FOCUSING ON SUSTAINABILITY TO STRENGTHEN CORPORATE GOVERNANCE

Hugh Grove *, Mac Clouse **

* Professor of Accounting, Daniels College of Business, University of Denver, USA
** *Corresponding author* Professor of Finance, Daniels College of Business, University of Denver, USA
Contact details: Daniels College of Business, University of Denver, 2101 S. University Blvd., Denver, CO 80208, USA

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Abstract

This paper provides a summary of current sustainability issues and trends, primarily from an application perspective, which contributes to the state of the art of scholarly literature with implications for improved corporate governance. A leading sustainability advocate for better corporate governance is Larry Fink, who is the CEO of BlackRock, the world's largest asset-management company with $6.3 trillion under management and offices in 30 countries and clients in over 100 countries. In January 2018, he sent a letter to all CEOs of public companies across the world to start accounting for the societal impact of their companies and to focus upon economic growth that is sustainable. Currently, a majority of S&P 500 companies have publicly disclosed their sustainability performances with Environmental, Social, and Governance (ESG) metrics. These ESG reporting companies had higher financial returns than their non-ESG reporting competitors. As gatekeepers for investors and other stakeholders, Boards of Directors should pay attention to these sustainability trends, related company performances, and opportunities for future company performance which should strengthen corporate governance.

Keywords: Sustainability, Environmental, Social and Governance Metrics

1. INTRODUCTION

Larry Fink is the founder, chairman, and chief executive officer (CEO) of BlackRock, the world's largest asset-management company with $6.3 trillion under management and offices in 30 countries and clients in over 100 countries. In January 2018, he sent a letter to all CEOs of public companies across the world to start accounting for the societal impact of their companies and to focus upon economic growth that is sustainable and inclusive for the majority of people with corresponding implications for a new model of corporate governance.

In his letter, Fink wrote that companies need to demonstrate a strategy for long-term value creation and financial performance and that understanding a company's effect on the world was a key component. Simply managing for short-term shareholder profit was not an acceptable management strategy. To prosper over time, every company, every company must deliver not only financial performance but also show how it makes a positive contribution to society. Companies must benefit all of their stakeholders, including shareholders, employees, customers, and the communities in which they operate (Fink, 2018).

Global efforts are described in this paper to help meet these sustainability and corporate governance challenges. For example, in September 2015, the United Nations General Assembly adopted a 2030 Agenda for Sustainable Development report, which lists 17 Sustainable Development Goals (SDGs). These SDGs presented an opportunity for business-led solutions and technologies to be developed and many businesses and organizations have embraced and focused on sustainability as the cornerstone in their search for development and long-term growth. Thus, sustainability reporting should be considered financially material. The connection between sustainability performance and financial performance has been clearly shown by academic research and is becoming more established in mainstream financial analysis and reporting (Pilot, 2017). 2011 was the first year that a majority of S&P 500 companies publicly disclosed their sustainability performance per the Governance & Accountability Institute (G&A Institute). These companies had higher financial returns than their non-reporting competitors (Stevens, 2012).

This G&A Institute report found that 53% of the S&P 500 companies issued sustainability reports in 2011 versus only 19% in 2010. A recent G&A Institute report found that 82% of the S&P 500 companies issued sustainability reports in 2016, more than triple the number in 2010 (Verschoor, 2017). A G&A Institute partner commented: "The lesson for corporate management and boards if you are not reporting, your competitors and peers almost surely are. The task of catching up will only grow larger and those companies reporting for a longer period of time have a definable lead on their peers." This G&A report also found that companies issuing sustainability reports attracted more investment dollars and offered their shareholders better returns than non-reporting competitors. The report concluded: "Companies that are responsible with their financial, human and natural resources, the communities they serve, and the people they impact can begin to recognize multiple benefits and efficiencies that can elevate their position in the marketplace and their position relative to their competitors and peers." Since investors are beginning to see a positive correlation between sustainability and financial performance, the demand for sustainability data has been increasing (Stevens, 2012).

This G&A report also found that one-third (167) of the S&P 500 companies had issued the Global Reporting Initiative (GRI) sustainability reports in 2011. These reports contained a GRI Content Index, indicating which GRI standards were disclosed. There are 36 GRI Sustainability Reporting Standards, as shown in Appendix 1, which have been applied by the Global Sustainability Standards Board. More Fortune 500 companies, not all of which are publicly traded, are issuing sustainability reports, indicating a strategy to help attract talent, increase brand value, and provide marketing to customers (Stevens, 2012). Also, 93% of the world's largest 250 companies report on their sustainability performances, and 82% report using GRI Sustainability Reporting Standards. The GRI Sustainability Disclosure Database is a collection of publicly available sustainability reports (GRI, 2016). These reporting guidelines may be used by Boards of Directors to help investigate the sustainability operations of their companies.

A Carbon Disclosure Rating (CDR) is a numerical score that indicates the level of reporting of a company's climate change initiatives. It is based on a company's response to the climate control questionnaire of the U.K. – based Climate Disclosure Project (CDP). A high carbon disclosure rating indicates a comprehensive response to this questionnaire and a sound understanding and management of climate-related issues, including greenhouse gas emissions. This CDR rating is based on a methodology developed by the CDP in consultation with its global advisor, PWC (PricewaterhouseCoopers). The carbon disclosure score is not a reflection of the actions taken by a company to mitigate its impact on climate change nor offset its carbon footprint, but the score is simply indicative of a company's disclosure level with regard to these issues. Most of the world's largest companies have a CDR score (Investopedia, 2017). For example, Google Finance lists a company's CDR score alongside traditional financial indicators, like revenues and profits, and Bloomberg provides sustainability data on all 310,000 of its in-house terminals.

Recent research has studied the effects of green information system impacts and found beneficial sustainability results (Idrissi & Corbett, 2016; Wang et al., 2015). A recent dissertation also found information system benefits for sustainability with the following value outcomes: social, environmental, and economic value benefits, as well as strategic value benefits as such knowledge, was used to position the organization for greater efficiency and effectiveness (Simmonds, 2015).

– In analyzing these sustainability developments and opportunities, this paper is organized into the following topics and sections:

– Sustainable Development with the United Nations' 17 sustainable development goals,

– Impact of Corporate Sustainability on Company Performance using matched samples of 180 companies with either High Sustainability policies or Low Sustainability policies,

– Purpose Beyond Profit Study with interviews from over 400 C-suite executives, emphasizing the importance of sustainability reporting,

– Global 100: Most Sustainable Corporations in the World using an annual survey of about 4,000 companies to determine the Global 100,

– Sustainable Themes for Investing and Related Business Opportunities using UBS's 16 long-term sustainability investment themes divided almost equally into technology, resources, and social categories,

– Conclusions emphasizing that Boards of Directors should use these emerging focuses on sustainability analyses and reporting to strengthen corporate governance, and five Appendices elaborating on these topics: Global Sustainability Reporting Standards, UN Sustainable Development Goals, Queries for Sustainability Policies, Global 100 Key Performance Indicators, and Piotroski F-score.

2. SUSTAINABLE DEVELOPMENT

The United Nations General Assembly recently adopted a 2030 Agenda for Sustainable Development report, which listed 17 Sustainable Development Goals (SDGs) with 169 targets to be achieved by 2030 (Thomson, 2015). Numerous businesses and organizations have emphasized sustainability as the cornerstone of their development and long-term growth. These SDGs are as follows:

1. No Poverty
2. Zero Hunger
3. Good Health and Well-Being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation, and Infrastructure
10. Reduced Inequalities

11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace, Justice, and Strong Institutions
17. Partnerships for the Goals

The 17 SDGs recognize the key role that business organizations can play in achieving these goals, which are elaborated in Appendix 2. By focusing upon a selection of SDGs that businesses can impact, the goals of driving long-term growth, creating value, and accelerating business expansion may be enhanced. To facilitate implementation of SDGs, senior management and Boards of Directors should consider the following strategies (Busco et al., 2017):

1. Understand how key sustainability drivers and initiatives contribute to achieving business and financial strategies and goals.
2. Integrate key sustainability drivers and the SDGs into the organization's strategy and business model.
3. Ensure that the SDGs and their connection with the organization's strategy are understood cross-functionally in the business organization.
4. Break down SDG targets and objectives for the organization as a whole into targets and objectives that are meaningful for individual subsidiaries, divisions, and departments.
5. Make SDGs a central element of the process of planning, budgeting, and performance measurement, and include sustainability targets and objectives in performance appraisals.
6. Connect SDGs and sustainability drivers with day-to-day decision making.
7. Monitor and report sustainability initiatives and performance toward the SDGs in an integrated way.

For example, PepsiCo's Board of Directors considers sustainability issues an integral part of its business oversight. The Board also amended the company's Corporate Governance Guidelines to add sustainability to the key aspects of PepsiCo's business over which the Board has oversight. The Board does annual reviews of PepsiCo's sustainability initiatives, focusing upon three key areas: 1) governance and decision making, 2) tracking and reporting metrics, and 3) facilitating business integration. PepsiCo's "Performance with Purpose" has three initiatives: Products with five of the 17 SDGs, Planet with 11 SDGs, and People with 12 SDGs.

Similarly, Eni, the Italian energy company, has developed strategic guidelines for three levers: 1) a defined path to de-carbonization, 2) an operating model that reduces risks as well as environmental and social impacts, and 3) a model with the hosting countries based on long-lasting partnerships and cooperation. It has linked various SDGs to these three key areas: Path to De-Carbonization with 3 of the 17 SDGs, Operating Model with 5 SDGs, and Cooperation Model with 10 SDGs (Busco et al., 2017).

3. IMPACT OF CORPORATE SUSTAINABILITY ON COMPANY PERFORMANCE

Using a matched sample of 180 companies, a recent academic study found corporations that had voluntarily adopted sustainability policies, called High Sustainability companies, significantly outperformed Low Sustainability companies, which had adopted almost no (or less than 10%) sustainability policies. The 27 sustainability policies analyzed in this study are elaborated in Appendix 3 and could be used by Boards of Directors in assessing their companies' sustainability policies and performance. This superior performance by High Sustainability companies included both stock market and financial accounting results over almost a 20-year period from 1992-2010. This research study also found that the Boards of Directors of these High Sustainability companies were more likely to be formally responsible for sustainability policies and top executive compensation incentives were more likely to be a function of sustainability metrics. Moreover, High Sustainability companies were more likely to have established processes for stakeholder engagement, to be more long-term oriented, and to exhibit more complex measurement and disclosure of nonfinancial information (Eccles, Ioannou, & Serafeim, 2014).

In this research study, a \$1 investment beginning in 1993 and ending in 2010 was compared for High and Low Sustainability companies. A \$1 stock market investment in the High Sustainability companies grew to \$14.30 versus \$11.70 for the Low Sustainability companies or a difference of \$2.60 (18%) over this 18 year period. For the cumulative financial accounting performance of \$1 based on return on assets, the High Sustainability companies grew to \$3.50 versus \$3.30 for the Low Sustainability companies or a difference of \$0.20 (6%). Similarly, for the cumulative financial accounting performance of \$1 based on return on equity, the High Sustainability companies grew to \$15.80 versus \$9.30 for the Low Sustainability companies or a difference of \$6.50 (41%).

The Low Sustainability companies primarily followed the traditional model of corporate profit maximization in which social and environmental issues are predominantly regarded as externalities. In contrast, the High Sustainability companies not only paid attention to externalities but were characterized by distinct governance mechanisms which directly involved the Board of Directors in sustainability policies and linked executive compensation to sustainability objectives. These High Sustainability companies exhibited a much higher level and deeper stakeholder engagement; a longer-term time horizon in their external communications matched by a larger proportion of long-term investors; greater attention to nonfinancial measures regarding employees; a greater emphasis on external environmental and social standards for selecting, monitoring, and measuring the performance of their suppliers; and a higher level of transparency in their disclosure of nonfinancial information. Thus, the High Sustainability companies benefited relatively more as they were more dependent on their relationships with consumers, communities, and the environment. These High Sustainability companies competed successfully on the basis of brands, human capital, and environmental awareness, even when some of their products depended on extracting large amounts of natural resources (Eccles, Ioannou, & Serafeim, 2014).

4. PURPOSE BEYOND PROFIT STUDY

Pilot (2017) conducted her sustainability research project jointly with the International Integrated Reporting Council, the Chartered Institute of Management Accountants, and the American Institute of Certified Public Accountants. Over 400 C-suite executives from more than 50 countries were surveyed. The findings emphasized the importance of sustainability reporting where businesses focused on more than just making a profit. The majority of these executives agreed that their organizations need to shift focus from pure shareholder value creation to value creation that includes wider stakeholder groups. Thus, 89% of these executives believed business must deliver purpose beyond profit.

This sustainability research found that meeting the expectations and needs of customers and inspiring and engaging people will grow far more in importance than just profitability and financial returns for investors. It concluded that a broader range of performance metrics are key to improved performance and long-term sustainability. However, only 11% of these C-suite executives felt they were able to make strategic decisions on broader factors and only 24% felt that their external information needs were being fulfilled. They felt that a new model of management and leadership was needed to fulfill their perceived mandate to create wider value for all stakeholders. Thus, changes are needed for measuring, managing, and understanding different elements of performance, especially sustainability reporting (Pilot, 2017).

5. GLOBAL 100: MOST SUSTAINABLE CORPORATIONS IN THE WORLD

One well-established approach for assessing and reporting sustainability is the Global 100 report, created and maintained since 2005 by Corporate Knights, a Toronto-based media and investment research firm. This report is an annual ranking of corporate sustainability performance, based upon the publicly-disclosed data of financial filings and sustainability reports. The methodology is based upon 14 key performance indicators (KPIs) focusing upon the resource, financial, and employee management. All publicly traded companies with a market capitalization of at least $2 billion are automatically considered as possibilities for the Global 100 report (Corporate Knights, 2017).

About 4,000 companies were considered for the 2017 Global 100 report which took about 1,000 research hours. The results are presented each January at the World Economic Forum in Davos, Switzerland and are published each January by Forbes. Some observers might think companies that invest heavily in sustainability might incur higher costs and become less profitable – not so! A $100 investment in the 2005 Global 100 companies would have been worth $232 at the end of 2016 versus just $208 for a $100 investment in the All Country World Index (ACWI), a basket of stocks designed to represent a wide range of global companies, which was a difference of $24, or 12% (Kauflin, 2017).

The Global 100 methodology uses four screening criteria which could be used by Boards of Directors in assessing sustainability performance for strengthened corporate governance:

1. Sustainability disclosure practices: companies that did not disclose at least 75% of the 12 “priority KPI’s” in their respective industry group are eliminated.
2. Financial health: companies with a Piotroski F-score below 5 are eliminated.
3. Product categories: companies with an industry code that relates to tobacco products or armaments are eliminated.
4. Sanctions: companies that are bottom quartile performers in a Sanctions screen are eliminated.

In this first screening criterion, the 12 “priority KPIs” was broken down into three groups, each with four KPIs: resource management, financial management, and employee management. The four resource management KPIs are energy intensity, carbon intensity, water intensity, and waste intensity. The four financial management KPIs are innovation capacity, percentage tax paid, CEO versus average employee pay, and pension fund status. The four-employee management KPIs are safety performance, employee turnover, leadership diversity, and clean capitalism pay link. There were also two additional, separate KPIs: a supplier score and a clean air productivity score. The details of these 14 KPI calculations are provided in Appendix 4 and may be used by Boards of Directors in assessing their companies' sustainability policies and performance.

In this second screening criterion, the details of the Piotroski F-score for financial health analysis are provided in Appendix 5 and may also be used by Boards of Directors in assessing their companies’ financial performance. This third screening criterion of companies with unacceptable products needs no further elaboration. In this fourth screening criterion, Sanctions are compiled by RepRisk AG and begin with the cash paid out by companies for qualifying fines, penalties, and settlements over the last year. The Sanctions then include but are not limited to, human rights, labor, environment, anti-trust, and community-related violations.

The one hundred companies in The 2017 Global 100 came from the following countries (with the top ten ranked companies also noted):

– United States: 19 companies including Cisco Systems (#3 Ranking), Johnson & Johnson (#8 Ranking), Colgate-Palmolive, Intel, Hess, Microsoft, HP, Apple, Merck, General Mills, and General Electric.

– Scandinavia: 14 companies including Storebrand (#2 Ranking), Danske Bank (#4 Ranking), Nokia, Holmen, Neste,DNB, Novozymes, Skandinaviska Enskilda Banken, Statoil, and Telefonaktiebola.

– France: 12 companies including Dassault Systemes, Credit Agricole, Vivendi, Television Francaise 1, TOTAL, L’Oreal, BNP Paribas, Peugeot, Legrand, Rexel, and Kering.

– United Kingdom: 11 companies including Derwent London, Centrica, Marks & Spencer, Pearson, BT Group, Coca-Cola European Partners, Sky, and Reckitt Benckiser Group.

– Germany 6 companies: Siemens (#1 Ranking), Henkel, Bayerische Motoren Werke, Adidas, Daimler, and Fraport (Frankfurt Airport Services Worldwide).

– Other EU Countries: 12 companies including ING Group (#5 Ranking), Koninklijke Philips (#7 Ranking), DSN (#9 Ranking), Enagas (#10 Ranking) Intesa Sanpaolo, Iberdrola, Assicurazioni Generali, UCB, and Walters Kluwer.

– Canada 6 companies: Royal Bank of Canada, Enbridge, Sun Life Financial, Toronto-Dominion Bank, Bank of Montreal, and Cameco Corp.

– Asian Countries: 12 companies including City Developments, Shinhan Financial Group, Hang Seng Bank, Takeda Pharmaceutical, NEC, and Lenovo Group (the only Chinese company).

– Others: 8 companies including Commonwealth Bank of Australia (#6 Ranking) Syngenta, Novartis, Accenture, and Banco Santander.

Similarly, MIT produces an annual list of the 50 Smartest Companies in the world. This list highlights technologically innovative companies whose business models allow them to exploit these advances. Besides the typical dominant technology companies, like Amazon, Apple, Facebook, and Google, there are many emerging companies who have an inside track to take advantage of the emerging technologies, such as artificial intelligence, that will define business in the coming years. Being smart about innovation does give such firms the potential to create and dominate new markets in an increasingly competitive business environment (Rotman, 2017). In the next section of this paper, the 16 UBS long-term sustainability themes start with five technology opportunities.

6. SUSTAINABLE THEMES FOR INVESTING AND RELATED BUSINESS OPPORTUNITIES

Investors and financial analysts are demanding more sustainability information for their investment decisions and recommendations; so, companies need to keep up with such demands. Mary Schapiro, former U.S. Securities and Exchange Commission (SEC) Chair, said: "There's a disconnect between what investors are demanding and what companies are providing" (Katz, 2017). A United Bank of Switzerland (UBS) Asset Management case study agreed: "With intangible assets accounting for more than 80% of the market value of S&P 500 companies, and stocks trading at multiples of book value, analysts require better information on nonfinancial factors to understand what the market is paying for. Examining corporate performance on material Environmental, Social, and Governance (ESG) factors ties into the financial theory to complete the picture on valuation" (UBS, 2015).

Similarly, a Goldman Sachs equity research report in April 2017 found direct links between corporate environmental and social factors and company financial performance. Since 2011, companies that fell in the bottom quartile of sustainability performance have underperformed sector peers by 135 basis points per year on average. The report concluded: "Our analysis shows that by focusing on a selective suite of key ESG metrics, mainstream investors can add a differentiated and alpha-additive complement of risk analysis to their toolkit. Where robust data is available, environmental and social metrics make a tangible difference to performance" (Katz, 2017).

Investors are starting to pay more attention to ESG information. A UBS Investment Strategy Guide issued in June 2017 introduced new sustainable themes for "investing in a better world" with related business opportunities to provide new goods and services. It noted major long-term trends of population growth, urbanization, and ageing that are creating a strain on natural resources, such as food, energy, and water, and increasing demand for basic services, such as education, healthcare, and sanitation. Companies that help meet such needs over the long term are expected to experience better financial performance in the future. Accordingly, UBS has introduced 16 new long-term investment themes which are considered part of a sustainable investing approach with a focus on positive environmental and/or social outcomes, in addition to financial returns. These long-term investment themes are similar to and reinforce the importance and timeliness of the GRI Sustainability Reporting Standards, the UN Sustainable Development Goals, and the Global 100 Key Performance Indicators. The 16 UBS long-term sustainability investment themes with related business opportunities are divided almost equally into technology, resources, and social categories as follows (UBS, 2017):

Technology

1. Automation and robots: A fourth industrial revolution is underway which will transform the future of manufacturing.
2. Mass transit rail: Rapid urbanization in Asia will strain mass transit systems, providing opportunities for infrastructure investment over the long term.
3. Medical devices: The medical device industry has matured but opportunities exist for increased penetration in emerging markets where affordability is on the rise.
4. Oncology: Advances in cancer therapeutics will create new multi-billion opportunities for successful drugs.
5. Security and Safety: Growing trends, such as urbanization, digital data growth, and increased regulation, support demand for security and safety.

Resources

6. Agricultural yield: The world faces a growing food production crisis as the global population increases. Companies that help to boost agricultural yields stand to benefit.
7. Clean air and carbon reduction: Rising populations and urbanization are fueling the need for clean-air technologies. Solution providers targeting emissions reductions stand to benefit.
8. Energy efficiency: Stricter regulation and corporate competition to improve product efficiency are driving demand for energy-efficiency solutions.
9. Waste management and recycling: Low waste treatment rates in emerging markets offer big catch-up potential that could lead to extraordinary growth rates.
10. Water Scarcity: Water scarcity is one of the biggest risks to mankind. If limited water resources can be better harnessed, the benefits could be enormous.

Society

11. Education resources: There is increased opportunity for the private education market.
12. Emerging market healthcare: An aging emerging market population requires stepped-up investment in healthcare. Global healthcare companies can benefit.

13. Emerging market infrastructure: Growing urbanization and high economic growth rates will drive demand for infrastructure investment in emerging markets.

14. Obesity: Urbanization and rising per-capita GDP in emerging markets will contribute to an ever greater prevalence of global obesity.

15. Retirement homes: A larger population of seniors and evolving social trends support opportunity in retirement homes investment.

16. Retirement planning: Changing demographics are increasing demand for retirement planning, benefiting wealth and asset managers.

7. CONCLUSIONS

The 2015 UN Sustainable Development Goals (SDGs) presented an opportunity for business-led solutions and technologies to be developed. Many businesses and organizations have embraced sustainability as the cornerstone in their search for development and long-term growth. The first year that a majority of S&P 500 companies publicly disclosed their sustainability performance was 2011 and this trend continues. These sustainability reporting companies had higher financial returns than their non-sustainability reporting competitors. In 2017, a Goldman Sachs report recommended that Environmental, Social and Governance (ESG) metrics become a relevant part of investors' toolkits. Also in 2017, a UBS Investment Strategy Guide introduced new sustainable themes for "investing in a better world" with related business opportunities to provide new goods and services.

As gatekeepers for investors and other stakeholders, Boards of Directors should pay attention to these sustainability trends, related company performances, and opportunities for future company performance. Boards of Directors could use this focus upon sustainability analyses and related business opportunities, discussed in this paper, to strengthen corporate governance. The five Appendices list criteria for the Global Initiative Institute's Sustainability Reporting Standards, the United Nation's Sustainable Development Goals, Queries for Sustainability Policies, the Global 100 Key Performance Indicators, and financial health analysis with the Piotroski F-score. This emerging area of sustainability reporting and related performance analysis is shown to present opportunities to strengthen corporate performance which enhances the gatekeeper role of Boards of Directors in helping companies' stakeholders.

But how can the Board of Directors spend the necessary time to focus on and investigate key questions and procedures in these five Appendices? The operation of a typical U.S. Senator may provide some strategies and guidance. Since U.S. Senators are constantly bombarded with requests for their time, they rely upon staffs to help them out. For example, former Minnesota Senator Al Frankein had a staff of 40 people who prepared briefing books on key issues, summarized results of Senate committee hearings, and acted as gatekeepers for his time (Frankein, 2017). Surely, busy Board of Directors members could hire one or more people from their own companies as their personal, independent staffs to provide assistance, similar to U.S. senators, in order to further strengthen corporate governance, as opposed to some Board members who treat such Directorships as mere honorary positions. After all, non-employee Directors are being compensated quite nicely, as shown by their median pay at 300 U.S. public companies in 2016: $260,000 at large-cap companies, $200,000 at mid-cap companies, and $145,000 at small-cap companies (Graves & Kohn, 2017).

Addressing such challenges, Fink wrote in his letter that many governments are failing to prepare for the future on issues ranging from retirement and infrastructure to automation and worker retraining. As a result, society increasingly is turning to the private sector and asking that companies respond to broader social challenges and that society is demanding that companies, both public and private, serve a social purpose. He argued that the time has come for a new model of corporate governance and shareholder engagement – one that strengthens and deepens communication between shareholders and the companies that they own.

Finks further commented that engagement needs to be a year-round conversation about improving long-term value. A Board of Directors' engagement and involvement in developing a company's long-term strategy is essential. Boards meet only periodically but their responsibility is continuous. Directors whose knowledge is derived from sporadic meetings are not fulfilling their duty to shareholders. Boards are essential to helping a company articulate and pursue its purpose, as well as responding to the questions that are increasingly important to its investors, its consumers, and the communities in which it operates. In the current environment, these stakeholders are demanding that companies exercise leadership on a broad range of issues and they are right to do so. A company's ability to manage environmental, social and governance matters demonstrate the leadership and good governance that is so essential to sustainable growth (Fink, 2018). Hopefully, this paper has summarized key guidance to help meet such challenges.

Such challenges have led to the issuance of a 2018 guide by the American Institute of Certified Public Accountants: Attestation Engagement on Sustainability Information (Including Greenhouse Gas Emissions Information). CPAs who provide assurance on sustainability reports can then follow this attestation guide. This guide applies when the reporting entity is holding the subject matter out as sustainability information or makes the assertion that it is sustainability information, such as economic, environmental, social, or governance. The governance topics include governance structure and composition, the role of highest governance body in various activities of the entity, and management and oversight of sustainability policies, practices, and risks (Tysiac, 2018; Mizar, 2017; Huffman, 2017; Tysiac, 2015).

A summary of empirical research from respected institutions by the Harvard Law School Forum on Corporate Governance and Financial Regulation found five pillars of the business case for corporate investment in environmental, social and governance (ESG) practices:

1. Corporate investment in ESG enhances market and accounting performance
2. Corporate investment in ESG lowers the cost of capital
3. Corporate investment in ESG is a means of engagement with key shareholders

4. Corporate investment in ESG improves business reputation, and

5. Corporate investment in ESG channelled to product innovation fosters new revenue growth (Tonello, 2015).

This paper provided a summary of current sustainability issues and trends, primarily from an application perspective, which contributes to the state of the art of scholarly literature. However, since this paper did not do empirical research, future empirical research could update Harvard's 2015 empirical research summary with its five pillars for ESG investment, especially since S&P 500 companies reporting of ESG information has increased by over a factor of four from 19% in 2010 to 82% in 2016. Future research doing case studies of how Boards of Directors are dealing with sustainability issues could help advance current corporate governance issues.

Boards of Directors should pay attention to these emerging trends of sustainability investment and reporting. For example, the above five pillars for ESG investment could be used as initial queries by the Board of Directors to investigate the sustainability strategies of their corporations. The dissertation research cited here found strategic value benefits as ESG knowledge was used to position the organization for greater efficiency and effectiveness (Simmonds, 2015).

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APPENDIX

Appendix 1. GRI Sustainability Reporting Standards

This Appendix includes the 36 Sustainability Reporting Standards of the Global Reporting Initiative, applied by the Global Sustainability Standards Board (GRI 2016), to facilitate the comparison of companies' sustainability efforts. They are organized by Universal Standards and Topic-Specific Standards. Appendix 3 also develops specific queries which can be used to help investigate these GRI standards.

Universal Standards

GRI 101: Foundation 2016
GRI 102: General Disclosures 2016
GRI 103: Management Approach 2016

Topic-Specific Standards

GRI 200: Economic
201: Economic Performance
202: Market Presence
203: Indirect Economic Impact
204: Procurement Practices
205: Anti-corruption
206: Anti-competitive Behavior
GRI 300: Environmental
301: Materials
302: Energy
303: Water
304: Biodiversity
305: Emissions
306: Effluents and Waste
307: Environmental Compliance
308: Supplier Environmental Assessment
GRI 400: Social
401: Employment
402: Labor/Management Relations
403: Occupational Health and Safety
404: Training and Education
405: Diversity and Equal Opportunity
406: Non-discrimination
407: Freedom of Association and Collective Bargaining
408: Child Labor
409: Forced or Compulsory Labor
410: Security Practices
411: Rights of Indigenous Peoples
412: Human Rights Assessment
413: Local Communities
414: Supplier Social Assessment
415: Public Policy
416: Customer Health Safety
417: Marketing and Labeling
418: Customer Privacy
419: Socioeconomic Compliance

Appendix 2. UN Sustainable Development Goals

This Appendix describes the 17 Sustainable Development Goals (SDGs) adopted by the United Nations General Assembly. These SDGs have a list of 169 targets to be achieved by 2030 (UN 2015). These 17 SDGs are elaborated as follows:

1. No Poverty: Eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.
2. Zero Hunger: End hunger and ensure access by all people, in particular, the poor and people in vulnerable situations, including infants, to safe, nutritious, and sufficient food all year round.
3. Good Health and Well-Being: Reduce the global maternal mortality ratio to less than 70 per 100,000 live births. End the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
4. Quality Education: Ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
5. Gender Equality: End all forms of discrimination against all women and girls everywhere. Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.
6. Clean Water and Sanitation: Achieve universal and equitable access to safe and affordable drinking water for all. Achieve access to adequate and equitable sanitation and hygiene for all and end open defecation.
7. Affordable and Clean Energy: Ensure universal access to affordable, reliable, and modern energy services. Increase substantially the share of renewable energy in the global energy mix and double the global rate of improvement in energy efficiency.
8. Decent Work and Economic Growth: Sustain per capital economic growth in accordance with national circumstances and, in particular, at least 7% gross domestic product growth per annum in the least developed countries. Achieve higher levels of economic productivity through diversification, technological upgrading, and innovation, including a focus on high-value, added and labor-intensive sectors.
9. Industry, Innovation and Infrastructure: Develop quality, reliable, sustainable, and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all. Promote inclusive and sustainable industrialization.
10. Reduced Inequalities: Progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average. Empower and promote the social, economic, and political inclusion of all.
11. Sustainable Cities and Communities: Ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums. Provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport.
12. Responsible Consumption and Production: Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries. Achieve the

sustainable management and efficient use of natural resources. Halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains.

13. Climate Action: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. Integrate climate change measures into national policies, strategies, and planning. Implement the commitment undertaken by developed-country parties to the UN Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually to address the needs of developing countries in the context of meaningful mitigation actions, especially with the Green Climate Fund.

14. Life Below Water: Prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

15. Life on Land: Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands. Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests, and substantially increase afforestation and deforestation globally.

16. Peace, Justice and Strong Institutions: Significantly reduce all forms of violence and related death rates everywhere. Promote the rule of law at the national and international levels and ensure equal access to justice for all. Significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets, and combat all forms of organized crime.

17. Partnerships for the Goals: Strengthen domestic resource mobilization, including through the commitment of developed countries to achieve a target of 0.7% of gross national income for official development assistance to developing countries. Enhance North-South, South-South and triangular regional and international cooperation and access to science, technology, and innovation. Promote a universal, rules-based, open non-discriminatory, and equitable multilateral trading system under the World Trade Organization. Enhance the Global Partnership for Sustainable Development.

Appendix 3. Queries for Sustainability Policies

This Appendix includes 27 specific queries for environmental and social policies used to construct a Sustainability Policies index (Eccles, Ioannou and Serafeim 2014). Each policy is investigated by asking if the company has such a policy. These queries may also be used to investigate the GRI Sustainability Reporting Standards in Appendix 1.

1. Bonus plan for most employees.
2. Community policy I: strive to be a good corporate citizen or endorse the Global Sullivan Principles.
3. Community policy II: respect business ethics or sign the UN Global Compact which follows the Organization for Economic Co-operation and Development guidelines.
4. Diversity and equal opportunity policy.
5. Emission reduction policy elements/ emissions.
6. Emission reduction/CO2 reduction.
7. Emission reduction/transportation impact reduction.
8. Employee welfare: work-life policy.
9. Employment quality/policy I: employee benefits and good relations in the supply chain.
10. Employment quality/policy II: maintain long-term employment growth and stability.
11. Environmental supply chain management: use environmental criteria (ISO 1400, energy consumption, etc.) in selecting suppliers or sourcing partners.
12. Generous fringe benefits: provide pension fund, healthcare, or other insurances.
13. Health & safety/policy: improve health and safety within the company and supply chain.
14. Human rights contractor: use human rights criteria in selecting and monitoring suppliers and sourcing partners.
15. Human Rights/policy I: guarantee the freedom of association universally applied independently of local laws.
16. Human rights/policy II: exclude a child, forced, or compulsory labor.
17. Internal promotion: favor promotion from within.
18. Management training: provide regular staff and business management training.
19. Positive discrimination: promote positive discrimination.
20. Product impact minimization: design product features and application/services that promote the responsible, efficient, cost-effective, and environmentally preferable use.
21. Product innovation: have take-back procedures and recycling programs to reduce the potential risks of products entering the environment.
22. Product responsibility/policy I: have the policy to protect consumer health and safety.
23. Product responsibility/policy II: have a products and services quality policy.
24. Resource efficiency/energy efficiency policy: have the policy to improve energy efficiency.
25. Resource efficiency/water efficiency policy: have the policy to improve water efficiency.
26. Training and development policy: have the policy to support skills training and career development of employees.
27. Waste reduction total: have initiatives to recycle, reduce, reuse, substitute, treat, or phase out total waste.

Appendix 4. Global 100 KPIs

This Appendix describes the measurements used to investigate the 14 Key Performance Indicators (KPIs) used to determine the Global 100 most sustainable corporations in the world each year (Corporate Knights, 2017).

Resource Management

– Energy Intensity: Revenue divided by (Energy use – renewable energy use)

– Carbon Intensity: Revenue divided by Greenhouse Gas (GHG) emissions: scope 1 and 2. The GHG Protocol provides accounting and reporting standards for business and government. Scopes 1 and 2 cover direct emission sources while scope 3 covers all indirect emissions due to the activities of an organization. Scope 1 emissions are fuel combustion, company vehicles, and fugitive emissions. Scope 2 emissions are purchased electricity, heat, and steam (WRI, 2017).

– Water Intensity: Revenue divided by Water use

– Waste Intensity: Revenue divided by Non-recycled or reused waste generated

Financial Management

– Innovation Capacity: R&D expenses divided by Revenue – three-year trailing

– Percentage Tax Paid: Cash tax amount paid divided by EBITDA – five-year trailing

– CEO versus Average Employee Pay: CEO compensation divided by Average employee compensation

– Pension Fund Status: Unfunded liabilities divided by total assets.

Employee Management

– Safety Performance: Fatalities and lost time incidents

– Employee Turnover: Number of departures divided by the Average number of total employees

– Leadership Diversity: Female representation on Board of Directors, executive management team, and the existence of a female CEO

– Clean Capitalism Pay Link: Mechanisms that link senior executive pay to clean capitalism targets

Additional KPIs

– Supplier Score: Company's largest supplier, determined by Bloomberg, is scored using the same Global 1000 methodology less this KPI

– Clean Air Productivity Score: 25% weightings for each of the following four measures which divide Revenue by Volatile Organic Compounds (VOC) emissions, Revenue by Nitrogen Oxide (NOX) emissions, Revenue by Sulfur Oxide (SOX) emissions, and Revenue by Particulate Matter (PM) emissions.

Appendix 5. Piotroski F-score

This Appendix describes the nine individual tests used to compute the Piotroski F-score for financial health analysis which is one of the screening criterion used for determining the Global 100 most sustainable corporations in the world each year. Each test scores one for a pass and zero for a fail. Companies have to pass at least five of the nine tests to satisfy this Global 100 screening analysis (Corporate Knights, 2017).

1. Net profit is positive.
2. Operating cash flow is positive.
3. Net profit divided by total assets at the beginning of the year, minus the same number for the previous year is positive.
4. Operating cash flow is greater than net profit (Quality of Earnings).
5. Long-term debt divided by average total assets has not increased.
6. The current ratio has increased (the change is more than zero, so even a negligible increase passes the test).
7. No raising of ordinary (common) equity over the previous year: this test is passed if the company did not issue any ordinary shares (excluding shares from dividend reinvestment plans).
8. Gross margin has improved over the previous year.
9. Asset turnover has increased.