

# FROM THE STOCKHOLDER TO THE STAKEHOLDER

HOW SUSTAINABILITY CAN DRIVE FINANCIAL OUTPERFORMANCE



GORDON L CLARK

Director, Smith School of  
Enterprise and the Environment,  
University of Oxford

ANDREAS FEINER

Head of Values Based Research  
and Advisory, Arabesque Asset  
Management Ltd

MICHAEL VIEHS

Research Fellow, Smith School of  
Enterprise and the Environment,  
University of Oxford

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# ENDORSEMENTS

*“Momentum building.”*

**Paul Polman**

*Chief Executive Officer  
Unilever*

*“I am delighted that this report shines a light on the importance of sustainability for shareholders; values in business matter for investors. At M&S we have put Plan A, our ethical and sustainability program, right at the heart of our business. It makes perfect business sense as well as being the right thing to do. Our relationship with our customers, employees, suppliers and society is built on 130 years of trust; it is a vital part of our brand. Furthermore the work we have done on sustainability provided a net financial benefit to the business of around £145 million last year through efficiencies in energy consumption, packaging, less waste etc.”*

**Robert Swannell**

*Chairman  
Marks & Spencers*

*“This report adds to the increasing body of evidence that companies with sustainable business models deliver improved financial returns, and that investors taking sustainability into account can deliver improved investment performance. Investors and companies take note.”*

**Jessica Fries**

*Executive Chairman  
The Prince’s Accounting for Sustainability Project*

*“A truly important study, showing how financial performance goes hand in hand with good governance, environmental stewardship and social responsibility.”*

**Georg Kell**

*Executive Director  
UN Global Compact*

*“This report strips bare the misplaced myths around sustainable investment, clearly demonstrating that ESG can add significant value for companies and investors.”*

**James Gifford**

*Founding Executive Director  
Principles for Responsible Investment*

*“Increasing attention is being paid to extra financial statement factors in determining the value and the quality of companies. This report is what every person interested in the ESG field and every investor should have on their desk – it is clear, comprehensive (wonderful reference materials), free of jargon and above all persuasive as to the need to take into account the impact of ESG elements.”*

**Robert A.G. Monks**

*Founder of ISS, Hermes Lens Focus Fund, Lens Fund  
and GMI (formerly The Corporate Library, now part of MSCI ESG Research)*

*“I welcome and recommend this report as a supporting study for all Japanese investors and corporate executives who proactively address ESG issues and stakeholder dialogues following the recent introduction of the Japanese Stewardship Code.”*

**Masaru Arai**

*Chair  
Japan Sustainable Investment Forum*

*“This report shows the solid effect of corporate sustainability practices on companies’ cost of capital, operating and stock performance. Such convincing findings may be groundbreaking in the sense that the study may contribute to ending the hesitations related to benefits of or at least reluctance to ESG issues.”*

**Ibrahim Turhan**

*Chairman & CEO  
Borsa Istanbul*

*“The report shows that shareholder engagement is an effective way to invest responsibly, and that it enhances long-term corporate performance, and ultimately shareholder value.”*

**Rob Bauer**

*Professor of Finance  
Maastricht University*

*“Thanks to the leadership of some companies we now have a wealth of evidence supporting the idea that corporate financial performance should not be at odds with the interests of other stakeholders.”*

**George Serafeim**

Associate Professor of Business Administration  
Harvard Business School

*“The integration of environmental, social and governance factors into corporate and investment decision making has been gathering momentum over the last decade. This well-researched report succinctly highlights one of the key drivers underpinning this shift: sustainability and financial performance are linked. This piece eloquently explores why, now more than ever, sustainability should be on the agenda of senior executives and investment professionals alike.”*

**Michael Jantzi**

CEO  
Sustainalytics

*“I welcome this report, which provides a good survey of research into the economic benefits of corporate sustainability. Importantly, it suggests that owners of the business are key to good corporate governance and that active ownership can contribute to financial and investment performance.”*

**Colin Melvin**

CEO  
Hermes Equity Ownership Services

*“From The Stockholder To The Stakeholder highlights the increasing global awareness of ESG issues among a broad range of stakeholders and emphasizes the business case for the integration of ESG into all aspects of business.”*

**Philipp Aeby**

CEO  
RepRisk AG

# ABOUT



The Smith School of Enterprise and the Environment is a leading international academic programme focused upon teaching, research, and engagement with enterprise on climate change and long-term environmental sustainability. It works with social enterprises, corporations, and governments; it seeks to encourage innovative solutions to the apparent challenges facing humanity over the coming decades; its strengths lie in environmental economics and policy, enterprise management, and financial markets and investment. The School has close ties with the physical and social sciences, including with the School of Geography and the Environment, the Environmental Change Institute, and the Saïd Business School.



Arabesque Partners

Arabesque Asset Management was established in June 2013 through a management buy-out from Barclays Bank PLC, which developed the technology from 2011 to 2013 in cooperation with professors from the universities of Stanford, Oxford, Cambridge and Maastricht. Arabesque and the Fraunhofer Society, a leading German semi-governmental think-tank and shareholder of Arabesque, entered into a strategic research partnership in 2014.

Arabesque offers a quantitative approach to sustainable investing. It combines state of the art systematic portfolio management technology with the values of the United Nations Global Compact, the United Nations Principles for Responsible Investments (UN PRI), and balance sheet and business activity screening. The integration of ESG research into a sophisticated portfolio management delivers a consistent outperformance.

Led by founder and CEO Omar Selim, Arabesque is headquartered in London and has a large research hub in Frankfurt, together with an Advisory Board of highly respected industry leaders and academics. Arabesque Asset Management Ltd is regulated by the UK Financial Conduct Authority (FCA). Arabesque (Deutschland) GmbH is based in Frankfurt with a focus on research, programming and advisory.

For further information on Arabesque's approach to sustainable investment management please contact Mr Andreas Feiner on +49 69 2474 77610 or [andreas.feiner@arabesque.com](mailto:andreas.feiner@arabesque.com).

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# FOREWORD



OMAR SELIM

CEO, ARABESQUE ASSET MANAGEMENT

We now live in a world where sustainability has entered mainstream. That much is evident from the fact that over 72% of S&P500 companies are reporting on sustainability, demonstrating a growing recognition of the strong interest expressed by investors.

This report, entitled *From the Stockholder to the Stakeholder*, aims to give the interested practitioner an overview of the current research on ESG.

In this enhanced meta-study we categorize more than 200 different sources. Within it, we find a remarkable correlation between diligent sustainability business practices and economic performance. The first part of the report explores this thesis from a strategic management perspective, with remarkable results: 88% of reviewed sources find that companies with robust sustainability practices demonstrate better operational performance, which ultimately translates into cashflows. The second part of the report builds on this, where 80% of the reviewed studies demonstrate that prudent sustainability practices have a positive influence on investment performance.

This report ultimately demonstrates that responsibility and profitability are not incompatible, but in fact wholly complementary. When investors and asset owners replace the question “how much return?” with “how much sustainable return?”, then they have evolved from a stockholder to a stakeholder.

# REPORT HIGHLIGHTS

1

Sustainability is one of the most significant trends in financial markets for decades.

2

This report represents the most comprehensive knowledge base on sustainability to date. It is based on more than 200 academic studies, industry reports, newspaper articles, and books.

3

90% of the studies on the cost of capital show that sound sustainability standards lower the cost of capital of companies.

4

88% of the research shows that solid ESG practices result in better operational performance of firms.

5

80% of the studies show that stock price performance of companies is positively influenced by good sustainability practices.

6

Based on the economic impact, it is in the best interest of investors and corporate managers to incorporate sustainability considerations into their decision making processes.

7

Active ownership allows investors to influence corporate behavior and benefit from improvements in sustainable business practices.

8

The future of sustainable investing is likely to be active ownership by multiple stakeholder groups including investors and consumers.

# 1. INTRODUCTION

Sustainability is one of the most significant trends in financial markets for decades. Whether in the form of investors' desire for sustainable responsible investing (SRI), or corporate management's focus on corporate social responsibility (CSR), the content, focusing on sustainability and ESG (environmental, social and governance) issues, is the same. The growth of the UN Global Compact,<sup>1</sup> the United Nations backed Principles for Responsible Investment (UN PRI),<sup>2</sup> the Global Reporting Initiative (GRI),<sup>3</sup> the Carbon Disclosure Project (CDP),<sup>4</sup> the Sustainability Accounting Standards Board (SASB),<sup>5</sup> the American<sup>6</sup> and European<sup>7</sup> SRI markets and the fact that more than 20% of global assets are now managed in a sustainable and responsible manner,<sup>8</sup> all bear strong testament to sustainability concerns. However from an investor's perspective, there exists a debate about the benefits of integrating sustainability criteria into the investment process, and the degree to which it results in a positive or negative return.<sup>9</sup>

This report investigates over 200 of the highest quality academic studies and sources on sustainability to assess the economic evidence on both sides for:

- a business case for corporate sustainability
- integrating sustainability into investment decisions

- implementing active ownership policies into investors' portfolios

This report aims to support decision makers by providing solid and transparent evidence regarding the impact of sustainable corporate management and investment practices. Our findings suggest:

- companies with strong sustainability scores show better operational performance and are less risky
- investment strategies that incorporate ESG issues outperform comparable non-ESG strategies
- active ownership creates value for companies and investors

Based on our results, we conclude that it is in the best economic interest for corporate managers and investors to incorporate sustainability considerations into decision-making processes.

We close the report with the suggestion that it is in the long-term self-interest of the general public, as beneficiaries of institutional investors (e.g. pension funds and insurance companies), to influence companies to produce goods and services in a responsible way. By doing so they not only generate better returns for their savings and pensions, but also contribute to preserving the world they live in for themselves and future generations.

1 For more information on the UN Global Compact, see: [www.unglobalcompact.org](http://www.unglobalcompact.org).

2 Background information on the United Nations backed Principles for Responsible Investment (UN PRI), see: [www.unpri.org](http://www.unpri.org).

3 See Global Reporting Initiative's website for further information: [www.gri.org](http://www.gri.org).

4 See [www.cdp.net](http://www.cdp.net) for more information on Carbon Disclosure Project.

5 For the SASB's mission statement, see [www.sasb.org](http://www.sasb.org).

6 Forum for Sustainable and Responsible Investment (US SIF) (2014).

7 Eurosif (2014).

8 Global Sustainable Investment Alliance (GSIA) (2013).

9 See, for example, Milton Friedman's view on the social responsibilities of firms (Friedman, 1970) versus R. Edward Freeman's perspective on how firms can take into account the interests of several stakeholders (Freeman, 1984). Subsequently, similar arguments are also made in Jensen (2002). A discussion about the arguments in favor or against the business case can be found in Davis (1973).

# 2. A BUSINESS CASE FOR CORPORATE SUSTAINABILITY

In 2013, Accenture conducted a survey of 1,000 CEOs in 103 countries and 27 industries. They found that 80% of CEOs view sustainability as a means to gain competitive advantages relative to their peers.<sup>10</sup> Furthermore, the study found that “81% of CEOs believe that the sustainability reputation of their company is important in consumers’ purchasing decisions”.<sup>11</sup> On the contrary, they found that only 33% of all surveyed CEOs think “that business is making sufficient efforts to address global sustainability challenges”.<sup>12</sup>

One reason for this imbalance between acknowledging the importance of sustainability and acting on it is pressure from the financial markets’ focus on short-termism.<sup>13</sup> This clearly emerges from another survey conducted on behalf of McKinsey & Company and the Canada Pension Plan Investment Board (CPPIB), in which 79% of C-level executives and board members state that they personally feel “pressure to deliver financial results in two years or less”.<sup>14</sup> Tellingly, 86% of them note that this constraint is in contrast to their convictions, where they believe that using

a longer time horizon to make business decisions would positively affect corporate performance in a number of ways, including strengthening longer-term financial returns and increasing innovation.<sup>15</sup>

There is however an increasing focus on longer-term thinking: a recent initiative, founded by the Canada Pension Plan Investment Board (CPPIB) and McKinsey, is bringing together business leaders from corporations, pension funds, and asset managers to promote longer-term corporate and investment management.<sup>16</sup> More broadly, numerous corporate leaders are taking decisive steps to implement a longer-term horizon within their companies. For example, under the leadership of its CEO, Paul Polman, Unilever has stopped giving earnings guidance and has moved away from quarterly profit reporting in order to transform the company’s culture and shift management’s thinking away from short-term results.<sup>17</sup>

Our research demonstrates that there is a strong business case for companies to implement sustainable management

10 Accenture (2013).

11 Accenture (2013: 36).

12 Accenture (2013: 15).

13 See Barton and Wiseman (2014).

14 Bailey, Bérubé, Godsall, and Kehoe (2014: 1).

15 See Bailey, Bérubé, Godsall, and Kehoe (2014: 7).

16 See Bailey, Bérubé, Godsall, and Kehoe (2014). More information can be found at [www.FCLT.org](http://www.FCLT.org).

17 See CBI (2012) and Ignatius (2012).

practices with regard to environmental, social, and governance (ESG) issues.<sup>18</sup> In other words, firms can ‘do well while doing good’.<sup>19</sup> However, it is imperative that the inclusion of ESG into strategic corporate management is based on business performance.<sup>20</sup>

Sustainability is further important for the public image of a corporation, for serving shareholder interests, and for the pre-emptive insurance effect for adverse ESG events.<sup>21</sup> To put it another way: good ESG quality leads to competitive advantages,<sup>22</sup> which can be achieved through a broader orientation towards stakeholders (communities, suppliers, customers and employees) as well as shareholders.<sup>23</sup> Clearly management cannot meet all demands of all stakeholder groups at the same time. Rather, we suggest that by focusing on profit maximization over the medium to longer term, i.e., shareholder value maximization, and

by taking into account the needs and demands of major stakeholders can a company create financial and societal value.<sup>24</sup>

In doing so, companies are required to appreciate the trade-offs that exist between financial and sustainability performance. Firms are required to implement sustainable management strategies that improve both performance measures (for instance through substantial product and process innovation).<sup>25</sup> To achieve this, companies are required first to identify the specific sustainability issues that are material to them. As recent research by Deloitte points out, “materiality of ESG data – like materiality for any input in investment decision-making – should be related to valuation impacts”.<sup>26</sup> Table 1 shows a selection of ESG issues that, depending on the individual company in question, can have a material impact.

**TABLE 1: SELECTION OF MATERIAL ESG FACTORS<sup>27</sup>**

| ENVIRONMENTAL (“E”)     | SOCIAL (“S”)                  | GOVERNANCE (“G”)               |
|-------------------------|-------------------------------|--------------------------------|
| Biodiversity/land use   | Community relations           | Accountability                 |
| Carbon emissions        | Controversial business        | Anti-takeover measures         |
| Climate change risks    | Customer relations/product    | Board structure/size           |
| Energy usage            | Diversity issues              | Bribery and corruption         |
| Raw material sourcing   | Employee relations            | CEO duality                    |
| Regulatory/legal risks  | Health and safety             | Executive compensation schemes |
| Supply chain management | Human capital management      | Ownership structure            |
| Waste and recycling     | Human rights                  | Shareholder rights             |
| Water management        | Responsible marketing and R&D | Transparency                   |
| Weather events          | Union relationships           | Voting procedures              |

18 For business case arguments of corporate social responsibility and sustainability, see for example, Davis (1973), Hart (1995), Porter and Kramer (2002, 2006), Porter and van der Linde (1995a, 1995b).  
19 A term used in the CSR context by David Vogel (2005: 19) and by Benabou and Tirole (2010: 9) to describe the ‘win-win scenario’ of CSR. Corporations adopt superior CSR standards to make the firm more profitable.  
20 For a study on executives’ perceptions of CSR and its business case, see Berger, Cunningham, and Drumwright (2007). See, for example, Davis (1973), Godfrey (2005), and Godfrey, Merrill, and Hansen (2009).  
21 See, for example, Davis (1973), Godfrey (2005), and Godfrey, Merrill, and Hansen (2009).  
22 Hart (1995), Hart (1997).  
23 Kurucz, Colbert, and Wheeler (2009).  
24 Jensen (2002), Porter and Kramer (2011). A similar statement has also been made by Smith (1994).  
25 Eccles and Serafeim (2013).  
26 Hespenheide and Koehler (2012: 5).  
27 The data has been synthesized from several sources, including MSCI (2013), UBS (2013), Bonini and Goerner (2011), Sustainability Accounting Standards Board (2013), Global Reporting Initiative (2013a), and the academic papers reviewed in this report. Table in alphabetical order.

The materiality of environmental, social and governance (ESG) issues differs substantially between industries. For instance, resource-intensive industries such as mining have a different exposure to environmental and social factors<sup>28</sup> than for example the commercial real-estate sector.<sup>29</sup> The Global Reporting Initiative (GRI) compiled a comprehensive overview about sector differences with regard to ESG issues. Over a period of ten years, the Global Reporting Initiative (GRI) has worked with a number of stakeholders to identify the most material ESG issues in different sectors<sup>30</sup> resulting in the G4 Sustainability Reporting Guidelines.<sup>31</sup>

Amongst others, there are three major ways how sustainability through the integration of environmental, social and governance (ESG) issues can lead to a competitive advantage:<sup>32</sup>

1. Risk:
  - *Company specific risks*
  - *External costs*
2. Performance:
  - *Process innovation*
  - *Product innovation*
3. Reputation:
  - *Human capital*
  - *Consumers*

Corporate managers should realize that the critical condition for translating superior ESG quality into competitive advantage is that sustainability has to be

deeply rooted in the organization's culture and values. Companies must reframe their identity into organizations that are open to sustainability and encourage innovation to increase productivity. Only once this is done can a corporate culture be changed into a realm in which 'transformational change' can occur.<sup>33</sup>

A selection of case studies show that successful companies which build a competitive advantage from sustainability initiatives have a clear responsibility at the board level, clear sustainability goals that are measurable in quantity and time, have an incentive structure for employees to innovate and external auditors which review progress. Such companies are able to benefit from their sustainability programmes over the medium to longer-term.<sup>34</sup>

## 2.1 RISK

An analysis of corporate fines and settlements demonstrates the financial impact of neglecting sustainability and ESG issues. In Table 2, we show the ten largest fines and settlements in corporate history, which together amount to \$45.5bn.<sup>35</sup> In the financial sector, banks have paid out \$100bn in U.S. legal settlements alone since the start of the financial crisis,<sup>36</sup> and global pharmaceutical companies have paid \$30.2bn in fines since 1991.<sup>37</sup>

28 See, Miranda, Burriss, Bingchang, Shearman, Briones, La Vina, and Menard (2003).

29 World Green Building Council (2013). For an academic discussion of this issue, see also Eccles, Krzus, Rogers, and Serafeim (2012).

30 See Global Reporting Initiative (2013a).

31 Global Reporting Initiative (2013b).

32 Similar to the model developed by Kurucz, Colbert, and Wheeler (2009) and the United Nations Global Compact Value Driver Model (PRI-UN Global Compact, 2013).

33 Eccles, Miller Perkins, and Serafeim (2012).

34 See Loew, Clausen, Hall, Loft, & Braun (2009) for the collection of case studies on sustainability in firms from Germany and the USA.

35 Own research. The University of Oxford and Arabesque are running a database where a neglect of environmental, social and governance (ESG) issues led to payments in excess of USD 100mn through fines or settlements. The analysis of currently 136 cases shows that the sectors which have been most affected are financials, pharmaceuticals, energy, technology and automobiles which represent 90% of all fines and settlements.

36 McGregor and Stanley (2014).

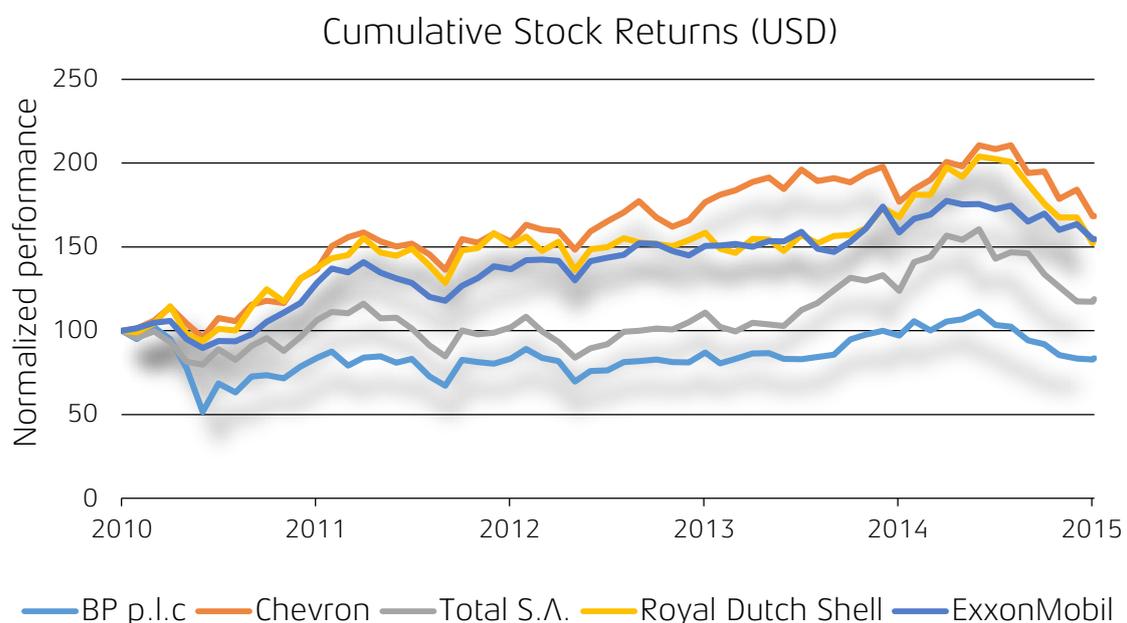
37 See Almashat and Wolfe (2012).

## CASE STUDY ON RISK: BRITISH PETROLEUM

BP's Deepwater Horizon 2010 oil spill in the Gulf of Mexico is the most high-profile recent example of how environmental risks can have meaningful financial consequences. Indeed, the company suffered not only financially, but also from a reputational and legal perspective. The total costs to BP are hard to estimate with accuracy. The Economist estimates \$42bn in clean-up and compensation costs<sup>38</sup> whereas the Financial Times estimates that the clean-up costs alone may amount to \$90bn.<sup>39</sup>

BP's share price lost 50% between 20 April 2010 and 29 June 2010 as the catastrophe unfolded. In the wake of the disaster, a peer group of major oil companies lost 18.5%. Since the disaster, BP's share price has underperformed the peer group by c. 37%.<sup>40</sup> Astute ESG investors would have avoided investing in BP at the time of the oil spill. Notably, two years before the spill happened there was severe criticism of the company's performance in environmental pollution, occupational health and safety issues, negative impacts on local communities and labour issues, according to RepRisk.<sup>41</sup> Additionally, MSCI excluded BP (in 2005) from their sustainable equity indices after the Texas City explosion<sup>42</sup> and a perceived lack of action from BP on health and safety issues.<sup>43</sup>

FIGURE 1: BP'S SHARE PRICE COMPARED TO OTHER OIL MAJORS



38 The Economist (2014), p. 59.

39 Chazan and Crooks (2014).

40 Own calculations, based on data from Factset. As of February 2015.

41 Cichon and Neghaiwi (2014).

42 See the website of the BP's Texas City Explosion for further details.

43 Based on personal communication with MSCI's research team on August 20, 2014.

TABLE 2: LARGEST FINES AND SETTLEMENTS CONCERNING ESG ISSUES (FEB 2015)

| COMPANY           | YEAR | SECTOR          | COUNTRY     | IN USD MN | CAUSE   | SOURCE                                 |
|-------------------|------|-----------------|-------------|-----------|---|--|
| Bank of America   | 2014 | Financials      | USA         | 16,650    | Financial fraud leading up to and during the financial crisis   | U.S. Department of Justice             |
| JP Morgan         | 2013 | Financials      | USA         | 13,000    | Misleading investors about securities containing toxic mortgages  | U.S. Department of Justice             |
| BNP Paribas       | 2014 | Financials      | France      | 8,970     | Illegally processing financial transactions for countries subject to U.S. economic sanctions  | U.S. Department of Justice             |
| Citigroup         | 2014 | Financials      | USA         | 7,000     | Misleading investors about securities containing toxic mortgages  | U.S. Department of Justice             |
| Anadarko          | 2014 | Energy          | USA         | 5,150     | Fraudulent conveyance designed to evade environmental liabilities   | U.S. Department of Justice             |
| BP                | 2012 | Energy          | UK          | 4,500     | Felony manslaughter: 11 people killed; Environmental crimes: oil spill in the Gulf of Mexico; Obstruction: misstatement of the amount of oil being discharged into the Gulf | U.S. Department of Justice, Securities |
| GlaxoSmithKline   | 2012 | Pharmaceuticals | UK          | 3,000     | Unlawful promotion of certain prescription drugs; Failure to report certain safety data to the FDA; False price reporting practices   | U.S. Department of Justice             |
| Credit Suisse     | 2014 | Financials      | Switzerland | 2,800     | Helping U.S. taxpayers hide offshore accounts from the IRS  | U.S. Department of Justice             |
| Pfizer            | 2009 | Pharmaceuticals | USA         | 2,300     | Misbranding Bextra (an anti-inflammatory drug that Pfizer pulled from the market in 2005) with the intent to defraud or mislead   | U.S. Department of Justice             |
| Johnson & Johnson | 2013 | Pharmaceuticals | USA         | 2,200     | Off-label marketing and kickbacks to doctors and pharmacists  | U.S. Department of Justice             |

Another risk for companies may be external costs (externalities).<sup>44</sup> These can affect production processes either directly or through disruptions in the supply chain which may depend on unpriced natural capital assets such as climate, clean air, groundwater and biodiversity. In the absence of regulation, unpriced natural capital costs usually remain externalized (i.e. are not paid for in the production process) unless events (for example droughts<sup>45</sup> or floods<sup>46</sup>) cause rapid internalization along supply chains through commodity price fluctuation or production disruption. One report estimates the annual unpriced natural capital costs

at \$7.3tn representing 13% of global economic production.<sup>47</sup> An analysis of the World Economic Forum comes to similar conclusions and identifies water and food crises, extreme weather events as well as a failure of climate change mitigation and adaption amongst the ten global risks of highest concern in 2014.<sup>48</sup> Neglecting sustainability issues can have a substantial impact on a company's business operations over the medium to longer term, or suddenly jeopardize the survival of a firm

44 See the OECD's definition of externalities: "Externalities refers to situations when the effect of production or consumption of goods and services imposes costs or benefits on others which are not reflected in the prices charged for the goods and services being provided." (OECD, 2014)

45 See, for example, Ernst & Young (2012).

46 See, for example, Knight, Robins, and Chan (2013).

47 Trucost (2013).

48 World Economic Forum (2014).

altogether (tail-risks).<sup>49</sup> Risk reduction is a major outcome of successfully internalizing sustainability into a company's strategy and culture.<sup>50</sup> Properly implemented, superior sustainability policies can mitigate aspects of these risks by prompting pre-emptive action.<sup>51</sup> Examples include risks from litigation as well as environmental, financial and reputational risks.<sup>52</sup> The result is a lower volatility of a company's cashflows as the impact of negative effects can be avoided or mitigated. Sustainability activities therefore play an important role in a firm's risk management strategy.<sup>53</sup>

## 2.2 PERFORMANCE

In an article in the Harvard Business Review, Michael Porter and Claas van der Linde claim that pollution translates to inefficiency. They argue that "when scrap, harmful substances, or energy forms are discharged into the environment as pollution, it is a sign that resources have been used incompletely, inefficiently, or ineffectively."<sup>54</sup> In one example, they examine 181 ways of preventing waste generation in chemical plants, and find that only one of them "resulted in a net cost increase".<sup>55</sup> In other words, process innovation more than offsets costs in 180 out of 181 cases.<sup>56</sup> For this reason, many companies are implementing long-term sustainability programs and reaping resulting benefits. For example, Coca-Cola has reduced the water intensity of their production process by 20% over the last decade.<sup>57</sup> Another example is Marks and Spencer who introduced 'Plan

A' to source responsibly, reduce waste and help communities, thereby saving the firm \$200mn annually.<sup>58</sup>

A recent study by PricewaterhouseCoopers claims that "sustainability is emerging as a market driver with the potential to grow profits and present opportunities for value creation — a dramatic evolution from its traditional focus on efficiency, cost, and supply chain risk".<sup>59</sup> In that respect, sustainable product innovation can have a substantial impact on a company's revenues. Revenues from "Green Products" at Philips, a diversified Dutch technology company, reached EUR 11.8bn representing a share of 51% of total revenues. Philips' "Green Products" offer a significant environmental improvement on one or more "Green Focal Areas": energy efficiency, packaging, hazardous substances, weight, recycling and disposal and lifetime reliability.<sup>60</sup> Another innovative company, LanzaTech, has come up with a microbe as a natural biocatalyst<sup>61</sup> that can capture CO<sub>2</sub> and turn it into ethanol for fuel.<sup>62</sup> The firm has a partnership with Virgin Atlantic, who believe that such innovation will assist the airline in meeting its pledge of a 30% carbon reduction per passenger kilometre by 2020.<sup>63</sup>

Moreover, research by the auditing company Deloitte argues that "sustainability is firmly on the agenda for leading companies and there is growing recognition that it is a primary driver for strategic product and business model innovation."<sup>64</sup> This can create a positive impact on financial performance.<sup>65</sup>

49 See, for example, Schneider (2011) who argues that poor environmental performance can threaten the company's long-run survival. See also Husted (2005) for a discussion of how corporate social responsibility could be seen as a real option to firms which can reduce the significant downside risks corporations are exposed to.

50 Kurucz, Colbert, and Wheeler (2009).

51 This risk reduction feature of ESG has also been documented by Lee and Faff (2009), who show that firms with superior sustainability scores have a substantially lower idiosyncratic risk. Similar findings are provided by Oikonomou, Brooks, and Pavelin (2012). The insurance value of CSR against risks has also been stressed by Godfrey (2005), Godfrey, Merrill, and Hansen (2009), and Koh, Qian, and Wang (2014).

52 See, for example, Bauer and Hann (2010). Additionally, Karpoff, Lott, and Wehrly (2005) show that the market punishes violations of environmental regulation. In particular, they conclude that on average, stock prices decrease by 1.69% in cases of alleged violation.

53 See, for example, Minor and Morgan (2011).

54 Porter and van der Linde (1995a: 122).

55 Porter and van der Linde (1995a: 125).

56 Porter and van der Linde (1995a).

57 Coca-Cola Company (2013).

58 Marks and Spencer Group Plc (2014).

59 PricewaterhouseCoopers (2010: 2).

60 Philips (2014).

61 LanzaTech (2014).

62 Wills (2014).

63 Virgin (2012).

64 Deloitte Global Services Limited (2012: 1).

65 Porter and Kramer (2006) and Eccles, Miller Perkins, and Serafeim (2012) stress this. Greening and Turban (2000) also point out that superior CSR practices can be a competitive advantage in that firms can more easily attract the best and most talented people for their workforce, which then potentially translates into higher productivity and efficiency, and in the end better operational performance. Also, Hart and Milstein (2003) argue that corporate sustainability is a crucial factor for the long-term competitiveness of corporations.

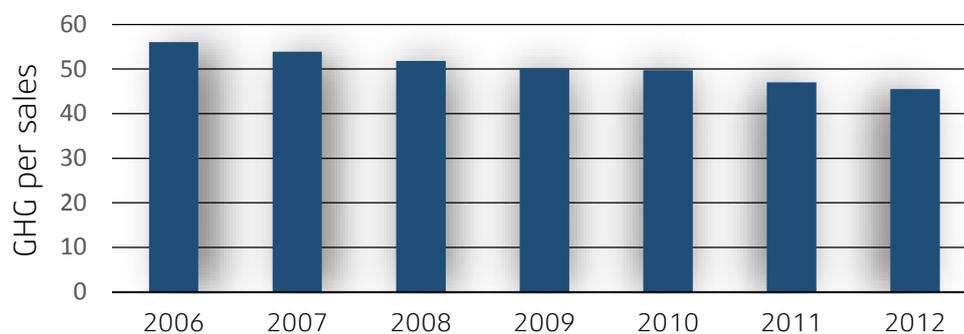
## CASE STUDY ON PERFORMANCE: WALMART

An example of a company implementing long-term sustainability measures to increase overall efficiency and operational performance is Walmart. Wanting to take the lead in a sector-wide evolution towards sustainability, Walmart set goals of becoming totally supplied by renewable energy, having zero waste and selling products that sustain people and the environment back in 2005.<sup>66</sup> Since then, commitments have been renewed and initiatives were widened. Such initiatives include: the Walmart Sustainability Expo first organized in 2014<sup>67</sup>, a supplier sustainability index<sup>68</sup> and the listing of commitments online, indicating if they have been completed or whether they are on track<sup>69</sup>.

Over the 2012 fiscal year, Walmart saved about 231 million dollars by means of efficient waste management and recycling; an estimated 150 million dollars were saved over 2013 through renewable energy projects and a zero waste program.

As an example of Walmart's efforts, greenhouse gas (GHG) emissions in terms of sales are shown in Figure 2.<sup>70</sup>

FIGURE 2: WALMART GHG EMISSIONS VERSUS SALES



■ GHG emissions per sales (metric tonnes CO<sub>2</sub> per 1 mio \$)

Walmart realizes that sustainability is also a means to an end in safeguarding low prices and satisfying consumers. Increasing operational efficiency<sup>71</sup> through sustainability programs allows Walmart to achieve a competitive advantage over its main competitors.<sup>72</sup> Walmart further emphasizes that there is a business case for corporate sustainability,<sup>73</sup> motivating others to follow in their footsteps.<sup>74</sup>

66 Louie (2012).

67 McCullough (2014).

68 Mayer (2013).

69 Walmart (2014).

70 Own calculations, based on data from Walmart (2014).

71 See for example Kahn and Kok (2014) who look into Walmart's environmental performance in California.

72 Clancy (2014).

73 Seligmann (2014).

74 McCullough (2014).

By incorporating ESG issues into a corporate sustainability framework, corporations will ultimately be able to realize cost savings through innovation, resource efficiency, and revenue enhancements via sustainable products, which *ceteris paribus* should lead to margin improvements.<sup>75</sup>

## 2.3 REPUTATION

Research points to the importance of corporate reputation as an input factor for persistent value maximization.<sup>76</sup> Human capital is one of the core resources that companies leverage in order to operate and deliver goods/services to customers.<sup>77</sup> Good reputation with respect to corporate working environments can also translate into superior financial performance and help gain a competitive advantage.<sup>78</sup> This has also been pointed out by Alex Edmans, Professor of Finance at the London Business School. In his study on the relationship between employee satisfaction and corporate financial performance, he argues that “a satisfying workplace can foster job embeddedness and ensure that talented employees stay with the firm”.<sup>79</sup> Furthermore, he claims that “a second channel through which job satisfaction can improve firm value is through worker motivation”.<sup>80</sup> An independent way to ascertain the reputation of a company in terms of workforce attraction can be found in external surveys such as Fortune’s Best Companies To Work For<sup>81</sup> and on more granular regional lists like Great Place To Work.<sup>82</sup>

Inferior ESG standards can pose a threat to a company’s reputation. For example, Barilla Pasta President Guido Barilla’s comment in 2013 that he’d never consider showing gay families in his advertisements resulted in a consumer boycott.<sup>83</sup> Barilla was heavily criticized in social media with over 140 thousand consumers signing a petition against buying Barilla’s products.<sup>84</sup> Another example is a recent report by The Guardian on slavery in Thailand’s shrimp industry which started a discussion on labour conditions in Thailand.<sup>85</sup> As a direct result of the issues raised, global supermarket chains reacted publicly to avoid business fallout, engaging with the local producers to improve labour working conditions.<sup>86</sup> Other widely reported examples include Foxconn<sup>87</sup> and the tragic textile factory collapse in Bangladesh in 2013.<sup>88</sup> Transparency on a company’s supply chain is not always complete and consumers, investors, and other stakeholders are often required to approximate the quality of a company’s supply chain. However, responsibility for such issues at the board level, transparent goals, and external auditors who monitor progress, are good indicators that a company is managing ESG risks. Furthermore active participation in multilateral sustainability initiatives can indicate the level of importance sustainability issues represent to a company.<sup>89</sup>

75 Eccles and Serafeim (2013), Porter and van der Linde (1995a, 1995b).

76 See, for example, Roberts and Dowling (2002).

77 Eccles and Serafeim (2014).

78 Edmans (2011, 2012).

79 Edmans (2012: 1-2).

80 Edmans (2012: 2).

81 The annual lists of the best companies to work for are published on Fortune’s website at: <http://fortune.com/best-companies>.

82 For more details consult the website of Great Place To Work: <http://www.greatplacetowork.com>.

83 Adams (2014).

84 Moveon.org Petitions (2014).

85 Hodal, Kelly, and Lawrence (2014) and Watts and Steger (2014).

86 Lawrence (2014).

87 Economist (2010).

88 Butler (2013).

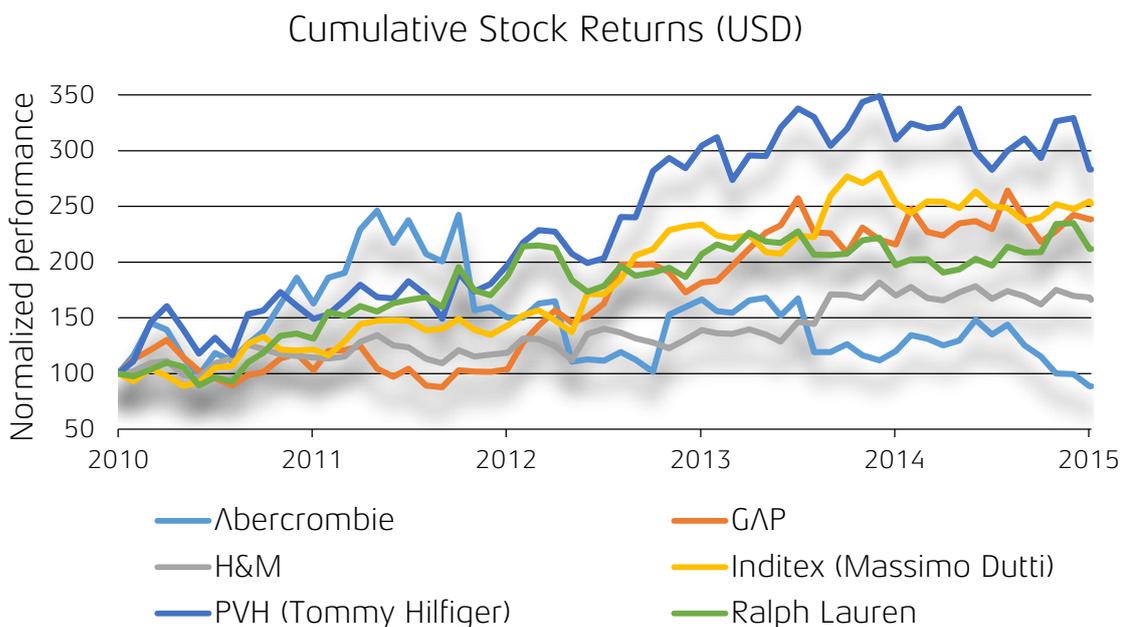
89 Exemplary initiatives are, for example, Roundtable on Sustainable Palm Oil (<http://www.rspo.org>), UN Global Compact’s The CEO Water Mandate (<http://ceowatermandate.org>), Sustainable Food Laboratory (<http://www.sustainablefoodlab.org>), Sustainable Apparel Coalition (<http://www.apparelcoalition.org>), Voluntary Principles on Security and Human Rights (<http://www.voluntaryprinciples.org>).

# CASE STUDY ON REPUTATION: ABERCROMBIE & FITCH

The impact of reputational risk can be illustrated by Abercrombie & Fitch. In a 2006 interview,<sup>90</sup> CEO Mike Jeffries owed the success of his company to the fact that they only target the “cool kids.” Such a deliberate exclusion of customers as part of the corporate strategy has been highly controversial over the last years. There was renewed attention to the “cool kids” article in May 2013.<sup>91</sup> The following months, tumbling sales were attributed to the controversy, also impacting stock performance.<sup>92</sup>

In 2009, Jeffries was named one of the “highest paid worst performers” of 2008, according to a CEO pay study from Corporate Library, which is now part of GMI Ratings/MSCI.<sup>93</sup> In 2013, he was listed by shareholder advisory firm Glass Lewis<sup>94</sup> as one of the ten most overpaid executives. Since 2008, sales have been declining for ten consecutive quarters.<sup>95</sup> Since 2009, Abercrombie underperformed its peer group by an average of 62%<sup>96</sup> on the stock market.

FIGURE 3: A&F’S SHARE PRICE COMPARED TO MAJORS COMPETITORS



Jeffries was removed from the Abercrombie leadership, first as a chairman<sup>97</sup> (January 2014) and later as the CEO (December 2014). This last announcement was followed by an 8% jump in the share price.<sup>98</sup>

90 Denizet-Lewis (2006).

91 Temin (2013).

92 Yousuf (2013).

93 Corporate Library (2009).

94 Lutz (2013).

95 Linshi (2014).

96 Own calculations, based on data from FactSet. As of February 2015.

97 Peterson (2014).

98 Rupp (2014).

# SUMMARY

We have investigated the strategic importance of sustainability topics such as environmental, social and governance (ESG) issues for corporations. The main conclusions of the reviewed research are:

- Sustainability topics can have a material effect on a company's risk profile, performance potential and reputation and hence have a financial impact on a firm's performance.
- Product and process innovation is critical to benefit financially from sustainability issues.
- Different industries have different sustainability issues that are material for financial performance.
- Medium to longer-term competitive advantages can be achieved through a broader orientation towards stakeholders (communities, suppliers, customers and employees) and shareholders.
- The management of sustainability issues needs to be deeply embedded into an organization's culture and values. Particular mechanisms mentioned by researchers include:
  - *Responsibility at the board level (ideally the CEO),*
  - *Clear sustainability goals that are measurable in quantity and time,*
  - *An incentive structure for employees to innovate and*
  - *External auditors which review progress.*
- Table 3 presents the most important academic papers on the business case of sustainability.

TABLE 3: OVERVIEW OF STUDIES ON THE BUSINESS CASE FOR SUSTAINABILITY  
(SUBJECTIVE SELECTION)

| AUTHOR(S)                | YEAR | JOURNAL                              | TITLE   |
|--------------------------|------|--------------------------------------|---|
| Davis                    | 1973 | Academy of Management Journal        | The Case for and Against Business Assumption of Social Responsibilities.                          |
| Eccles and Serafeim      | 2013 | Harvard Business Review              | The Performance Frontier.   |
| Hart                     | 1995 | Academy of Management Review         | A Natural-Resource-Based View of the Firm.  |
| Porter and Kramer        | 2002 | Harvard Business Review              | The Competitive Advantage of Corporate Philanthropy.  |
| Porter and Kramer        | 2006 | Harvard Business Review              | Strategy and Society: The Link Between Competitive Advantage and Corporate Social Responsibility. |
| Porter and van der Linde | 1995 | The Journal of Economic Perspectives | Toward a New Conception of the Environment-Competitiveness Relationship.                          |
| Porter and van der Linde | 1995 | Harvard Business Review              | Green and Competitive.  |

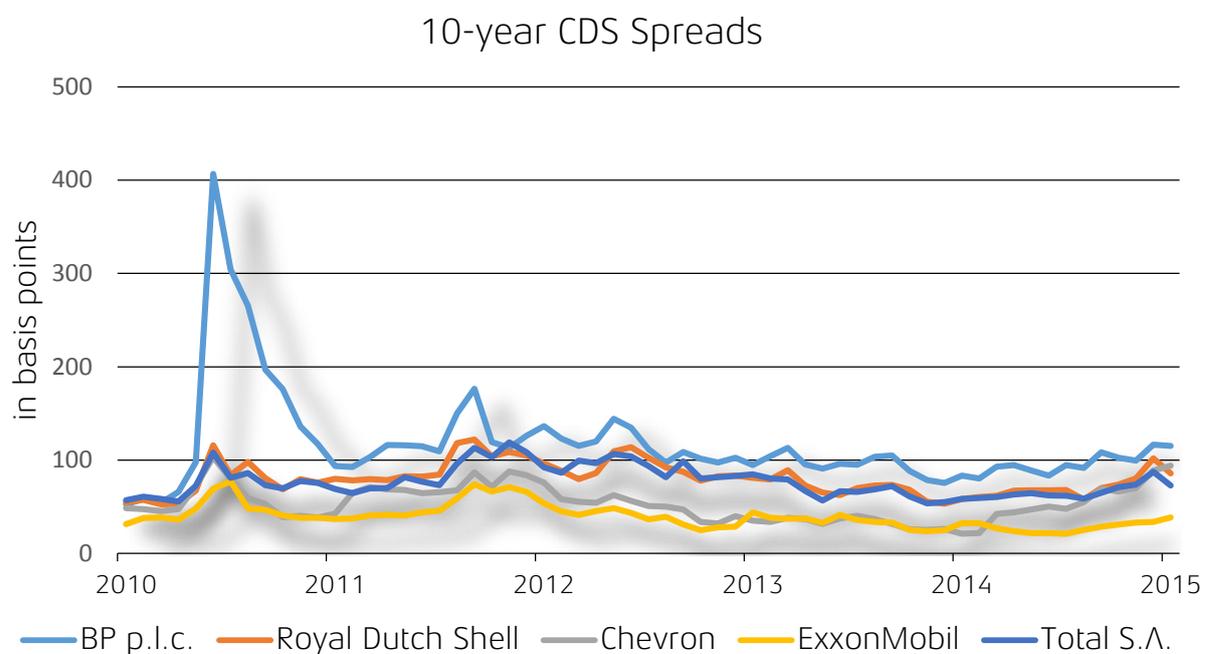
# 3. SUSTAINABILITY AND THE COST OF CAPITAL

This section reviews the effects of sustainability on the cost of capital, which is directly linked to a company's risk level and profitability. For our analysis we have split the cost of capital into two component parts, the cost of debt and the cost of equity. For each we analyse the relationship of environmental, social and governance issues separately. A summary at the end gives an overview of the reviewed empirical studies.

## 3.1 SUSTAINABILITY AND THE COST OF DEBT

Case studies and academic literature are clear that environmental externalities impose particular risks on corporations – reputational, financial, and litigation related – which can have direct implications for the cost of financing, especially for a firm's cost of debt.<sup>99</sup>

FIGURE 4: COMPARISON OF CREDIT SPREADS



Evidence suggests that by implementing reasonable environmental, social, and governance (ESG) policies to mitigate such risks, companies can benefit in terms of lower cost of debt (i.e. credit spreads).<sup>100</sup>

To illustrate how an environmental disaster can affect a corporation's cost of debt, BP's credit spread development since the Deepwater Horizon catastrophe in April 2010 is shown in Figure 4. After the incident, the 10-year credit spread of BP increased eightfold. 10-year credit spreads of a group of major oil companies were also affected by the disaster but less severely.

### 3.1.1 COST OF DEBT AND THE 'G' DIMENSIONS

Academic literature has specifically investigated the effects of corporate governance on cost of debt, and the conclusions are relatively clear: good corporate governance pays off in terms of reduced borrowing costs (i.e. credit spreads). It has been documented that certain governance measures have a significant impact on a firm's cost of debt, for example, the degree of institutional investor ownership,<sup>101</sup> the proportion of outside

directors on the board,<sup>102</sup> the disclosure quality,<sup>103</sup> and the existence of anti-takeover measures.<sup>104</sup> The research almost unanimously demonstrates that good corporate governance with respect to the aforementioned measures significantly decreases a firm's cost of debt (i.e. credit spreads).<sup>105</sup>

### 3.1.2 COST OF DEBT AND THE 'E' AND 'S' DIMENSIONS

Research investigating the effects of sound sustainability policies on a firm's cost of debt has shown that firms with superior environmental management systems have significantly lower credit spreads, implying that these companies exhibit a lower cost of debt (after controlling for firm and industry characteristics).<sup>106</sup> According to recent studies, the converse relationship also holds. Firms with significant environmental concerns have to pay significantly higher credit spreads on their loans.<sup>107</sup> For instance within the pulp and paper industry firms that release more toxic chemicals have significantly higher bond yields than firms that release fewer toxic chemicals.<sup>108</sup>

“IN THE PRESENCE OF SHAREHOLDER CONTROL, THE DIFFERENCE IN BOND YIELDS DUE TO DIFFERENCES IN TAKEOVER VULNERABILITY CAN BE AS HIGH AS 66 BASIS POINTS.”

*Cremers et al., 2007*

100 In a wider context of societal value creation, Godfrey, Merrill, and Hansen (2009) find that CSR actually offers corporations an 'insurance' benefit.

101 For evidence of institutional ownership as a governance device and its negative effect on bond yields (or its positive effect on bond ratings), see, for example, Bhojraj and Sengupta (2003), Cremers, Nair, and Wei (2007). Arguments against this relationship have been made by Ashbaugh-Skaife, Collins, and LaFond (2006).

102 Bhojraj and Sengupta (2003).

103 Schauten and van Dijk (2011) investigate the effect of corporate governance on credit spreads. They analyse 542 bond issues at large European firms and study the effect of four different corporate governance measures: shareholder rights, anti-takeover devices in place, board structure, and disclosure quality.

104 For evidence of the negative relationship between anti-takeover measures and corporate bond yields, see Klock, Mansi and Maxwell (2005). Similar evidence is provided by Ashbaugh-Skaife, Collins, and LaFond (2006), who document a positive relationship between the number of anti-takeover measures and bond ratings. The importance of anti-takeover measures for bondholders is also stressed by Cremers, Nair, and Wei (2007). Chava, Livdan, and Purnaanandam (2009).

105 Contrary evidence is provided by Menz (2010), and Sharfman and Fernando (2008). Mixed findings are provided by Bradley, Chen, Dallas, and Snyderwine (2008). They provide evidence that their board index alone significantly lowers bond spreads and improves credit ratings. They follow the argument that more stable boards bring more security to bondholders, thereby lowering spreads.

106 Bauer and Hann (2010).

107 Chava (2014), and Goss and Roberts (2011). Goss and Roberts (2011) find that firms facing CSR concerns pay between 7 and 18 basis points more than firms without CSR concerns.

108 Schneider (2011).

Studies also show that credit ratings are positively affected by superior sustainability performance. Better sustainability policies lead to better credit ratings.<sup>109</sup> In particular, it has been demonstrated that employee well-being leads to better credit ratings<sup>110</sup> and in turn lower credit spreads.<sup>111</sup>

“FIRMS WITH SOCIAL RESPONSIBILITY CONCERNS PAY BETWEEN 7 AND 18 BASIS POINTS MORE THAN FIRMS THAT ARE MORE RESPONSIBLE.”

*Goss and Roberts, 2011*

## 3.2 SUSTAINABILITY AND THE COST OF EQUITY

### 3.2.1 COST OF EQUITY AND THE ‘G’ DIMENSION

Studies show that good corporate governance influences the cost of equity by reducing the firm’s cost of equity.<sup>112</sup> This is not surprising, as good corporate governance translates into lower risk for corporations, reduces information asymmetries through better disclosure,<sup>113</sup> and limits the likelihood of managerial entrenchment.<sup>114</sup> Conversely, research also shows that firms with higher managerial entrenchment due to more anti-takeover devices in place, exhibit significantly higher cost of equity.<sup>115</sup> International evidence on Brazil and emerging market countries also supports the view that superior corporate governance reduces a firm’s cost of equity significantly.<sup>116</sup>

‘COMPANIES WITH BETTER GOVERNANCE SCORES EXHIBIT A 136 BASIS POINTS LOWER COST OF EQUITY’.

*Ashbaugh-Skaife, et al., 2004*

109 Attig, El Ghoul, Guedhami, Suh (2013) study firms from 1991-2010 and use MSCI ESG STATS as their source for CSR information. Additional evidence is provided by Jiraporn, Jiraporn, Boesprasert, and Chang (2014): after correcting for endogeneity, the authors conclude that firms with a better CSR quality tend to have better credit ratings, pointing towards a risk-mitigating effect of CSR.

110 See Verwijmeren and Derwall (2010: 962): ‘Firms with better employee relations have better credit ratings, and thus a lower probability of bankruptcy.’

111 See, for example, Bauer, Derwall, and Hann (2009).

112 See, for example, Ashbaugh-Skaife, Collins, and LaFond (2004) who show that well governed firms exhibit a cost of equity financing 136 basis points lower than their poorly governed counterparts. Even after adjusting for risk, the difference between well-governed and poorly-governed firms is still 88 basis points. Furthermore, Derwall and Verwijmeren (2007) also present evidence that better corporate governance on average led to lower cost of equity capital in the period 2003-2005.

113 See, for example, Barth, Konchitchki, and Landsman (2013). They show that greater corporate transparency with respect to earnings significantly lower the firm’s cost of capital. Their study sample is comprised of US firms over 1974-2000.

114 Derwall and Verwijmeren (2007).

115 See, for example, Chen, Chen, and Wei (2011). They show that the governance index of Gompers et al. (2003) is significantly and positively related with a firm’s cost of equity. This implies that relatively better governed firms can benefit from lower cost of equity, relative to poorly-governed firms.

116 See, for example, Lima and Sanvicente (2013) for evidence from Brazil. Chen, Chen, and Wei (2009) provide evidence on the relation between corporate governance and cost of equity for a sample of firms from emerging markets. They also show that good corporate governance leads to lower cost of equity capital.

### 3.2.2 COST OF EQUITY AND THE 'E' AND 'S' DIMENSIONS

Several studies also demonstrate that a firm's environmental management<sup>117</sup> and environmental risk management<sup>118</sup> have an impact on the cost of equity capital. Firms with a better score for the 'E' dimension of ESG have a significantly lower cost of equity.<sup>119</sup> Good environmental sustainability also reduces a firm's beta,<sup>120</sup> and voluntary disclosure of environmental practices further helps to reduce its cost of equity.<sup>121</sup>

Regarding the 'S' dimension of ESG, there is evidence that good employee relations and product safety lead to a lower cost of equity.<sup>122</sup> Beyond this, research on sustainability disclosure reveals that better reporting leads to a lower cost of equity by reducing firm-specific uncertainties, especially in environmentally sensitive firms.<sup>123</sup> Another study documents that a firm investing continuously in good sustainability practices has the effect of lowering a firm's cost of capital by 5.61 basis points compared to firms that do not.<sup>124</sup>

"SUPERIOR CSR PERFORMERS ENJOY A c. 1.8% REDUCTION IN THE COST OF EQUITY"

*Dhaliwal et al., 2011*

117 See, for example, El Ghoul, Guedhami, Kwok, and Mishra (2011).

118 Evidence of the effect of environmental risk management practices on a firm's cost of equity financing is provided by Sharfman and Fernando (2008), who document that a firm's overall weighted average cost of capital is significantly lower when it has proper environmental risk management measures in place.

119 See, for example, El Ghoul, Guedhami, Kim, and Park (2014). The authors show for a sample of 7,122 firm-years between 2002 and 2011 that firms with better corporate environmental responsibility have significantly lower cost of equity.

120 Theoretical and empirical evidence of CSR and a corporation's beta is provided by Albuquerque, Durnev, and Koskinen (2013), who document that their self-constructed composite CSR index is significantly and negatively related to a firm's beta, which implies that it also reduces its cost of equity financing, all other things being equal.

121 Dhaliwal, Li, Tsang, and Yang (2011) report a reduction of 1.8% in the cost of equity capital for first-time CSR disclosing firms with excellent CSR quality. Dhaliwal, Radhakrishnan, Tsang, and Yang (2012: 752) show that more CSR disclosure leads to lower analyst forecast error which indicates that CSR disclosure 'complements financial disclosure by mitigating the negative effect of financial opacity on forecast accuracy'.

122 See, for example, El Ghoul, Guedhami, Kwok, and Mishra (2011) who show that alongside environmental risk management, employee relations and product safety also influence the cost of equity financing.

123 Reverte (2012) finds a difference in the cost of equity of up to 88 basis points between those firms with good disclosure practices and those with bad disclosure practices.

124 Cajias, Fuerst, and Bienert (2012) evaluate the effect of aggregate CSR scores on the cost of equity capital and find that between 2003 and 2010 the effect of both CSR strength and weakness was negative overall, implying lower costs of equity capital financing.

# SUMMARY

This section has investigated the relationship between corporate sustainability and corporate cost of capital. The results can be summarized as follows:

- Firms with good sustainability standards enjoy significantly lower cost of capital.
- Superior sustainability standards improve corporations' access to capital.<sup>125</sup>
- Differentiating between a firm's cost of equity and cost of debt, we conclude the following:
  - Cost of debt:
    - *Good corporate governance structures such as small and efficient boards and good disclosure policies lead to lower borrowing costs.*
    - *Good environmental management practices, such as the installation of pollution abatement measures and the avoidance of toxic releases, lowers the cost of debt.*
    - *Employee well-being reduces a firm's borrowing costs.*
  - Cost of equity:
    - *The existence of anti-takeover measures increases a firm's cost of equity and vice versa.*
    - *Environmental risk management practices and disclosure on environmental policies lower a firm's cost of equity.*
    - *Good employee relations and product safety reduces the cost of equity of firms.*

Table 4 summarizes all 29 empirical studies on sustainability and its effects on cost of capital that have been reviewed for this report. In total, 26 of the 29 studies (90%) find a relationship which points to a reducing effect of superior sustainability practices on the cost of capital.

125 See, for example, Cheng, Ioannou, and Serafeim (2014).

**TABLE 4: EMPIRICAL STUDIES INVESTIGATING THE RELATIONSHIP BETWEEN SUSTAINABILITY AND CORPORATE COST OF CAPITAL**

| STUDY AUTHORS                                     | TIME PERIOD | ESG ISSUE   | ESG FACTOR | IMPACT (*) |
|---|-------------|---|------------|------------|
| Albuquerque, Durnev, and Koskinen (2013)          | 2003-2012   | Composite CSR index   | ESG        | Lower      |
| Ashbaugh-Skaife, Collins, and LaFond (2004)       | 1996-2002   | Several individual corporate governance attributes and a composite governance index | G          | Lower      |
| Ashbaugh-Skaife, Collins, and LaFond (2006)       | 2003        | Governance index and individual governance attributes                               | G          | Lower      |
| Attig, El Ghouli, Guedhami, and Suh (2013)        | 1991-2010   | Composite CSR index (excl. governance)  | ES         | Lower      |
| Barth, Konchitchki, and Landsman (2013)           | 1974-2000   | Earnings transparency   | G          | Lower      |
| Bauer, Derwall, and Hann (2009)                   | 1995-2006   | Employee relations  | S          | Lower      |
| Bauer and Hann (2010)                             | 1995-2006   | Environmental performance   | E          | Lower      |
| Bhojraj and Sengupta (2003)                       | 1991-1996   | Governance attributes (institutional ownership, outside directors, block holders).  | G          | Lower      |
| Bradley, Chen, Dallas, and Snyderwine (2008)      | 2001-2007   | Several governance indices  | G          | Lower (1)  |
| Cajias, Fuerst, and Bienert (2012)                | 2003-2010   | CSE strengths and concerns  | ESG        | Mixed      |
| Chava (2014)                                      | 2000-2007   | Environmental performance (net concerns)  | E          | Lower (2)  |
| Chava, Livdan, and Purnaanandam (2009)            | 1990-2004   | Reversed governance index   | G          | Lower (3)  |
| Chen, Chen, and Wei (2011)                        | 1990-2004   | Governance index  | G          | Lower      |
| Chen, Chen, and Wei (2009)                        | 2001-2002   | Composite governance index  | G          | Lower      |
| Cremers, Nair, and Wei (2007)                     | 1990-1997   | Anti-takeover index and ownership structure   | G          | Lower      |
| Derwall and Verwijmeren (2007)                    | 2003-2005   | Corporate governance quality  | G          | Lower      |
| Dhaliwal, Li, Tsang, and Yang (2011)              | 1993-2007   | CSR disclosing quality  | ESG        | Lower (4)  |
| El Ghouli, Guedhami, Kim, and Park (2014)         | 2002-2011   | Corporate environmental responsibility  | E          | Lower      |
| El Ghouli, Guedhami, Kwok, and Mishra (2011)      | 1992-2007   | Composite CSR index (excl. governance)  | ES         | Lower (5)  |
| Goss and Roberts (2011)                           | 1991-2006   | CSR concerns and strengths  | ESG        | Lower (6)  |
| Jiraporn, Jiraporn, Boesprasert, and Chang (2014) | 1995-2007   | Composite CSR score   | ESG        | Lower      |
| Klock, Mansi, and Maxwell (2005)                  | 1990-2000   | Governance index  | G          | Lower      |
| Lima and Sanvicente (2013)                        | 1998-2008   | Composite governance index  | G          | Lower      |
| Menz (2010)                                       | 2004-2007   | Binary indicator variables for social responsibility                                | ESG        | None (7)   |
| Reverte (2012)                                    | 2003-2008   | CSR reporting quality   | ESG        | Lower (8)  |
| Schauten and van Dijk (2011)                      | 2001-2009   | Disclosure quality  | G          | Lower (9)  |
| Schneider (2011)                                  | 1994-2004   | Environmental performance: pounds of toxic emissions                                | E          | Lower (10) |
| Sharfman and Fernando (2008)                      | 2002        | Environmental risk management   | E          | Mixed (11) |
| Verwijmeren and Derwall (2010)                    | 2001-2005   | Employee well-being   | S          | Lower      |

(\*) In the last column of the table, we state the effect of better ESG on the cost of capital of firms. 'Lower' indicates that better ESG lowers cost of capital. 'Mixed' indicates that better ESG has a mixed effect on the cost of capital. 'None' indicates that better ESG has no effect on the cost of capital.

#### NOTES TO TABLE 4:

- (1) More-stable boards indicate lower spreads. Mixed findings regarding several other governance attributes. We count it as 'lowering cost of capital' because more stable boards decrease cost of debt financing.
- (2) We count this as lowering costs of capital because bad environmental behaviour is penalized by lenders (i.e., they charge more). However, through exhibiting a better environmental quality, firms can get relatively better lending conditions.
- (3) The effect is positive when firms are exposed to takeovers. Conversely, firms which are protected from takeovers pay lower spreads (as in Klock, Mansi, and Maxwell (2005), who use the conventional G-index). Hence, Chava et al. (2009) support the idea that low takeover vulnerability decreases the cost of debt financing. We therefore count this study as documenting a reducing effect of proper ESG quality on the cost of capital.
- (4) Especially for firms with sound sustainability policies and practices.
- (5) Quality on employee relations, environment, and product strategies were particularly highlighted.
- (6) Sustainability concerns increase loan spreads. Better environmental performance is therefore valued by lenders. They enjoy relatively better lending conditions. Therefore, counted as better ESG quality 'lowers' cost of capital.
- (7) Only one model shows significant results.
- (8) Especially for industries in environmentally sensitive sectors.
- (9) The negative correlation between disclosure quality and credit spreads persists only if shareholder rights are low.
- (10) Hence, good environmental performance reduces yield spread.
- (11) The authors find that good environmental risk management increases the cost of debt and decreases the cost of equity. Hence, we count this study as delivering 'mixed' results.

# 4. SUSTAINABILITY AND OPERATIONAL PERFORMANCE

The previous section investigated the effects of sustainability on the cost of capital for corporations. Overall, the conclusion was that sustainability reduces a firm's cost of capital. The report now turns to the question whether sustainability improves the operational performance of corporations.

There is debate around the link between sustainability and a company's operating performance. Many commentators find a positive relationship between aggregated sustainability scores and financial performance.<sup>126</sup> Some suggest that there is no correlation,<sup>127</sup> and few argue that there is a negative correlation, between sustainability and operational performance.<sup>128</sup> Yet others propose that companies experience a benefit from merely symbolic sustainability actions through increased firm value.<sup>129</sup>

This section starts with an analysis of available meta-studies and then investigates the research on the effects of environmental, social, and governance (ESG) issues on operational performance separately. A table summarizing the reviewed empirical studies can be found at the end of this section.

## 4.1 META-STUDIES ON SUSTAINABILITY

There are several meta-studies and review papers which attempt to provide a composite picture of the relationship between sustainability and corporate financial performance. The general conclusion is that there is a positive correlation between sustainability and operational performance.

126 See, for example, Servaes and Tamayo (2013), Jo and Harjoto (2011) and Cochran and Wood (1984). Servaes and Tamayo (2013) conclude that CSR has a positive effect on financial performance, especially when the advertising intensity of a corporation is high. Firms benefit most from CSR if they also proactively advertise. This calls for a better CSR disclosure policy through which companies communicate their CSR efforts to the market and gain financially by, for example, attracting more customers. Jo and Harjoto (2011) show that CSR leads to higher Tobin's Q, but this relationship is significantly influenced by corporate governance quality. Cochran and Wood (1984) on the other hand conclude that superior CSR policy and practice lead to better operational performance of firms. Also, Pava and Krausz (1996) conclude that there is at least a slightly positive relation between CSR and financial performance using both market-based and accounting-based performance measures. Further evidence is provided by Koh, Qian, and Wang (2014). Wu and Shen (2013) find that CSR is positively related to financial performance; measured by accounting-based measures for 162 banks from 22 different countries. Albuquerque, Durnev, and Koskinen (2013) find a significant and positive relationship between their CSR score and Tobin's Q. Cai, Jo, and Pan (2012) show that the value of firms in controversial businesses is significantly and positively affected by CSR. In their classic study, Waddock and Graves (1997) show that corporate social performance is generally positively related to operational performance, with varying degrees of significance.

127 See, for example, McWilliams and Siegel (2000), Garcia-Castro, Arino, and Canela (2010), and Cornett, Erhemjamts, and Tehrani (2013). Garcia-Castro et al. (2010) claim that the existing literature on CSR and performance suffers from the fact that endogeneity is not properly dealt with. By adopting an instrumental variables approach, they are able to show that the relationship between an aggregate CSR index and financial performance becomes insignificant. They use ROE, ROA, Tobin's Q, and MVA as financial-performance measures.

128 See, for example, Baron, Harjoto, and Jo (2011).

129 Hawn and Ioannou (2013). Their results indicate that symbolic CSR changes significantly increase Tobin's Q, while substantive CSR action does not have any significant effect on firm performance. The authors suggest that 'firms with an established base of CSR resources might undertake symbolic actions largely because it is relatively less costly for them to do so, and also because such firms enjoy sufficient credibility with social actors to get away with it', p. 23.

In Table 5, we provide an overview of the most important meta-studies on sustainability and its relationship to corporate performance, and of studies which include a detailed overview of the literature on the topic.

**TABLE 5: OVERVIEW OF META-STUDIES AND REVIEW PAPERS IN THE FIELD OF SUSTAINABILITY AND ESG**

| AUTHORS                              | YEAR | JOURNAL   | TITLE  |
|--------------------------------------|------|---|--|
| Fulton, Kahn, and Sharples           | 2012 | Industry report; published by Deutsche Bank Group | Sustainable Investing: Establishing Long-Term Value and Performance  |
| Hoepner and McMillan                 | 2009 | Working Paper                                     | Research on 'Responsible Investment': An Influential Literature Analysis Comprising a Rating, Characterisation, Categorisation and Investigation |
| Margolis and Walsh                   | 2003 | Administrative Science Quarterly                  | Misery Loves Companies: Rethinking Social Initiatives by Business  |
| Margolis, Elfenbein, and Walsh       | 2007 | Working paper                                     | Does it Pay to be Good? A Meta-Analysis and Redirection of Research on the Relationship Between Corporate Social and Financial Performance       |
| McWilliams, Siegel, and Wright       | 2006 | Journal of Management Studies                     | Corporate Social Responsibility: Strategic Implications  |
| Orlitzky, Schmidt, and Rynes         | 2003 | Organisation Studies                              | Corporate Social and Financial Performance: A Meta-analysis  |
| Pava and Krausz                      | 1996 | Journal of Business Ethics                        | The Association Between Corporate Social-Responsibility and Financial Performance: The Paradox of Social Cost                                    |
| Salzmann, Ionescu-Somers, and Steger | 2005 | European Management Journal                       | The Business Case for Corporate Sustainability: Literature Review and Research Options   |
| van Beurden and Gössling             | 2008 | Journal of Business Ethics                        | The Worth of Value- A Literature Review on the Relation Between Corporate Social and Financial Performance                                       |

## 4.2 OPERATIONAL PERFORMANCE AND THE 'G' DIMENSION

The literature on corporate governance and its relationship to firm performance is broad, often focusing more on stock market outcomes than firm profitability from an accounting perspective.<sup>130</sup> Nevertheless, there is research

showing that poorly governed firms do have lower operating performance levels.<sup>131</sup> Similarly, there are also papers showing that good corporate governance leads to better firm valuations.<sup>132</sup> A similar relationship has been demonstrated for a sample of Swiss firms: good corporate governance is correlated with better firm valuations.<sup>133</sup> On a related note, some studies suggest that a smaller and transparent board structure increases firm value and that

130 We focus only on accounting-based studies in this section; the effects of corporate governance on stock price performance measures are discussed in the next section.

131 Core, Guay, and Rusticus (2006) show that firms with more anti-takeover devices in place (i.e., fewer shareholder rights as measured by the G-index of Gompers, Ishii, and Metrick (2003)) display lower returns on assets. Likewise, Cremers and Ferrell (2013) show that poorly-governed firms exhibit significantly lower industry-adjusted Tobin's Qs over the period 1978-2006. Giroud and Mueller (2011) also support these results by finding a significant negative relationship between the number of anti-takeover devices in place and firm valuation.

132 See, for example, Brown and Caylor (2006). They study the governance quality of 1,868 firms and relate it to their valuation statistics. Brown and Caylor show that their measure for corporate governance quality is positively and significantly related to firm value.

133 See, for example, Beiner, Drobetz, Schmid, and Zimmermann (2006).

firms with staggered or classified boards<sup>134</sup> suffer in terms of lower firm valuations.<sup>135</sup> There is also research showing that the governance environment of corporations (i.e. the governance legislation) significantly affects operational performance and firm valuation.<sup>136</sup>

Research has also shown that firm performance is directly affected by executive compensation practices.<sup>137</sup> If executive compensation schemes are properly designed (to motivate managers sufficiently not to incite excessive risk taking) the impact on firm performance is generally positive. Poorly-designed executive compensation schemes can tend to have the opposite effect, with higher executive pay resulting in lower firm performance.<sup>138</sup>

More indications to the positive effects of corporate governance on financial performance in a range of countries also exist, supporting the idea of a significant relationship between corporate governance quality and firm performance.<sup>139</sup>

## 4.3 OPERATIONAL PERFORMANCE AND THE 'E' DIMENSION

Empirical research on the relationship between environmental and financial performance points in a clear direction. Studies demonstrate that good corporate

environmental practices ultimately translate into a competitive advantage and thus better corporate performance.<sup>140</sup>

Proper corporate environmental policies result in better operational performance. In particular, higher corporate

environmental ratings,<sup>141</sup> the reduction of pollution levels,<sup>142</sup> and the implementation of waste prevention measures,<sup>143</sup> all have a positive effect on corporate performance. Likewise, the adoption of proper environmental management systems increases firm performance.<sup>144</sup> Moreover, the implementation of global standards with respect to corporate environmental behaviour increases Tobin's Q for multinational enterprises.<sup>145</sup> Furthermore, it has recently been demonstrated that more eco-efficient

"COMPANIES WITH LARGE BOARDS APPEAR TO USE ASSETS LESS EFFICIENTLY AND EARN LOWER PROFITS."

*Yermack, 1996*

134 The terms 'classified', or 'staggered', boards refer to a particular board structure in which not all board members are up for re-election in the same year. Under this board structure, only a fraction of the board members are up for election at a particular annual general meeting. The remaining board members are up for election in the following year. This means that it becomes more difficult for shareholders to replace board members because it will take several years until a complete board will be changed. For more details see Bebchuk and Cohen (2005) and Bebchuk, Cohen, and Wang (2011).

135 Yermack (1996) shows that larger boards significantly reduce firm value. Evidence of the effect of staggered boards on firm value is provided by Bebchuk and Cohen (2005) as well as by Bebchuk, Cohen, and Wang (2011). The latter study investigates the causal effects of staggered boards by the means of the investigation of two court rulings related to staggered boards. Overall, they study 2,633 firms and conclude that staggered boards significantly reduce firm value.

136 Giroud and Mueller (2010) show that the introduction of business combination laws in the United States negatively affect the operating performance of firms in less competitive industries. This finding implies that firms operating in very concentrated industries suffer from these business combination laws in terms of lower return on assets (ROA).

137 For example, Mehran (1995).

138 Core, Holthausen, and Larcker (1999) document that poorly-governed firms pay their executives more than their well-governed counterparts, resulting in poorer firm performance.

139 Ammann, Oesch, and Schmid (2011) examine 6,663 firm-year observations from 22 developed capital markets over the period 2003-2007 and find consistently across all their models a significant relationship between their measures of corporate governance quality and Tobin's Q.

140 Porter and van der Linde (1995a, 1995b).

141 Russo and Fouts (1997).

142 For evidence of the effect of anti-pollution measures, see Fogler and Nutt (1975), Spicer (1978), Hart and Ahuja (1996), King and Lennox (2001), and Clarkson, Li, and Richardson (2004). Clarkson et al. (2004) show that investments in pollution abatement technologies pay off, especially for firms that pollute less.

143 King and Lennox (2002) document that proper waste prevention leads to better financial performance as measured by Tobin's Q and ROA.

144 Darnall, Henriques, and Sadorsky (2008).

145 Dowell, Hart, and Yeung (2000).

firms have significantly better operational performance as measured by return on assets (ROA).<sup>146</sup> It is further argued that corporate environmental performance is the driving force behind the positive relationship between stakeholder welfare and corporate financial performance (measured by Tobin's Q).<sup>147</sup>

With regard to poor environmental policies, both the release of toxic chemicals and the number of environmental lawsuits have been found to have a significant and negative correlation to performance.<sup>148</sup> Additionally, carbon emissions have been found to affect firm value in a significant and negative manner.<sup>149</sup>

Hence, evidence related to the 'E' dimension shows that a more environmentally friendly corporate policy translates into better operational performance.

## 4.4 OPERATIONAL PERFORMANCE AND THE 'S' DIMENSION

Studies validate a correlation between the 'S' (social) dimension of sustainability and operational performance. Good corporate relations with three major stakeholder

groups – employees, customers and the community – significantly improve operational performance.<sup>150</sup> It is also clear that proper stakeholder management practices translate into higher firm value.<sup>151</sup> More broadly, a diverse workforce has a positive effect on firm performance,<sup>152</sup> and the evidence points to the importance of employee relations for operational performance. The conclusion is evident: good workforce practices pay off financially in terms of better operating performance.<sup>153</sup>

For other, more specific social dimensions, there is also evidence of significant and positive effects on corporate performance. For example, banks that have better scores for 'Community Reinvestment Act Ratings' exhibit better financial performance.<sup>154</sup>

Given the evidence, it is clear that the social dimension of sustainability, if well managed, generally has a positive influence on corporate financial performance. What is missing in this strand of research is direct evidence of other types of corporate social behaviour, for example, corporations' worker-safety standards in emerging markets, respect for human rights, or socially responsible advertising campaigns.

'A 10% REDUCTION IN EMISSIONS OF TOXIC CHEMICALS RESULTS IN A \$34 MILLION INCREASE IN MARKET VALUE'

*Konar and Cohen, 2001*

146 Guenster, Derwall, Bauer, and Koedijk (2011).

147 Jiao (2010).

148 Konar and Cohen (2001).

149 See, for example, Matsumura, Prakash, and Vera-Munoz (2011).

150 Preston and O'Bannon (1997).

151 See, for example, Benson and Davidson (2010), Hillman and Keim (2001), and Borgers, Derwall, Koedijk, and ter Horst (2013). Borgers et al. (2013) find a significant positive relation between a stakeholder index and subsequent operational performance of corporations measured by operating income scaled by assets and net income scaled by total assets.

152 Richard, Murthi, and Ismail (2007) investigate the effect of racial diversity on productivity and firm performance and find a positive relationship between the level of racial diversity and performance.

153 See, for example, Huselid (1995), Smithey Fulmer, Gerhart, and Scott (2003), and Faleye and Trahan (2010). Huselid (1995) provides evidence that good workforce practices translate into better operating performance. Similar findings are shown by Smithley et al. (2003), and Faleye and Trahan (2010).

154 Simpson and Kohers (2002).

# SUMMARY

In this section, we have analysed the academic literature on the relationship between sustainability and operational performance and conclude the following:

- Meta-studies generally show a positive correlation between sustainability and operational performance.
- Research on the impact of ESG issues on operational performance shows a positive relationship:
  - *With regard to governance, issues such as board structure, executive compensation, anti-takeover mechanisms, and incentives are viewed as most important.*
  - *Environmental topics such as corporate environmental management practices, pollution abatement and resource efficiency are mentioned as the most relevant to operational performance.*
  - *Social factors such as employee relationships and good workforce practices have a large impact on operational performance.*

Table 6 summarizes all reviewed empirical studies on the topic of sustainability in relation to operational performance.

In total we reviewed 51 studies, of which 45 (88%) show a positive correlation between sustainability and operational performance.

**TABLE 6: EMPIRICAL STUDIES ON THE RELATIONSHIP BETWEEN ESG AND CORPORATE OPERATIONAL PERFORMANCE.**

| STUDY AUTHORS                                   | TIME PERIOD | ESG ISSUE   | ESG FACTOR | IMPACT (*)         |
|---|-------------|---|------------|--------------------|
| Albuquerque, Durnev, and Koskinen (2013)        | 2003-2012   | Composite CSR index   | ESG        | Positive           |
| Ammann, Oesch, and Schmidt (2011)               | 2003-2007   | Compiled governance indices                                     | G          | Positive (1)       |
| Baron, Harjoto, and Jo (2011)                   | 1996-2004   | Aggregate CSR strengths index and CSR concerns index            | ESG        | Mixed findings (2) |
| Bebchuk and Cohen (2005)                        | 1995-2002   | Classified boards (Board structure)                             | G          | Positive (3)       |
| Bebchuk, Cohen, and Wang (2011)                 | 2010        | Classified boards   | G          | Positive           |
| Beiner, Drobetz, Schmid, and Zimmerman (2006)   | 2003        | Composite and individual governance indicators                  | G          | Positive           |
| Benson and Davidson (2010)                      | 1991-2002   | Stakeholder management practices and social issue participation | S          | Positive           |
| Borgers, Derwall, Koedijk, and ter Horst (2013) | 1992-2009   | Stakeholder relations index                                     | S          | Positive           |
| Brown and Caylor (2006)                         | 2003        | Composite governance score                                      | G          | Positive           |
| Busch and Hoffmann (2011)                       | 2007        | Carbon intensity  | E          | Mixed              |
| Cai, Jo, and Pan (2012)                         | 1995-2009   | Aggregate CSR index   | ESG        | Positive (4)       |
| Clarkson, Li, and Richardson (2004)             | 1989-2000   | Environmental capital expenditures                              | E          | Positive (5)       |
| Cochran and Wood (1984)                         | 1970-1979   | CSR reputation index  | ESG        | Positive           |
| Core, Guay, and Rusticus (2006)                 | 1990-1999   | Governance index/shareholder rights                             | G          | Positive (6)       |
| Core, Holthausen, and Larcker (1999)            | 1982-1984   | Excess compensation   | G          | Positive (7)       |
| Cornett, Erhemjamts, and Tehranian (2013)       | 2003-2011   | Overall ESG index   | ESG        | No effect (8)      |
| Cremers and Ferrell (2013)                      | 1978-2006   | Governance index/shareholder rights                             | G          | Positive (9)       |
| Darnall, Henriques, and Sadosky (2008)          | 2003        | Adoption of environmental management practices                  | E          | Positive           |
| Dowell, Hart, and Yeung (2000)                  | 1994-1997   | Adoption of global environmental standards                      | E          | Positive           |
| Faleye and Trahan (2011)                        | 1998-2005   | Good workforce practices  | S          | Positive           |
| Ferrell, Liang, and Renneboog (2014)            | 1999-2011   | Aggregate CSR and sub-topics                                    | ESG        | Positive           |
| Garcia-Castro, Arino, and Canela (2010)         | 1991-2005   | Aggregate stakeholder relations measure                         | ESG        | No effect          |
| Giroud and Mueller (2010)                       | 1976-1995   | Industry concentration  | G          | Positive (10)      |
| Giroud and Mueller (2011)                       | 1990-2006   | Governance index  | G          | Positive (11)      |
| Guenster, Derwall, Bauer, and Koedijk (2011)    | 1997-2004   | Eco-efficiency levels   | E          | Positive           |
| Hart and Ahuja (1996)                           | 1989-1992   | Reduction in pollution  | E          | Positive (12)      |
| Hawn and Ioannou (2013)                         | 2002-2008   | Symbolic CSR actions  | ESG        | Positive           |
| Hillman and Keim (2001)                         | 1994-1996   | Stakeholder relations and social issues participation           | S          | Positive (13)      |
| Huselid (1995)                                  | -           | Good workforce practices  | S          | Positive           |

*(continued)*

TABLE 6: CONTINUED

| STUDY AUTHORS                                | TIME PERIOD | ESG ISSUE   | ESG FACTOR | IMPACT (*)    |
|--|-------------|---|------------|---------------|
| Jayachandran, Kalaignanam, and Eilert (2013) | -           | Corporate environmental performance, product social performance | ES         | Mixed (14)    |
| Jiao (2010)                                  | 1992-2003   | Stakeholder welfare score                                       | S          | Positive      |
| Jo and Harjoto (2011)                        | 1993-2004   | Aggregate CSR index and governance index                        | ESG        | Positive (15) |
| King and Lennox (2001)                       | 1987-1996   | Total emissions   | E          | Positive (16) |
| King and Lennox (2002)                       | 1991-1996   | Installation of waste prevention measures                       | E          | Positive      |
| Koh, Qian, and Wang (2014)                   | 1991-2007   | Aggregate CSR score   | ESG        | Positive      |
| Konar and Cohen (2001)                       | 1989        | Release of toxic chemicals                                      | E          | Positive (17) |
| Liang and Renneboog (2014)                   | 1999-2011   | Various CSR ratings   | ESG        | Positive      |
| Matsumura, Prakash, and Vera-Munoz (2011)    | 2006-2008   | Total level of carbon emissions                                 | E          | Positive (18) |
| McWilliams and Siegel (2000)                 | 1991-1996   | Socially responsible indicator variable                         | ESG        | No Effect     |
| Mehran (1995)                                | 1979-1980   | Total executive compensation and share of equity based salary   | G          | Positive      |
| Pava and Krausz (1996)                       | 1985-1991   | Aggregate CSR score   | ESG        | Positive      |
| Preston and O'Bannon (1997)                  | 1982-1992   | Employee, customer, and community relations                     | S          | Positive (19) |
| Richard, Murthi, and Ismail (2007)           | 1997-2002   | Diversity   | S          | Positive      |
| Russo and Fouts (1997)                       | 1991-1992   | Corporate environmental performance                             | E          | Positive (20) |
| Servaes and Tamayo (2013)                    | 1991-2005   | Aggregate CSR index   | ESG        | Positive (21) |
| Simpson and Kohers (2002)                    | 1993-1994   | Community Relations   | S          | Positive      |
| Smithey Fulmer, Gerhart, and Scott (2003)    | 1998        | Employee wellbeing  | S          | Positive (22) |
| Spicer (1978)                                | 1970-1972   | Pollution control mechanisms                                    | E          | Positive      |
| Waddock and Graves (1997)                    | 1989-1991   | Weighted average CSR index                                      | ESG        | Positive      |
| Wu and Shen (2013)                           | 2003-2009   | Aggregate CSR index   | ESG        | Positive      |
| Yermack (1996)                               | 1984-1991   | Reductions in board size  | G          | Positive      |

(\*) In the last column of the table, we state the effect of better ESG on operational performance. 'Positive' indicates that better ESG has a positive effect on operational performance. 'Mixed' indicates that better ESG has a mixed effect on operational performance. 'Negative' indicates that better ESG has negative effect on operational performance.

#### NOTES TO TABLE 6:

- (1) Evidence from numerous countries. Tobin's Q; CSR challenges show a significantly negative correlation to Tobin's Q.
- (2) CSR strengths are not significantly correlated to

- (3) Counts as positive, as better-governed firms without classified boards have a relatively better performance.
- (4) Positive but insignificant for sin industries only.
- (5) Just for firms that are not major polluters.
- (6) This is counted as positive, because weak shareholder rights (a high G-index) lead to poor operating performance. Hence, improvements in shareholder rights can trigger better performance. This reasoning applies to all studies which investigate the effects of the governance index from Gompers, Ishii, and Metrick (2003) on performance.
- (7) Counts as positive because less excessive pay (i.e. better governance) implies relatively better performance.
- (8) Banking industry study.
- (9) Counts as positive, same argument as for Core, Guay, and Rusticus (2006).
- (10) Counts as positive, because study shows that well governed (in terms of industry competitiveness) firms perform relatively better.
- (11) Counts as positive.
- (12) Generally positive, even more positive effect for firms that pollute.
- (13) Social issue participation shows a negative correlation, but because these are controversial business indicators, the effect is positive overall.
- (14) Product social performance has positive effect on Tobin's Q, environmental performance has no effect, and environmental concerns have a negative effect.
- (15) G-index (by Gompers et al., (2003)) is negatively related to Tobin's Q, implying that improvements in the G-index will lead to relatively better valuations.
- (16) That is, less pollution is value enhancing. Therefore this study counts as positive.
- (17) Firms that release fewer toxic chemicals benefit by having better performance. Therefore counted as a 'positive effect'.
- (18) We count this study as 'positive' because a reduction in the level of carbon emissions would result in a relatively better performance.
- (19) A correlation is found here, but no causal effect.
- (20) This result holds especially for high growth industries.
- (21) Only when advertising intensity is high.
- (22) A correlation is found here, but no causal effect.

# 5. SUSTAINABILITY AND STOCK PRICES

The previous two sections investigated the link between sustainability and corporate performance where we found a significant positive correlation:

- 90% of the cost of capital studies show that sound ESG standards lower the cost of capital.
- 88% of the operational performance studies show that solid ESG practices result in better operational performance.

Based on these results, the following section analyses whether this information is beneficial for equity investors. In doing so, we use the same methodology as before: we examine the effects of environmental, social, and governance (ESG) parameters on stock prices separately and then consider the effects for the aggregate scores.

## 5.1 STOCK PRICES AND THE 'G' DIMENSION

The way in which the quality of corporate governance influences stock price performance has been the subject of in-depth analyses in financial economics and corporate finance literature.<sup>155</sup> The research has focused on particular features of governance structures in order to review effects on profitability and financial performance. The focus has been on both external governance mechanisms such as the market for corporate control,<sup>156</sup> the level of industry competition,<sup>157</sup> and internal mechanisms such as the board of directors<sup>158</sup> and executive compensation practices.<sup>159</sup> It has also been shown that revealed financial misrepresentation leads to significantly negative stock market reactions.<sup>160</sup>

'A PORTFOLIO THAT GOES LONG IN WELL GOVERNED FIRMS AND SHORT IN POORLY GOVERNED FIRMS CREATES AN ALPHA OF 10% TO 15% ANNUALLY OVER THE TIME PERIOD 1990 TO 2001.'

*Cremers and Nair, 2005*

155 The financial economics literature in general and the corporate finance literature in particular have clearly focused more on research which relates the corporate governance quality to corporate financial performance. This is because it is often claimed that the quality of corporate governance is easier to quantify than the quality of environmental or social performance, and that the financial consequences are easier to measure.

156 See Gompers, Ishii, and Metrick (2003) for the most prominent example of research on the relation between takeover exposure and stock-price performance. Their results have been confirmed by Core, Guay, and Rusticus (2006).

157 For example: Giroud and Mueller (2010) and (2011).

158 Evidence is, for example, provided by Yermack (1996).

159 For example, Core, Holthausen, and Larcker (1999).

160 Karpoff, Lee, and Martin (2008). The authors study 585 firms which have been involved in financial misrepresentation cases with the SEC over the time period from 1978 to 2002. 25.24%.

Probably the most prominent study on corporate governance and its relationship to stock market performance was published in the Quarterly Journal of Economics in 2003. Researchers from Harvard and Wharton showed, for the first time, that the stocks of well-governed firms significantly outperform those of poorly-governed firms. Their empirical analysis revealed that a long-short portfolio of both well- and poorly-governed firms (i.e., going long in firms with more-adequate shareholder rights and short in firms with less-adequate shareholder rights) leads to a risk-adjusted annual abnormal return (henceforth, alpha) of 8.5% over the period 1990 to 1999.<sup>161</sup>

Further research supports their finding that superior governance quality is valued positively by the financial market.<sup>162</sup> For example, a portfolio that goes long in well-governed firms and short in poorly-governed firms creates an alpha of 10% to 15% annually over the time period 1990 to 2001.<sup>163</sup>

However, there remains more work to be done in researching whether these findings are driven by governance aspects or by other firm or sector

characteristics as there has been some suggestion that adjusting for industry clustering may remove alpha.<sup>164</sup>

In summary, the majority of current studies suggest that superior governance quality leads to better financial performance.

## 5.2 STOCK PRICES AND THE 'E' DIMENSION

Research has also documented a direct relationship between the environmental performance of firms and stock price performance. In particular, it has been demonstrated that positive environmental news triggers positive stock price movements.<sup>165</sup> Similarly, firms behaving environmentally irresponsibly demonstrate significant stock price decreases.<sup>166</sup> Specifically, following environmental disasters in the chemical industry, the stock price of the affected firms reacts significantly negatively.<sup>167</sup>

It has been further shown that firms with higher pollution figures have lower stock market valuations.<sup>168</sup> Other prominent research has revealed that firms which are

161 Gompers, Ishii, and Metrick (2003) investigate the performance implications of the exposure of corporations towards the market for corporate control, constructing a governance index which consists of 24 unique anti-takeover devices. Higher index values imply many anti-takeover mechanisms in place ( $\geq 14$ ), or a low level of shareholder rights ('dictatorship' or poorly governed firms). In contrast, well-governed firms display very low levels ( $\leq 5$ ) of the governance index (the 'democracy' firms).

162 Bebchuk, Cohen, and Ferrell (2010) use an 'entrenchment index' based on six governance provisions with potential managerial entrenchment effects. The authors find that their entrenchment index is negatively related to firm value as measured by Tobin's Q., hence, their findings support the results obtained by Gompers, Ishii, and Metrick (2003) as well as those of Cremers and Ferrell (2013) in that they document the importance of corporate governance for firm value.

163 See Cremers and Nair (2005) who investigate the effects of governance quality on stock market performance. Their finding that well-governed firms outperform is, however, conditional on internal governance quality, i.e., their result only holds if there is high institutional ownership next to high takeover vulnerability.

164 See, for example, Johnson, Moorman, and Sorescu (2009).

165 See Klassen and McLaughlin (1996). The authors investigate the stock price reaction to the announcement of positive environmental news and use the announcement of the winning of an environmental award (verified by a third party organization) as their measure for good environmental performance. Conversely, they also document negative stock price reactions for adverse corporate environmental events.

166 See, Flammer (2013). The author investigates stock price reactions around news related to the environmental performance of corporations. Investigating environmentally related news over the time period 1980-2009, the author concludes that on the two days around the news event (i.e. one day before the announcement of the environmentally related news and the announcement day itself), stocks with "eco-friendly events" experience a stock price increase of on average 0.84% while firms with "eco-harmful events" exhibit a stock price drop of 0.65%.

167 See Capelle-Blancard and Laguna (2010). The authors investigate in total 64 explosions in chemical plants at 38 different corporations over the time period from 1990 to 2005. On the day of the explosion, the average stock price reaction is negative with 0.76%. Two-days after the event, shareholder lost on average 1.3%. The authors also find that share prices react more negatively if the disaster involved the release of toxic chemicals.

168 Cormier and Magnan (1997) find that firms that pollute more have lower stock market values. They argue that this is due to the 'implicit environmental liabilities' that these firms carry with them. Hamilton (1995) argues in a similar vein, showing that a company's share price shows a significantly negative reaction to the release of information on toxic releases.

more 'eco-efficient' significantly outperform firms that are less 'eco-efficient',<sup>169</sup> and this result holds even after accounting for transaction costs, market risk, investment style, and industries. This key finding points to a positive relationship between corporate environmental performance and financial performance<sup>170</sup>. The converse relationship also holds: firms that violate environmental regulations experience a significant drop in share price.<sup>171</sup>

On the other side, research also indicates that the market does not value all corporate environmental news equally.<sup>172</sup> For example, a voluntary adoption of corporate environmental initiatives has been known to result in a negative stock price reaction upon the announcement of the initiative.<sup>173</sup>

AFTER REPORTING ENVIRONMENTALLY POSITIVE EVENTS STOCKS SHOW AN AVERAGE ALPHA OF 0.84%. CONVERSELY, AFTER NEGATIVE EVENTS, STOCKS UNDERPERFORM BY -0.65%.

*Flammer, 2013*

## 5.3 STOCK PRICES AND THE 'S' DIMENSION

Besides the environmental and governance dimensions of sustainability, researchers have also investigated the effect of particular social issues on corporate financial performance. Perhaps the most prominent study on the social dimension of ESG and its effect on corporate financial performance is by Professor Alex Edmans, who was then at the Wharton School at the University of Pennsylvania. He investigated the '100 Best Companies to Work For' in order to check for a relationship between employee wellbeing and stock returns. His findings indicate that a portfolio of the '100 Best Companies to Work For' earned an annual alpha of 3.5% in excess of the risk-free rate from 1984 to 2009 and 2.1% above industry benchmarks.<sup>174</sup> Similar outperformance has also been observed for a more extended period from 1984 to 2011.<sup>175</sup>

Empirical results also show international evidence on the positive relationship between employee satisfaction and stock returns.<sup>176</sup>

This is a highly significant finding because it indicates that alphas seem to survive over the longer term and that

169 See Derwall, Guenster, Bauer, and Koedijk (2005): The authors investigate the stock market performance of firms that are more 'eco-efficient' and firms that are less 'eco-efficient'. They also focus on the concept of 'eco-efficiency' as a measure of corporate environmental performance. They define it as the economic value that the company generates relative to the waste it produces in the process of generating this value (p. 52). In the period 1995-2003, they find that the most 'eco-efficient' firms deliver significantly higher returns than less 'eco-efficient' firms.

170 Galema, Plantinga, and Scholtens (2008) argue that the reason some studies find no significant alpha after risk adjusting using the Fama-French risk factors is that corporate environmental performance significantly lowers book-to-market ratios, implying that the return differences between high CSR and low CSR stocks are created through the book-to-market channel because 'SRI results in lower book-to-market ratios, and as a result, the alphas do not capture SRI effects', p. 2653.

171 Karpoff, Lott, and Wehrly (2005) provide evidence of this relationship.

172 See, for example, Brammer, Brooks, and Pavelin (2006).

173 See, Fisher-Vanden and Thorburn (2011): The authors study 117 firms over the time period 1993-2008 and examine shareholder wealth effects resulting from participation in the voluntary environmental programmes using an event study methodology. Overall and across several empirical specifications, they document a significant and negative stock market reaction upon the announcement of joining the voluntary environmental performance initiatives. Shareholder value is therefore destroyed by voluntarily joining these programmes, hence the authors conclude that 'corporate commitments to reduce GHG emissions appear to conflict with firm value maximization'.

174 Edmans (2011) argues that the stock market does not fully value intangibles in the form of employee relations.

175 In his follow-up paper, Edmans (2012) extends the sample period until 2011 and tests for any alphas over the new sample period from 1984-2011. Consistent with his earlier findings, the results indicate an alpha of 3.8% annually in excess of the risk-free rate. Likewise, the alphas adjusting for industries are higher than in the shorter sample period with 2.3% annually.

176 See Edmans, Li, and Zhang (2014). The authors investigate the relation of employee satisfaction and stock returns in 14 countries over several different time periods. They find that for 11 out of the 14 countries the alphas of a portfolio of the companies with the highest employee satisfaction scores are positive. Their evidence also points to the fact that the observed and often quoted positive relationship between good employee relations and stock returns may not hold for all countries and that also country differences with respect to labor flexibility must be taken into account.

the market has still not yet priced in all the information regarding employee satisfaction.

Similar results have been documented elsewhere.<sup>177</sup> Other studies on the social dimension of ESG show that firms which make very high or very low charitable donations report better financial performance than other firms, especially over the long-term,<sup>178</sup> although in this context, we agree with those who question whether charitable donations are a real measure for sustainability or if donations are just seen as a 'symbolic action'.<sup>179</sup>

## 5.4 STOCK PRICES AND AGGREGATE SUSTAINABILITY SCORES

A number of studies look at aggregated sustainability indices. For example, the addition to, or exclusion from, the Dow Jones Sustainability World Index has been found to have some effect on stock prices: index inclusions have

a positive effect, while index exclusions have a negative effect on respective stock prices.<sup>180</sup> There is also wider evidence that exclusion from sustainability stock indices causes significant negative stock price reactions.<sup>181</sup> Other evidence shows that stocks of firms with a superior sustainability profile deliver higher returns than those of their conventional peers,<sup>182</sup> and that sustainability quality provides insurance-like effects when negative events occur, helping to support the stock price upon the announcement of the negative event.<sup>183</sup> It has also been demonstrated that firms experience significant positive stock price reactions when shareholder-sponsored CSR proposals are adopted by corporations.<sup>184</sup>

The effects of an aggregated sustainability measure have also been investigated in the context of corporate mergers and acquisitions.<sup>185</sup> For example, by following a trading strategy which goes long in acquirers with a better sustainability profile and going short in acquirers with a worse sustainability profile, investors are able to realize an annual risk-adjusted alpha of 4.8%, 3.6%, and 3.6% over

'A PORTFOLIO COMPRISED OF THE '100 BEST COMPANIES TO WORK FOR IN AMERICA' YIELDED AN ALPHA OF 2.3% ABOVE INDUSTRY BENCHMARKS OVER THE PERIOD 1984-2011.'

*Edmans, 2012*

177 Three examples of additional evidence are Smithey Fulmer, Gerhart, and Scott (2003), Filbeck and Preece (2003), and Faleye and Trahan (2011). Smithey Fulmer et al. (2003) show that the '100 Best Companies to Work For' are able to outperform the market, but not match peer firms. Filbeck and Preece (2003) conclude that a persistent outperformance of these firms is not observed, but that 'support may exist for such superior results for longer holding periods', p. 790. Faleye and Trahan (2011) report positive stock price reactions upon the announcement of the Fortune list which includes the '100 Best Companies to Work For'.

178 See, for example, Brammer and Millington (2008). Godfrey (2005) shows that 'strategic corporate philanthropy' can indeed benefit shareholders.

179 For example, Hawn and Ioannou (2013) discuss symbolic CSR actions in the context of firm value.

180 See Cheung (2011). The author also shows that most of the sample firms are operating in the manufacturing industry, implying that even companies in industries that traditionally have a poor CSR profile frequently become members of a sustainability index.

181 See, for example, Becchetti, Ciciretti, and Hasan (2009) and Doh, Howton, Howton, and Siegel (2010).

182 Statman and Glushkov (2009).

183 Godfrey, Merrill, and Hansen (2009).

184 Flammer (2014). The author shows for a sample of 2,729 shareholder-sponsored CSR proposals that implementing them leads to an alpha of 1.77%.

185 See, for example, Deng, Kang, and Low (2013), and Aktas, de Bodt and Cousin (2011).

one-, two-, and three-year holding periods respectively.<sup>186</sup> More generally, when companies with a good sustainability profile are acquired, the market reaction is unanimously positive.<sup>187</sup>

Another recent study which relates an aggregate sustainability score to stock market performance finds that a 'high-sustainability' portfolio outperforms a 'low-sustainability' portfolio by 4.8% on an annual basis (when using a value-weighted portfolio, the results indicate an annual outperformance of 2.3%).<sup>188</sup> Overall, these findings point to the possibility of earning an alpha by investing in firms with a superior sustainability profile.

Against this, there is some evidence indicating a negative relationship between aggregate sustainability scores and stock market performance exists, however such evidence is scarce.<sup>189</sup> Despite several studies showing no relationship, or a negative relationship, between sustainability scores (both aggregated and disaggregated) and stock price performance, the majority of studies find a positive relationship where superior ESG quality translates into superior stock price performance relative to firms with lower ESG quality.

The importance of good quality non-financial information was recently emphasized by a survey of 163 institutional investors<sup>190</sup>, 89% of whom indicated that non-financial performance information played a pivotal role in investment decision making over the last twelve months.

STOCKS OF SUSTAINABLE COMPANIES TEND TO OUTPERFORM THEIR LESS SUSTAINABLE COUNTERPARTS BY 4.8% ANNUALLY

*Eccles, Ioannou, and Serafeim, 2013*

186 Deng, Kang, and Low (2013) study 1,556 completed US mergers between 1992 and 2007 to address the key question whether CSR creates value for acquiring firms' shareholders. They find that superior CSR quality on the part of the acquirer creates value for both the acquiring shareholders and the target shareholders. They also document that bondholders' CARs (cumulative abnormal returns) are generally negative upon the announcement of a merger, but are less negative for those mergers in which an acquirer with a good CSR profile is involved, which adds to the evidence provided by Cremers, Nair, and Wei (2007).

187 Aktas, de Bodt and Cousin (2011) investigate 106 international merger deals from 1997-2007 using Innovest IVA ratings.

188 Eccles, Ioannou, and Serafeim (2013) classify the sustainability quality of firms based on a sustainability index which evaluates whether corporations adopt several different kinds of CSR policies (e.g., human rights, environmental issues, waste reduction, product safety, etc.). The authors primarily investigate the stock market performance of both groups of firms and therefore circumvent any reverse causality issues. Their empirical analysis reveals that a portfolio consisting of low-sustainability firms shows significantly positive returns. Further, the high-sustainability portfolio displays positive and significant returns over the sample period. Importantly, the performance differential is significant in economic and statistical terms. The authors also find that the high-sustainability portfolio outperforms the low-sustainability portfolio in 11 of the 18 years of the sample period.

189 See for example, Brammer, Brooks, and Pavelin (2006). They focus on the UK market and call for a disaggregation of CSR measures in order to disentangle the individual effects of each of the underlying CSR measures (also related to Table 1 of this report). Lee and Faff (2009) show that companies 'lagging' with respect to corporate sustainability underperform compared with their superior counterparts and the market.

190 Ernst & Young (2014).

# SUMMARY

Based on our review in this section, the following can be concluded with respect to the relationship between sustainability and financial market performance:

- Superior sustainability quality (as measured by aggregate sustainability scores) is valued by the stock market: more sustainable firms generally outperform less sustainable firms.
- Stocks of well-governed firms perform better than stocks of poorly-governed firms.
- On the environmental dimension of sustainability, corporate eco-efficiency and environmentally responsible behavior are viewed as the most important factors leading to superior stock market performance.
- On the social dimension, the literature shows that good employee relations and employee satisfaction contribute to better stock market performance.
- Table 7 summarizes all reviewed papers on sustainability and its relation to financial market performance. In total, we reviewed 41 studies, of which 33 (80%) document a positive correlation between good sustainability and superior financial market performance.

**TABLE 7: EMPIRICAL STUDIES INVESTIGATING THE RELATIONSHIP OF VARIOUS ESG FACTORS AND CORPORATE FINANCIAL PERFORMANCE**

| STUDY AUTHORS                                   | TIME PERIOD  | ESG ISSUE   | ESG FACTOR | IMPACT (**)                     |
|---|--------------|---|------------|---------------------------------|
| Aktas, de Bodt, and Cousin (2011)               | 1997-2007    | Intangible Value Assessment Ratings                     | ESG        | Positive (1)                    |
| Bebchuk, Cohen, and Ferrell (2009)              | 1990-2003    | Entrenchment index                                      | G          | Positive (2)                    |
| Bebchuk, Cohen, and Wang (2013)                 | 2000-2008    | Governance quality/shareholder rights                   | G          | No effect/no relation           |
| Becchetti, Ciciretti, and Hasan (2009)          | 1990-2004    | Sustainability index exits and entries                  | ESG        | Positive (3)                    |
| Borgers, Derwall, Koedijk, and ter Horst (2013) | 1992-2009    | Stakeholder relations index                             | S          | Mixed findings (4)              |
| Brammer and Millington (2006)                   | 1990-1999    | Charitable giving                                       | S          | Mixed findings (non-linear) (5) |
| Brammer, Brooks, and Pavelin (2006)             | 2002-2005    | Composite CSR index                                     | ES         | Mixed (6)                       |
| Capelle-Blancard and Laguna (2010)              | 1990-2005    | Environmental disasters (explosions) at chemical plants | E          | Positive (7)                    |
| Cheung (2011)                                   | 2002-2008    | Sustainability index inclusion/exclusions               | ESG        | Positive                        |
| Core, Guay, and Rusticus (2006)                 | 1990-1999    | Governance index/shareholder rights                     | G          | Positive                        |
| Core, Holthausen, and Larcker (1999)            | 1982-1984    | Excessive compensation                                  | G          | Positive (8)                    |
| Cormier and Magnan (1997)                       | 1986-1993    | Amount of pollution                                     | E          | Positive (9)                    |
| Cremers and Nair (2005)                         | 1990-2001    | Reversed governance index and block holder ownership    | G          | Positive                        |
| Deng, Kang, and Low (2013)                      | 1992-2007    | Composite CSR index                                     | ESG        | Positive                        |
| Derwall, Guenster, Bauer, and Koedijk (2005)    | 1995-2003    | Corporate eco-efficiency                                | E          | Positive                        |
| Doh, Howton, Howton, and Siegel (2010)          | 2000-2005    | Sustainability index inclusion/exclusion                | ESG        | Mixed (10)                      |
| Eccles, Ioannou, and Serafeim (2013)            | 1991-2010    | Corporate sustainability index                          | ESG        | Positive                        |
| Edmans (2011)                                   | 1984-2009    | Employee satisfaction                                   | S          | Positive                        |
| Edmans (2012)                                   | 1984-2011    | Employee satisfaction                                   | S          | Positive                        |
| Edmans, Li, and Zhang (2014)                    | 1984-2013    | Employee satisfaction                                   | S          | Generally positive              |
| Faleye and Trahan (2011)                        | 1998-2005    | Employee satisfaction                                   | S          | Positive                        |
| Filbeck and Preece (2003)                       | 1998         | Employee satisfaction                                   | S          | Positive                        |
| Fisher-Vanden and Thorburn (2011)               | 1993-2008    | Environmental performance initiative participation      | E          | Positive                        |
| Flammer (2013)                                  | 1980-2005    | Corporate environmental footprint                       | E          | Positive                        |
| Flammer (2014)                                  | 1997-2011    | Shareholder-sponsored CSR proposals                     | ESG        | Positive                        |
| Giroud and Mueller (2010)                       | 1976-1995    | Industry concentration                                  | G          | Positive (11)                   |
| Giroud and Mueller (2011)                       | 1990-2006    | Governance index in highly concentrated industries      | G          | Positive (12)                   |
| Godfrey, Merrill, and Hansen (2009)             | 1991-2002/03 | Social initiative participation                         | ESG        | Positive                        |
| Gompers, Ishii, and Metrick (2003)              | 1990-1998    | Shareholder rights                                      | G          | Positive                        |

*(continued)*

TABLE 7: CONTINUED

| STUDY AUTHORS                             | TIME PERIOD | ESG ISSUE                             | ESG FACTOR | IMPACT (*)            |
|---|-------------|---------------------------------------|------------|-----------------------|
| Hamilton (1995)                           | 1989        | Volume of toxic releases              | E          | Positive (13)         |
| Jacobs, Singhal, and Subramanian (2010)   | 2004-2006   | Environmental performance             | E          | Mixed findings        |
| Johnson, Moorman, and Sorescu (2009)      | 1990-1999   | Governance quality/shareholder rights | G          | No effect/no relation |
| Karpoff, Lott, and Wehrly (2005)          | 1980-2000   | Environmental regulation violations   | ESG        | Positive (14)         |
| Karpoff, Lee, and Martin (2008)           | 1978-2002   | Financial misrepresentation           | G          | Positive (15)         |
| Kaspereit and Lopatta (2013)              | 2001-2011   | Corporate sustainability and GRI      | ESG        | Positive              |
| Klassen and McLaughlin (1996)             | 1985-1991   | Environmental management awards       | E          | Positive              |
| Krüger (2014)                             | 2001-2007   | CSR news events                       | ESG        | Positive (16)         |
| Lee and Faff (2009)                       | 1998-2002   | Corporate sustainability quality      | ESG        | Negative              |
| Smithey Fulmer, Gerhart, and Scott (2003) | 1998        | Employee wellbeing                    | S          | Positive (17)         |
| Statman and Glushkov (2009)               | 1992-2007   | Composite CSR index                   | ES         | Positive              |
| Yermack (1996)                            | 1984-1991   | Reductions in board size              | G          | Positive              |

(\*) In the last column of the table, we state the effect of better ESG on stock price performance. ‘Positive’ indicates that better ESG has a positive effect on stock price performance. ‘Mixed’ indicates that better ESG has a mixed effect on stock price performance. ‘Negative’ indicates that better ESG has negative effect on stock price performance.

#### NOTES TO TABLE 7:

- (1) Evidence from numerous countries.
- (2) We count this study as having a ‘positive’ effect on stock prices because the authors conclude that a higher entrenchment index reflects bad governance structures. This means that by improving the entrenchment index, firms can perform relatively better.
- (3) We count this study as positive as index deletions result in significant negative stock price returns. Assuming that superior ESG firms stay in the index, better ESG could prevent significant negative stock price reactions.
- (4) The positive effect is not apparent from 2004-2009. Therefore we label it ‘mixed findings’.
- (5) Extremely high and extremely low – with both resulting in improved firm performance.
- (6) We treat this study as ‘mixed findings’ because the authors find a negative relation for the disaggregated CSR categories of environment and community, but a weakly positive one for employment.
- (7) Counted as ‘positive’, because firms which suffer from environmental disasters experience a significant share price drop. Firms which are prepared for such events (by, for example, putting particular safety means in place), relatively benefit from experiencing no significant negative stock price reactions.
- (8) Counted as ‘positive’, because excess compensation reduces the subsequent stock returns.
- (9) We treat this study as ‘positive’ because firms that pollute less (i.e., firms that are more environmentally friendly) perform relatively better. No direct increase

in share value observed - not stock price reaction per se.

- (10) Counts as 'mixed findings' because index deletions cause significant negative returns implying that more sustainable firms remain on the index and do not suffer from these negative valuation effects.
- (11) Highly concentrated industries experience a significant negative stock price reaction to exogenous changes in the competitive environment.
- (12) Governance pays off, especially in relatively less competitive industries.
- (13) We treat this study as 'positive' in our calculations because lower volumes of toxic releases would lead to relatively better stock price movements.
- (14) We count this study as 'positive' because bad performers suffer while good performers do relatively better.
- (15) This study is counted as positive because it shows that firms which conduct financial misrepresentation are punished by stock markets through significant stock price declines.
- (16) This study counts as positive as the results indicate that shareholders react strongly negative to negative CSR news and positive to positive CSR news – at least when no agency problems are present in firms.
- (17) 'Positive' because the analysis reveals an outperformance of a market benchmark.

# 6. ACTIVE OWNERSHIP

**T**hus far in the report, we have analyzed existing research to demonstrate the positive correlation between ESG parameters and investment performance. We have demonstrated that companies with higher sustainability scores on average have a better operational performance, are less risky, have lower cost of debt and equity, and are better stock market investments.

An additional feature of note is that various studies have found a ‘momentum effect’ regarding ESG parameters. In other words, strategies that assign a higher portfolio weight to companies with improving ESG factors have outperformed strategies that focus on static ESG criteria.<sup>191</sup>

It is therefore logical for investors to seek to influence the companies into which they have invested in order to improve the company’s ESG metrics. The investors then benefit from the companies’ improvement once other market participants integrate the new information into their investment decisions.

This influencing, which is usually undertaken via ‘active ownership’, and ordinarily is a combination of three forms:

1. Proxy Voting:  
A low-cost tool to engage with firms in order to achieve better corporate sustainability/ESG standards. The benefits may seem logical, but the literature available to date only provides limited evidence that proxy voting is an effective tool to promote proper ESG standards, or that it is helpful in creating superior financial performance at investee firms.<sup>192</sup>
2. Shareholder Resolutions:  
Shareholder resolutions at an annual general meeting can be a powerful tool to influence a company’s management. When a company wants to avoid publicity on a certain topic, it can concede in return for a withdrawal of the respective shareholder proposal.<sup>193</sup>
3. Management Dialogue:  
Dialogue with the invested company’s management team is often used as a form of private engagement by institutional investors,<sup>194</sup> and successful management engagement has the potential to positively influence the stock price of target firms. It has been demonstrated that successful private engagement leads to an average annual alpha of 7.1% subsequent to successful engagement.<sup>195</sup>

191 See, for example, the study by MSCI ESG Research ‘Optimizing Environmental, Social, and Governance Factors in Portfolio Construction’ by Nagy, Cogan, and Sinnreich (2012).

192 See, for example, Gillan and Starks (2000) and (2007).

193 See, for example, Bauer, Braun, and Viehs (2012), and Bauer, Moers, and Viehs (2013). Bauer et al. (2013) provide detailed evidence on the determinants of shareholder proposal withdrawals, whereas Bauer et al. (2012) investigate which factors drive shareholder to file resolutions with certain companies. They also study the determinants of the resolutions’ voting outcomes.

194 See, for example, Eurosif (2013), McCahery, Sautner, and Starks (2013), Bauer, Clark, and Viehs (2013), and Clark and Hebb (2004). Clark and Hebb (2004) argue that direct engagements by pension funds with their investee firms represent an expression of the long-term investing proposition. Bauer, Clark, and Viehs (2013) investigate the engagement activities of a large UK-based institutional investor and find that shareholder engagement is increasing over time. The engagement takes place within all three dimensions of ESG, and in some years the number of environmental and social engagements exceeds the number of governance engagements, pointing to a growing importance of environmental and social issues. The authors also show that private engagements suffer from a home bias effect: UK firms are more likely to be targeted than firms from other countries.

195 See the study by Dimson, Karakas, and Li (2013).

To date, active ownership has achieved a great deal, and this is likely to continue the more investors engage. Companies such as Hermes EOS, F&C, and Robeco offer attractive active ownership services enabling investors to join forces and set a common agenda and priorities, while the PRI clearing house<sup>196</sup> offers a platform for collaborative engagements with regard to priority themes.

Active ownership is a powerful tool. However, in its current form, it lacks the structural support of a key stakeholder group – the customer of the invested companies. In our view, the next step in the evolution of active ownership is to include the ultimate beneficiaries of institutional investors, who are at the same time the ultimate consumers of the goods and services of the invested companies, into the agenda and priority setting process.

SUCCESSFUL ENGAGEMENTS LEAD  
TO ALPHAS OF 7.1% IN THE YEAR  
FOLLOWING THE ENGAGEMENT.

*Dimson, Karakas, and Li, 2013*

196 More information on the UN PRI's clearing house can be found here: <http://www.unpri.org/areas-of-work/clearinghouse/>.

# 7. FROM THE STOCKHOLDER TO THE STAKEHOLDER

**T**he report has clearly demonstrated the economic relevance of sustainability parameters for corporate management and for investors. The main results of the report are:

1. 90% of the cost of capital studies show that sound ESG standards lower the cost of capital.
2. 88% of the studies show that solid ESG practices result in better operational performance.
3. 80% of the studies show that stock price performance is positively influenced by good sustainability practices.

Given the strength, depth, and breadth of the scientific evidence, demonstrating that sustainability information is relevant for corporate performance and investment returns, we conclude as follows:

1. It is in the best long-term interest of corporate managers to include sustainability into strategic management decisions.
2. It is in the best interest of institutional investors and trustees, in order to fulfill their fiduciary duties, to require the inclusion of sustainability parameters into the overall investment process.<sup>197</sup>

3. Investors should be active owners and exert their influence on the management of their invested companies to improve the management of sustainability parameters that are most relevant to operational and investment performance.
4. It is in the best interest of asset management companies to integrate sustainability parameters into the investment process to deliver competitive risk-adjusted performance over the medium to longer term and to fulfill their fiduciary duty towards their investors.<sup>198</sup>
5. The future of active ownership will most likely be one where multiple stakeholders (such as individual investors and consumers) are involved in setting the agenda for the active ownership strategy of institutional investors.
6. There is need for ongoing research to identify which sustainability parameters are the most relevant for operational performance and investment returns.

197 For similar arguments, see the so-called 'Freshfield Reports': United Nations Environment Programme Finance Initiative (2005) and (2009).

198 United Nations Environment Programme Finance Initiative (2005) and (2009).

This clear economic case for sustainable corporate management and investment performance can be supported on the basis of logic alone. The most important stakeholders for institutional investors like pension funds and insurance companies are the beneficiaries of these institutions, i.e., the people who live in the sphere of impact of the companies in the investment portfolios. Companies affect the environment and communities, provide employment, act as trading partners and service providers, as well as contribute through tax payments to the overall budget of countries.

Aside from the clear economic benefit for the investment portfolio, it is axiomatic that it is in the best interest of an individual to influence companies to demonstrate prudent behaviour with regard to sustainability standards since those companies have a direct impact on the life of the individual person.

Based on current trends<sup>199</sup>, we expect that the inclusion of sustainability parameters into the investment process will become the norm in the years to come. This will be supported by a push from the European Union to increase companies' transparency and performance on environmental and social matters<sup>200</sup>, on improving corporate governance<sup>201</sup> and on corporate social responsibility<sup>202</sup>.

The most successful investors will most likely have set up continuous research programs regarding the most relevant sustainability factors to be considered in terms of industry and geography. In such a scenario, we expect that it will be a requirement for professional investors to have a credible

active ownership strategy that goes beyond the traditional instruments that institutional investors currently employ.

The future of active ownership will most likely be one where multiple stakeholders such as individual investors and consumers will find it attractive to be involved in setting the agenda for the active ownership strategy of institutional investors.

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199 See, PricewaterhouseCoopers (2014).

200 European Commission (2014a), and European Commission (2013a).

201 European Commission (2014b).

202 European Commission (2013b), European Commission (2013c), and European Commission (2013d).

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