms, standards and conventions to define the goals and vision of sustainability - The GRI advocates that sustainability performance should be reported in relation to the broader concepts of sustainability, by considering the performance of the organization "in the context of the limits and demands placed on environmental or social resources at the sectoral, local, regional, or global level" (Global Reporting Initiative, 2006, p. 11). - "Reporting only on trends in individual performance (or the efficiency of the organization) will fail to respond to the underlying question" (Global Reporting Initiative, 2006, p. 11) [of how an organization positively or negatively impacts the economic, environmental and social conditions within a particular spatial scale].
(4) Consideration of potential future performance and greater focus on long-term perspectives in approaches to sustainability assessment	- While historical performance can provide some measure of reliability and predictability about potential future performance, it is still fraught with a high level of uncertainty. - For example, the manner in which a company has responded to and managed a crisis in the past can offer valuable information about its ability to address similar situations in the future, or even to prevent similar negative outcomes in the future. Yet, indicators which explicitly consider and anticipate risks and opportunities can better evaluate potential future performance, thereby helping to

	strengthen the approaches to sustainability assessment. - Approaches to sustainability assessment must find a way to reconcile the long-term perspective intrinsic to sustainable development with the short-term focus predominant in the capital markets. - Dilemma could be reconciled through the use of indicators which track performance and monitor trends over several consecutive time periods (for example, over five or ten years), rather than exclusively assessing performance based on a single, shorter time period (ie. annually).
(5) Exclusion of entire industry sectors by some indexes	- Indexes which exclude specific industries (eg. nuclear, tobacco, etc.) may discourage companies within those industries from voluntarily pursuing sustainability initiatives. - Including all industries and using a 'best of sector' or 'best in class' approach may encourage companies in controversial industries to tackle sustainability issues.

In conclusion, the comparative analysis of sustainability criteria used by the indexes and guidance tools provides insight into how the concept of sustainable development or sustainability is operationalized within the corporate sector. The data set demonstrates the wide spectrum of issues that are relevant in corporate sustainability. The analysis also generates a number of key findings, the most significant being the lack of standardization amongst the tools on the core set of sustainability indicators relevant to all industry sectors. Comparisons of sustainability criteria indicate that the indexes and guidance tools provide different degrees of coverage on the various sustainability issues within the assessment and

guidance frameworks. The analysis also reveals that the tools attempt to integrate some of the factors introduced in the theoretical perspectives on sustainability assessment. For instance, the tools have incorporated the notion of context in defining certain sustainability indicators, as well as developed a small number of indicators for capturing potential future performance of companies. The analysis also identifies the specific limitations of the tools and the areas for improvement.

Chapter 5: Conclusions

This research was an exploratory study seeking to gain greater insight into corporate sustainability assessment as it is practiced within the capital markets. The objective of the research was to address the following two questions:

(i) To what extent do the stock market sustainability indexes represent the sustainability performance of publicly traded companies?

(ii) To what extent and in what ways are the approaches for assessing corporate sustainability, (as carried out in the context of the stock market sustainability indexes) similar and different from the tools that seek to provide guidance on sustainability reporting and advance sustainability practices within the corporate sector? In other words, to what extent do the two sets of tools align?

With respect to the first question, a comparative analysis of the sustainability criteria used in the assessment frameworks of the DJSI, FTSE4Good and JSI stock market indexes was carried out. Furthermore, answering this question involved an analysis of the extent to which these frameworks reflect the concept of sustainable development and the theoretical perspectives on sustainability assessment presented in the literature review of Chapter 2. The second question involved examining the extent to which the sustainability reporting framework of the GRI and the guidelines of the ISO 26000 standard on social responsibility influenced the sustainability criteria used in the assessment frameworks of the indexes.

The findings of this research indicate that there is significant variation in the sustainability issues covered by the indexes and the guidance tools. The analysis exclusively focused on the core sustainability criteria (as opposed to sector specific criteria), which according to the indexes and guidance tools, are deemed relevant across the majority of industry sectors. Nevertheless, the findings illustrate a lack of standardization amongst the assessment and guidance tools on these core sustainability issues. While all of the tools generally follow the

same model of organizing sustainability criteria according to environmental, social and economic themes, within each of those themes there is a lack of consensus on the specific indicators for tracking performance. This finding, however, may not be surprising, since the concept of sustainability or sustainable development itself encompasses a broad range of environmental, social and economic issues and has been understood and interpreted in a variety of ways in both academic and industry literature, as demonstrated in Chapter 2.

Nonetheless, the lack of standardization amongst assessment frameworks and guidance tools on the core sustainability issues relevant to business practices leads to various implications. Firstly, companies looking for guidance on sustainability practices or seeking to improve current business practices relevant to sustainable development are left with little direction on which sustainability issues are most relevant across industry sectors. Secondly, it is costly for companies having to respond to different sets of criteria set forth by the assessment frameworks and guidance tools, specifically in terms of the time and resources needed to address and report on a wide range of sustainability issues. Thirdly, while ratings of companies would be comparable within an index, as long as criteria are applied consistently to all companies within that index, comparability (of ratings) across indexes becomes difficult. Given that the different indexes emphasize different sustainability issues, a company may be rated high in one index and low in another, making it difficult to understand the true sustainability performance of that company. This may lead to confusion and uncertainty in seeking to identify, across multiple ratings, the companies that are top performers with respect to sustainable development.

A dilemma that arises, however, is that moves towards standardization create the potential for suppressing flexibility and innovation in the development of frameworks for corporate sustainability assessment. The element of flexibility is especially critical since the concept of sustainable development is continuously evolving as it takes on varying interpretations which are significantly influenced by contextual considerations.

With regards to the application of theoretical perspectives on sustainable development and sustainability assessment, the indexes reflect particular aspects presented in the theory. For instance, a number of sustainability criteria include considerations about potential future performance and include a long-term focus, spanning multiple years rather than quarterly periods within a year. The results also indicate that considerations about context have been considered in some of the sustainability criteria. Yet all three indexes demonstrated that there is significant margin for improvement on these points, specifically in terms of increasing the number of indicators which are future-oriented and focus on a long-term perspective, as well as emphasizing the notion of context in a greater number of performance metrics.

With regards to addressing the second question of this research, all three indexes show some degree of alignment with the guidance tools in a range of different topics, with the JSI showing greatest alignment to the GRI on the majority of sustainability criteria. A possible reason for the apparently closer alignment of the JSI with the GRI, compared to the DJSI and FTSE4Good indexes, may be because the indicators for the JSI were only available in more generic terms, while those of the other two indexes were provided in significantly greater detail. Therefore, in organizing the criteria for analysis, the more generic language used in the JSI criteria resulted in greater ambiguity in the interpretations, such that the indicators could correlate to a range of similar criteria. The findings, however, do not conclusively suggest that any one index has a particularly stronger association to the GRI and / or the ISO 26000 standard than the other two indexes. Therefore, this finding reiterates the point made earlier, which is that reporting on one particular set of criteria and being evaluated on a different set of criteria may be costly for companies, and may detract from the objective of encouraging companies to pursue and advance sustainable business practices.

Turning to a discussion on the barriers encountered during the course of this research, these mainly relate to data accessibility and data quality. In order to address the two research questions, the data set analyzed in this study exclusively consisted of the sustainability criteria used in the indexes and guidance tools. The original intent of this research, however,

was to also examine the distribution of weightings assigned to the sustainability criteria within each of the indexes. The analysis of weightings as part of the study would have provided a greater level of understanding on which sustainability issues are given greatest importance in the indexes, and more broadly, in frameworks for assessing corporate sustainability performance. Yet, since none of the indexes published or disclosed information on the distribution of weightings, the analysis only focused on the sustainability criteria.

The lack of data on indicator weightings highlights the difficulty in accessing information about the assessment frameworks of the indexes. As indicated in Chapter 1 of this study, ratings agencies have developed proprietary assessment frameworks for evaluating the sustainability performance of companies, and the details of the frameworks, including the specific criteria and distribution of weightings assigned to the criteria, are often not fully disclosed for competitive reasons. Some indexes, such as the DJSI and FTSE4Good published the entire set of criteria used in the sustainability assessment frameworks, while others, such as the JSI and Calvert Social Index only published brief descriptions of the general issue areas covered. The criteria used by the JSI were provided upon request for this detailed information, while the Calvert Social Index only provided such information to clients, and not for the purposes of this research.

Another significant barrier to the analysis was that the wording of indicators or criteria for the JSI were provided in a general and high level format, in contrast with the level of detail provided in the criteria for the DJSI and FTSE4Good indexes. The vague language used in some of the JSI indicators and the overall generality evident in the criteria wording led to ambiguity when interpreting the specific intentions or expectations of the particular indicators, and consequently, in organizing the indicators for analysis.

Although this research focused on examining a small number of tools, the findings can still be used to understand the nature of corporate sustainability assessment as practiced in the capital markets and to understand the broader implications for advancing sustainability

practices in the corporate sector. Following in the lead of this study, other assessment frameworks and guidance tools could be selected for similar comparative analysis and to address the questions raised in this study. Furthermore, this study focused on examining the core set of sustainability criteria which are considered relevant across a range of industry sectors. Future research could include examining sector specific criteria and analyzing how different indexes evaluate the sustainability performance of firms within a particular industry sector.

Another direction for potential future research would be to examine sustainability assessment from a company perspective, rather than analyzing the topic from the perspective of sustainability ratings and guidance tools as done in this study. For instance, an important aspect of research on this topic would be to understand whether companies are placing greater importance on following the recommendations and guidance provided in tools such as the GRI and ISO 26000 or on the assessment criteria of ratings frameworks such as the sustainability indexes. It would be valuable to conduct an industry-wide survey of companies to understand the reasons why a company may choose to follow one type of tool over another.

This study, therefore, serves as a first step towards helping companies understand the key similarities and differences between the assessment frameworks of sustainability indexes and the guidance tools which provide direction on sustainability reporting and on operationalizing sustainable development within business practices. This understanding is important, because it allows companies to strategically address sustainability issues by recognizing which issues are given highest priority or greatest weight in the different sustainability indexes and guidance tools. Due to the lack of convergence amongst the different tools on the core set of sustainability criteria that are relevant to all industry sectors, companies may not know that by following the ISO 26000 or GRI guidelines, for instance, that they may be negatively impacting their potential for inclusion in one or more indexes. If companies were so informed, would they select to follow the guidance tools or the indexes? Furthermore, by

exploring the mechanisms through which the indexes and guidance tools advance sustainable development, this study enables companies to make more informed decisions about which type of tool will provide optimum guidance in advancing corporate sustainability objectives.

References

Ambec, S., & Lanoie, P. (2008). Does it Pay to be Green? A Systematic Overview. ***Academy of Management Perspectives***: 45-62.

Bansal, P. (2005). Evolving Sustainability: A Longitudinal Study of Corporate Sustainable Development. ***Strategic Management Journal***, 26: 197-218.

Bortolotti, D. (2009, November). Investing: The Complete Couch Potato Roadmap. ***Money Sense***. Retrieved September 6, 2010, from http://www.moneysense.ca/2009/11/01/investing-the-complete-couch-potato-roadmap/.

Calvert Investments. (2010). The Calvert Social Index. Retrieved September 6, 2010, from http://www.calvert.com/sri-index.html.

Calvert Investments. (2010). Sustainable and Responsible Investing: What is SRI? Retrieved September 6, 2010, from http://www.calvert.com/sri-whatis.html.

Canadian Institute of Chartered Accountants (CICA), (2010). Environmental, Social and Governance (ESG) Issues in Institutional Investor Decision Making. Canadian Institute of Chartered Accountants.

Chatterji, A., & Levine, D. (2006). Breaking Down the Wall of Codes: Evaluating Non-Financial Performance Measurement. ***California Management Review***, 48(2): 29-51.

Chatterji, A. K., Levine, D. I., & Toffel, M. W. (2009). How Well Do Social Ratings Actually Measure Corporate Social Responsibility? ***Journal of Economics & Management Strategy***, 18: 125-169.

Clements-Hunt, P., & Lawal, K. (2003). Finance, Environment and Sustainable Development - Corporate Responsibility and Capital Markets - Managing Qualitative Risk Issues.

CMA Canada. (1999). Writing and Evaluating Sustainable Development and Environmental Reports.

Dawe, N. K., & Ryan, K. L. (2003). The Faulty Three-Legged-Stool Model of Sustainable Development. ***Conservation Biology***, 17(5): 1458-1460.

Déjean, F., Gond, J., & Leca, B. (2004). Measuring the unmeasured: An institutional entrepreneur strategy in an emerging industry. ***Human Relations***, 57(6): 741-764.

Delmas, M., & Blass, V. D. (2010). Measuring Corporate Environmental Performance: The Trade-offs of Sustainability Ratings. ***Business Strategy and the Environment***, 19: 245-260.

Devuyst, D. (2000). Linking Impact Assessment and Sustainable Development at the Local Level: The Introduction of Sustainability Assessment Systems. ***Sustainable Development***, 8: 67-78.

Dow Jones Sustainability Indexes. (2009). Corporate Sustainability Assessment. Retrieved September 6, 2010, from http://www.sustainability-index.com/07_htmle/assessment/overview.html.

Dow Jones Sustainability Indexes. (2010). Licensing. Retrieved February 3, 2011, from http://www.sustainability-index.com/07_htmle/other/licensing.html.

Elkington, J. (2004). Enter the Triple Bottom Line. In: Henriques, A., & Richardson, J. *The Triple Bottom Line: Does it all add up? Assessing the Sustainability of Business and CSR*. London: Earthscan Publications Limited.

Epstein, M. J. (2008). *Making Sustainability Work: Best Practices in Managing and Measuring Corporate Social, Environmental, and Economic Impacts*. San Francisco, CA: Berrett-Koehler Publishers.

Espeland, W. N., & Sauder, M. (2007). Rankings and Reactivity: How Public Measures Recreate Social Worlds. ***American Journal of Sociology***, 113(1): 1-40.

Feldman, S. J., Soyka, P. A., & Ameer, P. (1996). Does Improving a Firm's Environmental Management System and Environmental Performance Result in a Higher Stock Price?: 1-23: ICF Kaiser International, Inc.

Feltmate, B. (2009). The Sustainable Development Elevator Speech. Retrieved September 6, 2010, from http://www.green-business.ca/Sustainability-Reporting/Features/the-sustainable-development-elevator-speech.html.

Food and Agriculture Organization of the United Nations. (2007). Earth Summit and Agenda 21. Retrieved February 25, 2011, from http://www.fao.org/sard/en/sard/2070/2071/index.html.

Freedman, M., & Jaggi, B. (1992). An Examination of the Impact of Pollution Performance on Economic and Market Performance: Pulp and Paper Firms. ***Journal of Business Finance & Accounting***, 19(5): 697-713.

FTSE. (2010). EIRIS. Retrieved February 3, 2011, from http://www.ftse.com/Indices/FTSE4Good_Index_Series/EIRIS.jsp.

FTSE. (2010). FTSE4Good Index Series. Retrieved September 6, 2010, from http://www.ftse.com/Indices/FTSE4Good_Index_Series/index.jsp.

FTSE4Good Climate Change Criteria. Retrieved April 13, 2011, from http://www.ftse.com/Indices/FTSE4Good_Index_Series/Downloads/FTSE4Good_Climate_Change_Criteria.pdf.

FTSE4Good Countering Bribery Criteria. Retrieved April 13, 2011, from http://www.ftse.com/Indices/FTSE4Good_Index_Series/Downloads/FTSE4Good_Countering_Bribery_Criteria.pdf.

FTSE4Good Index Series Inclusion Criteria. Retrieved April 13, 2011, from http://www.ftse.com/Indices/FTSE4Good_Index_Series/Downloads/F4G_Criteria.pdf.

FTSE4Good Supply Chain Criteria. Retrieved April 13, 2011, from http://www.ftse.com/Indices/FTSE4Good_Index_Series/Downloads/FTSE4Good_Supply_Chain_Criteria.pdf.

George, C. (2001). Sustainability appraisal for sustainable development: integrating everything from jobs to climate change. ***Impact Assessment and Project Appraisal***, 19(2): 95-106.

Gibson, R. B. (2001). *Specification of sustainability-based environmental assessment decision criteria and implications for determining "significance" in environmental assessment.* Retrieved August 8, 2010, from http://www.sustreport.org/downloads/SustainabilityEA.doc.

Global Footprint Network. (2010). Footprint Basics - Overview. Retrieved February 28, 2011, from http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_basics_overview/.

Global Reporting Initiative. About GRI. Retrieved September 7, 2010, from http://www.globalreporting.org/AboutGRI/WhatIsGRI/.

Global Reporting Initiative. (2006). Sustainability Reporting Guidelines. Retrieved May 5, 2010, from http://www.globalreporting.org/ReportingFramework/ReportingFrameworkDownloads/.

Global Reporting Initiative. (2006). Sustainability Reporting Guidelines (Version 3.0). Retrieved April 13, 2011, from http://www.globalreporting.org/NR/rdonlyres/69B73A44-F372-4898-8548 B657BA73F8FF/0/G3_Guidelines_English.pdf.

Graafland, J. J., Eijffinger, S. C. W., & Smid, H. (2004). Benchmarking of Corporate Social Responsibility: Methodological Problems and Robustness. ***Journal of Business Ethics***, 53: 137-152.

GreenMoney Journal. (2011). Socially Responsible Investing: Reaching New Heights – Community Development Venture Capital, from the CDVC Alliance. Retrieved March 2, 2011, from http://www.greenmoneyjournal.com/article.mpl?newsletterid=23&articleid=238.

Grene, S. (2010, May 30). Sustainable Investment Gains as Investors Seek Security. *Financial Times*. Retrieved March 3, 2011, from http://www.ft.com/cms/s/0/0ee1ab5e-6a83-11df-b282-00144feab49a.html#axzz1FYVr4uEh.

Hardi, P., & Pinter, L. (1995). Models and Methods for Measuring Sustainable Development Performance. International Institute for Sustainable Development.

Hart, S. L., & Ahuja, G. (1994). Does it Pay to be Green? An Empirical Examination of the Relationship Between Pollution Prevention and Firm Performance. Retrieved July 2, 2010, from http://deepblue.lib.umich.edu/bitstream/2027.42/35684/1/b1798303.0001.001.txt.

Hassel, L., Nilsson, H., & Nyquist, S. (2005). The Value Relevance of Environmental Performance. ***European Accounting Review***, 14(1): 41-61.

Heemskerk, B., Pistorio, P., & Scicluna, M. (2002). Sustainable Development Reporting: Striking the Balance. World Business Council for Sustainable Development.

Hillman, A. J., & Keim, G. D. (2001). Shareholder Value, Stakeholder Management, and Social Issues: What's the Bottom Line? ***Strategic Management Journal***, 22: 125-139.

Hohnen, P. (2007). Corporate Social Responsibility: An Implementation Guide for Business. International Institute for Sustainable Development.

Holmberg, J., & Sandbrook, R. (1992). Sustainable Development: What Is to Be Done? In: Holmberg, J., editor. *Making development sustainable: redefining institutions, policy, and economics.* London: Earthscan Publications Limited.

Industry Canada. (2010). Are Firms Benefiting from CSR Activities? Retrieved February 25, 2011, from http://www.ic.gc.ca/eic/site/csr-rse.nsf/eng/rs00129.html.

Industry Canada. (2009). What is Corporate Social Responsibility? Retrieved September 6, 2010, from http://www.ic.gc.ca/eic/site/csr-rse.nsf/eng/rs00129.html.

Industry Canada. (2009). Why Has CSR Become Important? Retrieved September 6, 2010, from http://www.ic.gc.ca/eic/site/csr-rse.nsf/eng/rs00129.html.

International Institute for Sustainable Development, Deloitte & Touche, & World Business Council for Sustainable Development. (1992). *Business Strategy for Sustainable Development: Leadership and Accountability for the 90s*.

International Organization for Standardization. (2009). ISO 26000: Draft International Standard - Guidance on Social Responsibility.

International Organization for Standardization. (2011). ISO 26000 Project Overview. Retrieved June 2, 2011, from http://www.iso.org/iso/iso_catalogue/management_and_leadership_standards/social_responsibility/sr_iso26000_overview.htm.

International Organization for Standardization. (2008). Social Responsibility. Retrieved September 7, 2010, from http://isotc.iso.org/livelink/livelink/fetch/2000/2122/830949/3934883/3935096/home.html?nodeid=4451259&vernum=0.

Jantzi-Sustainalytics. (2010). Global Environmental, Social and Governance Indicators.

Jenkins, B., Annandale, D., & Morrison-Saunders, A. (2003). The evolution of a sustainability assessment strategy for Western Australia. ***Environmental and Planning Law Journal***, 20(56): 56-65.

Keeble, J. J., Topiol, S., & Berkeley, S. (2003). Using Indicators to Measure Sustainability Performance at a Corporate and Project Level. ***Journal of Business Ethics***, 44(2/3): 149-158.

Keefe, J. (2008, December 16). Sustainable Investing and the Financial Crisis: How Long-Term Investing Can Replace Short-Term Bubbles. *The Huffington Post*. Retrived March 3, 2011, from http://www.huffingtonpost.com/joe-keefe/sustainable-investing-and_b_151516.html.

Kinderyte, L. (2008). Analysis and Comparison of Methodologies for Corporate Sustainability Assessment. ***Environmental Research, Engineering and Management***, 4(46): 66-75.

King, A. A., & Lennox, M. J. (2001). Does it Really Pay to be Green? An Empirical Study of Firm Environmental and Financial Performance. ***Journal of Industrial Ecology***, 5(1): 105-116.

Klassen, R. D., & McLaughlin, C. P. (1996). The Impact of Environmental Management on Firm Performance. ***Management Science***, 42(8): 1199-1214.

Koellner, T., Weber, O., Fenchel, M., & Scholz, R. (2005). Principles for Sustainability Rating of Investment Funds. ***Business Strategy and the Environment***, 14: 54-70.

Labuschagne, C., Brent, A. C., & van Erck, R. P. G. (2005). Assessing the Sustainability Performances of Industries. ***Journal of Cleaner Production***, 13: 373-385.

Margolis, J. D., & Walsh, J. P. (2003). Misery Loves Companies: Rethinking Social Initiatives by Business. ***Administrative Science Quarterly***, 48: 268-305.

Marsden, S., & Dovers, S. (2002). Conclusions: Prospects for SEA. In: Marsden, S., & Dovers, S., editors. *Strategic Environmental Assessment in Australasia*. Sydney: The Federation Press.

McWilliams, A., & Siegel, D. (2000). Corporate Social Responsibility and Financial Performance: Correlation or Mis-specification? ***Strategic Management Journal***, 21: 603-609.

Molina-Azorín, J. F., Claver-Cortés, E., López-Gamero, M. D., & Tarí, J. J. (2009). Green Management and Financial Performance: A Literature Review. ***Management Decision***, 47(7): 1080-1100.

MSCI. (2010). MSCI to Transition the FTSE KLD Indices to New MSCI ESG Indices. Retrieved March 22, 2011, from http://www.msci.com/products/indices/thematic/esg/announcement_july_1_2010.html.

Natural Step. The Four System Conditions. Retrieved September 8, 2010, from http://www.naturalstep.org/the-system-conditions.

Ness, B., Urbel-Piirsalu, E., Anderberg, S., & Olsson, L. (2007). Categorising tools for sustainability assessment. ***Ecological Economics***, 60: 498-508.

Notat, N. (2011). Integrating Social Factors into Investment. Retrieved February 24, 2011, from http://www.vigeo.com/csr-rating-agency/en/news/news-vigeo/investir-en-integrant-les-facteurs-sociaux.html.

Pembina Institute. Genuine Progress Indicator. Retrieved February 28, 2011, from http://www.pembina.org/economics/gpi.

Pope, J., Annandale, D., & Morrison-Saunders, A. (2004). Conceptualising Sustainability Assessment. ***Environmental Impact Assessment Review***, 24: 595-616.

Robeco, & Booz & Company. (2007). Responsible Investing: A Paradigm Shift - From Niche to Mainstream. Robecco & Booz & Company.

Rowlands, I. H. (2001). The Kyoto Protocol's 'Clean Development Mechanism': A Sustainability Assessment. ***Third World Quarterly***, 22(5): 795-811.

Rowley, T. & Berman, S. (2000). A Brand New Brand of Corporate Social Performance. ***Business and Society***, 39(4): 397-418.

Salzmann, O., Ionescu-Somers, A., & Steger, U. (2005). The Business Case for Corporate Sustainability: Literature Review and Research Options. ***European Management Journal***, 23(1): 27-36.

Sheate, W. R., et al. (2001). SEA and Integration of the Environment into Strategic Decision-Making, Imperial College Consultants Ltd. 1: 130.

Sheate, W. R., et al. (2003). Integrating the Environment into Strategic Decision-Making: Conceptualizing Policy SEA. ***European Environment***, 13: 1-18.

Sinkin, C., Wright, C. J., & Burnett, R. D. (2008). Eco-efficiency and Firm Value. ***Journal of Accounting and Public Policy***, 27: 167-176.

Social Investment Organization. (2011). Canadian Socially Responsible Investment Review 2010: A Comprehensive Survey of Socially Responsible Investment in Canada. Retrieved May 13, 2011, from http://www.socialinvestment.ca/documents/CanadianSociallyResponsibleInvestmentReview2010_English_final.pdf.

Social Investment Organization. Fact Sheet #1: What is Socially Responsible Investment (SRI)?. Retrieved September 6, 2010, from http://www.socialinvestment.ca/Investor%20Information/InvestorsFactSheet1.htm.

Social Investment Organization. Fact Sheet #2: Screening Basics: Evaluating Investment Choices. Retrieved September 6, 2010, from http://www.socialinvestment.ca/Investor%20Information/InvestorsFactSheet2.htm.

Social Investment Organization. Fact Sheet #3: What is Community Investing? Retrieved September 6, 2010, from http://www.socialinvestment.ca/Investor%20Information/InvestorsFactSheet3.htm.

Standard & Poor's. (2010). S&P / TSX Composite. Retrieved September 6, 2010, from http://www.standardandpoors.com/indices/sp-tsx-composite/en/us/?indexId=spcadntxc-caduf--p-ca----.

SustainAbility. (2010). Rate the Raters, Phase One – Look Back and Current State. SustainAbility.

SustainAbility. (2010). Rate the Raters, Phase Two – Taking Inventory of the Ratings Universe. SustainAbility.

SustainAbility. (2011). Rate the Raters, Phase Three. Retrieved February 23, 2011, from http://www.sustainability.com/library/rate-the-raters-phase-three#.

Sustainable Asset Management. (2009). SAM Research Corporate Sustainability Assessment Questionnaire – Mixed. Retrieved April 13, 2011, from https://secure2.sam-group.com/online/documents/testcompany.pdf.

Sustainable Asset Management. (2009). SAM Research Corporate Sustainability Assessment Questionnaire – Specialized Consumer Services. Retrieved April 13, 2011, from https://secure2.sam-group.com/online/home.jsp.

Sustainable Asset Management. (2010). Sustainability Investing. Retrieved February 3, 2011, from http://www.sam-group.com/htmle/djsi/djsi.cfm.

Sustainalytics. (2010). Indexes. Retrieved September 6, 2010, from http://sustainalytics.com/indexes.

Sweeney, L., & Coughlan, J. (2008). Do different industries report Corporate Social Responsibility differently? An investigation through the lens of stakeholder theory. ***Journal of Marketing Communications***, 14(2): 113-124.

Tyteca, D. (1998). Sustainability Indicators at the Firm Level: Pollution and Resource Efficiency as a Necessary Condition Toward Sustainability. ***Journal of Industrial Ecology***, 2(4): 61-77.

UN Global Compact. (2010). Overview of the UN Global Compact. Retrieved September 6, 2010, from http://www.unglobalcompact.org/AboutTheGC/index.html.

U.S. National Research Council. (1999). Executive Summary. In: *Our Common Journey: A Transition Toward Sustainability*.

US Securities and Exchange Commission. (2007). Market Capitalization. Retrieved September 6, 2010, from http://www.sec.gov/answers/marketcapitalization.htm.

US Securities and Exchange Commission. (2007). Market Indices. Retrieved September 6, 2010, from http://www.sec.gov/answers/indices.htm.

van Beurden, P., & Gosling, T. (2008). The Worth of Values – A Literature Review on the Relation Between Corporate Social and Financial Performance. ***Journal of Business Ethics***, 82: 407-424.

Veleva, V., & Ellenbecker, M. (2000). A Proposal for Measuring Business Sustainability: Addressing Shortcomings in Existing Frameworks. ***Greener Management International***, 31: 101-120.

Verheem, R. A. A., & Tonk, J. A. M. N. (2000). Strategic Environmental Assessment: One Concept, Multiple Forms. ***Impact Assessment and Project Appraisal***, **18**(3): 177-182.

Waddock, S. A., & Graves, S. B. (1997). The Corporate Social Performance-Financial Performance Link. ***Strategic Management Journal***, 18(4): 303-319.

Waheed, B., Khan, F., & Veitch, B. (2009). Linkage-Based Frameworks for Sustainability Assessment: Making a Case for Driving Force-Pressure-State-Exposure-Effect-Action (DPSEEA) Frameworks. ***Sustainability***, 1: 441-463.

Willard, B. (2002). *The Sustainability Advantage: Seven Business Case Benefits of a Triple Bottom Line*. Gabriola Island, British Columbia: New Society Publishers.

World Commission on Environment and Development. (1987). Our Common Future. Retrieved September 8, 2010, from http://www.un-documents.net/ocf-02.htm.

Appendix A: High Level Matrix – Comparative Analysis of Sustainability Indicators Covered by Guidance and Assessment Tools

Legend: Blue cell – indicator is covered by tool; White cell – indicator is not covered by tool

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Environment				Environment			Environment
Environment	**Materials**	Materials used					
		Recycled input materials					
	Energy	Energy consumption					
		Energy saved					
		Initiatives to reduce energy consumption					
	Water	Water consumption					
		Water sources affected					
		Water recycled and reused					
	Biodiversity	Land area					
		Impacts on biodiversity					
		Habitats protected or restored					
		Managing impacts on biodiversity					
		Number of species or habitats affected by operations					

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Environment			Environment	Environment		Environment	
Environment	**Emissions, Effluents & Waste**	GHG emissions					
		Initiatives to reduce GHG emissions and reductions achieved					
		Emissions of ozone-depleting substances					
		NOx, SOx emissions					
		Total water discharge					
		Total waste disposal					
		Number and volume of spills					

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Environment			Environment		Environment	Environment	
Environment	**Emissions, Effluents & Waste**	% of hazardous waste and % of waste shipped internationally	■	■			■
				■			■
				■			■
				■			■
		Water bodies and habitats affected by water discharge	■				
	Products & Services	Initiatives to mitigate environmental impacts of products / services	■	■		■	■
		% of products and packaging material reclaimed	■				
	Compliance	Systems for ensuring environmental compliance	■		■	■	■
	Transport	Environmental impact from Transportation	■				■
	Overall	Environmental protection expenditures / investments	■				
	Corporate-wide environmental policies, certifications, and programs	Corporate environmental policy and programs to reduce environmental impacts			■	■	■
	Climate change adaptation initiatives	Actions taken for climate change adaptation		■			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Labour Practices	**Employment**	Total workforce	■				■
		Employee turnover rate	■		■		■
		Employee benefits	■				■
		Conditions of Work & Social Protection		■		■	
				■			
				■			■
				■			
				■			
	Labour / Management Relations	% employees covered by collective bargaining agreements	■	■	■	■	■
				■			
		Minimum notice period regarding organizational changes	■	■	■		
		Employee satisfaction			■		
		Systems to handle employee grievances			■		■
		Publicly endorse charters / frameworks			■	■	■
		Labour / management relations		■			
				■			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Labour Practices	**Occupational Health & Safety**	Occupational health and safety committee and programs					
		Health and safety incidents and impacts					
		Health and safety education / training					
		Health and safety agreements with trade unions / workers' organizations					
	Training & Education	Hours of employee training					
		Skills development and career advancement training programs					
		% employees receiving career development reviews					
	Diversity & Equal Opportunity	Employee breakdown by gender, age, ethnicity, minority groups, etc.					
		Salary ratio - male vs. female					

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Society	**Community**	Programs / practices to assess organization's impacts on local community					
		Promoting social responsibility within sphere of influence					
		Promoting community education & culture					
		Community skills development					
		Community technology development					
		Community health					
		Community social investment					

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Society	**Corruption & Bribery**	Corporate policy on corruption and bribery					
		Implementation of policy on corruption / bribery					
		% of business units analyzed for risks of corruption					
		Anti-corruption training for employees					
		Response to incidents of corruption					
	Public Policy	Participation in public policy					
		Financial and in-kind contributions to political parties					
	Anti-competitive behaviour	Legal actions for anit-competitive behaviour					
	Compliance	Non-compliance incidents and fines - eg. corruption, anti-competitive behaviour					

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Product Responsibility	**Customer Health & Safety**	Customer health and safety					
		Non-compliance regarding health / safety of products and services					
	Products & Service Labeling	Products and service labelling					
		Non-compliance regarding product / service information / labelling					
	Customer Satisfaction	Practices related to customer satisfaction - eg. surverys, complaint / dispute resolution					

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Product Responsibility	**Marketing Communications**	Programs to assure compliance with laws / standards regarding marketing communications					
		Non-compliance regarding marketing communications					
	Customer Privacy	Systems to assure customer privacy and non-compliance regarding customer privacy					
	Compliance	Non-compliance regarding the provision / use of products / services					
	Respect for Property Rights	Respect for property rights					
	Access to Essential Services	Access to essential services					

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Human Rights	**Investment & Procurement Practices**	Investment agreements that include human rights clauses or screening					
		Systems to screen suppliers / contractors (on human rights)					
		Employee training on human rights issues relevant to business					
	Non-discrimination	Discrimination incidents and response taken					
	Freedom of Association & Collective Bargaining	Commitment to freedom of association & collective bargaining					
	Child Labour	Measures to eliminate child labour					
	Forced & Compulsory Labour	Measures to eliminate forced & compulsory labour					
	Security Practices	Security personnel trained in human rights issues					

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Human Rights	**Indigenous Rights**	Commitment to indigenous rights, violations of indigenous rights					
	Human Rights Policy	Human rights policy					
	Resolving Grievances	Human rights - resolving grievances					
	Civil / Political Rights	Human rights - civil & political rights					
	Economic, Social, Cultural Rights	Human rights - economic, social, cultural rights					

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Economic				Economic		Economic	
Economic	**Economic Performance**	Revenues					
		Operating costs					
		Employee compensation (wages & benefits)					
		Payments to capital providers					
		Payments to government					
		Donations & community investments					
		Retained earnings					
		Financial implications (RISK) associated with climate change					
		Financial implications (Opportunities) associated with climate change					
		Defined vs other types of benefit plans (retirement)					
		Financial assistance from government					
	Market Presence	Ratio - standard entry level vs. local minimum wage					
		Policies, practices, spending on locally based supplies					
		Policies on local hiring					

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Economic			Economic		Economic	Economic	
Economic	**Indirect Economic Impacts**	Impact of infrastructure investments					
		Indirect economic impacts as money circulates through economy					
	Corporate Governance	Corporate governance					
	Risk & Crisis Management	Risk & Crisis Management					
	Corporate Codes of Conduct	Corporate codes of conduct					
	Customer Relationship Management	Customer relationship management					
	Brand Management	Brand management					
	Privacy Protection	Privacy protection for all stakeholders					

Appendix B: Detailed Level Matrix – Comparative Analysis of Sustainability Indicators Covered by Guidance and Assessment Tools

Legend: Blue cell – indicator is covered by tool; White cell – indicator is not covered by tool

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Environment				Environment		Environment	
Environment	Materials	Materials used	Materials used by weight or volume	- implement materials efficiency programmes to reduce the environmental burden caused by use of raw materials for production processes or for finished products used in its activities or in the delivery of its services; - materials efficiency programme is based on identification of ways to increase the efficiency of raw material use in the sphere of influence of the organization; - measure, record and report on significant uses of other resources;			
		Recycled input materials	Percentage of materials used that are recycled input materials				
	Energy	Energy consumption	Direct energy consumption by primary energy source	- measure, record and report on reduction of energy consumption; - measure, record and report on significant uses of energy;	Total energy consumption + reduction target + explain trend and performance against target.		
			Indirect energy consumption by primary source				
		Energy saved	Energy saved due to conservation and efficiency improvements	- energy efficiency programmes to reduce the energy demand for buildings, transportation, production processes, appliances and electronic equipment, the provision of services or other purposes. Efficiency improvements in energy use should also complement efforts to advance sustainable use of renewable resources such as solar energy, hydroelectricity, tidal and wave energy, wind power and biomass; - complement or replace non-renewable resources with alternative renewable and low impact sources;			
		Initiatives to reduce energy consumption	Initiatives to provide energy-efficient or renewable energy-based products and services, and reductions in energy requirements as a result of these initiatives.				
			Initiatives to reduce indirect energy consumption and reductions achieved.				
	Water	Water consumption	Total water withdrawal by source.	- measure, record and report on reduction of water consumption; - measure, record and report on significant uses of water;	Total water use + reduction target + explain trend and performance against target.		
		Water sources affected	Water sources significantly affected by withdrawal of water.	- manage water resources to ensure fair access for all users within a watershed;			
		Water recycled and reused	Percentage and total volume of water recycled and reused.	- conserve and reuse water in its own operations and stimulate water conservation within its sphere of influence. Millennium Development Goals include the provision of sustainable access to safe drinking water. - reuse water as much as possible;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Environment				Environment		Environment	
Environment	Biodiversity	Land area	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.				
		Impacts on biodiversity	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	- valuing, protecting and restoring ecosystem services; - valuing and protecting biodiversity; - using land and natural resource sustainably; - advancing environmentally sound urban and rural development; - identify potential adverse impacts on ecosystem services and biodiversity and take measures to eliminate or minimize these impacts; - where feasible and appropriate, participate in market mechanisms to internalize the cost of environmental burdens caused and create economic value in protecting ecosystem services; - give highest priority to avoiding the loss of natural ecosystems, next to restoring ecosystems, and finally, if the former two actions are not possible or fully effective, to compensating for losses through actions that will lead to a net gain in ecosystem services over time;			
		Habitats protected or restored	Habitats protected or restored.				
		Managing impacts on biodiversity	Strategies, current actions, and future plans for managing impacts on biodiversity.				
				- establish and implement an integrated strategy for the administration of land, water and ecosystems that promotes conservation and sustainable use in a socially equitable way; - take measures to preserve any endemic or endangered species or habitat that may be adversely affected; - implement planning, design and operating practices as a way to minimize the possible environmental burdens resulting from its land use decisions, including decisions related to agricultural and urban development; - incorporate the protection of natural habitat, wetlands, forest, wildlife corridors, protected areas and agricultural lands into the development of buildings and construction works; - consider adopting sustainable agricultural, fishing, animal welfare and forestry practices as defined in leading standards and certification schemes; - consider that wild animals and their habitats are part of our natural ecosystems and should therefore be valued and protected;			
				- progressively use a greater proportion of products from suppliers meeting the requirements of standards and certification schemes; - avoid approaches that threaten the survival or lead to the global, regional or local extinction of species or that allow the distribution or proliferation of invasive species;			
		Number of species or habitats affected by operations	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.				

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Environment							
Environment	**Emissions, Effluents & Waste**	GHG emissions	Total direct and indirect greenhouse gas emissions by weight.	- identify the sources of direct and indirect GHG emissions and define boundaries (scope) of responsibility; - measure, record and report on its significant GHG emissions, preferably using methods defined in internationally agreed standards;	Total direct GHG emissions + reduction target + explain trend and performance against target.	- Total operational CO2 or GHG emissions as tonnes of CO2 equivalent or operational energy consumption; - Public disclosure of product related emissions/ efficiency; - end user emission, fuel efficiency; - Sector metric where established as an industry norm. For example, for cement companies, kg CO2 per tonne of cement; or efficiency ratio.	
			Other relevant indirect greenhouse gas emissions by weight.				
		Initiatives to reduce GHG emissions and reductions achieved	Initiatives to reduce greenhouse gas emissions and reductions achieved.	- implement measures to progressively reduce and minimize the direct and indirect GHG emissions within its control or sphere of influence; - reduce the use of fossil fuels and impacts of their use, for example by making use of low-emission technologies and renewable energy, with aim of reducing life cycle GHG emissions, bearing in mind possible environmental and social consequences of increased use of such resources; - prevent the release of GHG emissions (particularly those also causing ozone depletion) from land use and land use change, processes or equipment including heating, ventilation and air conditioning units;		- Long-term strategic goal of significant quantified reductions of operational GHG emissions or carbon intensity improvement over more than five years, which should be publicly available; AND / OR - Short/medium-term management targets for quantified GHG operational emissions reduction over less than five years. - At least one of the following must be met: - At least a 5% reduction in carbon intensity over the last two years. - The company is able to demonstrate that for the previous two years it is in the top quartile of companies in its subsector when assessed on accepted carbon efficiency metrics.	
				- consider opportunities for emissions trading or similar market instruments and development mechanisms that use recognized methodologies and are provided under international agreements such as the UN Framework Convention on Climate Change (UNFCCC) [109]. An organization should carefully examine whether such efforts will lead to substantial GHG reduction; - consider aiming for carbon neutrality by implementing measures to offset remaining GHG emissions, for example through supporting reliable emissions reduction programmes that operate in a transparent way, carbon capture and storage or carbon sequestration.		- a Transformational Initiative or a combination, providing they are quantified and significant; (Transformational initiative = strategic initiative that makes a significant contribution to the reduction of GHG emissions. FTSE will consult a panel of climate change experts and industry sector data will be assessed to identify significance levels. Example categories include buying 'low carbon electricity' and fuel switching; demand side management; research, development and production of low carbon technologies; generation of renewable energy; product/service innovation; carbon capture and storage; supply chain/upstream emissions reductions; new business models; breakthrough project.)	
		Emissions of ozone-depleting substances	Emissions of ozone-depleting substances by weight.	- emissions to air of pollutants such as lead, mercury, volatile organic compounds (VOCs), sulphur dioxide (SO2), nitrogen oxides (NOx), dioxins, particulates and ozone depleting substances can cause environmental and health impacts that affect individuals differently. - emissions directly from organization's facilities and activities or caused indirectly by the use or end-of-life handling of its products and services or the generation of the energy it consumes;			
		NOx, SOx emissions	NOx, SOx, and other significant air emissions by type and weight.				

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Environment							
Environment	**Emissions, Effluents & Waste**	Total water discharge	Total **water discharge** by quality and destination.	- direct, intentional or accidental **discharges into surface water** bodies, unintentional runoff to surface water or infiltration to ground water. - discharges directly from organization's facilities, or caused indirectly by use of its products & services.			
		Total waste disposal	Total weight of waste by type and disposal method.	- activities, products and services that may lead to liquid or solid waste that, if improperly managed, can cause contamination of air, water land and soils. Responsible waste management seeks avoidance of waste, & follows waste reduction hierarchy: source reduction, reuse, recycle and reprocess, waste treatment and waste disposal.	Total waste generation + reduction target + explain trend and performance against target.		
				- implement measures aimed at preventing pollution and waste, using the waste management hierarchy, and ensuring proper management of unavoidable pollution and waste			
				- other identifiable forms of pollution: activities, products and services that may cause other forms of pollution that negatively affect the health and well-being of communities and that can affect individuals differently, including: noise, odour, visual, vibration, radiation, infectious agents (viral or bacterial), emissions from diffused or dispersed sources and biological hazards (invasive species).			
				- measure, record and report on reduction of pollution, waste generation			
		Number and volume of spills	Total number and volume of significant spills.	- release of toxic and hazardous chemicals (both naturally occurring and anthropogenic)			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Environment				Environment		Environment	
Environment	**Emissions, Effluents & Waste**	% of hazardous waste and % of waste shipped internationally	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.				
				- publicly disclose amounts and types of relevant and significant toxic and hazardous materials used and released, including known human health and environmental risks of these materials			
				- systematically identify and prevent use of banned chemicals, defined both by national law and by international conventions, and where possible, chemicals identified by scientific bodies or any other stakeholder as being of concern. - also seek to prevent use of such chemicals by organizations within its sphere of influence. Chemicals to avoid include, but are not limited to: ozone-depleting substances, persistent organic pollutants (POPs) and chemicals covered under the Rotterdam Convention, hazardous chemicals and pesticides (as defined by the World Health Organization), chemicals defined as carcinogenic (including exposure to smoke from tobacco products) or mutagenic, and chemicals that affect reproduction, are endocrine disrupting, or persistent, bio-accumulative and toxic (PBTs) or very persistent and very bio-accumulative (vPvBs);			
				- implement chemical accident prevention and preparedness programme and emergency plan covering accidents and incidents both on- and off-site and involving workers, partners, authorities and local communities and other relevant stakeholders. - Such a programme should include: hazard identification and risk evaluation, notification procedures and communication systems, public education and information.			
		Water bodies and habitats affected by water discharge	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.				

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Environment							
Environment	**Products & Services**	Initiatives to mitigate environmental impacts of products / services	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	- To contribute to sustainable consumption, an organization should: offer consumers socially and environmentally beneficial products and services considering the full life cycle and reduce adverse impacts on the environment and society by: - eliminating, where possible, or minimizing any negative health and environmental impact of products and services, such as noise and waste; - designing products and packaging so that they can be easily reused, repaired or recycled and, if possible, offering or suggesting recycling and disposal services; - [consumer education and awareness on]: - environmental protection; - efficient use of materials, energy and water; - sustainable consumption; - proper disposal of wrapping, waste, and products;		- Board level or senior executive responsibility for climate change related issues (individual or committee); - Public statement/ policy identifying climate change or energy consumption as relevant to business activities and the need to address climate change as a key concern*; - Public statement/ policy should also include a commitment to reduce product related emissions or climate change impact;	
		% of products and packaging material reclaimed	Percentage of products sold and their packaging materials that are reclaimed by category.				
	Compliance	Systems for ensuring environmental compliance	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.		- What mechanisms are in place to assure effective implementation of your company's codes of conduct (e.g. compliance system)? (1) Responsibilities, accountabilities and reporting lines are systemically defined in all divisions and group companies; (2) Dedicated help desks, focal points, ombudsman, hot lines; (3) Codes of conduct linked to employee remuneration; (4) Employee performance appraisal systems integrates compliance/codes of conduct; (5) Disciplinary actions in case of breach, i.e. warning, dismissal, zero tolerance policy; (6) Compliance system is certified/audited/verified by third party; - Does your company publicly report on breaches (e.g. number of breaches, cases etc) against your codes of conduct/ethics and anti-corruption and bribery policy?	- **Policy:** • Commitment to monitoring and audit; • Commitment to public reporting; - **Management:** • Internal audits against the requirements of the system not limited to legal compliance); • Internal reporting and management review; - **Repporting:** • Non-compliance, prosecution, fines, accidents; • Independent verification;	
	Transport	Environmental impact from Transportation	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.				

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Environment				Environment		Environment	
Environment	**Overall**	Environmental protection expenditures / investments	Total environmental protection expenditures and investments by type.				
	Corporate-wide environmental policies, certifications, and programs	Corporate environmental policy and programs to reduce environmental impacts			- Has your company adopted **corporate environmental policy**? - Please indicate whether your corporate environmental policy applies to: (1) company's own operations; (2) Environmental impacts of products & services; (3) Suppliers & service providers (contractors); (4) Other key business partners; - Please indicate how your environmental management system is verified / audited / certified: ISO 14001, JIS Q 14001, EMAS certification by internal / 3rd party; other audits by internal / 3rd party; - Please indicate % of total revenues verified / audited / certified according to these (EMS) systems;	- **Policy:** • Policy refers to all key issues; • Responsibility for policy at board or department level; • Commitment to use of targets; • Globally applicable corporate standards; • Commitment to stakeholder involvement; • Policy addresses product or service impact; • Strategic moves towards sustainability; - **Management:** - ISO 14001, EMAS certification; • Presence of environmental policy; • Identification of significant impacts; • Documented objectives and targets in key areas; • Outline of processes and responsibilities, manuals, action plans, procedures; - **Reporting:** • Text of environmental policy; • Description of main impacts; • Quantitative data; • Performance measured against targets; • Financial dimensions; • Stakeholder dialogue; • Coverage of sustainability issues;	
	Climate change adaptation initiatives	Actions taken for climate change adaptation		- actions for climate change adaptation - integrate CCA into decision making, implement responsiveness measures to climate change impacts, increase adaptation capacity of stakeholders within sphere of influence; - planning for land use; - developing agricultural, industrial, medical and other technologies and making them accessible to those in need, ensuring security of drinking water, sanitation, food and other resources critical to human health; - support regional steps to reduce vulnerability to pluvial and fluvial flooding; - awareness through education and preventive measures for resilience of society;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Labour Practices	**Employment**	Total workforce	Total workforce by employment type, employment contract, and region.				
		Employee turnover rate	Total number and rate of employee turnover by age group, gender, and region.		- Number of employees laid off in the last fiscal year		
		Employee benefits	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.				
		Conditions of Work & Social Protection		**- Conditions of work and social protection:** - provide decent conditions of work in respect of wages, hours of work, weekly rest, holidays, health and safety, maternity protection and ability to combine work with family responsibilities; - respect the right of workers to adhere to normal or agreed working hours established in laws, regulations or collective agreements. It should also provide workers with weekly rest and paid annual leave; - compensate workers for overtime in accordance with laws, regulations or collective agreements. When requesting workers to work overtime, an organization should take into account the interests, safety and well-being of the workers concerned and any hazard inherent in the work. An organization should respect laws and regulations prohibiting mandatory and non-compensated overtime, and always respect the basic human rights of workers concerning forced labour;		**- Management:** • flexible working arrangements and family benefits (meaning at least three of the following - flexible working time, child care support, job sharing, career breaks, or maternity or paternity pay beyond the legal requirements); - committed to ILO + working hours	
				- wherever possible, allow observance of national or religious traditions and customs with respect to weekly rest; - **Human development:** respect the family responsibilities of workers by providing reasonable working hours, parental leave and, when possible, childcare and other facilities that can help workers achieve a proper work-life balance;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Labour Practices	**Employment**	Conditions of Work & Social Protection		**- Conditions of work and social protection:** - ensure that the conditions of work comply with national laws and regulations and are consistent with relevant international labour standards; - observe at least those minimum provisions defined in international labour standards as established by the ILO, especially where national legislation has not yet been adopted; - provide conditions of work that are comparable with those offered by similar employers in the locality concerned and that permit, to the greatest extent possible, work-life balance;			
				- Conditions of work and social protection: - provide wages and other forms of remuneration in accordance with national laws, regulations or collective agreements. An organization should pay wages at least adequate for the needs of workers and their families. In doing so, it should take into account the general level of wages in the country, the cost of living, social security benefits and the relative living standards of other social groups. It should also consider economic factors, including the requirements of economic development, levels of productivity and the desirability of attaining and maintaining a high level of employment. In determining wages and working conditions that reflect these considerations, the organization should bargain collectively with the workers where they so wish, in accordance with national systems for collective bargaining;			
				- Conditions of work and social protection: - provide equal pay for work of equal value; - pay wages directly to the workers concerned, subject only to any restriction or deduction permitted by laws, regulations or collective agreements; - comply with any obligation concerning the provision of social protection for workers in the country of operation;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Labour Practices	**Labour / Management Relations**	% employees covered by collective bargaining agreements	Percentage of employees covered by collective bargaining agreements.	- respect higher levels of provision established through other applicable legally binding instruments such as collective agreements; - recognize the importance for organizations of social dialogue institutions and applicable collective bargaining structures, including at the international level; - respect at all times the right of workers to form or join their own organizations to advance their interests or to bargain collectively; - not obstruct workers who seek to form or join their own organizations and to bargain collectively, for instance by dismissing or discriminating against them, through reprisals or by making any direct or indirect threat so as to create an atmosphere of intimidation or fear;	- Freedom of Association (ILO convention 87, 98) - % Employees represented by independent trade union or covered by collective bargaining agreements	- **Management:** • Providing evidence of systems to maintain good employee relations including union recognition agreements or other consultative arrangements (covering more than 25% of staff where figures are available);	
				- as far as possible, and to an extent that is reasonable and non-disruptive, provide duly designated worker representatives with access to authorized decision makers, to workplaces, to the workers they represent, to facilities necessary to perform their role and to information that will allow them to have a true and fair picture of the organization's finances and activities; - refrain from encouraging governments to restrict the exercise of the internationally recognized rights of freedom of association and collective bargaining or participating in incentive schemes based on such restrictions.			
		Minimum notice period regarding organizational changes	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	- provide reasonable notice, timely information and, jointly with worker representatives where they exist, consider how to mitigate adverse impacts to the greatest possible extent when considering changes in its operations, such as closures that affect employment; - where changes in operations would have major employment impacts, provide reasonable notice to the appropriate government authorities and representatives of the workers so that the implications may be examined jointly to mitigate any adverse impact to the greatest possible extent;	- Freedom of Association (ILO convention 87, 98) (1) Consultations, negotiations with trade unions over organizational changes (eg. restructuring, outsourcing); (2) Consultations, negotiations with employees over organizational changes (e.g. restructuring, outsourcing);		
		Employee satisfaction			- Indicate in the following table the **satisfaction level of your employees** based on your company's employee satisfaction surveys: (1) Employee satisfaction %, e.g.committed, motivated, satisfied; (2) % of employees covered through employee surveys;		

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Labour Practices	**Labour / Management Relations**	Systems to handle employee grievances			'- Please indicate which **systems in place to collect and handle employee grievances** and complaints to ensure that workers can raise their concerns in confidentiality: help line; whistleblowing policy; independent person / dept. in charge of solving employee complaints (diversity committee, ombudsman); counseling; strict confidentiality ensured; policies and related info widely circulated in appropriate languages;		
		Publicly endorse charters / frameworks			- **publicly endorse one or more charters / frameworks:** (1) UN universal declaration of human rights; (2) ILO Tripartite declaration of principles concerning multinational enterprises and social policy; (3) OECD guildelines for multinational enterprises; (4) national / international charters related to labour practices / basic rights issues	- Public statement of **commitment to respect all the ILO core labour standards globally**. The core conventions relate to: equal opportunities, freedom of association/ collective bargaining, forced labour and child labour. Alternatively signatories to the UN Global Compact or SA8000, or whose policy states support for the OECD Guidelines for Multi-national Enterprises are considered to meet this requirement; - statement of support for the Universal Declaration of Human Rights;	
		Labour / management relations		**- Employment and employment relationships:** - be confident that all work is performed by women and men who are legally recognized as employees or who are legally recognized as being self-employed; - not seek to avoid the obligation that the law places on the employer by disguising relationships that would otherwise be recognized as an employment relationship under the law; - recognize the importance of secure employment to both the individual worker and to society. Use active workforce planning to avoid the use of work performed on a casual basis or the excessive use of work performed on a temporary basis, except where the nature of the work is genuinely short term or seasonal; - eliminate arbitrary or discriminatory dismissal practices, if any;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Labour Practices	**Labour / Management Relations**	Labour / management relations		**- Employment and employment relationships:** - protect employee personal data and privacy; - take steps to ensure that work is contracted or sub-contracted out only to organizations that are legally recognized or are otherwise able and willing to assume the responsibilities of an employer and to provide decent working conditions. An organization should use only those labour intermediaries who are legally recognized and where other arrangements for the performance of work confer legal rights on those performing the work;			
	Occupational Health & Safety	Occupational health and safety committee and programs	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	- (Box 9) Joint labour-management health and safety committees should be equally divided among management and worker representitives (not appointed by management but elected by workers), should include both men and women whenever possible, should be of sufficient size for all shifts, sections, locations of organization to be represented, should NOT be considered substitute for trade unions or work councils; - establish joint labour-management programmes that promote health and well-being;		- committed to ILO + health and safety; - **Management:** • Providing evidence of health and safety systems, including awards;	
				- develop, implement and maintain a health, safety and working environment policy that clearly states that implementation of good health, safety and environmental standards should not be traded off against good performance: the two are mutually reinforcing; - understand and apply principles of health and safety management, including the hierarchy of controls: elimination, substitution, engineering controls, administrative controls, work procedures and personal protective equipment; - address the specific and sometimes different ways in which women and men are affected by occupational safety and health (OSH) risks, as well as the ways people with disabilities and workers below 18 years of age may be affected; - provide equal health and safety protection for part-time and temporary workers, as well as subcontracted workers operating on the premises; - workplace health and safety measures should not involve monetary expenditures by workers;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Labour Practices	**Occupational Health & Safety**	Occupational health and safety committee and programs		- base its health, safety and environment systems on the participation of the workers concerned (see Box 9) and recognize and respect the rights of workers to: - obtain full and accurate information concerning the health and safety risks and the best practices used to address these risks; - freely inquire into and to be consulted on all aspects of their health and safety related to their work; - refuse work that is reasonably considered to pose an imminent or serious danger to their life or health or to the lives and health of others; - seek outside advice from workers' organizations and others who have expertise; - report health and safety matters to the relevant authorities; - participate in health and safety decisions and activities, including investigation of accidents; and - be free of the threat of reprisals for doing any of these things;			
		Health and safety incidents and impacts	Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities by region.	- record and investigate all health and safety incidents and problems raised by workers in order to minimize or eliminate them;	- Based on ILO's codes of practices - Safe Work: - Tracking of safety performance; work-related fatalities; near-misses or similar crisis events	- **Management:** • Providing evidence of health and safety systems, including published accident rates;	
		Health and safety education / training	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	- analyze and control the health and safety risks involved in its activities; - communicate information about the requirement that workers should follow all safe practices at all times and ensure that workers follow the proper procedures; - provide the safety equipment needed, including personal protective equipment, for the prevention of occupational injuries, diseases and accidents, as well as for dealing with emergencies; - strive to eliminate psychosocial hazards in the workplace, which contribute or lead to stress and illness; - provide adequate training to all relevant personnel on all relevant matters;		- **Management:** • Providing evidence of health and safety systems, including details of health and safety training;	
		Health and safety agreements with trade unions / workers' organizations	Health and safety topics covered in formal agreements with trade unions.	- seek outside advice from workers' organizations and others who have expertise;		- Policy/code (or other relevant documentation) to commit to, or clearly be based on ILO + Health and Safety;	

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Labour Practices	**Training & Education**	Hours of employee training	Average hours of training per year per employee by employee category.		- Please indicate which performance indicators your company uses to measure the execution of your skill mapping and developing strategy: (1) Non-financial indicators/ratios (e.g. number of hours spent in trainings, company-specific skills categorization); (2) Cost-based indicators/ratios (e.g. training cost per employee); (3) Value-based human resource indicators (e.g. ROI - Return on investment per employee, EVA - Economic value added per employee)	- **Management:** • Providing evidence of training and employee development systems including: **providing significant data on time and money spent on training;**	
		Skills development and career advancement training programs	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	- provide all workers at all stages of their work experience with access to skills development, training and apprenticeships, and opportunities for career advancement, on an equal and non-discriminatory basis; - ensure that, when necessary, workers are helped to transition to new employment through skills recognition systems and helped to access training on stress management to cope with being made redundant;	- Please indicate the implementation of your company's formalized skill mapping and developing process; - Please indicate the coverage for each employee category and attach relevant information = executive / top managment, middle / general management, first line management / supervisor, specialists groups, other employees; Please indicate the tools and processes widely adopted by your company to manage organizational learning and knowledge management; (1) Formal knowledge/learning networks with regular meetings and staff support; (2) Intranet based Knowledge Repositories/Databases (3) Intranet based interactive knowledge platforms integrated into daily work processes; (4) Peer group KPI comparisons across Business Units (5) Systematically accessible process descriptions of best practice processes; (6) Company university or external comparable education facility; (7) Employee idea management system integrated	- Training of relevant employees (e.g. compliance/audit teams or equivalent, buying teams, managers and workers in suppliers) on the (Supply Chain Labour Standards) policy/code (ILO or supply chain labour standards);	
		% employees receiving career development reviews	Percentage of employees receiving regular performance and career development reviews.		- Please indicate the percentage for each employee categorization, which are covered by a predefined and standardized performance appraisal process; **Employee categories:** executive/top mgmt, midddle/general mgmt, first line mgmt/supervisor, specialist groups, other employees;	- annual training reviews for staff (more than 25% of those staff where figures are available)	
	Diversity & Equal Opportunity	Employee breakdown by gender, age, ethnicity, minority groups, etc.	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	- give special attention to vulnerable groups in respect of employment and capacity building; - ensure equal opportunities for all workers and not discriminate either directly or indirectly in any labour practice including on the grounds of race, colour, gender, age, nationality or national origin, ethnic or social origin, caste, marital status, sexual orientation, disability, health status such as HIV/AIDS status or political affiliation; - promote fair representation of under-represented groups (including women and racial and ethnic groups) in senior positions in the organization;	- Non-discrimination / Diversity (ILO convention 111) (1) Female % of total workforce; (2) Female % of total workforce in mgmt position; (3) Breakdown of workforce by minority, culture, or similar; (4) Other diversity indicator; (5) Number of women on company's board of directors / supervisory board;	- **Policy:** • Adopting an equal opportunities policy and/or including a commitment to equal opportunities or diversity in their annual report or web-site; - **Management:** • Providing evidence of equal opportunities systems, including one or more of: - monitoring of the policy and workforce composition; - more than 10% of managers being women or the proportion of managers who are women or from ethnic minorities exceeding two fifths of their representation in the workforce concerned;	
		Salary ratio - male vs. female	Ratio of basic salary of men to women by employee category.		- Equal Remuneration female / male (ILO convention 100) Salary for male vs. female - executive, management, non-management levels;		

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				**Social**		**Social**	
Society	**Community**	Programs / practices to assess organization's impacts on local community	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.	- Community involvement: - consult representative community groups in determining priorities for social investment and community development activities. Special attention should be given to vulnerable, discriminated marginalized, unrepresented and under-represented groups, to involve them in a way that helps to expand their options and respect their rights; - participate in local associations as possible and appropriate, with the objective of contributing to the public good and the development objectives of communities; - consider the economic and social impact of entering or leaving a community, including impacts on basic resources needed for the sustainable development of the community;	- Does your company have a system in place to systematically measure the impact of your company's voluntary social contributions in order to further improve / re-align the company's corporate citizenship and philanthropy strategy? (1) Business outcomes and impact (e.g. product innovation); (2) Social outcomes and impact; (3) Impact on corporate reputation and stakeholder satisfaction;		
					- Please indicate the **principles** formulated at corporate level **which guide your company's stakeholder engagement at site level**: (1) A priori examination of costs, opportunities and risks involved in a particular stakeholder engagement; (2) Identification of all stakeholders, that can affect or are affected by your company's activities, for input into strategy; (3) Development of a common understanding of issues relevant to the underlying problem, such as technical terms; (4) Mutual agreement on the type of engagement (type of meetings such as group meetings, one-on-ones,..., frequency of meetings, exchange of information, roles of each party....); (5) Feedback from stakeholders to board / supervisory board and / or senior directors and / or compliance and / or communication department; (6) Results of the engagement process are reported to the stakeholders involved; (7) Results of the engagement process are publicly available; (8) No principles at corporate level defined, but at more than half of the sites a stakeholder engagement process is implemented;		

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Society	**Community**	Promoting social responsibility within sphere of influence		**- Promoting social responsibility within its sphere of influence:** - integrate ethical, social, environmental and gender equality criteria, including health and safety, in its purchasing, distribution and contracting policies and practices in order to improve consistency with social responsibility objectives; - encourage other organizations to adopt similar policies, without indulging in anti-competitive behaviour in so doing; - carry out relevant and appropriate investigations and monitoring of the organizations with which it has relationships, with a view to preventing compromise of the organization's commitments to social responsibility;			
				- Promoting social responsibility within its sphere of influence: - consider providing support to SMOs, where appropriate, including by providing them with awareness raising on issues of social responsibility and best practice and with additional assistance (for example, technical, capacity building or other resources) to meet socially responsible objectives; - actively participate in raising the awareness of organizations with which it has relationships about principles and issues of social responsibility; - promote fair and practical treatment of the costs and benefits of implementing socially responsible practices throughout the value chain, including, where possible, enhancing the capacity of organizations in the value chain to meet socially responsible objectives;			
		Promoting community education & culture		**- Promote community education and culture:** - promote and support education at all levels, and engage in actions to improve the quality of and access to education, promote local knowledge and eradicate illiteracy; - promote learning opportunities for vulnerable or discriminated groups; - encourage the enrolment of children in formal education, and contribute to the elimination of barriers to children obtaining an education (such as child labour); - promote cultural activities, respect and value the local cultures and cultural traditions, consistent with the principle of respect for human rights. Actions to support cultural activities that strengthen the identity of historically disadvantaged groups are especially important as a means of combating discrimination; - consider facilitating human rights education and awareness raising; - help conserve and protect cultural heritage, especially where the organization's operations have an impact on it; - promote the use of traditional knowledge and			
		Community skills development		**- Community skills development:** - consider participating in local and national skills development programmes, including apprenticeship programmes, programmes focused on particular disadvantaged groups, life-long learning programmes and skills recognition and certification schemes; - consider helping to develop or improve skills development programmes in the community where these are inadequate, possibly in partnership with others in the community;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Society	**Community**	Community technology development		**- Community technology development and access:** - contribute to development of low cost technologies that are easily replicable and have high positive impact on poverty, hunger eradication; - where economically feasible, develop potential local and traditional knowledge and technologies while protecting community's right to that knowledge / technology; - engage in partnerships with local organizations such as universities or research laboratories to enhance scientific and technological development with partners from local community, and employ local people in this work; - adopt practices that allow technology transfer and diffusion, where economically feasible. Where applicable, organization should set reasonable terms and conditions for licenses or technology transfer so as to contribute to local development. Capacity of the local community to			
		Community health		**- Community health:** - seek to minimize or eliminate negative health impacts of any production process, product or service provided by the organization; - consider promoting good health by, for example, contributing to access to medicines and vaccination and by encouraging healthy lifestyles, including exercise and good nutrition, by early detection of diseases, and by discouraging the consumption of unhealthy products and substances. Special attention should be given to child nutrition; - consider raising awareness about health threats and major diseases and their prevention, such as, according to local circumstances and priorities, HIV/AIDS, cancer, heart disease, malaria, tuberculosis and obesity; - consider supporting access to essential health care services and to clean water and appropriate sanitation as a means of preventing illness;			
		Community social investment		**- Community social investment:** - take into account the promotion of community development in planning social investment projects. All actions should broaden opportunities for citizens, for example by increasing local procurement and any outsourcing so as to support local development; - avoid actions that perpetuate a community's dependence on the organization's philanthropic activities, on-going presence or support; - assess existing community-related initiatives and provide feedback on their success and suitability to the community and to people within the organization and identify where improvements might be made; - consider contributing to programmes that provide access to food and other essential products for vulnerable or discriminated groups and persons with low income, taking into account the importance of contributing to their increased capabilities, resources and opportunities. Special attention should be given to child nutrition;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Society	**Corruption & Bribery**	Corporate policy on corruption and bribery			- Please indicate which of the following aspects are covered by your anti-corruption and bribery policy at a group level (including subsidiaries): (1) Bribes in any form, including kickbacks, on any portion of contract payments or soft dollar practices; (2) Direct or indirect political contributions; (3) Political contributions publicly disclosed; (4) Charitable contributions and sponsorship; (5) Charitable contributions and sponsorship publicly disclosed;	- Prohibits giving and receiving bribes; (Companies that are signatories to UN Global Compact may be considered committed to this criteria indicator); - Commits to obeying all relevant laws; - Commits to restricting and controls facilitation payments; - Commits to restricting giving and receiving gifts; - Policy is publicly available / disclosed; - Compliance mechanisms are publicly disclosed;	
		Implementation of policy on corruption / bribery				- Communicates policy to employees; - Trains relevant employees; - Compliance mechanisms (eg. assurance, audits, monitoring, board reports); - Provides secure communication channels for employees to seek advice or voice concerns (e.g. , hotlines, advicelines, whistle-blowing procedures for protection, internal reporting mechanisms); Procedures to remedy non-compliance; (Where there is a significant and credible controversy/allegation that a company, its business partners, including suppliers, contractors or agents are committing bribery, the company must have taken visible, demonstrable or quantifiable steps to prove it has investigated these allegations effectively and in a timely manner.)	
		% of business units analyzed for risks of corruption	Percentage and total number of business units analyzed for risks related to corruption.	- identify the risks of corruption and implement, apply and improve policies and practices that counter corruption, bribery and extortion;	- Please indicate the percentage of coverage of your codes of conduct and anti-corruption and bribery policy relative to the total number of: (1) Employees group-/worldwide: % (2) Contractors/Suppliers/Service providers: % (3) Subsidiaries: % (4) Joint ventures: %		
		Anti-corruption training for employees	Percentage of employees trained in organization's anti-corruption policies and procedures.	- support its employees and representatives in their efforts to eradicate bribery and corruption, and provide incentives for progress; - train and raise the awareness of its employees and representatives about corruption and how to counter it;			
		Response to incidents of corruption	Actions taken in response to incidents of corruption.	- ensure the leadership sets an example for anti-corruption and provide commitment, encouragement and oversight for implementation of the anti-corruption policies; - ensure that the remuneration of its employees and representatives is appropriate and for legitimate services only; - establish and maintain an effective system of internal controls to counter corruption - encourage its employees, partners, representatives and suppliers to report violations of the organization's policies by adopting mechanisms that enable reporting without fear of reprisal; - bring violations of the criminal law to the attention of the relevant law enforcement authorities; - work to oppose corruption by influencing others with which the organization has operating relationships to adopt similar anti-corruption practices; - maintain transparent relationships with local government officials and political representatives, free from bribery or improper influence;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Society	**Public Policy**	Participation in public policy	Public policy positions and participation in public policy development and lobbying.	- train and raise the awareness of its employees and representatives about responsible political involvement and contributions and how to deal with conflicts of interest; - be transparent regarding its policies and activities related to lobbying, political contributions and political involvement; - establish and implement policies and guidelines to manage the activities of people retained to advocate on the organization's behalf; - avoid political contributions that amount to an attempt to control policymakers in favour of a specific cause; - prohibit activities that involve misinformation, misrepresentation, threat or compulsion; - maintain transparent relationships with local government officials and political representatives, free from bribery or improper influence;			
				- contribute to policy formulation and the establishment, implementation, monitoring and evaluation of development programmes, while respect the rights and views of others to express and defend their own interests.			
		Financial and in-kind contributions to political parties	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.				
	Anti-competitive behaviour	Legal actions for anit-competitive behaviour	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	- To promote fair competition, an organization should: - conduct its activities in a manner consistent with competition laws and regulations and co-operate with the appropriate authorities; - establish procedures and other safeguards to prevent engaging in or being complicit in anti-competitive behaviour; - promote employee awareness of the importance of compliance with competition legislation and fair competition; - support anti-trust and anti-dumping practices, as well as public policies that encourage competition; and be mindful of the social context in which it operates and not take advantage of social conditions, such as poverty, to achieve unfair competitive advantages.			
	Compliance	Non-compliance incidents and fines - eg. corruption, anti-competitive behaviour	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.		- What mechanisms are in place to assure effective implementation of your company's codes of conduct (e.g. compliance system)? (1) Responsibilities, accountabilities and reporting lines are systemically defined in all divisions and group companies; (2) Dedicated help desks, focal points, ombudsman, hot lines; (3) Codes of conduct linked to employee remuneration; (4) Employee performance appraisal systems integrates compliance/codes of conduct; (5) Disciplinary actions in case of breach, i.e. warning, dismissal, zero tolerance policy; (6) Compliance system is certified/audited/verified by third party; - Does your company publicly report on breaches (e.g. number of breaches, cases etc) against your codes of conduct/ethics and anti-corruption and bribery policy?	- Compliance mechanisms **(in the context of bribery)** (e.g. assurance, audits, monitoring, board reports); - **(In the context of bribery)** Procedures to remedy non-compliance; Where there is a significant and credible controversy/allegation that a company, its business partners, including suppliers, contractors or agents are committing bribery, the company must have taken visible, demonstrable or quantifiable steps to prove it has investigated these allegations effectively and in a timely manner; - **(In the context of bribery)** Compliance mechanisms are publicly disclosed;	

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Product Responsibility	**Customer Health & Safety**	Customer health and safety	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	- In protecting the health and safety of consumers, an organization should: - provide products and services that, under normal and reasonably foreseeable conditions of use, are safe for users and other persons, their property, and the environment; - assess the adequacy of health and safety laws, regulations, standards and other specifications to address all health and safety aspects. Organization should go beyond these minimum safety requirements where there is evidence that these higher requirements would achieve significantly better protection, as indicated by the occurrence of accidents involving products or services that conform to the minimum requirements, or the availability of products or product designs that can reduce the number or severity of accidents;			
				- minimize risks in the design of products by: - identifying the likely user group(s) and giving special care to vulnerable groups; - identifying the intended use and the reasonably foreseeable misuse of the process, product or service and hazards arising in all the stages and conditions of use of the product or service; - estimating and evaluating the risk to each identified user or contact group, including pregnant women, arising from the hazards identified; - reduce the risk by using the following order of priority: inherently safe design, protective devices and information for users; - address health and safety, including product hazards;			
				- in product development, avoid use of harmful chemicals, including but not limited to carcinogenic, mutagenic, toxic for reproduction, or that are persistent and bio-accumulative. If products containing such chemicals are offered for sale, they should be clearly labelled; - as appropriate, perform a human health risk assessment of products and services before introduction of new materials, new technologies or production methods and, when appropriate, make relevant documentation available; - convey vital safety information to consumers using symbols wherever possible, preferably internationally agreed ones, in addition to textual information; - instruct consumers in proper use of products and warn them of risks involved in intended or normally foreseeable use; - adopt measures that prevent products from becoming unsafe through improper handling or storage while in care of consumers;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Product Responsibility	**Customer Health & Safety**	Customer health and safety		- when a product, after having been placed on the market, presents unforeseen hazard, has serious defect or contains misleading or false information, withdraw all products that are still in the distribution chain, and recall products using appropriate measures and media to reach people who purchased the product. Measures for traceability may be relevant and useful; - information on appropriate laws and regulations, ways of obtaining redress and agencies and organizations for consumer protection;			
		Non-compliance regarding health / safety of products and services	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services, by type of outcomes.		- What mechanisms are in place to assure effective implementation of your company's codes of conduct (e.g. compliance system)? (1) Responsibilities, accountabilities and reporting lines are systemically defined in all divisions and group companies; (2) Dedicated help desks, focal points, ombudsman, hot lines; (3) Codes of conduct linked to employee remuneration; (4) Employee performance appraisal systems integrates compliance/codes of conduct; (5) Disciplinary actions in case of breach, i.e. warning, dismissal, zero tolerance policy; (6) Compliance system is certified/audited/verified by third party; - Does your company publicly report on breaches (e.g. number of breaches, cases etc) against your codes of conduct/ethics and anti-corruption and bribery policy?		
	Products & Service Labeling	Products and service labelling	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	- in product development, avoid use of harmful chemicals, including but not limited to carcinogenic, mutagenic, toxic for reproduction, or that are persistent and bio-accumulative. If products containing such chemicals are offered for sale, they should be clearly labelled; - convey vital safety information to consumers using symbols wherever possible, preferably internationally agreed ones, in addition to textual information; - instruct consumers in proper use of products and warn them of risks involved in intended or normally foreseeable use;			
				- providing consumers with traceable information about the environmental and social factors related to production and delivery of their products or services, including information on resource efficiency, where relevant, taking the value chain into account; - providing consumers with information about products and services, including on performance, country of origin, energy efficiency (where applicable), contents or ingredients (including, where relevant, use of genetically modified organisms), impacts on health, aspects related to animal welfare, safe use, maintenance, storage and disposal of the products and their packaging; - making use of relevant, independent, and robust labelling schemes, for example, eco-labelling, to communicate positive environmental aspects, energy efficiencies, and other socially beneficial characteristics of products and services.			
				- product and service labelling and information provided in manuals and instructions; - information on weights and measures, prices, quality, credit conditions and availability of essential services; - information about risks related to use and any necessary precaution;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Product Responsibility	Products & Service Labeling	Non-compliance regarding product / service information / labelling	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.		- What mechanisms are in place to assure effective implementation of your company's codes of conduct (e.g. compliance system)? (1) Responsibilities, accountabilities and reporting lines are systemically defined in all divisions and group companies; (2) Dedicated help desks, focal points, ombudsman, hot lines; (3) Codes of conduct linked to employee remuneration; (4) Employee performance appraisal systems integrates compliance/codes of conduct; (5) Disciplinary actions in case of breach, i.e. warning, dismissal, zero tolerance policy; (6) Compliance system is certified/audited/verified by third party; - Does your company publicly report on breaches (e.g. number of breaches, cases etc) against your codes of conduct/ethics and anti-corruption and bribery policy?		
	Customer Satisfaction	Practices related to customer satisfaction - eg. surverys, complaint / dispute resolution	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	- Consumer service, support, and complaint and dispute resolution: - take measures to prevent complaints by offering consumers, including those who obtain products through distance selling, the option to return products within a specified period or obtain other appropriate remedies; - review complaints and improve practices in response to complaints; - if relevant, offer warranties that exceed periods guaranteed by law and are appropriate for the expected length of product life; - clearly inform consumers how they can access after-supply services and support as well as dispute resolution and redress mechanisms; - offer adequate and efficient support and advice systems; - offer maintenance and repair at a reasonable price and at accessible locations and make information readily accessible on the expected availability of spare parts for products;	- Does your company monitor and set quantitative targets to improve customer satisfaction and are targets and results communicated externally? Explain trends and performance against targets. - What approaches does your company use for integrating customer feedback? (1) Company-wide harmonized customer database, including marketing, order, fulfillment and customer service history; (2) Free 7 days/ 24 h feedback possibilities via internet, phone or mail; (3) Integration of feedback into product / services development; (4) Customers' complaints feedback to compliance officers and / or risk managers and / or communication officers; (5) Independent person or department in charge of solving customer complaints such as customer advocate or corporate ombudsman;		
				- make use of alternative dispute resolution, conflict resolution and redress procedures that are based on national or international standards, are free of charge or are at minimal cost to consumers, and that do not require consumers to waive their rights to seek legal recourse. - Organizations can also use standards: - ISO 10001 - Quality management - Customer satisfaction - Guidelines for codes of conduct for organizations; - ISO 10002 - Quality management - Customer satisfaction - Guidelines for complaints handling in organizations; - ISO 10003 - Quality management - Customer satisfaction - Guidelines for dispute resolution external to organizations.			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Product Responsibility	**Marketing Communications**	Programs to assure compliance with laws / standards regarding marketing communications	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	- When communicating with consumers, an organization should: - not engage in any practice that is deceptive, misleading, fraudulent or unfair, including omission of critical information; - clearly identify advertising and marketing; - openly disclose total prices and taxes, terms and conditions of the products and services as well as any accessory required for use and delivery costs. - When offering consumer credit, provide details of the actual annual interest rate as well as the average percentage rate charged (APR), which includes all the costs involved, amount to be paid, number of payments and the due dates of instalment payments; - substantiate claims or assertions by providing underlying facts and information upon request; - not use text or images that perpetuate stereotyping with respect to, for example, gender, religion, race and sexual orientation; not unfairly target vulnerable groups;			
				- provide complete, accurate, understandable and comparable information in the languages of the point of sale on: - all relevant aspects of products and services, including financial and investment products, ideally taking into account the full life cycle; - the key quality aspects of products and services as determined using standardized test procedures, and compared, when possible, to average performance or best practice. Provision of such information should be limited to circumstances where it is appropriate and practical and would assist consumers; - health and safety aspects of products and services, such as potentially hazardous processes, hazardous materials and hazardous chemicals contained in or released by products; - information regarding accessibility of products and services; - organization's physical address, telephone number and e-mail address, when using domestic or cross-border distance selling, including by means of the Internet, e-commerce, or mail order.			
				- use contracts that: - are written in clear and understandable language; - are transparent about the duration of the contract and the cancellation periods; - do not include unfair contract terms, such as the unfair exclusion of liability, the right to unilaterally change prices and conditions, the transfer of risk of insolvency to consumers or unduly long contract periods; - provide clear and sufficient information about prices, terms, conditions and costs.			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Product Responsibility	Marketing Communications	Non-compliance regarding marketing communications	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes.		- What mechanisms are in place to assure effective implementation of your company's codes of conduct (e.g. compliance system)? (1) Responsibilities, accountabilities and reporting lines are systemically defined in all divisions and group companies; (2) Dedicated help desks, focal points, ombudsman, hot lines; (3) Codes of conduct linked to employee remuneration; (4) Employee performance appraisal systems integrates compliance/codes of conduct; (5) Disciplinary actions in case of breach, i.e. warning, dismissal, zero tolerance policy; (6) Compliance system is certified/audited/verified by third party; - Does your company publicly report on breaches (e.g. number of breaches, cases etc) against your codes of conduct/ethics and anti-corruption and bribery policy?		
	Customer Privacy	Systems to assure customer privacy and non-compliance regarding customer privacy	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	- **Consumer data protection and privacy:** - limit the collection of personal data to information that is either essential for the provision of products and services or provided with the informed and voluntary consent of the consumer; - only obtain data by lawful and fair means; - specify purpose for which personal data are collected, either before or at time of data collection; - not disclose, make available or otherwise use personal data for purposes other than those specified, including marketing, except with the informed and voluntary consent of the consumer or when required by the law; - provide consumers with right to verify whether the organization has data relating to them and to challenge these data, as defined by law. If the challenge is successful, the data should be erased, rectified, completed or amended, as appropriate; - protect personal data by adequate security safeguards; - be open about developments, practices and policies with respect to personal data, and provide readily available ways of establishing the existence, nature an	- Does your company inform customers on the following: (1) Kind of information captured; (2) Use of the collected information; (3) Possibility for customers to decide how private data are used; (4) How long the information is kept on corporate files; (5) Third parties disclosure policy (private and public entities);		
				- **Consumer data protection and privacy:** - disclose identity and usual location of the person responsible for data protection in the organization (sometimes called the data controller), and hold this person accountable for complying with the above measures and relevant law.			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Product Responsibility	**Compliance**	Non-compliance regarding the provision / use of products / services	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services		- What mechanisms are in place to assure effective implementation of your company's codes of conduct (e.g. compliance system)? (1) Responsibilities, accountabilities and reporting lines are systemically defined in all divisions and group companies; (2) Dedicated help desks, focal points, ombudsman, hot lines; (3) Codes of conduct linked to employee remuneration; (4) Employee performance appraisal systems integrates compliance/codes of conduct; (5) Disciplinary actions in case of breach, i.e. warning, dismissal, zero tolerance policy; (6) Compliance system is certified/audited/verified by third party; - Does your company publicly report on breaches (e.g. number of breaches, cases etc) against your codes of conduct/ethics and anti-corruption and bribery policy?		
	Respect for Property Rights	Respect for property rights		**- Respect for property rights:** - covers both physical property and intellectual property and include interest in land, and other physical assets, copyrights, patents, funds, moral rights and other rights. - May also encompass a consideration of broader property claims, such as traditional knowledge of specific groups, such as indigenous peoples, or the intellectual property of employees or others;			
				- Respect for property rights: - implement policies and practices that promote respect for property rights and traditional knowledge; - conduct proper investigations to be confident it has lawful title permitting use or disposal of property; - not engage in activities that violate property rights, including misuse of a dominant position, counterfeiting and piracy; - pay fair compensation for property that it acquires or uses; - consider the expectations of society, human rights and basic needs of the individual when exercising and protecting its intellectual and physical property rights;			
	Access to Essential Services	Access to essential services		**- Access to essential services:** An organization that supplies essential services should: - not disconnect essential services for non-payment without providing the consumers with the opportunity to seek reasonable timeframes to make the payment.; - in setting prices and charges, offer, wherever permitted, a tariff that will provide a subsidy to those who are in need; - operate in a transparent manner, providing information related to the setting of prices and charges; - not resort to collective disconnection of services that penalize all consumers regardless of payment, in cases of non-payment of bills payable collectively by a group of consumers; - manage any curtailment or interruption of supply in an equitable manner, avoiding discrimination against any group of consumers; - continually maintain and upgrade its systems to help prevent disruption of service;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Human Rights	**Investment & Procurement Practices**	Investment agreements that include human rights clauses or screening	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.	- not provide goods or services to an entity that uses them to carry out human rights abuses; - not enter into a formal partnership with a partner that commits human rights abuses in the context of the partnership; - Depending upon the situation and influence, reasonable efforts could include establishing contractual obligations on suppliers and sub contractors;			
		Systems to screen suppliers / contractors (on human rights)	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.	- inform itself about the social and environmental conditions in which purchased goods and services are produced; - not benefit from unfair, exploitative or abusive labour practices of their partners, suppliers or subcontractors. An organization should make reasonable efforts to encourage organizations in its sphere of influence to follow responsible labour practices, recognizing that a high level of influence is likely to correspond to a high level of responsibility to exercise that influence. - making unannounced visits and inspections; and exercising due diligence in supervising contractors and intermediaries. - Where suppliers and sub-contractors are expected to comply with a code of labour practice, the code should be consistent with the Universal Declaration of Human Rights and the principles underlying relevant ILO labour standards;	- Which of the following **areas** are **covered by labor standards** guidelines / requirements f**or the selection and ongoing evaluation of key suppliers and service providers:** **(A) Environmental standards/requirements** (1) Environmental policies, targets; (2) Environmental performance data available; (3) Established environmental management system certified to ISO 14001, EMAS or equivalent with external independent audits; (4) Environmental standards for supplier's processes, products or services; (5) Lifecycle impact assessment of the supplier's processes, products or services; **(B) Labor standards/requirements** (1) Labor standards/employment practices; (2) Occupational health & safety; (3) Human rights (such as forced, slave labor, child labor) (ILO conventions); (4) Grievance processes implemented; **(C) Standards based on:** (1) national / local laws; (2) broadly accepted international principles (eg. AA1000,SA8000, ILO, ISO 14000, Worldbank, International Finance Corporation, IUCN, WBSCD, UN conventions);	- Policy/code (or other relevant documentation) to commit to, or clearly be based on ILO Core Convention Areas (Equality / Discrimination, Forced Labour, Child Labour, Worker Representation) + Healthy and safety + Working hours + Wages + Disciplinary procedures; - Policy/code must be publicly available; - Report (or other form of communication) (on Supply Chain Labour Standards) is publicly available and covers both policy and management systems; - visiting/auditing of suppliers (e.g. some risk assessment to identify the highest priority suppliers/products/countries and some substantial supplier visits or audits); - Supply chain labour standards policy/code should be communicated to suppliers globally (e.g. first tier – those with whom the company has a direct trading relationship);	
						- Strategic responsibility for the policy/code (ILO or Supply chain labour standards) implementation shall rest with one or more board members or senior executives/managers; - committed to ILO + disciplinary procedures; • Communication of a relevant policy /code, position or concern to suppliers (at least in some regions); • monitoring of supply chain (for example identification of supply chain, supplier numbers, assessment of where the issues are by country or product); - Training of relevant employees (e.g. compliance/audit teams or equivalent, buying teams, managers and workers in suppliers) on the (Supply Chain Labour Standards) policy/code (ILO or supply chain labour standards);	

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
			Social	Social		Social	
Human Rights	**Investment & Procurement Practices**	Systems to screen suppliers / contractors (on human rights)			- Please indicate which of the following elements your company has established to **assure effective implementation of its standards for suppliers.** (A) Implementation of Guidelines / Requirements: (1) Internal audits/spot-checks conducted for % of first line suppliers during the last financial year; (2) External (third party) audits/spot-checks conducted for % of first line suppliers during the last financial year; (B) Management of non-compliance: (1) Policies and procedures for management of non-compliance in place; (2) Defined categories of non-compliance and defined categrories of remediation actions; (3) Joint company-supplier corrective action plan coupled to reaudits; (4) Organisational learning built into non-compliance management (e.g. change in reporting lines);	- Policy/code (ILO or Supply chain labour standards) has procedures to remedy any non-compliance; - Where a company's suppliers in its supply chain have been alleged to be in breach of the ILO Core Convention areas, it must have taken visible, demonstrable or quantifiable measures or steps to prove it has investigated these allegations effectively;	
		Employee training on human rights issues relevant to business	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	**- aimed at employees (I think):** - consider facilitating raising awareness of their rights among members of vulnerable groups;		- Training for employees globally in its human rights policy; - communication of the human rights policy to employees globally;	
	Non-discrimination	Discrimination incidents and response taken	Total number of incidents of discrimination and actions taken.	- **ILO** - the elimination of discrimination in respect of employment and occupation; consider making public, or taking other action indicating that it does not condone acts of discrimination occurring in employment in the country concerned; - ensure that it does not discriminate against employees, partners, customers, stakeholders, members and anyone else with whom it has any contact or on whom it can have an impact; examine its own operations and the operations of other parties within its sphere of influence, to determine whether direct or indirect discrimination is present - for example, undertake an analysis of typical ways in which it interacts with women, as compared with men, and consider whether policies and decisions in this respect are objective or reflect stereotyped preconceptions;		- Policy/code (or other relevant documentation) to commit to, or clearly be based on (and contain the principles of), the **ILO Core Convention area: Equality / Discrimination** OR member of The Ethical Trading Initiative, The Fair Labour Association, or audited to Social Accountability International's SA8000	
				- contribute to redressing discrimination or the legacy of past discrimination, wherever practicable - for example, make special efforts to employ or do business with organizations operated by people from groups historically discriminated against, and where feasible, support efforts to increase access to education, infrastructure or social services for groups denied full access;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
			Social	Social		Social	
Human Rights	**Freedom of Association & Collective Bargaining**	Commitment to freedom of association & collective bargaining	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights.	- freedom of peaceful assembly and of association; - **ILO** - freedom of association and effective recognition of the right to collective bargaining;	- Freedom of Association (ILO convention 87, 98) - % Employees represented by independent trade union or covered by collective bargaining agreements;	- Policy/code (or other relevant documentation) to commit to, or clearly be based on (and contain the principles of), the **ILO Core Convention area**: **Worker representation** OR members of The Ethical Trading Initiative, The Fair Labour Association, or audited to Social Accountability International's SA8000	
	Child Labour	Measures to eliminate child labour	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor.	- **ILO** - the effective abolition of child labour;		- Policy/code (or other relevant documentation) to commit to, or clearly be based on (and contain the principles of), the **ILO Core Convention area**: **Child labour** OR members of The Ethical Trading Initiative, The Fair Labour Association, or audited to Social Accountability International's SA8000	
	Forced & Compulsory Labour	Measures to eliminate forced & compulsory labour	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures taken to contribute to the elimination of forced or compulsory labor.	- **ILO** - the elimination of all forms of forced or compulsory labour;		- Policy/code (or other relevant documentation) to commit to, or clearly be based on (and contain the principles of), the **ILO Core Convention area**: **Forced labour** OR members of The Ethical Trading Initiative, The Fair Labour Association, or audited to Social Accountability International's SA8000	
	Security Practices	Security personnel trained in human rights issues	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.	- verify that its security arrangements respect human rights and are consistent with international norms and standards for law enforcement; - security personnel (employed, contracted, sub-contracted) should be adequately trained in human rights standards; - complaints about security procedures or personnel should be addressed and investigated promptly, (and independently);		- **Guidelines governing the use of armed security guards** based on UN Basic principles on the Use of Force and Firearms by Law Enforcement Officials or the Code of Conduct for Law Enforcement Officials. Alternatively signatories to the Voluntary Principles on Security and Human Rights meet this requirement	
	Indigenous Rights	Commitment to indigenous rights, violations of indigenous rights	Total number of incidents of violations involving rights of indigenous people and actions taken.	- consult and accommodate indigenous and local communities on the terms and conditions of development that affect them, consultation prior to development and should be based on complete, accurate and accessible information; - promote the use of traditional knowledge and technologies of indigenous communities;		- stated commitment to respecting indigenous peoples' rights	
	Human Rights Policy	Human rights policy		- Human rights: - a human rights policy for the organization that gives meaningful guidance to those within the organization and those closely linked to the organization; - means of assessing how existing and proposed activities may affect human rights; - means of integrating the human rights policy throughout the organization; - means of tracking performance over time, to be able to make necessary adjustments in priorities and approach;		- Company has published policies covering human rights issues that are clearly communicated globally (in local languages where appropriate); Strategic responsibility for human rights policy/ies rests with one or more Board members or senior managers who reports directly to CEO; - Monitoring the implementation of its human rights policy including existence of procedures to remedy any non-compliance; - Human rights: Consulting with independent local stakeholders in countries of concern; - Evidence of a human rights impact assessment which includes the company identifying major human rights issues it faces and integrating human rights concerns into its risk assessment procedures; - Reporting on human rights policy and performance to the public in a published format;	
						- Reporting on HR: Covering policies & management systems as a minimum;	

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Social				Social		Social	
Human Rights	**Resolving Grievances**	Human rights - resolving grievances		**- Human rights: resolving grievances:** - An organization should establish remedy mechanisms for its own use and that of its stakeholders, with following characteristics: (1) legitimate - clear, transparent and sufficiently independent governance structures to ensure that no party to a particular grievance process can interfere with the fair conduct of that process; (2) accessible - existence should be publicized and adequate assistance provided for aggrieved parties who may face barriers to access, such as language, illiteracy, lack of awareness or finance, distance or fear of reprisal; (3) predictable - clear and known procedures, a clear time frame for each stage and clarity as to the types of process and outcome they can and cannot offer, and a means of monitoring the implementation of any outcome;			
				- Human rights: resolving grievances: (4) equitable - aggrieved parties should have access to sources of information, advice and expertise necessary to engage in a fair grievance process; (5) rights-compatible - outcomes and remedies should accord with internationally recognized human rights standards; (6) clear and transparent - although confidentiality might sometimes be appropriate, the process and outcome should be sufficiently open to public scrutiny and should give due weight to the public interest; (7) based on dialogue and mediation - aggrieved parties should have the right to seek alternative, independent mechanisms for adjudication where bilateral mechanisms involving only the aggrieved and the organization fail;			
	Civil / Political Rights	Human rights - civil & political rights		- Human rights: civil and political rights: freedom of opinion and expression - organization should not aim to suppress anyone's views or opinions, even when the person expresses criticism of the organization internally or externally; - freedom to seek, receive and impart information and ideas through any means, regardless of national borders; - access to due process and the right to a fair hearing before any internal disciplinary measure is taken. Any disciplinary measure should be proportionate and not involve physical punishment or inhuman or degrading treatment.			
	Economic, Social, Cultural Rights	Human rights - economic, social, cultural rights		- Human rights: economic, social and cultural rights: - ways of facilitating access to, and where possible providing support and facilities for, education and life long learning for community members; - joining efforts with other organizations and governmental institutions supporting respect for and realization of economic, social and cultural rights; - exploring ways related to their core activities to contribute to the fulfilment of these rights; - ways to adapt goods or services to the purchasing ability of poor people; - making its facilities and resources available for hosting occasional cultural activities in the community;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Economic			**Economic**	**Economic**		**Economic**	
Economic	**Economic Performance**	Revenues	Revenues				
		Operating costs	Operating costs				
		Employee compensation (wages & benefits)	Employee compensation (wages & benefits)		- What is the share of performance-related compensation for each employee category as a percentage of total compensation (excluding pension plans and fringe benefits) that your company paid out in the last year. **Employee categories:** executive / top mgmt, midddle/general mgmt, first line mgmt / supervisor, specialist groups, other employees; - Is the individual performance of each employee (relevant for variable compensation) communicated to the next upper management level? - Please indicate for each employee category the percentage of variable compensation that is based on corporate and / or individual performance respectively;	- committed to ILO + wages	
					- Please indicate your company's pre-defined corporate indicators relevant for the variable compensation of Executive / Top Management: (1) Internal Financial Success Metrics (e.g. cashflow, EBIT, Revenues); (2) External Financial Success Metrics (e.g. Share price, Tobins Q); (3) External perception metrics (e.g. reputational risks, brand recognition, customer satisfaction, feedback from stakeholders); (4) Environmental metrics (e.g. corporate Emission reduction); (5) Social metrics (e.g. corporate Health & Safety figure);		
					- Please indicate the type and employee coverage of individual performance appraisals, which are used for individual performance related compensation: (1) Management by Objectives: Systematic use of agreed measurable targets by line superior % of all employees; (2) Multidimensional performance appraisal (e.g. 360 degree feedback) % of all employees; (3) Formal comparative ranking of employees within one employee category % of all employees; - Please indicate the type and its percentage share of total performance-related compensation (excluding pension plans and fringe benefits) which your company paid out/granted for the last year: (1) Annual cash bonus %; (2) Share / share options immediately available %; (3) Shares/share options with a locking period of a minimum 4 years %; (4) Other pay-out types immediately available, please specify: % (5) Other pay-out types with a locking period of a minimum 4 years, please specify:		

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Economic			Economic	Economic		Economic	
Economic	Economic Performance	Payments to capital providers	Payments to capital providers				
		Payments to government	Payments to government	- fulfil its tax responsibilities and provide authorities with the necessary information to correctly determine taxes due.			
		Donations & community investments	Donations & community investments		- Please estimate the monetary value of your company's voluntary social contributions in last fiscal year: (exclude marketing and advertising budgets in contribution amount): Types of contributions: (1) cash contributions; (2) in-kind giving - employee volunteering during paid work hours; (3) in-kind giving - product / service donations, project partnerships or similar;	- charitable donations in excess of £50,000; - gifts in kind or staff secondments to community schemes; - Operating payroll giving schemes; - Assigning responsibility for charitable donations or community relations to a senior manager;	
		Retained earnings	Retained earnings				
		Financial implications (RISK) associated with climate change	Financial implications (RISK) associated with climate change				
		Financial implications (Opportunities) associated with climate change	Financial implications (Opportunities) associated with climate change				
		Defined vs other types of benefit plans (retirement)	Defined vs other types of benefit plans (retirement)				
		Financial assistance from government	Financial assistance from government				
	Market Presence	Ratio - standard entry level vs. local minimum wage	Ratios of standard entry level wage / local minimum wage				
		Policies, practices, spending on locally based supplies	Policies, practices and proportion of spending on local supplies	- consider giving preference to local suppliers of products and services and contributing to local supplier development where possible and practicable; - consider undertaking initiatives to strengthen the ability of and opportunities for locally based suppliers to contribute to value chains, giving special attention to disadvantaged groups within the community;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Economic			Economic	Economic		Economic	
Economic	Market Presence	Policies on local hiring	Procedures for local hiring and proportion of senior mgmt hired from local community	- analyze the impact of its investment decisions on employment creation and, where economically viable, make direct investments that alleviate poverty through employment creation; - consider the impact of technology choice on employment and, where economically viable in the longer term, select technologies that maximize employment opportunities; - consider the impact of outsourcing decisions on employment creation, both within the organization making the decision and within external organizations affected by such decisions; - where operating internationally, endeavour to increase the employment, occupational development, promotion and advancement of nationals of the host country. This includes sourcing and distributing through local enterprises where practical;			
	Indirect Economic Impacts	Impact of infrastructure investments	Development & impact of infrastructure investments and services primarily for public benefit	- consider supporting appropriate initiatives to stimulate diversification of existing economic activity in the community; - engage in economic activities with organizations that, owing to low levels of development, have difficulty meeting the legal requirements only where: - the purpose is to address poverty; - the activities of these organizations are consistent with human rights and there is a reasonable expectation that these organizations will consistently move towards conducting their activities within the appropriate legal framework; - consider contributing to programmes and partnerships that assist community members, especially women, to establish businesses and co-operatives, in improving productivity, promoting entrepreneurship and encouraging the efficient use of available resources. Such programmes could, for example, provide training in business planning, marketing, quality standards required to become suppliers, management and technical assistance, access to finance, and facilit			
		Indirect economic impacts as money circulates through economy	Indirect economic impacts - additional impacts generated as money circulates through economy	- give special attention to vulnerable groups in respect of employment and capacity building; - consider appropriate ways to make procurement opportunities more easily accessible to community organizations, including, for example, through capacity-building on meeting technical specifications, and making available information about procurement opportunities; - consider supporting organizations and persons that bring needed products and services to the community, which can also generate local employment as well as linkages with local, regional and urban markets where this is beneficial for the welfare of the community; - consider appropriate ways to help in the development of community-based associations of entrepreneurs;			

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Economic				Economic		Economic	
Economic	**Corporate Governance**	Corporate governance		**- Organizational governance:** - An organization's decision-making processes and structures should enable it to: - create and nurture an environment in which the principles of social responsibility are practised; - create a system of economic and non-economic incentives related to performance on social responsibility; - use financial, natural and human resources efficiently; - balance the needs of the organization and its stakeholders, including immediate needs and those of future generations; - establish two-way communication processes with its stakeholders that take into account the stakeholders' interests and assist in identifying areas of agreement and disagreement and in negotiation to resolve possible conflicts; - encourage effective participation of all levels of employees in the organization's decision making on issues of social resp	**- Economic Dimension - Corporate governance:** - Please indicate the number of executive, non-executive directors on the board of directors/supervisory board of your company for: - ONE-TIER SYSTEM For companies with board of directors: executive directors, non-executive directors, independent directors; - TWO-TIER SYSTEM For companies with supervisory board: supervisory board = non-executive directors, independent directors, employee representatives; management board / executive management = senior executives; Is the board of directors/supervisory board headed by a non-executive and independent chairman and/or an independent lead director? ********** - How many women are members on your company's board of directors/supervisory board?		
				- balance the level of authority, responsibility and capacity of people who make decisions on behalf of the organization; - keep track of the implementation of decisions to ensure that these decisions are followed through and to determine accountability for the results of the organization's decisions and activities, either positive or negative; - periodically review and evaluate the governance processes of the organization;	**- Economic Dimension - Corporate governance:** - Please indicate in the table below the functions, and associated committee names, for which the board of directors / supervisory board explicitly assumes formal responsibility: Function = strategy; audit, accounting, risk management; selection and nomination of board members and top management; remuneration of board members and top management; corporate social responsibilty, corporate citizenship, sustainable development;		
					- Economic Dimension - Corporate governance: - Please indicate if the board of directors/supervisory board has issued a formal corporate governance policy, if publicly available, and covers the following aspects: (1) Statement of compliance of the formal policy with current legislation; (2) Remuneration framework and performance evaluation of the members of board of directors/supervisory board, CEO and senior executives; (3) Independency statement of board of directors / supervisory board; (4) Attendance of board of directors / supervisory board meetings disclosed; (5) Biographies, CVs of board of directors / supervisory board disclosed; (6) Other mandates of board of directors/supervisory disclosed;		

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Economic			**Economic**	**Economic**		**Economic**	
Economic	**Corporate Governance**	Corporate governance			**- Economic Dimension - Corporate governance:** How does your company ensure the effectiveness of your board of directors/supervisory board and alignment with the (long-term) interests of shareholders? (1) Stock ownership (value at the end of last business /fiscal year) = Non-executive directors are required to buy shares; Non-executive directors' individual average stock ownership worth USD; (2) Number of meetings attended in percentage last business/fiscal year = All members attended % of meetings of board of directors/supervisory board; Minimum attendance for all members required, atleast %; (3) Number of other mandates of the board of directors/supervisory board members = Number of directors with 4 or less other mandates; Number of other mandates for all directors restricted to (?):;		
					- Economic Dimension - Corporate governance: (4) Performance assessment of board of directors/supervisory board members = Regular self-assessment of board performance, please specify or provide supporting documents; Regular independent assessment of board performance, please specify or provide supporting documents; - Does your company communicate the remuneration / compensation of your board of directors / supervisory board members and other highest paid senior directors / executives (e.g. CEO) externally? Please attach references.		
	Risk & Crisis Management	Risk & Crisis Management			**- Economic Dimension - Risk & Crisis Management: -** Does your company use a uniform groupwide risk analysis framework, i.e. risk assessment, risk management, risk communication / reporting? - Which of the following factors does your company systematically include in defining corporate risk? Please provide supporting documents = probability of occurrence of risk event, magnitude, time horizon of risk event, correlation (how are risks related to each other); - Does your company use risk maps (or other tools) in order to rank your risk exposures on a two-dimensional scale (probability and magnitude)? - Does your company perform sensitivity analysis and stress testing on a group level? = with main focus on foreign exchange and interest rates; comprehensive scenarios based on other factors; - As part of your corporate risk response strategy which risks does your company retain, which are transferred, and which risks are avoided?		

			GRI	ISO26000	DJSI	FTSE4Good	Jantzi
Economic			Economic	Economic		Economic	
Economic	**Corporate Codes of Conduct**	Corporate codes of conduct			**- Economic Dimension - Codes of Conduct / Compliance / Corruption & Bribery:** - Please indicate for which areas corporate codes of conduct have been defined at a group level (including subsidiaries): (1) Corruption and bribery (2) Discrimination (3) Confidentiality of information (4) Money-laundering and/or insider trading/dealing (5) Security of staff, business partners, customers (6) Environment, health and safety (7) Whistleblowing; - What mechanisms are in place to assure effective implementation of your company's codes of conduct (e.g. compliance system)? (1) Responsibilities, accountabilities and reporting lines are systemically defined in all divisions and group companies; (2) Dedicated help desks, focal points, ombudsman, hot lines; (3) Codes of conduct linked to employee remuneration; (4) Employee performance appraisal systems integrates compliance/codes of conduct; (5) Disciplinary actions in case of breach, i.e. warning, dismis (6) Compliance system is certified/audited/verified by third pa		
	Customer Relationship Management	Customer relationship management			**- Economic Dimension - Customer Relationship Management:** - Do your company's customer care (call) centers have access to the following databases: = Billing; Customer information; Accounting; Shipment; Other communication done previously via different media (Letter, Email, Phone calls, Visits); - In your company's CRM database (not sure what CRM stands for) are you able to segment customers according to the following criteria? (1) Historical sales trends; (2) Product / Service bought; (3) Geographical segmentation; (4) Revenues the customers generated; (5) Different product specification / customization; (6) Potential lifetime value to business; (7) Customer Lifestyle;		

			GRI	ISO26000	DJSI	FTSE4Good	
Economic			Economic	Economic	Economic	Economic	
Economic	Brand Management	Brand management			**- Economic Dimension - Brand Management:** - In order to strategically manage your brand(s) does your company (please provide supporting documents): (1) Conduct a 360 degree feedback process (including suppliers, customers, employees, etc) at least on a yearly basis; (2) Integrate the received feedback into the company strategy; (3) Have a clearly defined branding process; (4) Link brand metrics to financial performance; (5) Assign explicit centralized responsibility, with direct link to top management, for the tracking and analytics of the brand metrics; (6) Benchmark its brand(s) with peer group; - How does your company determine the return on brand asset / investments or brand value? (1) Cost-approach; (2) Market approach, i.e. value estimated based on actual market transactions; (3) Income approach, i.e. net present value of brand (NPV) of forecasted brand earnings, discounted by the brand discount rate; (4) Return on brand investment, i.e. ROBI;		
	Privacy Protection	Privacy protection for all stakeholders			**- Economic Dimension - Privacy Protection:** - Please indicate if a formal privacy policy has been issued and if it is publicly available. - Please indicate the percentage of coverage of your formal privacy policy relative to the total number of: (1) Contractors / Suppliers / Service providers: % (2) Subsidiaries: % (3) Joint ventures: % - What mechanisms are in place to ensure effective implementation of your company's privacy policy? (1) Responsibilities, accountabilities and reporting lines are systemically defined in all divisions and group companies; (2) Dedicated help desks; (3) Training and education of all the employees; (4) Privacy policy system embedded in group-wide risk / compliance management; (5) Disciplinary actions in case of breach (i.e. zero tolerance policy); - Do you have a person formally responsible for data privacy? Please indicate name, position, reporting line. - How does your c unauthorized users)? (1) Code of conduct defining unauthorized use of customers' (2) Regular internal audits; (3) External audits; (4) Simulated hacker attacks;		