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Corporate Social Responsibility:

The Institutionalization of ESG

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Abstract

Understanding the impact of Corporate Social Responsibility (CSR) on firm performance as it relates to industries reliant on technological innovation is a complex and perpetually evolving challenge. To thoroughly investigate this topic, this dissertation will adopt an economics-based structure to address three primary hypotheses. This structure allows for each hypothesis to essentially be a standalone empirical paper, unified by an overall analysis of the nature of impact that ESG has on firm performance. The first hypothesis explores the evolution of CSR to the modern quantified iteration of ESG has led to the institutionalization and standardization of the CSR concept. The second hypothesis fills gaps in existing literature testing the relationship between firm performance and ESG by finding that the relationship is significantly positive in long-term, strategic metrics (ROA and ROIC) and that there is no correlation in short-term metrics (ROE and ROS). Finally, the third hypothesis states that if a firm has a long-term strategic ESG plan, as proxied by the publication of CSR reports, then it is more resilience to damage from controversies. This is supported by the finding that pro-ESG firms consistently fared better than their counterparts in both financial and ESG performance, even in the event of a controversy. However, firms with consistent reporting are also held to a higher standard than their non-reporting peers, suggesting a higher risk and higher reward dynamic. These findings support the theory of good management, in that long-term strategic planning is both immediately economically beneficial and serves as a means of risk management and

social impact mitigation. Overall, this contributes to the literature by fillings gaps in the nature of impact that ESG has on firm performance, particularly from a management perspective.

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Definitions / Abbreviations

ESG	Environmental, Social, Governance
CSR	Corporate Social Responsibility
FP	Financial Performance
GRI	Global Reporting Initiative
UN	United Nations
IEEE	Institute of Electrical and Electronics Engineers
ISO	International Standards Organization
SASB	Sustainability Accounting Standards Board
IFRS	International Financial Reporting Standards Foundation
ISSB	International Sustainability Standards Board
IASC	International Accounting Standards Committee
CDSB	Climate Disclosures Standards Board
TCFD	Task Force on Climate-Related Financial Disclosures
WEF	World Economic Forum
VRF	Value Reporting Foundation

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1.1 Introduction

The concept of Corporate Social Responsibility (CSR) has evolved from a broad theory to a widespread and increasingly metricized business practice (ESG) (Chapter 2). The academic study of this complex evolution has spanned economics, management, history, and more. It is vital to understand how such an impactful concept has and continues to evolve, especially now as we are in a process of standardization, digitalization, and globalization of CSR. As it is assessed at an individual firm level and a wider industry level, addressed on the national stage through regulation, and

furthered by international third party organizations and multilateral agreements, CSR has become a pivotal consideration for a firm's strategic plan. To test this concept of strategic implementation, this dissertation examines the dynamics of the relationship between ESG and firm performance (Chapter 3) and deepens the analysis of strategic planning by examining the impact of ESG on controversy resilience (Chapter 4). The direction of ESG standardization is heavily influenced by the impact of ESG on firm performance and resilience as ESG is now understood as an effective means of risk management.

To address this large and complex area of research, this dissertation draws on existing academic literature which studies the impact that CSR has on firm performance, from both a financial perspective and a controversy resilience standpoint. It finds support for Porter's theory of *good management*, in that CSR is best understood by first and foremost assessing the impact of managers. Strategic CSR investments can been highly beneficial tools for firms if implemented with consideration and long-term planning. Overall, academic literature has yielded largely positive findings of the CSR and firm performance relationship juxtaposed by a smaller portion of mixed, insignificant, or negative results, largely influenced by the long- or short-term time horizon of the metrics used.

When considering CSR as a long-term strategic tool, future planning and risk analysis come to mind. In studying this relationship, it is therefore necessary to build off the relationship between CSR and firm performance by studying the impact that CSR has on firm resilience in controversy recovery. This dissertation addresses this by drawing together firm performance, self-published voluntary CSR reports, and ESG scores in order to more fully appreciate the role that CSR plays in strategic resilience.

The institutionalization of CSR occurs in a time period defined by digitalization and platformzation. Digitalization, especially in the operation of the tech sector, is defined

by the change of processes from traditional labour into the modern iteration of work wherein much of the labour is conducted virtually, thus changing the manifestation of the working process (Vayre 2022; Mendoza-Fong et al. 2018). Platformization is the change in products within the tech sector wherein value is generated from virtual platforms, subscription services, and data collection from consumers, thus creating new means of profit creation and stakeholder interactions (Steinberg 2019; Westermeier 2020). Both digitalization and plaformization are changing the way that stakeholders, ranging from investors to consumers, interact with tech firms, thus raising challenging questions about the nature and impact that a tech firm's CSR initiatives can have, as well as what is currently being reported. With growing social media presences, increased internal and external pressures from social activists, and shifts toward intangible assets, the shape of CSR investments must be cutting edge in order to keep up with social demands. This dissertation seeks to set the foundation for how we got to this point in the CSR evolution, what the current relationship means, and how it impacts future firm resilience.

1.2 Research Questions and Their Relationship

This dissertation investigates the relationship between CSR and firm performance, controversy response, and resilience. To do so, it utilizes firm performance metrics (such as Return on Assets and Research and Development), ESG (Environmental, Social, Governance) metrics (ESG Scores), and textual analyses of self-published CSR reports in a regression model in order to determine if there is a relationship, and if so, how significant the relationship may be. It approaches this complex topic by separating it into three hypotheses that build upon one another in a Management and Economic style of distinct empirical studies united under a single research question; *how does CSR impact firm performance?* This is further divided into three questions as separate chapters; (1) *how did the evolution and institutionalization of CSR lead to an increasing standardization of ESG?, (2) is ESG positively correlated with*

firm performance?, and (3) is CSR reporting beneficial for controversy recovery and firm performance? These are examined in depth next.

To understand how CSR interacts with and impacts firm performance it is beneficial to take a three-pronged approach. Akin to a KitKat bar, this thesis can be broken apart into separate, standalone empirical studies. This dissertation essentially looks at the past, present, and future. It begins with (1) how CSR has evolved to where it is today, conscious of the shift in narrative when CSR took on a more quantified structure as ESG, which allowed for it to be factored into financial analyses and company strategies, to (2) what is the relationship as defined by the impact of CSR on firm performance, as this process of ESG quantification and integration into firm strategy comes with costs and benefits, through to examining (3) the role of CSR reporting on firm performance and resilience in the event of a controversy, as ESG has recently taken on a strong element of risk-management as both a cost and a benefit. In this sense, the foundation established by the evolution of CSR (Chapter 2) sets the tone of metricisation for financial and accounting purposes, and themes of quantification and standardization as they emerge in later chapters through the process of CSR transitioning into the commonly used modern term of ESG. This shift into a metricized ESG allows for robust testing of ESG variables alongside firm performance metrics (Chapter 3), which fits into the wider theme in academic literature of examining the impact, positive or negative, that ESG investment has on long-term financial returns. Recently, ESG has been framed as a means of risk management, leading to the future element of this study (Chapter 4) which gauges the impact that sustained CSR reporting has had on firm performance in the event of a controversy or crisis, and how the social capital that CSR is meant to provide has contributed to firm risk resilience.

The first chapter of this dissertation is an in-depth review of the current literature. It will examine the arguments surrounding CSR and ESG, from *good management* and *slack resources* theories to the rationales for the variables used in firm performance

testing. *Good management* theory states that investment in CSR is a strategic, preemptive decision made on the part of an effective manager as a means of good business practice, while *slack resources* theory argues that investment in CSR is a reactionary move to having excess funds available to put towards such initiatives (Porter and Kramer 2006; Porter and Kramer 2011). As there have been conflicting findings regarding the benefits and challenges of CSR on firm performance and resilience, it is vital to explore the logic behind these impacts. To understand why these approaches were chosen and how this process of measurement and standardization of ESG came about, it is necessary to understand the development of CSR literature and practice. These differing theories
have shaped the evolution of CSR from a concept to the quantifiable metrics of ESG, as explored further in the next chapter.

The second chapter of this dissertation addresses the question, *how did the evolution and institutionalization of CSR lead to an increasing standardization of ESG?* This historical overview tracks the major influential academic literature and real-world events that shaped the shift of CSR into ESG. Influence from the financial sector and firm management led to increased demands for quantification and standardization of ESG, marked by the 2005 UN report *Who Cares Wins,* wherein the concept of ESG was introduced as the financial sector sought to reimagine the concept of CSR into a format that could be quantified and measured, with the intention of utilizing it as nonfinancial data for risk management and investment purposes. This followed rising interest in academic testing of the relationship between CSR and firm performance before ESG was introduced, growing impact of large-scale activism on private business, and mounting pressure on governments to hold companies to account when they were exposed for societal violations such as engaging in child labour. Once CSR could be quantified as ESG, it became easier to examine the mechanisms by which ESG investment impacted firm performance, most notably from the perspective of a variety of stakeholders. This furthered the concept of *stakeholder theory,* which

expanded a firm's responsibility from just shareholders to the wider population that is impacted by the firm's actions, referred to as stakeholders (Freeman and McVea 2001). In doing so, expectations of a firm's awareness and responsibility grew, metrics were developed by which to gauge and test the outcomes of a firm's actions, and ESG became a widely discussed and investigated topic.

The third chapter builds upon the first chapter by testing in line with academic literature the question, *is ESG positively correlated with firm performance?* It approaches this broad, complex question by breaking the concept of firm performance down into five commonly used metrics, Return on Assets (ROA), Return on Invested Capital (ROIC), Return on Equity (ROE), Return on Sales (ROS), and Research and Development (R&D) (Margolis and Walsh 2001; Orlitzky, Schmidt, and Rynes 2003). These metrics are commonly used by managers and investors alike and while they are tested by many academics, there is a lack of consistency in academic findings. This chapter contributes to this body of literature by taking an innovative approach to testing in examining both *aggregate* and *over time* regressions, offering insights into the evolving relationship between variables. While less often utilized, this dissertation further examines the relationship between ESG and R&D, finding a surprisingly weak albeit still positive correlation.

The fourth chapter furthers this analysis in asking, *is CSR report beneficial for controversy recovery and firm performance?* The findings from the previous chapter support the *good management* argument in that long-term strategic CSR is beneficial for firm performance, which logically leads to future considerations of how this benefit will manifest in case of controversy. ESG has become a form of risk management in recent years, as both a strategic self-audit process wherein the firm examined its own potential weaknesses through an ESG lens such as environmental stress testing, as well as a source of reputational management as firms establish social capital to buffer blowback from controversy.

The overall findings are consistent with Porter's *good management* theory, finding that the positive relationship between ESG investment and firm performance is a byproduct of creative, strategic planning on the part of management. When a manager is interested in the long-term success of the business, they will invest time and effort into ESG initiatives in the interest of the firm's success. The unifying research question of this study, in examining the overall impact of CSR on firms, is designed to create a well-rounded, in depth understanding of the processes and outcomes associated in this complex topic.

This study tests this relationship between CSR reporting and firm performance with data collected from the tech sector. With some of the largest multinational firms in the world, global value chains, and a complex balance of relationships to stakeholders and governments, the tech sector offers a unique and salient snapshot of the ESG landscape. As an industry, it is characterized by its constant innovative growth and trendsetting, including within the sphere of ESG. Tech-sector employees also helped to drive much of the CSR / ESG efforts in this industry. After all, the stereotype of a tech person as a smiling guy in a hoodie, playing ping-pong and enjoying complementary company-provided snacks is meant to encourage this perspective of tech firms as being relaxed environments with happy, well treated employees. As evidenced by activism within tech firms, such as the internal pushback that led to Google discontinuing Project Maven's AI work for the US Department of Defence, tech sector employees are more involved in CSR efforts than their counterparts in industries like oil and gas. CSR efforts helped to demonstrate that companies were doing good for the environment, and also their employees. Few other industries can sell an image of employee satisfaction so effectively.

Hypotheses:

1. *How did the evolution and institutionalization of CSR lead to an increasing standardization of ESG?*
2. *Is ESG positively correlated with firm performance?*
3. *Is CSR reporting beneficial for controversy recovery and firm performance?*

1.3 Literature Review

Porter and Kramer frame CSR as "…a source of opportunity, innovation, and competitive advantage" (2006: 80). Their theory of *good management* essentially stated that a good manager will be conscious of both their economic and social impacts, in the sense that both are good for business and long-term strategic planning. Porter and Kramer furthered this argument in the theory of *strategic value,* wherein the benefit of CSR initiatives are best achieved when managers design these initiatives in line with the firm's strategic goals, aligning the social and economic goals to best maximize both (2011).

The arguments in favor of CSR being good for business as a strategic tool have risen in academic literature, in part because the presence of a strong ESG rating is viewed as an investment in social capital, risk management, and strategic foresight. The term CSR is used in reference to the overall theory addressed, whereas ESG will be used to refer to the quantified application of CSR. Key arguments and findings in the literature are evidenced in the lower cost of capital for firms (Gupta, Raman, and Shang 2018; de Graaf and Stoelhorst 2009), higher public trust (Fukukawa and Teramoto 2009; Assaf et al. 2017; Amatulli et al. 2018), and improved employee satisfaction (Akerlof and Kranton 2005; Vlachos, Panagopoulos, and Rapp 2013; O'Riordan and Fairbrass 2008). Managers that tie ESG considerations into economic performance tend to yield better results for both as they critically assess the activities of the firm, invest in employee welfare, and focus on environmentally sustainable practices (Allouche and Laroche 2006; Hernández-Murillo and Martinek 2009), taking a well-rounded and

thorough approach to stakeholder value.

However, there are arguments against investments in CSR initiatives. As Friedman's famous article put it, firm leadership who invest in CSR initiatives are potentially reducing returns to stockholders through profit reinvestment, raising product costs to take more money from consumers, and lowering the incomes of employees, thus "…spending their money" (1970: 2). In their meta-analysis, Whelan et al (Whelan et al. 2021) found that studies examining short-term time horizons tended to find more negative relationships between firm performance and ESG as their results were heavily influenced by the investment period in an ESG initiative, meaning that the relationship was only demonstrating the costs of the ESG investment but not the benefits. From this short-term perspective, ESG appears to be all expenditure with no return. Further, firms that invest in CSR tend to develop significant social capital, which is best defined as 'high risk, high reward,' as when a firm presents itself as being ESG conscious only to violate stakeholder expectations by the exposure of contradictory practices, stakeholders feel more betrayed than if the firm had not presented itself positively beforehand (Willness 2019; Margolis, Elfenbein, and Walsh 2009; Li et al. 2017; Helm and Tolsdorf 2013). Throughout the last fifty years of academic and business practitioner debates, tension has been prominent between academics arguing stakeholder value and corporate practices favouring shareholder value up until the Global Financial Crisis in 2008. While the debate is ongoing, discussions of stakeholder value have become more common in corporate spaces as ESG and nonfinancial reporting are in the process of becoming commonplace.

Margolis & Walsh (2001) succinctly stated, "A company's financial performance is a function of innumerable variables" at the beginning of their compendium on CSR and corporate firm performance wherein they analyzed the focuses of 95 studies from 1970 - 2000. While the majority of studies found a positive relationship, a significant number found mixed, negative, or no results. This dissertation contributes to the

overall body of literature by adopting a similar approach to existing studies (Al-Tuwaijri, Christensen, and Hughes II 2004; Ullmann 1985; Alareeni and Hamdan 2020; Galant and Cadez 2017), in that it found both positive and mixed results that diverged based on the time frame of the firm performance metric. These findings clearly indicated that long-term analyses tended to find positive results while findings became more mixed and negative in shorter time frames, demonstrating that time frame is a significant factor when examining this relationship as the economic benefits of ESG need time to properly develop. For this reason, this thesis deviates from existing studies in order to study the ESG and firm performance relationship over a longer time frame.

Drawing from the meta-analyses conducted by Margolis et al (2009) and Orlitzky et al (2003), the firm performance metrics chosen for this study are consistent in the relationship between ESG and firm performance literature spanning management, economics, and business. The chosen metrics are Return on Assets (ROA), Return on Invested Capital (ROIC), Return on Equity (ROE), and Return on Sales (ROS). These metrics were chosen, in large part, because they are annual metrics that would best be tested against the annual data provided in ESG ratings, as opposed to a metric that is daily or affected by short-term bursts of external impact such as share price. They are commonly used metrics in CSR literature and are readily available through Thomson Reuters DataStream. It is interesting to note that ROA and ROIC are long-term, management-based metrics whereas ROE and ROS are more immediately impacted by short-term external forces. This divergence is made evident in the outcome of the testing, as ROA and ROIC had a consistently strong positive relationship with ESG metrics while ROE and ROS did not, supporting the arguments of *good management theory*.

Moreover, this study takes the analysis of firm performance and ESG one step further by examining the relationship between the levels of R&D when tested with ESG.

Theoretically, a positive relationship would support good management theory, as ESG and R&D can be mutually beneficial if a firm utilizes strategic long-term planning. As an overall industry, the tech industry is a prime example of the need for constant innovation, as technology evolves quickly and firms can easily lag behind if they fail to act. That a relationship should be evident between R&D and ESG follows arguments that, particularly within the tech sector considering the rising demand for green technologies, investment in new environmentally and socially conscious products will lead to profit and a strengthened corporate reputation, which serves to both increase consumer loyalty and social capital in case of controversy (Dicuonzo et al. 2022; Miroshnychenko, Barontini, and Testa 2017; Fu, Boehe, and Orlitzky 2020; Xu, Liu, and Shang 2020). Many studies focusing on R&D have found a positive relationship to ESG metrics (Padgett and Galan 2009; Dicuonzo et al. 2022; Miroshnychenko, Barontini, and Testa 2017; Xu, Liu, and Shang 2020; Fu, Boehe, and Orlitzky 2020). However, there is a demonstrable lag between R&D investment and any benefits to ESG investments, as the investment takes time to metaphorically bear fruit (Chen et al. 2019), and academic literature still lacks a consensus on the exact mechanisms through which this relationship acts (Guerrero-Villegas, Sierra-García, and Palacios-Florencio 2018). This lack of clarity is evident in the findings of this dissertation, as the relationship between ESG variables and R&D is positive in aggregate, but inconsistent when tracked over time, likely due to the delayed economic returns to R&D investing.

This dissertation diverges from previous studies in that it does not only test the *aggregate* relationship of firm performance metrics with ESG metrics. Aggregate testing means that data was tested as a single variable regardless of time frame, as in testing the combined values of ROE alongside the combined values of ESG Scores so that it is a test of the overall relationship rather than matching data at specific points in time to test the relationship in that moment. In breaking with that approach, this dissertation tests the relationship *over time*, lending insight into the evolution of the relationship and clearly demonstrating the investment in ESG initiatives immediately

following the 2007 financial crisis. In only testing aggregate relationships, previous academic studies missed the volatility of relationships, as all five metrics (ROA, ROIC, ROE, ROS, and R&D) have positive aggregate relationships when regressed with ESG metrics, but *only* ROA and ROIC maintain that positive relationship over time. This demonstrates the significant impact that long-term managerial strategies have on both ESG and firm performance, as managers who invested in ESG reaped the benefits in both social capital and profits.

When doing analyses involving financial assessments, there is a distinction between two types of information, soft and hard (Liberti and Petersen 2018). Soft information is generally text, commentaries, or ideas, while hard information encompasses number driven data such as typical financial variables or stock market prices. In CSR literature, soft information is the norm, which is why this study seeks to blend soft and hard information to create a thorough analysis. Soft information can be more readily manipulated and is generally harder to refute.

When gauging the value of hard or soft information, it is first necessary to ask who the target audience is. In the case of CSR reports, the target audience may have started as average consumers or activists, but it has evolved over recent years to target investors (Amel-Zadeh and Serafeim 2018). At over a hundred pages each with several publications a year, keeping up with a firm's CSR reports may be daunting for the casual consumer. It is easier to access snippets of that information through blogs, tweets, and posts. Investors, however, have the motivation to delve into the reports and search for relevant data for projects and analysis (de Jong and van der Meer 2015; Perrault and Quinn 2016; Marlin and Marlin 2003) as a form of risk analysis and management. As CSR reports began as a means of connecting with invested stakeholders before becoming more targeted, they were intended to reach a wide audience hence the necessity for readable, accessible language.

Linguistic clarity and consumer perception play major roles in the financial benefits of CSR initiatives. Many novel approaches to linguistic analysis of CSR reporting have emerged (Tremblay, Parra, and Castellanos 2015; Humpherys et al. 2011; Seele and Lock 2014; Yusoff, Mohamad, and Darus 2013; Courtis 2004; Nazari, Hrazdil, and Mahmoudian 2017) alongside frameworks for linguistics-based fraud detection within annual reporting, both legally required and voluntary (Sorkun and Toraman 2017). There are innumerable factors that can influence the impact of CSR efforts, such as an ill-fitting firm initiative having the same negative impact as a well-fitting initiative that is perceived by consumers as being strictly profit driven (Becker-Olsen, Cudmore, and Hill 2006).

This linguistic accessibility is a major factor in assessing the intent and efficiency of CSR reporting as it brings focus to the intended audience and the desired outcomes. Managers utilize CSR reporting in order to signal a firm's values, bolster social capital, and demonstrate both social consciousness and risk management strategy. In doing so the CSR report itself needs to be accessible, as proxied by the linguistic analysis tools deployed in this testing, to ensure that the firm's messaging is understandable to the diverse range of stakeholders, spanning average consumers to well-informed investors. As previously addressed, the intended audience for extensive firm-published CSR reports has narrowed to investors and engaged activists, but the firm may still benefit in terms of overall social capital from the act of publishing the reports. That is to say that in the eyes of the average consumer, the act of self-audit and report publication may be enough to garner goodwill, generating the desired outcome of a degree of social buffer in the event of a firm controversy (CSRHub and RepRisk 2015; Torres et al. 2012; Zygliodopoulos 2003). CSR Reports are, in case of a controversy, a tool for firm resilience and social capital (Rose 2017), allowing for a degree of leeway as stakeholders have a generally positive perception of the firm and so the controversy is seen as less detrimental than if the firm lacked that social capital.

1.4 Methodology

1.4.1 Data Collection

Data for this study was collected from Thomson Reuters Datastream. This source was chosen for several pivotal reasons; first, it is a commonly used tool by investors and finance professionals, who represent a key audience with a vested interest in the relationship between ESG and firm performance. Second, it draws on resources that both released by firms and that is released by third party organizations, meaning that it is not wholly reliant on one potentially biased source. Third, Thomson Reuters produces its own ESG data that is further explored later in the methodology that is well balanced, thoroughly researched, and did not undergo significant methodological changes during the timeline studied by this dissertation, ensuring that there are no significant disruptions in how the data is processed and presented. These factors combined allow for consistency, reliability, and a conscious attempt at impartiality (Alareeni and Hamdan 2020).

Data collected fell into one of two categories, financial or nonfinancial data. Financial data consisted of annual calculations of Return on Assets (ROA), Return on Invested Capital (ROIC), Return on Equity (ROE), Return on Sales (ROS), and Research and Development (R&D) for individual firms over the set time frame. Nonfinancial data consisted of annual metrics of ESG Score, Environmental Pillar Score, Social Pillar Score, Governmental Score, and ESG Controversy Score for individual firms over the set time frame. ESG Score is the overall calculation of Environmental Pillar Score, Social Pillar Score, Governance Pillar Score, and ESG Controversy Score, and serves as an overview of how a firm is performing from an ESG standpoint. Environmental Pillar, Social Pillar, and Governance Pillar Scores are calculated by Thomson Reuters with over three hundred individual data points spanning emissions ratings, gender pay parity, and board diversity. The ESG Controversy Score is a calculation of negative

press received by a firm for a given year, which represents negative social impacts for poor firm performance. As a trusted source for investors, the data Thomson Reuters provides is among the least biased in weighting practices, meaning that nonfinancial data wasn't unduly skewed toward one metric over another, as some ESG ratings agencies tend to favour one aspect, such as environmental scoring, more heavily.

Data was collected in two formats. First, firm data was downloaded from Thomson Reuters Datastream as a time series. This firm financial data and nonfinancial ESG data was collected at the same time using the same sequence of code for each firm, to ensure consistency. It is also worth noting that Thomson Reuters did not make any significant changes to its methodology prior to the date of data collection, meaning that the ESG data collected was consistent for the time period sampled. The second source of data was comprised of firm-published CSR reports. These reports are typically held in online repositories, either the firm's website or a digital archive. CSR reports were tracked down, downloaded, read, and analyzed through two software packages. Data was vetted to ensure reliability, meaning that I carefully examined all data collected to ensure there were no unreasonable outliers. CSR reports and financial data were stored in a cloud account on a secure, password-protected laptop. All analysis was kept on the University of Glasgow's OneDrive account with a mandatory password.

CSR reports were downloaded as pdfs and stored according to firm name and year. As there was no standardization of CSR reports in the timeframe studied, reports are inconsistent. This is to say that some years, some firms published an environmental report while other years, the same firm would publish an environmental report along with an anti-slavery report and political contributions report. As there was little consistency in this regard, all CSR reports were downloaded and stored according to year, which also offered an opportunity to learn more about where the firm's reporting values focused. That is to say that if a firm was primarily publishing

environmental reports then included an anti-slavery report, it is likely that the firm decided that it would become a necessity for social or regulatory reasons.

After the data was collected, it was refined into two datasets; (1) D142 comprised of all 142 firms in the tech sector that had consistent ESG scoring from 2004 – 2018, while (2) D21 is a subsect of D142 comprised of firms that had consistently published CSR reports from 2005 – 2018. D142 and D21 both contained the same financial and nonfinancial ESG data collected from Thomson Reuters. D21 further comprised of the linguistic analyses conducted on the CSR reports collected from firm websites and digital archives. Each firm in D21 published at least one nonfinancial CSR report, such as an environmental or social report about the firm. However, as the time period studied had no standardization or reporting requirements, the number of reports published was at the discretion of the firm, meaning that there were anywhere from one to five reports collected annually for each firm. The linguistic analysis run through RStudio produced a number value which was used to examine the accessibility of the CSR reports to determine how easily the average consumer would find the report to read. Since CSR reporting has been shifting to more of an investor audience, reports have gotten longer and, arguably, less easily accessible, but more rigorous, detailed, and standardized. This is further explored in the discussion on linguistic analysis and the Chapter 4: Resilience and Controversy discussion shortly.

1.4.2 Testing

The data collected was tested using two software packages, STATA and RStudio. STATA is a widely used statistical software program used by economists for data testing and visualizations, capable of easily running the regressions necessary for this study. RStudio is an open-source software with a wide array of coding available for different forms of statistical analysis and testing. For the purposes of this study, RStudio was used to analyze the CSR reports as PDF documents downloaded from

firm websites. The RStudio code used several linguistic analysis packages to analyze the readability of the documents, as discussed in more detail later. This coding has been included in this dissertation as Appendix 1. Both software products are reliable tools for analysis and are industry standard for academic use and were used in conjunction to best utilize their respective strengths, such as the variety of coding packages available for RStudio which allowed for streamlined linguistic testing and the ease of data organization and regression testing in STATA (Aouadi and Marsat 2016; Assaf et al. 2017; Bebbington, Larrinaga, and Moneva 2008; Broadstock et al. 2021; Lorenzo Sacconi ; Maas, Schaltegger, and Crutzen 2016).

The choice of industry was based on the Global Industry Classification Standards (GICS), a hierarchical classification system developed in 1999 by S&P and MSCI, used throughout the global financial community. The expression 'tech firms' describes firms that fall under the GICS definition of the technology sector. Within the Information Technology Sector (45) are three divisions: Software and Services (4510), Technology Hardware & Equipment (4520), and Semiconductors & Semiconductor Equipment (2530). While there are notable differences among the three subsections in terms of supply chain structures, ESG materiality[1], and firm structure, the overall industry is interconnected enough that these differences are relatively mitigated in this macro analysis. Future studies would benefit from narrower industry or firm case studies to assess the particularities of individual situations, as no two firms are the same and valuable insights may be gained from targeted analysis.

The tech sector was chosen for several key reasons. First, the tech sector is truly global from its supply chain to its markets to its product disposal sites. This is important in a macro industry study as this as it helps to control from country specific impacts, such

[1] This is to refer to ESG issues that are particularly prevalent for a firm or industry, such as manufacturing firms being more susceptible to challenges arising from environmental issues rather than social issues.

as the impact of the Chinese government's control efforts on its tech sector. Second, the tech sector is known for its fast-evolving approach, encapsulated in the former motto for Facebook of 'move fast and break things'. The concept of constant significant growth and perpetual innovation means that these firms must invest heavily in research and development while being sensitive to market trends that could negatively impact operations, such as concern over unfair labor practices or conflict mineral mining. As both a high-profile and future-oriented industry, the tech sector is trend setting and tends to attract significant activist and investor attention. Third, leaders in the tech sector have fostered relationships with their respective governments, as historically, the successful launch of a tech or manufacturing sector within a country was reliant upon a balanced investment from both private firms and government initiatives. These relationships create spheres of influence wherein tech leaders may connect directly with high-level government officials, influencing the creation of opportunities, blocking restrictive or challenging regulations, and negotiating elements of environmental packages to be lenient to the tech firm's raw materials interests.

Drawing on existing academic literature, this study will utilize a linear regression analysis using balanced panel data (Ahmed and Bhuyan 2020; Carnini Pulino et al. 2022; Galbreath and McDonald 2010; Garcia, Mendes-Da-Silva, and Orsato 2017; Duque-Grisales and Aguilera-Caracuel 2019), while controlling for market value and total assets in line with a significant portion of literature that controlled for firm size as well as year and firm fixed effects (Badulescu et al. 2018; Boukattaya, Achour, and Hlioui 2021; Margolis and Walsh 2001; Buallay 2019). Robustness was checked using the wald chi squared test and P values to ensure validity of significance. This will offer insight into the significance and magnitude of the relationships exhibited between the variables tested, ranging from firm performance (ROA, ROIC, ROE, ROS, and R&D) to ESG (ESG Score, Environmental Score, Social Score, Governance Score, and ESG Controversy Score) (Adascalitei 2015; Akben Selcuk and Kiymaz 2017). This analysis

will be further developed in the use of textual analysis to understand the role of linguistic accessibility in CSR reporting.

Building off a foundation of textual analysis (Nazari, Hrazdil, and Mahmoudian 2017; Yusoff, Mohamad, and Darus 2013), this study utilized an RStudio code which ran the following readability indices on a self-published PDF available on the firm's website: Flesch-Kincaid Grade Level (FGL), Gunning Fog (FOG), Coleman Liau (CLI), Simple Measure of Gobbledygook (SMOG), and Automated Readability (AR). While some academics settled for one or two of these metrics, it was beneficial and simple to run all five. The purpose of these indices is to quantify accessibility for the average reader in a variety of ways; (1) Flesch-Kincaid assesses word and sentence length, (2) Gunning Fog looks at the average sentence length and complexity of words, (3) Coleman Liau calculates letters and sentences per 100 words, (4) SMOG finds the number of three syllable words per thirty sentences, and (5) Automated Readability gauges the number of characters per word and words per character. These are all used to determine how complex the language is, as more complex words and sentences are more difficult for the average reader. There are two key points in detailing why CSR report readability is important to firm performance; (1) CSR reports serve as a proxy for a firm's investment in ESG initiatives, which this dissertation is working to understand the impact of on firm performance, and (2) CSR reports were initially designed for general stakeholder access, meaning that the intended audience ranged from average consumers to investors. These two aspects would both contribute to the public perception of a firm, ergo easily understood CSR reporting would serve to bolster a firm's social capital which, in turn, would cushion the negative backlash in the event of a controversy. These approaches are consistent with existing studies, but differ in that they are applied to a new sector and time period for replicability.

1.5 Overview of the articles included in the thesis

1.5.1 Chapter 2: Historical Evolution of CSR and ESG

Following the Literature Review in Chapter 1, Chapter 2 is a historical overview of the evolution of CSR from academic theory in the 1950s through quantified, wide-spread business practice of ESG in modern day. By analyzing the key literature and events that contributed to the current manifestation of CSR literature, several themes emerged. The 2005 switch from CSR to ESG was led by a collaboration between the UN and the financial sector, in part influenced by socially and environmentally conscious investors pressuring financial firms. As such, it was within the financial firm's interest to facilitate the process of the quantification and standardization of CSR into something measurable that firms could use for investment screenings, marketing purposes, or statistical testing. This chapter defines a clear, yet still unresolved, tension between stakeholder and shareholder theories and values, as the two concepts were largely at odds since the 1970s. However, the narrative surrounding CSR in common practice has shifted since the Global Financial Crisis of 2008, when business took a notable turn toward stakeholder value that has been gaining support ever since.

1.5.2 Chapter 3: ESG and Firm Performance

Chapter 3 examines the relationship between firm performance (ROA, ROIC, ROE, ROS, and R&D) and ESG scores. Consistent with previous work, this analysis yielded mixed results (Alexander and Buchholz 1978; Alareeni and Hamdan 2020). While ROA and ROIC are both positively correlated with ESG, ROE and ROS are mixed. ROA and ROIC are both long-term, strategic, managerial variables in the sense that they are heavily influenced by internal factors and management has significant control them, considering that managers decide on how to allocate funds and investments. The positive relationship demonstrated here is a clear indication that managers can create strategic value in tying ESG and economic metrics together in their long-term

planning. This is of practical benefit for managers as it shifts the concept of CSR from something excessive or outside of their mandated scope into a strategic tool for them to use in best accomplishing both economic and social goals.

While it may initially seem that the confused results of ROE and ROS stand in contradiction to the point made by ROA and ROIC, the short-term and externally influenced nature of these variables suggest otherwise. That is to say that ROE and ROS are both impacted by investor and consumer trends which can shift quickly and tend to fluctuate more often during the fiscal year. ESG investments tend to be long-term, such as multi-year goals to reduce carbon emissions, increase diversity in management, or audit supply chains for human rights abuses. These ESG goals take time to work through and for their benefits to manifest, as in the case of diversified management. It will take time for the right people to be found to promote, rather than simply tokenizing a person from an underrepresented community. As such, variables that are more influenced by short-term, external factors such as ROE and ROS are less likely to demonstrate a positive relationship with long-term ESG investments.

Interestingly, the relationship between R&D and ESG also proved mixed akin to ROE and ROS. This is likely due to R&D not being a metric of return, but rather a further investment process that is not necessarily going to manifest in the same financial means as the other firm performance metrics. While R&D and ESG are both long-term investments that could be mutually beneficial, there is also a degree of risk associated with R&D needs in terms of potential supply chain controversies. Everything from conflict minerals to human rights violations in supply chains can complicate R&D investments, but they tend to be exposed in the media rather than rooted out by the firm itself. In this way, R&D would benefit from strategic ESG investment but it is likely to take time before that investment can fully permeate the supply chains.

These two trends in returns-based firm performance metrics, juxtaposing long- and short-term outcomes, lend full support to the argument of *good management* wherein management is the driving force behind any value-add that ESG can produce. The mixed results found in R&D testing suggest that there has not been a successful merger of ESG and R&D efforts, but if the long-term managerial perspective is adopted then there could very well be an opportunity to develop a positive relationship in time.

1.5.3 Chapter 4: Resilience and Controversy

Chapter 4 begins by testing the linguistic accessibility of CSR reports before regressing the firm performance and ESG performance of D142 and D21 to compare side by side. Examining these two datasets next to one another, wherein D142 represents the wider industry and D21 is the industry subsect that has been publishing CSR Reports, demonstrates the significant impact that self-published CSR reports has on firm performance and resilience. Overall performance and, notably, resilience to controversy are both demonstrably more positive in D21 wherein the firm had been voluntarily publishing CSR reports. This clearly supports the argument that CSR reporting has a positive impact on social capital, however there was no demonstrable correlation between the linguistic accessibility of a CSR report and any sort of ESG scoring.

As the audience for CSR reports shifts towards investors more than general consumers, reports need not be accessible to all stakeholders but will be expected to have more actionable data as investors are looking for clear indications of ESG investment and risk assessment. CSR reports, most notably those focused on environmental issues, have gotten significantly longer and more complex over time. At the same time, general consumer communication has shifted more into the social media realm as, particularly within the culture of the tech sector, firms are putting out

tweets, posts, and blogs with snippets of information regarding their ESG policies. In this way, the signaling of publishing a CSR report is an effective tool in generating social capital while the CSR report itself can be used to communicate directly with investors. This is a clear evolution of the intended audience of CSR reports as they shift more toward financial and signaling tools.

1.6 Discussion, Future Studies, and Conclusion

This dissertation was structured in order to build off of existing findings of previous chapters. In the economics and management styles of distinct empirical chapters, I designed three chapters that offered a functional, practical assessment of the evolving relationship between CSR and firm performance. This intentionally highlighted the practical application and strategic utilization of CSR and ESG, as well as addressing the concurrent perspectives in academia and private / public sector partnerships. It served to fill in gaps in the literature by addressing the causes behind mixed or conflicting results in firm performance literature, clearly demonstrating that time horizon is a significantly impacting factor that must be taken into account as developments and nuances of relationships are lost when this relationship is tested strictly in aggregate, single year snapshots. Finally, this dissertation presented a clear analysis of the impact that CSR reporting has on firm performance and resilience in the event of a controversy, demonstrating that the signalling associated with report publishing may have an impact on the majority of consumers and that CSR reports are steadily becoming more tailored for investors, thus shifting the intended audience from all stakeholders to an invested selection.

Future studies would benefit from deeper examinations of particular firms, subsects of the tech sector, and country foci. While this dissertation took a macro approach to analyzing CSR impacts, a more focused micro analysis would yield particular strengths and weaknesses that academics and managers alike could benefit from. Internal or

micro analyses of ESG initiatives, from inception through goal achievement, should be encouraged with a particular focus on the impact on corporate organizational practices. It would also be of particular interest to study in more detail the relationship between ESG and R&D, as the focus on innovation and sustainability will only become more prevalent with the growth of green technologies.

This dissertation contributes to the overall body of work by presenting a clear evolution of not just CSR literature, but of how firm performance metrics have evolved in conjunction with ESG metrics and how CSR reporting has evolved through the standardization and metricization of ESG. Rather than taking a snapshot of the CSR and firm performance relationship, this study highlighted the necessity of time horizons in understanding this developing situation. It also furthered the literature in Porter's *good management theory* in examining the firm performance metrics used and offering a viable argument to explain why some variables are more appropriate for testing this relationship than others, by noting that short-term, externally impacted variables are inconsistent with the long-term, managerial nature of ESG investment.

All of this research contributes to a unified argument in support of *good management theory* that ESG is a positive long-term investment with economic benefits for firms in both financial performance and resilience. Beyond academia, this contributes to practical applications for management as it redefines CSR from being an extra workload to take on, to being a strategic tool for managers to consider in project management and risk assessment. With the rising interest in ESG and the accessibility of information on the internet, firms need to be aware of their impacts on stakeholders and environment to maintain their social license. It is becoming imperative from a regulatory and socially mandated perspective. It is a wise manager who strategically invests in ESG measures.

Appendix 1:

#TEXTUAL ANALYSES - RSTUDIO

```
#Flesch-Kincaid Readability Score                    Word length and
FGL <- textstat_readability(text_corpus,                    sentence length
                measure = "Flesch.Kincaid",
                remove_hyphens = TRUE,
                min_sentence_length = 1,
                max_sentence_length = 100000)

#Gunning Fog Index                                   Average sentence length and
FOG <- textstat_readability(text_corpus,                    number of complex
words
                measure = "FOG",
                remove_hyphens = TRUE,
                min_sentence_length = 1,
                max_sentence_length = 100000)

#Coleman-Liau Index                                  Letters per 100 words
and
CLI <- textstat_readability(text_corpus,                    sentences per 100 words
                measure = "Coleman.Liau.grade",
                remove_hyphens = TRUE,
                min_sentence_length = 1,
                max_sentence_length = 100000)

#SMOG                                                Number of 3 syllable
words
SMOG <- textstat_readability(text_corpus,                   per thirty sentences
                measure = "SMOG",
                remove_hyphens = TRUE,
                min_sentence_length = 1,
                max_sentence_length = 100000)
```

```
#Automated Readability Index
ARI <- textstat_readability(text_corpus,
                measure = "ARI",
                remove_hyphens = TRUE,
                min_sentence_length = 1,
                max_sentence_length = 100000)

?stats
library(help = "stats")

AVG <- ave(FGL[,2], FOG[,2], CLI[,2], SMOG[,2], ARI[,2])
```

Number of characters per word and number of words per character

Bibliography

Adascalitei, Simona. 2015. 'Measuring and Modeling Volatility Using High Frequency Data – Does Corporate Social Responsibility Make Any Difference?', *Procedia Economics and Finance*, 20: 1-7.

Ahmed, Rafiuddin, and Rafiqul Bhuyan. 2020. 'Capital Structure and Firm Performance in Australian Service Sector Firms: A Panel Data Analysis', *Journal of Risk and Financial Management*, 13.

Akben Selcuk, Elif, and Halil Kiymaz. 2017. 'Corporate Social Responsibility and Firm Performance: Evidence from an Emerging Market', *Accounting and Finance Research*, 6.

Akerlof, George A., and Rachel E. Kranton. 2005. 'Identity and the Economics of Organizations', *The Journal of Economic Perspectives*, 19: 9 - 32.

Al-Tuwaijri, Sulaiman A., Theodore E. Christensen, and K.E. Hughes II. 2004. 'The relations among environmental disclosure, environmental performance, and economic performance: a simultaneous equations approach', *Accounting, Organizations and Society*, 29: 447-71.

Alareeni, Bahaaeddin Ahmed, and Allam Hamdan. 2020. 'ESG impact on performance of US S&P 500-listed firms', *Corporate Governance: The International Journal of Business in Society*, 20: 1409-28.

Alexander, Gordon J, and Rogene A Buchholz. 1978. 'Corporate Social Responsibility and Stock Market Performance', *The Academy of Management Journal*, 21: 479 - 86.

Allouche, José, and Patrice Laroche. 2006. 'The Relationship Between Corporate Social Responsibility and Corporate Financial Performance: A Survey'.

Amatulli, Cesare, Matteo De Angelis, Daniel Korschun, and Simona Romani. 2018. 'Consumers' perceptions of luxury brands' CSR initiatives: An investigation of the role of status and conspicuous consumption', *Journal of Cleaner Production*, 194: 277-87.

Amel-Zadeh, Amir, and George Serafeim. 2018. 'Why and How Investors Use ESG Information: Evidence from a Global Survey', *Financial Analysts Journal*, 74: 87-103.
Aouadi, Amal, and Sylvain Marsat. 2016. 'Do ESG Controversies Matter for Firm Value? Evidence from International Data', *Journal of Business Ethics*, 151: 1027-47.
Assaf, A. George, Alexander Josiassen, Jin Sun Ahn, and Anna S. Mattila. 2017. 'Advertising spending, firm performance, and the moderating impact of CSR', *Tourism Economics*, 23: 1484-95.
Badulescu, Alina, Daniel Badulescu, Tomina Saveanu, and Roxana Hatos. 2018. 'The Relationship between Firm Size and Age, and Its Social Responsibility Actions—Focus on a Developing Country (Romania)', *Sustainability*, 10.
Bebbington, Jan, Carlos Larrinaga, and Jose M. Moneva. 2008. 'Corporate social reporting and reputation risk management', *Accounting, Auditing & Accountability Journal*, 21: 337-61.
Becker-Olsen, Karen L., B. Andrew Cudmore, and Ronald Paul Hill. 2006. 'The impact of perceived corporate social responsibility on consumer behavior', *Journal of Business Research*, 59: 46-53.
Boukattaya, Sonia, Zyed Achour, and Zeineb Hlioui. 2021. 'Corporate Social Responsibility and Corporate Financial Performance: An Empirical Literature Review', *International Journal of Innovative Research and Publications*: 1-32.
Broadstock, D. C., K. Chan, L. T. W. Cheng, and X. Wang. 2021. 'The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China', *Financ Res Lett*, 38: 101716.
Buallay, Amina. 2019. 'Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector', *Management of Environmental Quality: An International Journal*, 30: 98-115.
Carnini Pulino, Silvia, Mirella Ciaburri, Barbara Sveva Magnanelli, and Luigi Nasta. 2022. 'Does ESG Disclosure Influence Firm Performance?', *Sustainability*, 14.
Chen, Tsung-chun, Dong-Qiang Guo, Hsiao-Min Chen, and Tzu-ti Wei. 2019. 'Effects of R&D intensity on firm performance in Taiwan's semiconductor industry', *Economic Research-Ekonomska Istraživanja*, 32: 2377-92.
Courtis, John K. 2004. 'Corporate report obfuscation: artefact or phenomenon?', *The British Accounting Review*, 36: 291-312.
CSRHub, and RepRisk. 2015. "Does Corporate Social Responsibility Performance Affect Reputational Risk?" In.: CSRHub.
de Graaf, Frank Jan, and J. W. Stoelhorst. 2009. 'The Role of Governance in Corporate Social Responsibility', *Business & Society*, 52: 282-317.
de Jong, Menno D. T., and Mark van der Meer. 2015. 'How Does It Fit? Exploring the Congruence Between Organizations and Their Corporate Social Responsibility (CSR) Activities', *Journal of Business Ethics*, 143: 71-83.
Dicuonzo, Grazia, Francesca Donofrio, Simona Ranaldo, and Vittorio Dell'Atti. 2022. 'The effect of innovation on environmental, social and governance (ESG) practices', *Meditari Accountancy Research*, 30: 1191-209.
Duque-Grisales, Eduardo, and Javier Aguilera-Caracuel. 2019. 'Environmental, Social and Governance (ESG) Scores and Financial Performance of Multilatinas: Moderating Effects of Geographic International Diversification and Financial Slack', *Journal of Business Ethics*, 168: 315-34.
Freeman, R. Edward, and John McVea. 2001. 'A Stakeholder Approach to Strategic

Management', *SSRN Electronic Journal*.
Friedman, Milton. 1970. 'The Social Responsibility of Business is to Increase its Profits', *The New York Times Magazine,* 13-09-1970.
Fu, L., D. Boehe, and M. Orlitzky. 2020. 'Are R&D-Intensive firms also corporate social responsibility specialists? A multicountry study', *Res Policy*, 49: 104082.
Fukukawa, Kyoko, and Yoshiya Teramoto. 2009. 'Understanding Japanese CSR: The Reflections of Managers in the Field of Global Operations', *Journal of Business Ethics*, 85: 133-46.
Galant, Adriana, and Simon Cadez. 2017. 'Corporate social responsibility and financial performance relationship: a review of measurement approaches', *Economic Research-Ekonomska Istraživanja*, 30: 676-93.
Galbreath, Jeremy, and Gael McDonald. 2010. 'How does corporate social responsibility benefit firms? Evidence from Australia', *European Business Review*, 22: 411-31.
Garcia, Alexandre Sanches, Wesley Mendes-Da-Silva, and Renato J. Orsato. 2017. 'Sensitive industries produce better ESG performance: Evidence from emerging markets', *Journal of Cleaner Production*, 150: 135-47.
Guerrero-Villegas, Jaime, Laura Sierra-García, and Beatriz Palacios-Florencio. 2018. 'The role of sustainable development and innovation on firm performance', *Corporate Social Responsibility and Environmental Management*, 25: 1350-62.
Gupta, Atul, Kartik Raman, and Chenguang Shang. 2018. 'Social capital and the cost of equity', *Journal of Banking & Finance*, 87: 102-17.
Helm, Sabrina, and Julia Tolsdorf. 2013. 'How Does Corporate Reputation Affect Customer Loyalty in a Corporate Crisis?', *Journal of Contingencies and Crisis Management*, 21: 144-52.
Hernández-Murillo, Rubén, and Christopher j Martinek. 2009. "CSR Can Be Profitable." In.: The Regional Economist.
Humpherys, Sean L., Kevin C. Moffitt, Mary B. Burns, Judee K. Burgoon, and William F. Felix. 2011. 'Identification of fraudulent financial statements using linguistic credibility analysis', *Decision Support Systems*, 50: 585-94.
Li, Changhong, Jialong Li, Mingzhi Liu, Yuan Wang, and Zhenyu Wu. 2017. 'Anti-misconduct policies, corporate governance and capital market responses: International evidence', *Journal of International Financial Markets, Institutions and Money*, 48: 47-60.
Liberti, José María, and Mitchell A Petersen. 2018. "Information: Hard and Soft." In.: National Bureau of Economic Research.
Lorenzo Sacconi, Giacomo Degli Antoni. 'Social Capital, Corporate Social Responsibility, Economic Behaviour and Performance INDEX'.
Maas, Karen, Stefan Schaltegger, and Nathalie Crutzen. 2016. 'Integrating corporate sustainability assessment, management accounting, control, and reporting', *Journal of Cleaner Production*, 136: 237-48.
Margolis, Joshua D., Hillary Anger Elfenbein, and James P. Walsh. 2009. 'Does it Pay to Be Good...And Does it Matter? A Meta-Analysis of the Relationship between Corporate Social and Financial Performance', *SSRN Electronic Journal*.
Margolis, Joshua Daniel, and James Patrick Walsh. 2001. *People and Profits? The Search for a Link Between a Company's Social and Financial Performance* (Psychology Press).
Marlin, John Tepper, and Alice Marlin. 2003. 'A Brief History of Social Reporting', *Business Respect*, 51.
Mendoza-Fong, José, Jorge García-Alcaraz, Emilio Jiménez Macías, Nancy Ibarra Hernández, José Díaz-Reza, and Julio Blanco Fernández. 2018. 'Role of Information and

Communication Technology in Green Supply Chain Implementation and Companies' Performance', *Sustainability*, 10.
Miroshnychenko, Ivan, Roberto Barontini, and Francesco Testa. 2017. 'Green practices and financial performance: A global outlook', *Journal of Cleaner Production*, 147: 340-51.
Nazari, Jamal A., Karel Hrazdil, and Fereshteh Mahmoudian. 2017. 'Assessing social and environmental performance through narrative complexity in CSR reports', *Journal of Contemporary Accounting & Economics*, 13: 166-78.
O'Riordan, Linda, and Jenny Fairbrass. 2008. "CSR Models & Theories in Stakeholder Dialogue." In.
Orlitzky, Marc, Frank L. Schmidt, and Sara L. Rynes. 2003. 'Corporate Social and Financial Performance: A Meta-Analysis', *Organization Studies*, 24: 403-41.
Padgett, Robert C., and Jose I. Galan. 2009. 'The Effect of R&D Intensity on Corporate Social Responsibility', *Journal of Business Ethics*, 93: 407-18.
Perrault, Elise, and Michael A. Quinn. 2016. 'What Have Firms Been Doing? Exploring What KLD Data Report About Firms' Corporate Social Performance in the Period 2000-2010', *Business & Society*, 57: 890-928.
Porter, Michael E, and Mark R Kramer. 2011. 'Creating Shared Value', *Harvard Business Review*, 89: 62-77.
Porter, Michael E., and Mark R. Kramer. 2006. 'Strategy & Society: The Link Between Competitive Advantage and Corporate Social Responsibility', *Harvard Business Review*, 84: 78-92.
Rose, Adam 2017. 'Defining and Measuring Economic Resilience from a Societal, Environmental and Security Perspective', *Integrated Disaster Risk Management*.
Seele, Peter, and Irina Lock. 2014. 'Instrumental and/or Deliberative? A Typology of CSR Communication Tools', *Journal of Business Ethics*, 131: 401-14.
Sorkun, Murat Cihan, and Taner Toraman. 2017. 'Fraud Detection on Financial Statements Using Data Mining Techniques', *International Journal of Intelligent Systems and Applications in Engineering*, 3: 132-34.
Steinberg, Marc. 2019. *The Platform Economy*.
Torres, Cristina A Cedillo, Mercedes Garcia-French, Rosemarie Hordijk, Kim Nguyen, and Lana Olup. 2012. 'Four Case Studies on Corporate Social Responsibility: Do Conflicts Affect a Company's Corporate Social Responsibility Policy?', *Utrecht Law Review*, 8.
Tremblay, Monica Chiarini, Carlos M Parra, and Arturo Castellanos. 2015. "Corporate Social Responsibility Reports: Understanding Topics via Text Mining." In *Twenty-First Americas Conference on Information Systems* Puerto Rico.
Ullmann, Arieh A. 1985. 'Data In Search of a Theory: A Critical Examination of the Relationships among Social Performance, Social Disclosure, and Economic Performance of U. S. Firms', *The Academy of Management Review*, 10: 540-57.
Vayre, Émilie. 2022. "Digitalization of Work." In *New Spaces and New Working Times*, edited by Émilie Vayre.
Vlachos, Pavlos A., Nikolaos G. Panagopoulos, and Adam A. Rapp. 2013. 'Feeling Good by Doing Good: Employee CSR-Induced Attributions, Job Satisfaction, and the Role of Charismatic Leadership', *Journal of Business Ethics*, 118: 577-88.
Westermeier, Carola. 2020. 'Money is data – the platformization of financial transactions', *Information, Communication & Society*, 23: 2047-63.
Whelan, Tensie, Ulrich Atz, Tracy Van Holt, and Casey Clark. 2021. "ESG and Financial Performance: Uncovering the Relationship by Aggregating Evidence from 1,000 Plus

Studies Published between 205 - 2020." In.: NYU Stern Center for Sustainable Business and Rockefeller Asset Management.
Willness, Chelsea R. 2019. 'When CSR Backfires.' in Abagail McWilliams, Deborah E. Rupp, Donald S. Siegel, Günter K. Stahl and David A. Waldman (eds.), *The Oxford Handbook of Corporate Social Responsibility*.
Xu, Jian, Feng Liu, and Yue Shang. 2020. 'R&D investment, ESG performance and green innovation performance: evidence from China', *Kybernetes*, 50: 737-56.
Yusoff, Haslinda, Siti Salwa Mohamad, and Faizah Darus. 2013. 'The Influence of CSR Disclosure Structure on Corporate Financial Performance: Evidence from Stakeholders' Perspectives', *Procedia Economics and Finance*, 7: 213-20.
Zygliodopoulos, Stelios C. 2003. 'The Issue Life-Cycle: Implicaitons for Reputation for Social Performance and Organizational Legitimacy', *Corporate Reputation Review*, 6: 70-81.

Introduction

Since the turn of the century the concept of Corporate Social Responsibility (CSR) has been catching on as both a marketing goldmine and a buffer in case of a corporate reputational emergency. As this dissertation will demonstrate, CSR has evolved from an unregulated theory into ESG, the institutionalized, quantifiable version in the process of being standardized at a global scale. The most common theme from the conceptualization of CSR has been to question how these practices impact firm performance. While the majority of studies have found a positive correlation, there have been mixed, negative, or no relationships found as well (Margolis and Walsh 2001). This dissertation will contribute to this body of literature through robust testing of several firm performance variables and exploring the differing relationships among predominantly American high-tech firms, while also examining the impact of reporting on resilience, as the ability to bounce back from major shocks.

While there is a demonstrably positive relationship between different firm performance metrics and ESG, the shape and significance of the metrics differ. As both ESG metrics in their measurements and scope, and the nature of firm financial metrics (compliments of an increasingly digital society, complex global value chains, and platformization) have been changing over the last several decades, the relationship between the two types of metrics has become more complicated, even more tenuous with digitization and supply chains, while remaining largely positive. Interestingly, the continued refinement of CSR reports through linguistic and content development appears to have no impact on this overall dynamic. As reports become largely standardized and firm communication shifts toward social media instead of unregulated firm publications, CSR reports will become more specialized, targeted, and commonplace for specific firm messages.

The primary research question of this dissertation asks how the positive relationship between CSR and firm performance manifests from a practical, applicable standpoint. To properly assess this relationship, this thesis is essentially divided into past, present, and future. The first chapter examines the past in the evolution of CSR into ESG and the factors that influenced this development. This is critical for understanding how CSR has become mainstream, what challenges businesses face in CSR implementation, and what direction it is likely going in. In this analysis, the impact of ESG on firm performance is studied as it presents the economic arguments that current managers must address. From a future standpoint, this dissertation examines how ESG impacts a firm in the event of a controversy, for which foresight and strategic planning are key. Social capital is developed in the publishing of CSR reports as a means of preparing for a future controversy and potentially lessening the negative impacts that a firm may experience. These concepts are addressed in the three chapters following the literature review, which address three separate hypotheses.

The first hypothesis is: *how did the evolution and increasing institutionalization of CSR lead to the standardization of ESG?* This is assessed by examining the evolution of CSR as a concept, from both an academic and a practitioner standpoint into its modern iteration of ESG. This will include governmental initiatives, influences from the private financial sector, and the growing impact of globalization and platformization. Following the conception of the term 'ESG' in 2005 through a joint UN and financial sector report, ESG has been rapidly gaining global attention through a litany of public, private, and third sector efforts. The Covid-19 pandemic saw a public interest spike in ESG and international calls for standardization. Bringing all these factors together allows for a more thorough appreciation for both where CSR has come from and where ESG is going.

Building upon this, the second hypothesis draws from existing literature: *is ESG positively correlated with firm performance*? This chapter will contribute to existing

literature with an innovative approach and address argumentative gaps that fail to explain the differences between firm performance metrics and their specific interactions with ESG. In analyzing this relationship through several accounting metrics over a fifteen-year time frame, rather than as a single aggregate value as is common in CSR literature, this approach offers significantly more insight into the evolving relationship between ESG and firm performance. It finds that the relationship is best understood from a longer strategic timeframe (ROA and ROIC), with a positive relationship emerging for long-term strategic metrics while juxtaposed by no relationship emerging with short-term metrics (ROE and ROS). CSR literature predominantly finds a positive relationship which this research supports, but it has also struggled to properly examine the negative or mixed results which this research works to clarify.

The next step in this analysis leads to the third hypothesis: *is CSR reporting beneficial for controversy recovery and firm resilience?* That is to say that the impacts on firm performance in the event of a controversy are, to a significant degree, mitigated when firms have demonstrable ESG strategies in place. This is partly done by assessing the accessibility of CSR reports through linguistic analysis which, interestingly, found no significant relationship while the firms that published reports fared better than those that didn't. This is likely a difference among the target audiences for the CSR reports themselves, as casual consumers may be positively influenced by the perceived good behavior entailed in the act of publication itself, while the savvy investor would gauge the reports as a means of risk management and long-term strategic planning.

These three hypotheses build to an overall assessment of how ESG impacts firm performance from a practical application standpoint, in that they address the history, current performance, and future risk analysis of the relationship. It explores why a firm may wish to focus on long-term strategic ESG planning both as a general financial decision and as a combination of risk assessment and social capital buffer in case of

an emergency. In doing so, this thesis creates a strong argument in favor of the Porter theory which argues that CSR is essentially a manifestation of good management in that it demonstrates long-term planning, sensitivity to social trends that may impact economic performance, and managerial diligence.

Three Hypotheses:

4. *How did the evolution and institutionalization of CSR lead to an increasing standardization of ESG?*
5. *Is ESG positively correlated with firm performance?*
6. *Is CSR report beneficial for controversy recovery and firm performance?*

Thesis Structure

The structure of this thesis has been influenced by both Economic History and Economics, and as such will be presented in a hybrid format. Following influence from Economics, this thesis will be essentially comprised of three distinct empirical papers that could be published separately. Ergo the introduction of each chapter will expand upon specific topics introduced in the literature review and a more thorough examination of the methodologies implemented.

In the following chapters, I will explore the evolution of CSR into ESG, how CSR potentially impacts a firm's financial performance, and test the relationship between reporting and resilience in the face of controversy. Throughout the development of CSR into its modern iteration of ESG, hundreds of academic studies have sought to answer the elusive question how CSR affects or enhances firm performance. This dissertation contributes to this literature by focusing on the particularly salient tech industry, while simultaneously exploring different aspects and measurements of firm performance. While much of the academic literature has taken an aggregate approach to data testing, this study will analyze the evolution of the relationships over a fifteen-

year time frame, creating an opportunity for deeper assessment of impactful trends and fluctuating impacts. It is intended to give a more holistic understanding of the impact of CSR within an industry that impacts every life on this planet, directly (such as active product usage, human rights throughout the global value chain) and indirectly (such as environmental impacts from improper product recycling or rare earths mining).

Data for this study is collected in part from Thomson Reuters, a respected source of financial and nonfinancial (ESG) data that stretches back to the 1990s, making it appropriate for the time frame studied (Chapters 3 and 4). Thomson Reuters also publishes ESG data, with no significant changes to methodology until after the data collection for this study had been conducted. As it is a resource primarily used for a wide range of investors, the ESG data is more equally weighted than in other ESG indices, making the analysis more balanced between the three ESG pillars (Environmental, Social, and Governance) (Reuters 2022). The other data source used in this dissertation (Chapter 4) are the CSR reports published by firms themselves, which were read and examined through linguistic analysis using the open-source coding software RStudio and linguistic analysis packages in line with previous authors (Nazari, Hrazdil, and Mahmoudian 2017; Nilipour, De Silva, and Li 2020). These reports are primarily available on the firm's website but have also been collected from digital archives when necessary and available. These two data sources offer both quantitative and qualitative data in the financial and nonfinancial data collected, allowing for a balanced and detailed analysis.

Data tested in Chapters 3 and 4 are comprised of firms that meet the Global Industry Classification Standard (GICS) definition of the technology sector. This data has been collected from Thomson Reuters DataStream. While there are unique subsectors (software & services, technology hardware & equipment, and semiconductors & semiconductor equipment), the industry is deeply interwoven between GICS subsects.

Significant impacts upon one element of the technology sector, such as a controversy negatively impacting a leading firm, is likely to have ripple effects throughout the overall sector (Miller 2022). The technology sector was therefore studied as an overall sector in order to allow for a macro analysis of trends. Future studies would benefit from a deeper dive into specific subsectors.

From this classification of data, two datasets were created. The first was the overall dataset comprised of 142 firms which had financial and ESG data dating back to 2005, henceforth referred to as D142. D142 was used in Chapter 3 to analyze the relationship between several metrics of firm performance and ESG metrics, with split results. Two metrics of firm performance (ROA and ROIC) are positive correlated while the other two metrics (ROE and ROS) showed no relationship. This lent insight into the overall debate as it is essentially a difference of long-term managerial planning (ROA and ROIC) and short-term external impacts (ROE and ROS). The second dataset used was a subsection of the 142 firms, comprised of the 21 firms that have been publishing CSR reports during this entire time frame, referred to as D21. Chapter 4 compared the results of D142 with D21 to offer an insight into the impact that CSR reporting has on the impacts of controversy and resilience. It found that the firms of D21 that had been publishing CSR reports fared better than the industry average demonstrated in D142. This is likely due to long-term strategic planning, ESG as a tool for risk management, and the social capital developed in the process of CSR report publication. These topics are explored at length in the chapters that follow.

Chapter 1 will begin with a review of the literature as it relates to CSR / ESG and its impact on firm performance, reporting, and resilience to controversy. To do so, it will utilize the most used metrics of firm performance in this body of literature: Return on Assets (ROA), Return on Invested Capital (ROIC), Return on Equity (ROE), and Return on Sales (ROS). As the tech sector is highly innovation-dependent, it will also examine Research and Development. I will develop this analysis further by using linguistic and

content analyses to explore the development of CSR reporting for 2005 – 2019 and how this may impact a firm's ability to withstand shocks and potentially damaging negative media attention in the form of the ESG Controversy Score. It will include a discussion of the variables involved and a thorough description of the methodology.

Chapter 2 will explore the evolution of CSR into ESG through historical and academic analysis. The particular forces that shaped the development from vague concept to quantified, standardized common practice have created the environment for future development, meaning that this historic foundation will set the tone for the coming years as ESG standards evolve further. As ESG is in the early stages of standardization, it is important to understand how globalizing market forces and international collaborative efforts shaped this value-driven evolution as it essentially metricized stakeholder value.

Chapter 3 builds off the plethora of studies that have explored this value-driven relationship between ESG and firm performance, utilizing specifically the tech sector as its dataset of 142 firms. It finds how the most used metrics of firm performance reveal two distinct patterns of significance when regressed with ESG metrics, one of which is distinctly Positive while the other is Mixed. While this lends credence to the overall argument that the relationship is highly complex and requires further study, this study works to explain *why* these relationships are evolving and how the confused results are shaped by platformization and globalization. These firm performance metrics are impacted by industrial trends, such as the outsourcing of assets by Western tech firms in favor of leasing out intellectual property, meaning that the firm performance metrics themselves are evolving alongside the ESG metrics which makes assessing the relationship between firm performance and ESG measures even more difficult. This study assesses both the aggregate relationship between ESG and FP metrics as well as the relationship over time to offer an overview of development.

Building off Chapter 3, Chapter 4 focuses on a smaller dataset comprised of only 21 firms that demonstrated a consistent history of publishing CSR reports and examines how it relates to shocks to the industry. This is a means of testing the importance of reporting itself as a tool of resilience and stakeholder connection, as perceptions of transparency and authenticity impact the social cushion a firm can foster in case of controversy or crisis. In breaking with previous findings, this study finds that the reports themselves appear less important than the publishing of such reports, as there is a weak relationship between linguistic analysis as a gauge for reporting quality and performance, suggesting that the signaling of firm values that occurs in the act of publishing the report itself is of more importance than the contents. The tech industry, in creating new ways to communicate via social media, essentially shaped its own communication landscape so that the CSR reports it puts out are only valuable to a small percentage of invested stakeholders and investors, while the majority of the firm's communication with consumers can occur through brief social media posts. However, the findings also indicate a stronger positive relationship between ESG metrics and firm performance in firms that consistently published reports while these firms experienced more significant ESG controversies, precisely because of their openness. Transparency, especially for strongly public firms, can be a double-edged sword.

Chapter 5 will conclude with the important themes and discoveries of this dissertation, most notably as they relate to the current state of CSR through its historical roots and the potential for future studies. Further, it will position the key findings and analysis of this dissertation within the wider body of CSR literature. This work has contributed to the overall understanding of the nature of the impact of ESG upon firm performance and has contributed meaningfully to academic and practitioner engagement with ESG literature.

Key Findings

Interest in the relationship between CSR and firm performance evolved dramatically in the latter half of the 20th century[2]. With well over two thousand unique studies testing the direction of causality, significance of impact, and potential confounding factors, it is a uniquely interesting field of study because of the great variety of findings. As CSR is further quantified as standardized ESG metrics and is the preferred term now in business practice, this study will utilize ESG as the preferred term for calculating individual scores. CSR will be used to denote the overall concept of corporate citizenship or stakeholder value, whereas ESG will refer to the specific variables used for testing. The significant relationship, or lack thereof, between different aspects of ESG and the innumerable ways to measure firm performance across completely different industries in different political and economic climates, has yielded studies that contradict and challenge one another (Chapter 2). I will contribute to this discourse by analyzing firm performance and CSR through ROA, ROIC, ROE, ROS, and R&D, mindful of their evolution, to better explain why these discrepancies exist and what they tell us about the nature of this complex relationship. With ESG moving toward mainstream acceptance and standardization, it is more important than ever to understand how ESG variables actively impact firm performance.

CSR reporting began as a voluntary practice, but the international interrelatedness and investment brought about by the internet and especially financial globalization has led to demands for transparency and accountability that far exceed any previous expectations. With a major growth spurt during the Covid-19 pandemic, firms publicly invested heavily into CSR initiatives and ESG investments, while simultaneously

[2] This dramatic analysis growth isn't limited to academia. In their assessment of both academic and practitioner reports, Peloza (2009) found significant differences in the variables used, largely due to data availability (internal practitioners would clearly have access to firm data that most academics wouldn't). While most reports were quite consistent, practitioner reports tended to favour intermediate metrics as they are more likely to highlight internal, short-term benefits of CSR initiatives.

creating a large swath of new job positions for ESG professionals. From personal observation, many of these positions have appeared in some form of a marketing or communications lens, suggesting that firms are highly aware of the need to communicate their desirability and ESG credentials to attract further investments[3]. These communications are spreading beyond unregulated CSR reports to verified non-financial reporting for stock exchanges, virtually published reports, and even social media presences. ESG investing alone is a major growth sector. ESG has quickly grown into a multimillion dollar industry, with Verdantix research finding a projected 17% CAGR[4] from 2022 – 2027, for the market of all ESG related industry including investing to reach $16 billion by 2027 (Knickle, Molero, and Renshaw 2022). However, following the Covid Pandemic's mad rush into ESG is a newfound hesitation as firms and stakeholders have begun to question the efficacy and actual relevance of ESG in performance. For instance, Demers et al (2021) found that the benefits derived from covid-era investments were *not*, as previously argued, from the positive benefits of ESG but rather from increasing investment in intangible assets, as this protected stocks from shocks to the global supply chain.

These CSR / ESG investments and reports have not been simply to satisfy external stakeholders. Many academic studies have largely found a positive link between firm performance, resilience to controversies, and general social capital when a firm invests in CSR and relevant reporting. CSR has often been touted not only as a signal of good global citizenship, but also as performance enhancing. However, there are new challenges to these predominantly positive findings as recent literature tends to argue now the Covid-era ESG obsession was seen through rose-colored glasses and the multi-variable metrics are too complicated to assess a clear relationship to

[3] Unfortunately, the departmental placement of these jobs communicates a firm investment that is more geared to public perception than actual impactful change. Roles placed in marketing departments aren't exactly known for their ability to institute real change throughout a firm's operations.

[4] Calculated Annual Growth Rate

performance (Barauskaite and Streimikiene 2020). That is to say that the practicality of ESG implementation and ratings are currently under fire as the impartiality of methodologies, the difficulties of standardization and measurement, and use of ESG as a risk management tool are being called into question (Tett 2022; 1in1000 and 2investinginitiative 2022; Steffen 2021).

The tech sector is also particularly notable for the range of international partnerships, both inter-industry and with governments, that have shaped its ESG approaches and the extensive structures of their global value chains. Similarly, the evolution of CSR has been defined by partnerships, such as the joint work of the UN and the financial sector to reframe CSR as ESG or countless collaborations between private firms and NGOs for social, human rights, and environmental causes. In response to the EU's CSR Directive, due diligence laws have risen from France, Norway, and Germany (Miccoli 2022). The challenges and issues addressed here are too large for a single entity to tackle on its own, and so they draw together networks of impassioned experts from often boutique consulting firms and expert NGOs. This has given rise to mutual collaborations to tackle specific ESG issues (primarily environmental or social in nature) in global value chains across the world such as avoiding conflict minerals to improving supplier responsibility to avoiding human rights or worker abuses. These partnerships have helped to shape the evolution of ESG reporting, leading to suggestions that ESG reporting is biased and fails to present an accurate assessment of firm behavior, an argument that is furthered by the slew of legislation brought against the Big Four Accounting firms for a variety of ethical violations in their biased auditing practices (Holmstedt-Pell 2021; View 2017). It is interesting, then, that these four firms are going to have a massive influence on the standardization of ESG reporting and assessment with input from the interindustry groups of the industries that are meant to be regulated (O'Dwyer and Edgecliffe-Johnson 2021).

This process of standardization began to crystalize with the 2005 UN Global Compact

Report, wherein the UN in conjunction with large financial firms interested in quantification, published *Who Cares Wins: Connecting Financial Markets to a Changing World* (2005). A year later, the UN Environmental Program Finance Initiative (UNEP-FI) published a report which "gave first evidence of ESG issues and discussed at length the concern of fiduciary duty in the use of ESG information in investment decisions" (Eccles, Lee, and Stroehle 2020). These two reports served as the foundation for the UN's Principles for Responsible Investment (UN PRI), launched in 2006 with global signatories & over $89 trillion in assets as of 2018. These three primary pillars are Environmental, Social, and Governance (ESG), each of which are delineated into smaller subsects, totaling over 100 points of consideration in reaching a final ESG score. This score is also impacted by an ESG Controversies metric, which measures negative press and lawsuits brought against a firm in a given year.

Firms are now expected to self-audit, report, and strive to be more ethical participants in society. This marks a distinct shift from Friedman's shareholder approach to the currently popular stakeholder capitalism, as consumer are demanding steadily increasing investments in society from companies. As Larry Fink of BlackRock wrote in his 2022 *Letter to CEOs,* "…in today's interconnected world, a company must create value for and be valued by its full range of stakeholders in order to deliver long-term value for its shareholders" (Fink 2022). The price of social legitimacy is rising, and firms are being held to perpetually higher standards. This is a massive reversal of Milton Friedman's famous missive, which in 1970 argued that CSR was tantamount to theft as it deprived shareholders of money that would otherwise go into their pockets. This was an early formulation of what would become the dominant ethos in business of shareholder value. The concept of responsibility has, thankfully, evolved beyond Friedman's restrictive stance that a firm's sole purpose was to generate as much money as possible for shareholders at the detriment of wider stakeholders (Friedman

1970). The price of social legitimacy[5] is rising, and firms are being held to perpetually higher standards. If they want to stay ahead of governmental regulations regarding environmental impact or social statistics, they must prove that they can better manage themselves., which means being proactive in the protection of their continued social legitimacy.

Craig Deegan defines the circumstances of social legitimacy as "…organizations exist to the extent that the particular society considers that they are legitimate, and if this is the case, the society 'confers' upon the organization the 'state' of legitimacy" (Deegan 2002: 292). As such, companies exist in a state of constantly reaffirming their legitimacy, a state which is more precarious with the incredible speed of the internet and social media. Firms can quickly face public backlash and be 'cancelled' (which rarely results in the actual disintegration of a firm but can cause temporary economic pains). As firms shift more into intangible, digital spaces through platformization, this risk to legitimacy is more volatile than ever. Deegan's concept of social legitimacy has major implications for understanding firm resilience during controversies or crisis, which is tested in this study.

This cost of social legitimacy is especially relevant for the tech sector considering the shift onto platform economies. Platformization, the economic shift on to digital platforms, has become what Steinberg (2019: 1) dubbed the "keyword of our time" as its usage has exploded from (highly questionable) platform shoes to being "platform everything", as social media, ecommerce, even transportation has shifted on to digital platforms. This rise of interconnection has helped streamline the incredible growth of MNEs in the twenty-first century in a range of ways, such as the growing efficiency and simultaneous ecological impact of transportation services or the ability to

[5] Deegan's 2002 discussion of social legitimacy and social and environmental reporting serves as primary launch point for this particular line of research. It is interesting to note that among the primary reasons he cites for managerial CSR motivations is the mediating effect of social legitimacy as a reputational buffer in case of threats to a firm's legitimacy (Deegan 2002).

headquarter intellectual property in a tax advantageous jurisdiction while leasing it to other divisions within the firm. [6] With abundant opportunities for an MNE to avoid taxes where they operate, outsource harmful manufacturing practices to developing countries, or sidestep safety protocols in data privacy or production, the baseline responsibility to meet social legitimacy is increasingly a conscious effort that firms must analyze and adjust to.

This process of platformization is simultaneously complicating and rendering more transparent the evolution of ESG, across all industries. As more and more data is collected on a regular basis and complex software is used to gauge the environmental and social impacts of a firm, the expectations for a firm's investment into efficient (both economic and environment) practices increase. Greater transparency and efficiency leads to calls for greater accountability. As such, the rise of platformization, cloud computing, and increasing digitization of global value chains and the overall business landscape means that ESG expectations will continue to evolve and be in demand.

Consumers themselves are demanding higher environmental and ethical knowledge, so that this data often becomes a primary selling point of products themselves. This is easily demonstrated by the exponential rise in ethical sourcing organizations, such as Good On You (offers ratings of many mainstream fashion brands with sustainable alternative), EarthHero (zero waste online shopping, marketing itself as an alternative to Amazon), or Ecosia (tree-planting search engine seeking to draw consumers away from Google). For the tech sector specifically, privacy protections act as a

[6] Large multinational firms that are amassing power through strategic utilization of platform technologies have made a habit in recent years of purchasing smaller firms, arguing that it doesn't really count as monopolization since the smaller firms have different markets, such as Meta (previously Facebook) purchasing WhatsApp and arguing that the messaging platform is a wholly separate entity that merely falls under the same ownership as the flagship social media app. Most of these arguments have managed to pass in the plethora of court cases brought against tech giants.

counterweight to "surveillance capitalism" (Zuboff 2019). Privacy and personal data protection has become a major political issue that has arisen as digital transparency and digital literacy become more commonplace, meaning that stakeholders are becoming increasingly aware of themselves as the commodity as firms market and monetize their data. This demonstrates an evolution in the CSR realm, as it is no longer a matter of a firm impacting a negative externality on society, as in the case of pollution, but rather a firm directly and without consent exploiting its consumers for profit. As Kenney and Zysman so articulated, "…Google is monetizing our searches, Facebook is monetizing our social networks, LinkedIn monetizing our professional networks, or Uber monetizing our cars, they all depend on the digitization of value-creating human activities" (Kenney and Zysman 2016: 62). However, alongside this commercialization of our personal data is the forced transparency of firms as they are called out and pushed to communicate more openly, be it by consumers, advocacy groups, or governments. This push for transparency and accountability has brought to light the monetization of data and digital assets that consumers provide, inadvertently fueling the feeling that if tech firms can know all about you, you can know all about a tech firm. After all, if Google is going to make a profit off your search for a new mattress, you might as well know who you're in bed with.

There are some serious ethical issues with this shift toward digitization and platformization that have arisen recently. As these systems are designed and built by fallible people, it is becoming increasingly obvious that biases are being built into algorithms. The 2018 *Gender Shades* publication that led to the scandalous firing of Dr Timnit Gebru found that in facial recognition software, women of colour were misclassified 34.7% of the time, compared a meager 0.8% of misclassification of white men (Buolamwini and Gebru 2018). Alongside the social challenges are the environmental ramifications, as both the algorithmic revolution and the explosion of cloud computing that Kenney and Zysman cite as the primary technologies of the platform economy require huge electricity consumption to function (Kenney and

Zysman 2016: 64). These underlay the rising Internet of Things (IoT)[7] and industrial internet, both of which have been credited with streamlining and making energy and industrial outputs more efficient, thus conserving resources. However, this is balanced against the rising demand for these products, increased global trade, and the sheer electronic consumption needed to run these services. In short, the tect sector has a unique footprint of environmental, social, ethical, supply chain, and governance issues that make it an ideal industry to study how CSR / ESG reporting affects firm performance.

When discussing ESG issues, modern business-speak has adopted the expression 'negative externality' to capture any negative impacts to third parties. These negative externalities are typically the result of environmental pollution, poor worker conditions being outsourced to developing economies, or congestion in a city like San Francisco that have become tech centers. Alongside this concept is that of ESG materiality, wherein the specific aspects of ESG are measured in financial terms, such as the fiscal costs and benefits of lowering carbon emissions. These concepts are discussed further in the following Literature Review.

This study will focus on the evolution of CSR and ESG, using the global tech sector as its sample as it has grown exponentially over the last several decades, it is at the cutting edge of ESG[8] issues, and it is interwoven into virtually every other industrial

[7] As Mark Weiser said, "The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it" (1991: 94). The Internet of Things (IoT) is comprised of those indistinguishable tools that we adopt and that become almost invisible as a part of daily life, like our watches or headphones. We use these things without thought, while these tools are able to collect massive amounts of data on our habits (Madakam, Ramaswamy, and Tripathi 2015).

[8] Environmentally, the tech sector is a massive impact as it makes significant demands on mining, manufacturing, and energy production. Socially, platforms can be perpetuators of every kind of discrimination and radicalizing. From a governance standpoint, it doesn't seem like a moment has passed in the last three decades that didn't include a major tech firm locked in an anti-trust case trying to control attempted monopolizing.

sector from the production of new technologies to the cloud storage of business and government data to running global shipping logistics. As such, positive developments can be lauded and marketed by the firms they supply while negative externalities can drive potential clients to the competition. For instance, Google had landed a major contract with Project Maven, working with the US Department of Defense to refine artificial intelligence (AI) for improved accuracy to be used in warfare. Following internal blowback that argued the project was against Google's principles, Google chose to not renew the contract in 2019 and to release[9] a set ethical principles regarding the development of AI for the military (Statt 2018). This led to the Defense Innovation Board, an Obama-era group designed to connect top tech experts with military officials that includes executives from Google, Microsoft, and Facebook, releasing a set of ethical principles (Simonite 2019; Board 2019). Interestingly, after Project Maven, Google continued to undertake work for the US government without the same kind of internal blowback. The act of stepping back from Project Maven was effective in satisfying stakeholders, while not dramatically impairing Google's future collaborations. Major tech firms accept massive government contracts all the time, often with little trouble; but when there is blowback, it is in the firm's best interest to respect the calls from stakeholders. This example illustrates increased employee demands for socially conscious firm behavior and the extent to which a firm can be pressured into complying. Employee activism is rising, and employees are demanding more work with a clear conscience.

The primary goal of this study is to examine how ESG impacts a firm's performance through key accounting-based metrics (ROA, ROIC, ROE, ROS, and R&D), the evolution of reporting, and how these factors impact resilience to controversy or crisis. It finds support for the argument that CSR is good for firm performance in the

[9] These principles may have been kept internal or assumed as part of the Defense Innovation Board's publication of AI standards, of which Google is a member, as there doesn't appear to be such a set of principles available online.

case of all four return metrics and R&D, while demonstrating that the difference in significance is due to shifting financial and operational landscapes as a result of globalizing value chains. Further, the reports themselves don't appear to be an impactful as I anticipated while CSR communication is still important, suggesting that the existence of the information and the outreach attempt is important to consumers while the full content of a long report might be less important, a valuable support for a positive interpretation of signaling theory. Finally, firms with sustained CSR reporting demonstrated overall more positive results than their less-regularly-reporting counterparts, but also suffered more in the event of a crisis, in line with expectancy violations theory in that consumers will simultaneously reward and punish CSR communicative firms more significantly than their counterparts.

This is further explored in the following Literature Review.

Literature Review

1.1 Introduction

The theoretical landscape of CSR has grown exponentially since the term was coined in the early 1950s. What began as a management theory has expanded into other fields, from economics, to business management, to political science. While this has greatly developed the understanding and methodologies used, it also complicates an already vague concept by adding different lenses from different fields, such as how economics will take a significantly different approach to CSR than political science. For economics, CSR is a mathematical equation, a cost-benefit analysis with confounding variables and a million different potential control variables. For business management, implementing CSR practices for different stakeholder audiences as a form of corporate communication, leaving aside its impact on financial performance is more salient. For politics, it is a question of how much the government should regulate firms, under what conditions, and how this impacts the overall power balance. This chapter reviews core conceptual frameworks for CSR and ESG, then discusses the issues with operationalizing ESG measures, then discusses academic studies that have tried to determine the relationship between CSR / ESG and firm performance specifically.

Definitions of CSR are consistently juxtaposed, as definitions are split along lines of anticipatory or reactionary, voluntary or mandated, intended to serve the public or to serve the financial bottom line. As economist R. T. Naylor (2011: 117) said, 'morality...seems not only ethno-politically selective but rises and falls with the market'. Wood, Logsdon, Lewellyn, and Davenport (2006), in their book *Global Business Citizenship,* discuss the concept of a Global Business Citizen (GBC). Their definition, '…a business enterprise (and its managers) that responsibly exercises its rights and implements its duties to individuals, stakeholders, and societies within and

across national and cultural borders' is close, but distinctly separate from CSR by one crucial factor; it does not mention voluntarily going above or beyond the legal requirements in a given society to be a good citizen. This definition keeps the ethical business within legal boundaries of a given society, which are subject to change from public and corporate pressures. CSR tends to emphasize voluntary social initiatives by the company itself that are non-mandated.

1.2 CSR

CSR is difficult to define. It has gone by many names over time, ranging from Triple-Bottom-Line to stakeholder theory. Some argue that it is rooted in the Triple Bottom Line (TBL - social, ecological, & financial), others that it is purely economic (such as Friedman's shareholder value emphasis, to be addressed later) and that complicating the concept with more than one bottom line would be a mistake. As George Steiner explained, 'business is and must remain fundamentally an economic institution, but…it does have responsibilities to help society achieve its basic goals and does, therefore, have social responsibilities. The larger a company becomes, the greater are these responsibilities, but all companies can assume some share of them at no cost and often at a short-run as well as long-run profit' (Steiner, 1971). Cai et al (2011) described CSR as '…an extension of firms' efforts to foster effective corporate governance, which ensures the sustainability of firms via sound business practices that promote accountability, information transparency, and corporate philanthropy.' This more modern definition is interesting in that it seems to side-step the hint of romanticism that some definitions adopt in their social consciousness-oriented perspectives[10]. Keith Davis of Arizona State University simplified the definition in 1973,

[10] By 'romanticized' concepts, I am referring to more vague philosophical views of the responsibility that humans owe to one another, of which there have been countless expressions throughout history such as investment in the spiritual well-being of the population of a utopian-inspired company town through the building of a local church (and the implied mandatory attendance) (Robinson 2021).

in simply stating that 'social responsibility begins where the law ends' (Davis, 1973, PP 313). While this definitive quality is appealing for its simplicity, Dow Votaw clarifies the challenges best in the following quote from 1973:

> 'The term [social responsibility] is a brilliant one; it means something, but not always the same thing, to everybody. To some it conveys the idea of legal responsibility or liability; to others, it means socially responsible *behaviour* in an ethical sense; to still others, the means transmitted it that of 'responsible for', in a causal mode; many simply equate it with a charitable contribution; some take it to mean socially conscious; many of those who embrace it most fervently see it as a mere synonym for 'legitimacy', in the context of 'belonging' or being proper and valid; a few see it as a sort of fiduciary duty imposing higher standards of behavior on businessmen than on citizens at large' (Votaw 1972: 25).

When visualizing these differing perspectives, Carroll's pyramid is a useful clarifying tool (1991). Depicted in Figure 1 below, it builds upon the responsibilities of a firm in a way that demonstrates the evolving expectations, as the economic and legal responsibilities are typically defined as required, ethical responsibilities are expected, and the philanthropic responsibilities are desired. In this way, the Milton Friedman approach to firm responsibility as being singularly to make money for shareholders is absorbed as a foundational expectation, upon which further responsibilities can be built (Friedman 1970). This logic argues that once a firm has its basic survival needs met, its obligations grow beyond survival mode and begin to incorporate actively ethical behaviors, such as ensuring that the firm's supply chain is free from child labor or human rights abuses. This is an important distinction as national governing bodies can be slow to act or to implement relevant legislation, while businesses, especially since the adoption of the internet and the incredible technological evolution of the last several decades, have the flexibility to adjust their operating practices more

quickly. This also means that firms have to be more cautious, as growing transparency means that consumers and stakeholders can expose poor practices more easily and negatively impact the firm.

Figure 3
The Pyramid of Corporate Social Responsibility

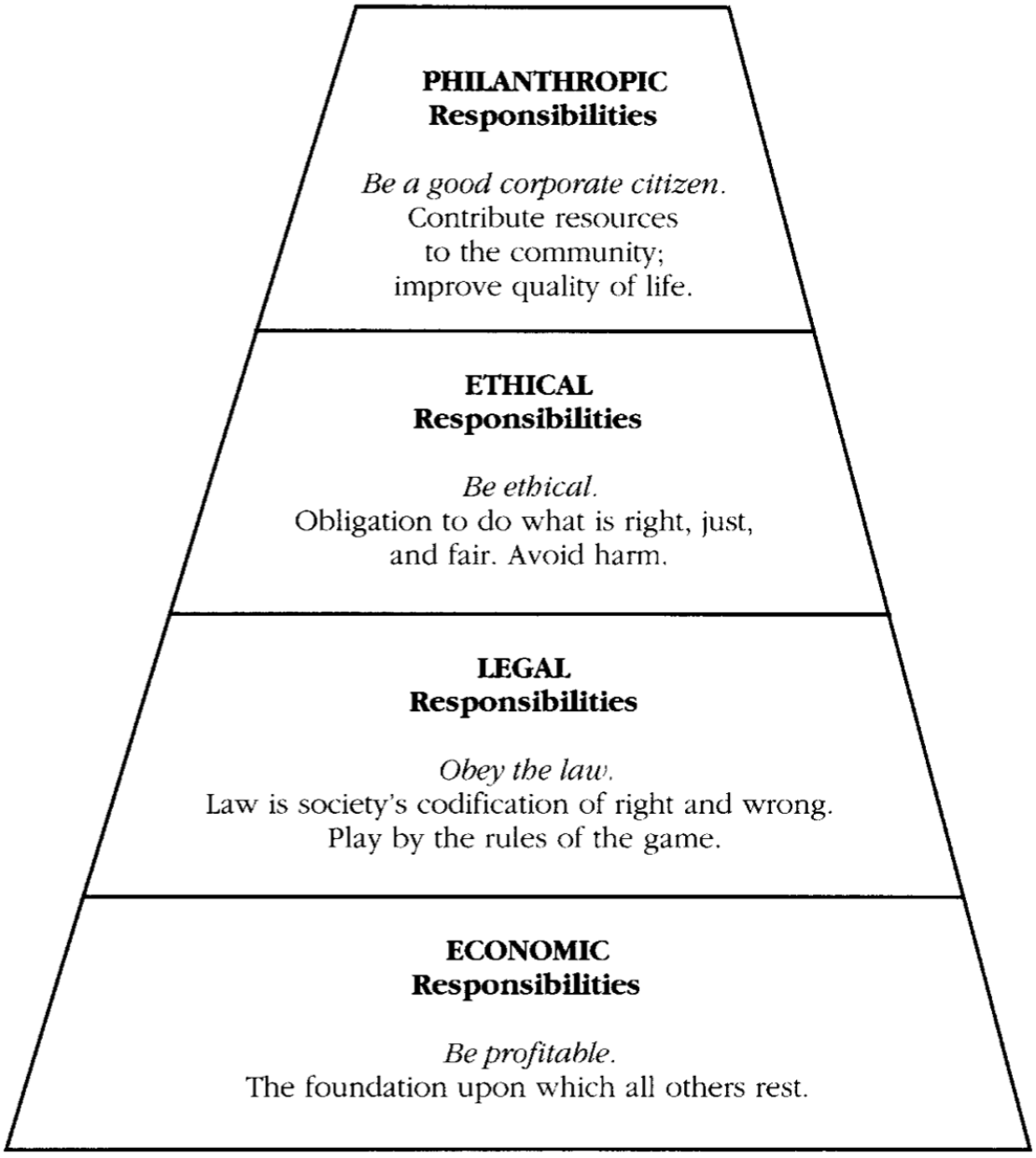


Figure 2 Carroll's CSR Pyramid

Given the interconnected nature of ESG issues and the growth in literature exploring the nuances of the field, Carroll revisited his pyramid with Schwartz (2003) and created the modified Three-Domain Model, shown in Figure 2 below. While not as popular, the Three-Domain Model does emphasize the overlap between otherwise distinct blocks of responsibility; there is clearly an expression of the inherent grey-zone and trade-offs in these complex issues. For instance, the environmental degradation of a community does not exist in a vacuum but is a major problem because of the wider environmental *and* human costs as locals lose access to clean drinking water, arable land, or entire livelihoods. It is impossible to fully separate out the interwoven inspirations for, benefits of, and drawbacks of CSR efforts.

Figure 3 Shwartz and Carroll, 2003

These definitions and layers leave space for fascinating interpretations. Porter and

Kramer (2006) pointed out that many firms were essentially blindsided by societal expectations only after they had violated given social norms, as in the case of Nike's child labor scandal. Four primary pro-CSR arguments are highlighted: moral obligation, license to operate, sustainability, and reputation. Of these four, the two of particular interest in this study are license to operate and reputation, as license to operate is essentially social legitimacy and reputation is deeply embedded in the impact of CSR reporting on resilience to controversy. As in Nike's case, the exposed scandal challenged both its license to operate following a violation of social norms and a major blow to its reputation that would haunt the firm for years (and ensure that it is still, two decades later, a primary example brought up in this area of literature) (Achabou 2020). Porter and Kramer make the argument that generic, inconsiderate CSR efforts are counterproductive as they reinforce the misrepresentation of the relationship between CSR and firm performance as being diametrically opposed forces, battling it out for firm resources. The Nike case may have sparked the focus on supply chain transparency and accountability, prompting some firms to begin release anti-slavery statements (Center).

As Porter and Kramer frame CSR as "…a source of opportunity, innovation, and competitive advantage" (2006: 80), the savvy firm would invest simultaneously in profits *and* purposes, as in the case of FairPhone. Fairphone's strategic approach to CSR is to incorporate it into existing product development in beneficial ways by drawing upon recycled materials and making products upgradeable. These products are designed to be easily upgraded by users and used components can be returned for recycling and material reclamation. This approach is economically, environmentally, and socially appealing as it saves on resources, saves manufacturing costs, and promotes social goodwill.

Legitimacy theory was first introduced by Preston and Post (1981), who argued "…the basic legitimacy of the corporation [is] as a form of social organization. The two are

closely linked, and the social legitimacy of the enterprise depends now, as it has in the past, on its ability to meet the performance expectations of its stakeholders" (pg 61). Having grown out of social contracts, defined by Shocker and Sethi (1973) as a two-pronged requirement for an organization to operate within society; first, it must deliver something deemed desirable to society, and second, it must distribute benefits to the society it serves in the form of economic, social, or political means. The scope of what defines a firm's responsibility to society has been evolving throughout business and social history and will continue to do so. Hence, the concept of applicable CSR implicitly defies concrete definition as it is subject to change with the shifting demands of society, which may serve as a benefit as it remains a constantly adapting concept. Legitimacy theory states that firms must evolve along with society's expectations in order to retain the public blessing needed to have a functional, profitable business operating within a society (Patten 1992; Brown and Deegan 1998).

As firms establish their legitimacy and expand into new social markets, they can manifest as one of four types of multinational enterprises (MNEs): exploitative, transactional, responsive, or transformative. In order of least to most socially invested, exploitative MNEs take advantage of the less stringent legal protections in a host country to exploit workers or resources; transactional MNEs are not as exploitational, but they do use legal benefits to gain a competitive advantage; responsive MNEs are more sensitive to stakeholder input and set a higher standard than demanded by basic legality; and transformative MNEs commit the firm's purpose to social investment and focus on meeting local needs (Bartlett and Beamish 2018). The firms that invest in their communities are also investing in social capital that should rebound positively for the firm's reputation and potential future performance.

The concept of social capital is defined by the OECD as the "…shared values and understandings in society that enable individuals and groups to trust each other and work together" (OECD 2001), and by economist Robert Putnam as "features of social

organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated action" (Putnam, Leonardi, and Nanetti 1994: 302). In the context of this dissertation, it is essentially the goodwill and trust a firm can build through positive impacts on its communities. Social capital, akin to legitimacy theory, is rooted in public acceptance of a firm which allows it to successfully operate in that society. For instance, a business that sells books is more likely to have the legitimacy and social capital to operate successfully, as it is accepted and supported by the communities it operates within, than a business attempting to sell baby toys that spontaneously combust.

When discussing social capital, the question of business scale arises as the impact of social capital on small- to medium- enterprise (SME) would differ from a larger one. Russo and Perrini stress the distinction between MNEs and SMEs in the relevance of stakeholder theory and social capital (2010). Essentially, stakeholder theory is more relevant to MNEs as they focus on strategic growth in numerous distinct markets, while social capital is more appropriate for SMEs as they operate in a smaller, focused environment with more direct consumer contact. Unlike large MNEs, SMEs tend to be institution-takers rather than influencers. Neither of these concepts are entirely independent of the other, as the concepts are similar while the idiosyncrasies of business scale vary. As this study is not limited to firms of a specific size or market share, both stakeholder theory and social capital will be used in their specific contexts.

These varying degrees of local investment when firms expand into other countries lead to differences such as the Shanghai versus California effect wherein the social norms of a business are exported to its operations outside of its home country. These are essentially two sides of the same coin, in the exportation of labor standards when MNEs outsource to new countries with varying legislative protections for the environment or workers, with the Shanghai effect being an exploitation of these weaknesses whereas the California effect is a corporate move toward stricter

legislation that helps the firm gain some form of social capital (Zhu and Lai 2019) . As firms are held to higher standards in one major market, it impacts the other markets they are active in. For instance, if Apple is touting its human rights practices in the US, there are stakeholder demands that it meet certain baseline criteria for its operations in China. Hence the California Effect, wherein higher standards in one region can lead to improvements in another. This may have contributed to the backlash against Apple when it was revealed that FoxConn, their Chinese manufacturer, was putting its employees in such incredible stress that several committed suicide. That event would be perceived by Western stakeholders as a violation of their expectations for basic human rights.

This leads to expectancy violation theory, wherein firms can benefit from publicizing their socially responsible actions, but the ramifications for CSR controversies is significantly higher. Essentially, consumers will support firms that support their ideological goals, but will also feel betrayed if the firm is revealed to have violated that faith (Lin-Hi and Blumberg 2016). The strategic, positive value of CSR can negatively compound the blowback firms experience in the event of a controversy. This strategic CSR can manifest as targeted philanthropy or internally driven CSR investing.

It is worth noting that Porter and Kramer themselves take umbrage with the term targeted philanthropy, as it is often simply a misrepresentation of cause-related marketing. As Varadarajan and Menon explain the concept of cause-related marketing as a marketing technique designed to improve corporate financial performance by associating products with a social cause (1988). This is particularly salient in the tech sector, with a 2020 report from IBM finding that consumers are falling into either value-driven or purpose-driven delineators with a greater percentage gravitating toward preferring sustainability in products than ever before (IBM 2020). The ecommerce revolution of the early 2000s allowed for a much broader range of

products and companies to choose from, and consumers are taking advantage of that range of selection to reward companies deemed purpose-driven at increasingly growing rates.

It is important to note the difference between CSR and philanthropy, as corporate philanthropic giving can be an element of CSR investment. In Porter and Kramer's 2002 publication *The Competitive Advantage of Corporate Philanthropy*, the authors cite statistics showing that the percentage of profit dedicated to corporate giving had dropped in the last 15 years by 50%, arguably due to executives being pulled in opposing directions: invest more heavily in CSR efforts while simultaneously maximizing short-term profits for investors (2002). The answer here is strategic competitive advantage, or targeted philanthropy. The authors note a spike in spending by US firms from 1990 to 2002, from $125 million to $828 million on cause-related marketing, hence arguing in favor of a win-win situation. Executives can invest in targeted philanthropic efforts and advertise those investments aggressively to capitalize on the social goodwill returns.

Akin to philanthropy, social activism and firm responses to it have been steadily rising with the enhanced reach of modern technology. Social movement organizations (SMOs) have shifted focus from primarily petitioning government bodies to targeting firms, demonstrating the shifting flexibility and power structures. In doing so, SMOs are pushing firms to adopt social management devices, an expression coined by McDonnell, King, and Soule (2015: 654) to describe a firm's practices or organizational adoptions intended to safeguard the firm's image and prepare for future challenges to firm reputation. When a firm institutes a social management device in the form of a Corporate Sustainability Officer (CSO), targeted social or environment initiative, or apologetic NGO donation, it shifts the firm's internal operations as the firm openly recognizes the impact that this negative pressure from an SMO can have (Odziemkowska 2021; McDonnell, King, and Soule 2015).

Multinationals can have farther reaching impacts than border-constrained governments. SMOs have modernized and diversified their campaigns, from overt physical protests like the Occupy Movement to establishing investment wings in order to influence firm boards (see Greenpeace and PETA). Collaborative partnerships between SMOs and MNEs can be mutually beneficial, as the firm profits from the SMOs' particular expertise while the SMO gains financial resources and a higher profile from multinationals, but at the risk of cooptation (Odziemkowska 2021). While these partnerships can be mutually valuable, there are inherent risks. If the firm in question is swept into a scandal, *especially* one around an issue that the SMO is involved with, it can be damaging to both organizations (McDonnell, Odziemkowska, and Pontikes 2021). Collaborative SMOs are those that strike up a partnership with a firm, while contentious SMOs are those that are actively campaigning against a firm or industry. In the case of a scandal, collaborative SMOs have felt the sting of negative press while contentious SMOs have benefitted from increased donations and support.

1.3 ESG

1.3.1 The Quantification of CSR into ESG

As a quite recent development over the last five years, CSR reporting has transformed into ESG metrics, which grew more from socially responsible investment practices (discussed more in Chapter 3). Rating and ranking organizations typically produce a quantified form of CSR metric in the ESG Score, which is calculated by proprietary methodologies of individual agencies. The ESG Score is the average between the three separate pillars of Environmental, Social, and Governance metrics, often with some form of counterbalancing risk or controversy metric. Some agencies include weighting for particular issues that are more prevalent for particular industries or regions, others don't. Some agencies will also produce a separate ESG Controversy

Score, which is a metric for how much negative PR a firm has received in a given time frame. As these ratings become more commonplace, more firms are adopting them as metrics of how well they're performing. However, the degree of standardization still needs to be taken with a grain of salt as firms have several ratings agencies to choose from and can pick whichever one weights variables in their favor. For example, a firm that is more focused on social issues may receive lower ESG scores from a ratings agency with more of an environmental focus, and so will choose to advertise the scores they receive from a different agency with more favorable methods. These ESG metrics are explained in more detail below as they are still undergoing considerable flux in their specific definitions and scope.

Environmental concerns are those that are related to a firm's impact upon the environment. There are several ways of understanding the degrees of responsibilities, typically referred to as scopes; Scope 1 contains the carbon emissions produced from direct operations such as transportation, Scope 2 expands to indirect emissions such as electricity that is produced by another company then purchased by the one in question for operations, and Scope 3 is the more broad umbrella of all emissions that the organization is directly or indirectly responsible for, such as the environmental impact of the disposal of a product. For example, a computer hardware firm's Scope 1 emissions would include the carbon emissions from the company-owned cars in its fleet, Scope 2 would be the firm's electricity, and Scope 3 would be the environmental impact of the firm's suppliers and all the manufacturing impacts that it takes to produce an item. Often when firms report on their environmental impact, they focus on Scope 1 with a dabbling of Scope 2, as these are the most within firm control, easiest for firms to actively track, and are significantly smaller than Scope 3. The environmental issues are the easiest to report on, as they are typically quantified in metrics such as carbon emissions, energy usage, or resource consumption. It gets more difficult when the scope of responsibility is expanded into the global value chain, as supply chains can be several dozen suppliers deep and difficult to fully map

down to the mining, let alone to assure supplier responsibility. Scope 3 emissions are still largely untraceable and difficult to track, but digitalization and new reporting initiatives may help clarify these more in the future. There are still considerable measurement issues involved.

Social scores are calculated through factors such as workplace diversity and inclusion (D&I) measures such as gender or minority representation across management staff, maternity / paternity leave policies, and LGBTQ+ protection policies. These metrics can be difficult to quantify and can lead to a significant amount of washing or tokenism. Firms can hire more women or people of color, but that doesn't mean that these people are listened to or treated as equals. Even if barriers to entry to the tech sector are removed, there are still significant differences in career longevity between genders, as 40% of women compared to 17% of men choose to leave tech firms after 10 years citing 'undermining behavior from managers', 'workplace conditions', and challenges in career progression[11] (Perez 2019: 95). There is a major difference between elevating specific people for demographic reasons and in updating the existing path to leadership to ensure more people have the information and resources necessary to progress at a reasonable rate. Interestingly, social performance significantly impacts the appeal that a firm has for employees, with higher value prospective employees even being willing to accept as much as 44% *less* money if a job is posted with a firm's social statement included in the job advertisement (Burbano 2016).

Governance scores are calculated by leadership decisions such as board diversity, executive remuneration especially in comparison to base employee pay, and firm willingness to work alongside oppressive regimes in the interest of entering or

[11] For those who try to argue that the tech sector in the western world is unbiased and egalitarian, in 2021 Google finally paid over $3.8 million regarding 2014 – 2017 audits that found dramatic compensation discrepancies that unfairly disadvantaged female and Asian employees across the entire workforce (DOL 2021; Dickey 2021).

remaining in particular markets. Of the three pillars, Governance may be the most difficult to measure and analyze, but there is growing focus on this issue. For example, the scope of governance includes Corporate Political Action (CPA), which incorporates lobbying efforts by firms, indirect donations to political parties via PACs[12], and the practice of 'astroturfing' wherein a faux grassroots organization is established by a PR firm that just so happens to support a political concept that is beneficial to the firm that hired it. These are examples of what would be deemed negative CPA, especially in the tech industry as it tends to present itself as a free and liberal space as it headquarters in liberal-presenting areas such as Silicon Valley in California, when tech firms are exposed for supporting politicians and legislation that are seen as anti-social[13]. However, Dawkins found that levels of corporate citizenship were not impacted by governmental investment such as corporate welfare[14], suggesting that the actual benefit derived from investing in government favors are largely negligible (Dawkins 2002). On the opposite side of the governance performance coin, the Gompers-Ishii-Metrick Governance Index found that when firms demonstrated stronger shareholder rights, as measured within the construct of a 24 point governance rules index, they also demonstrated higher firm value, sales growth, and profits with lower capital expenditures and corporate acquisitions (Gompers, Ishii, and Metrick 2003)[15]. This pro-governance stance is also supported by research finding that tethering executive compensation to ESG performance has led to increased long-termism and firm value, greater investment in green innovations and E/S initiatives,

[12] Political Action Committees (PACs) are a means by which firms can take donations made by employees and direct them to the politician of their choice.

[13] In 2011, Google was exposed as a donor to the American Legislative Exchange Council (ALEC), a conservative nonprofit with right-wing opposition to social issues that Google supposedly supported, such LGBTQ+ rights.

[14] In defining corporate welfare, Dawkins builds off Barlett and Steele's 1998 work and states that it is "loosely defined…any action taken by the government that provides benefits to a corporation or industry not offered to others" (Dawkins 2002: 269). It is worth noting in the context of the tech sector that this definition does not include large government contracts.

[15] The difference between Dawkins and Gompers-Ishii-Metrick is the relationship discussed. Dawkins is looking at government / firm directional impact, whereas G-I-M is looking at internal metrics for governance impact.

and emissions reduction (Flammer, Hong, and Minor 2019).

1.3.2 ESG Reporting

Growing transparency and accessibility are the primary driving forces behind the shift in social activism from targeting governments to targeting private industries, capitalizing on the influence that an MNE can have on both its industry and government while being sensitive to market disruptions and negative media coverage (King and McDonnell 2012). With increased political power from massive corporations, it has become more politically effective to engage with firms as shareholders to impact ESG-related changes, such as commitments to carbon-neutral goals, than it is to petition the government for action, especially when politicians are in the habit of receiving large donations from corporate interests (Hearn 2022). In the interest of this rising direct stakeholder communication, more firms are getting in the habit of having accessible pages on their website that detail their ESG work.

The umbrella term of CSR reporting can cover a wide swath of potential reports, but they are often defined as voluntary reports that focus on Environmental, Social and Governance (ESG) issues. This can include environmental impact reports, published anti-slavery audits in a firm's supply chain, or breakdowns of a firm's donations to political candidates. As these reports are voluntary, there has yet to be a unified standard. As such, firms have been able to maximize on the appearance of transparency and communication while actually being held to little to no accountability. These reports can be used to benchmark firms against others in their industry, to inspire employees and consumers, and to discourage governmental interference by appearing to get ahead of relevant regulations (Hahn and Kühnen 2013).

This does raise a significant question, however; without standardization or thorough third-party auditing, can stakeholders be confident in the authenticity of such reports? One effective means of cultivating stakeholder confidence is through partnerships with reputable organizations, especially with high profile SMOs. These reports are typically designed with strategic stakeholder cultivation in mind, be that stakeholder individual consumers or third-party organizations. They often appeal to activist groups, as positive partnerships with NGOs result in a 54% reduction in contentious activist campaigns against a firm in the following year (McDonnell and Werner 2016).

Courtis (2004) highlights three elements of corporate disclosure communication: content, timing, and presentation. Related to Bloomfield's Incomplete Revelation Hypothesis[16], stakeholders and investors are operating with limited and incomplete data, typically shaped by the firm's response (2002). In the event of an ESG controversy, firms can see two broad stakeholder responses. If the firm has developed a reputation of generally positive CSR performance, it may be able to mitigate the risk of punitive damage through the social capital it has built up. However, if a firm experiences an ESG controversy in the pillar that it has promoted itself on (such as an environmental scandal occurring when a firm positions itself as being more environmentally conscious than its peers), then the response to this expectancy violation is typically more harsh as stakeholders can feel betrayed (Lin-Hi and Blumberg 2016; Janney and Gove 2011).

Building off this, a firm's perceived intentions can also significantly impact stakeholder response to its actions. In a field experiment that tested stakeholder perceptions of a firm's motivation between an ESG initiative being undertaken because the CEO

[16] An evolution of the Efficient Market Hypothesis, the Incomplete Revelation Hypothesis takes into account obfuscation or deliberately withheld communications, as managers have been known to try to limit the negative impact of poor performance in stock reporting. In both financial and non-financial reporting, this avoidance of transparent, full disclosure impacts long and short term decisions by investors (Bloomfield 2002).

believed in it versus market research finding it would be most beneficial to firm performance, Meier and Cassar (2021) found that the latter motivation resulted in more negative responses from stakeholders, including requiring higher compensation if offered a job and less trust in the firm overall. In this case, highlighting the economic benefits of an ESG initiative or charitable donation may negate any value produced as the perception of firm motivation is seen as self-interested or insincere. In response to a controversy, firms benefit most by being ahead of the issue in the release of relevant reports[17] or firm stances, as they may be perceived as rushing in to protect their reputation if they immediately publish a statement of their own good actions in response to an industry peer's controversy.

This is all to say that reporting has been rising exponentially since the turn of the century. This has recently evolved into integrated reporting, wherein reports merge traditional financial and modern nonfinancial data into a singular report, such as including carbon emissions as a negative externality line item. As argued by Richard Howitt, CEO of the International Integrated Reporting Council (KPMG 2017), integrated reporting is rising in countries that are actively trying to attract foreign investment, such as Brazil and Mexico. In this sense, the integration of corporate responsibility into financial reporting is taken as a proxy for quality of governance, creating a cohesive and strategic dissemination of information that serves to develop social capital.

With the rise in reporting comes the necessary administrative response of regulation. Pressure has been growing for industries to standardize their reporting practices to allow for equitable data sharing and to allow consumers and investors to compare firms by the same metrics instead of having mismatched, piecemeal data. This has led to the focus on standardization.

[17] Which may explain why many firms have been publishing anti-slavery statements for years, even if they rarely go into any detail as to how they are actively anti-slavery.

1.3.3 Standardization

Given the variability and tendency toward brand-making and greenwashing, a number of SMOs have attempted to create more standardized reports to create greater trust and legitimacy. These reports are often associated with some form of framework or standard, such as the GRI standards or UN Principles for Responsible Investment (PRI) framework. As Figure 3 below demonstrates, there are quite a few organizations that offer standards and frameworks, with a secondary group of ranking and rating organizations focused on quantifying the implementation of ESG initiatives balanced against a risk metric. While standards are the baseline criteria for what should be included in a decent report, frameworks are a more loose set of contextualizing options that can be more easily modified (GRI 2022). The various standards, frameworks, reporting and ratings agencies may be working in the same general context, but are distinct for their unique focuses and areas of interest. For example, the Task Force for Climate-Related Financial Disclosures (TCFD) was established in 2015 by the Financial Stability Board (FSB), a group interested in long-term global financial stability, in the interest of helping stakeholders assess how issues like climate change would impact their operational and financial practices (UNEP).

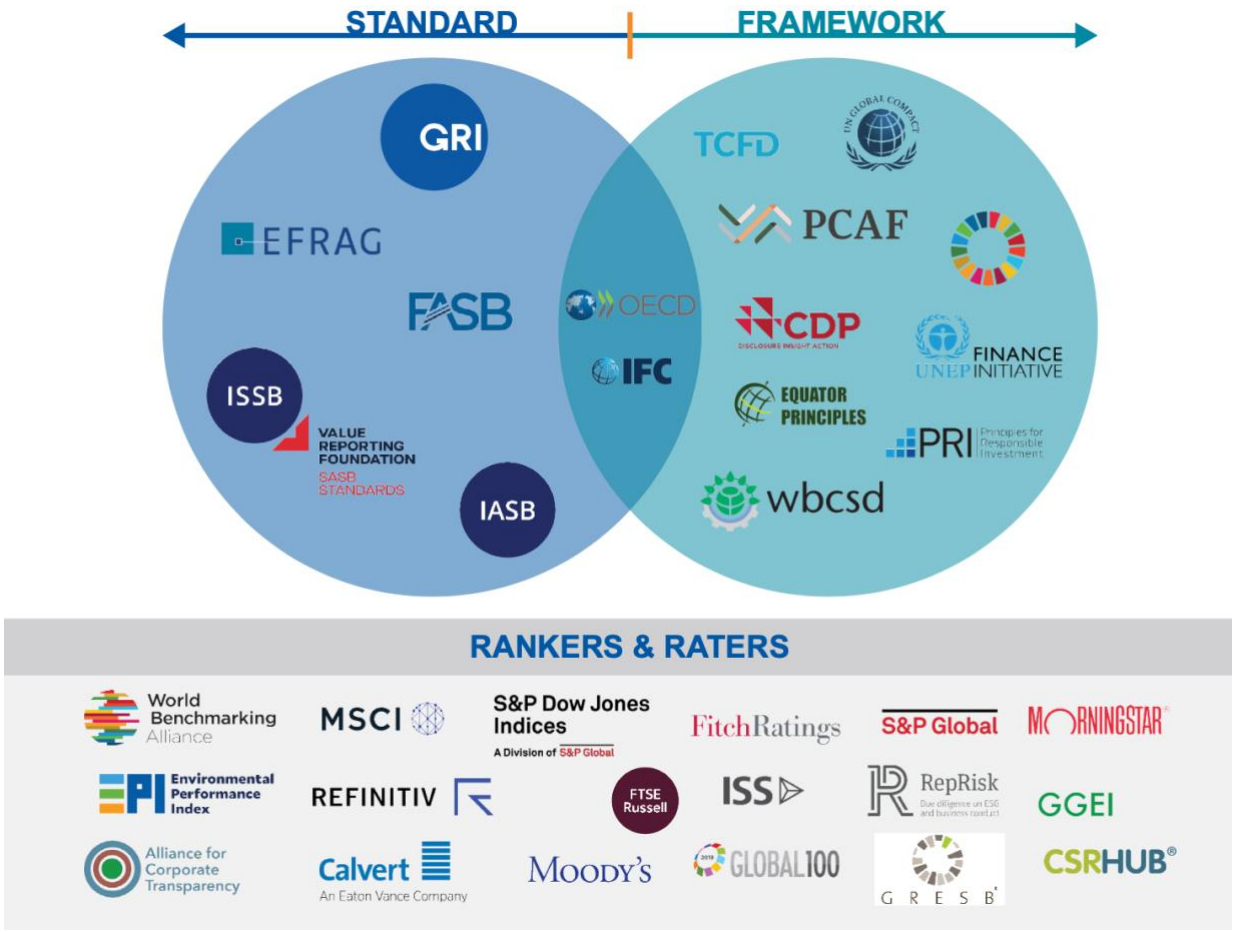
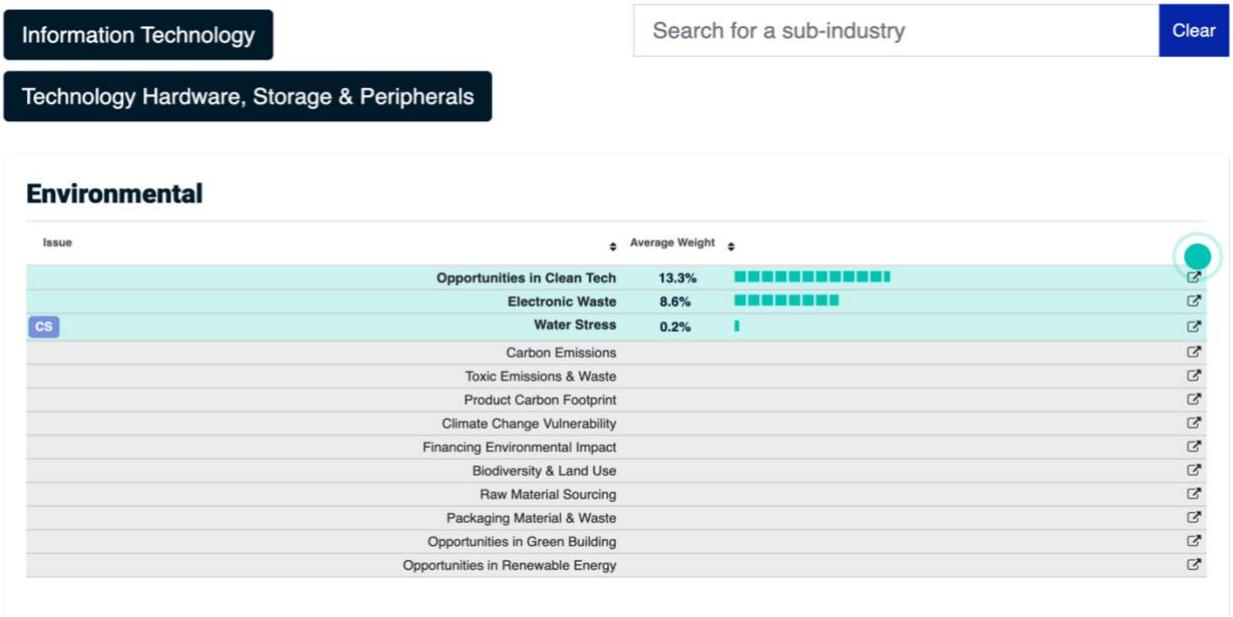


Figure 4 Standards & Frameworks, GRI (GRI 2022)

Differences in firm size are also reflected in differing negative externalities and ESG materiality. ESG materiality is defined by the NYU Stern Center for Sustainable Business as "…an economic, environmental, or social issue on which a company has an impact, or may be impacted by" (2019: 2). For investors, material ESG variables are issues that may positively or negatively impact the company such as carbon emissions or resource usage, both of which factor into longer term sustainability and capability of the firm in the sense that if a firm destroys its operating environment or depletes a nonrenewable resource, it will damage its own longevity. It is important to note, however, that there is currently no formal framework or universally accepted definition for ESG materiality, leaving issues up to the individual reporting organizations (Stern 2019). Currently, the most influential organization impacting ESG

materiality is the Sustainability Accounting Standards Board (SASB), but they lack regulatory power and faced criticism in 2014 from the SEC for attempting "…to influence the US financial reporting regime" (Jebe 2019: 645). It is interesting, then, that ESG materiality is used by investors to help gauge risk while receiving simultaneous institutional resistance.

For a massive MNE, potential negative externalities are global and perpetually evolving as GVC audits reveal social and environmental impacts on communities buried within the production process. Along the same lines, ESG materiality tends to carry significantly higher costs and returns as firms scale upwards (Jebe 2019; Consolandi, Eccles, and Gabbi 2020). This is a clear demonstration of the quantification and financialization of CSR into ESG, as it evolved into a risk metric for firm assessment. For example, the MSCI ESG Materiality Map highlights the following issues as being key risk factors of long-term resilience issues for firms in the Information Technology Sector, Subsector Technology Hardware, Storage, & Peripherals:



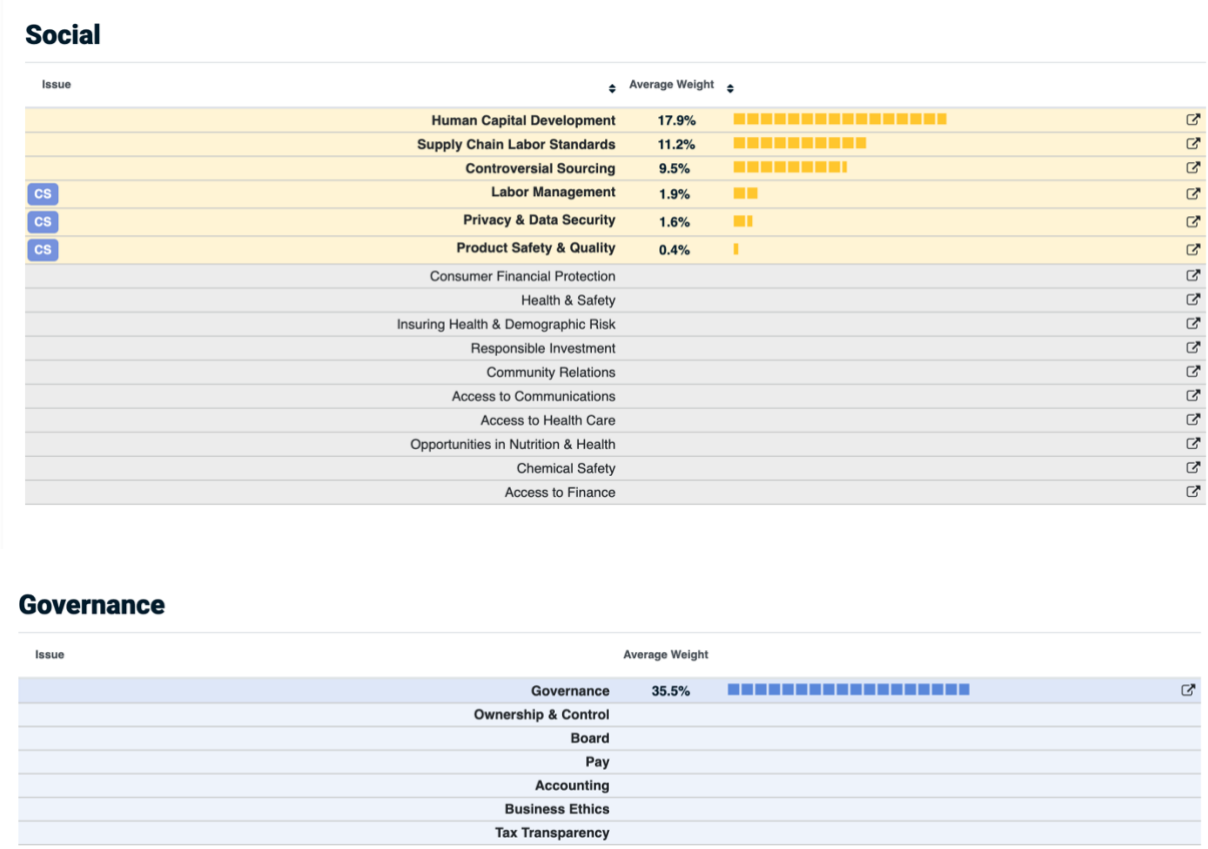


Figure 5 MSCI ESG Materiality Map

https://www.msci.com/our-solutions/esg-investing/esg-ratings/materiality-map

The ESG Materiality Maps in Figure 4 above demonstrate the scope of data included in these risk assessments, typically derived from analyses of potential future risks (such as an exhaustion of nonrenewable resources) and current controversies (as in recurring legal accusations of monopolistic practices). These Figures represent what MSCI has deemed the most salient issues by percentage for this industry sector. While Product Safety & Quality is significant, it is deemed less of a threat to ESG scoring than Supply Chain Labor Standards. In some cases, the MSCI Materiality Index will weight a particular issue lower if it is a firm-by-firm issue rather than an industry-wide issue, as in the case of Water Stress under Environmental Materiality, as demonstrated in Image 1 below.

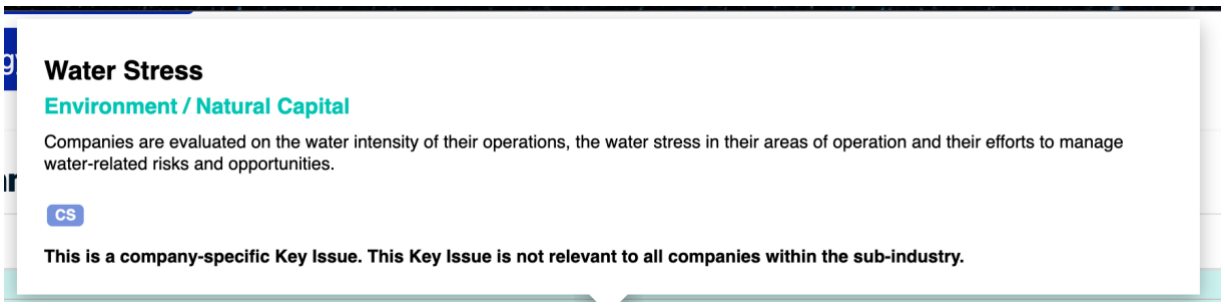


Image 1: Description of weighting of Water Stress from the MSCI Materiality Map

For Technology Hardware, significant upcoming issues to be aware of include e-waste, supply chain labor standards, and general governance concerns. Firms are likely to benefit from investment in these areas or to suffer from neglecting to properly plan ahead as these issues grow in prominence. In order to communicate with stakeholders, especially regarding appropriate consideration of negative externalities and ESG materiality issues, many firms have turned to ESG reporting.

Finally, there is a recent push by the Big Four Accounting firms[18] to standardize their ESG metrics (Tett 2020). The World Economic Forum (WEF) and International Business Council (IBC) announced at the annual meeting in Davos in 2020[19] that the Big Four would be joining forces to standardize ESG standards for widespread adoption, a major step toward clarity and methodological ease-of-use when comparing firms across rating agencies (WEF 2022; WEF and IBC 2020). The Big Four standards will incorporate their own internal methodologies as well as building off standards developed by the TCFD[20], the SASB[21], and the GRI[22]. This is a particularly important step as it is a major step toward standardized institutionalization of ESG, beyond an unregulated free-for-all.

[18] EY (Ernst & Young), KPMG, Deloitte, and PwC (PricewaterhouseCoopers)
[19] It seems fitting that the theme for the 2020 WEF Davos Summit was *The Universal Purpose of a Company in the Fourth Industrial Revolution* (Schwab 2019), as this immediately ties into themes expressed in CSR, globalization, and business management literature.
[20] Taskforce for Climate-Related Financial Disclosures
[21] Sustainability Accounting Standards Board
[22] Global Reporting Initiative

While the standardized metrics will offer greater clarity and more consistent ESG reporting, it also risks the loss of diverse reporting. For instance, if an investor had a special interest in highlighting environmental scoring, they may prefer to rely on rating agencies that prioritize and specialize in environmental issues. The variety of values will have to be addressed in this convergence of ESG scoring. There is the added concern of the efficacy of the Big Four Accounting Firms themselves, as it is hardly uncommon to see reports of one of them being charged with some sort of negligence scandal (Admati 2017; Eisinger 2017).

1.4 Firm Performance and ESG

A primary focus in the standardization and financialization of CSR into ESG has been the growing fascination with testing how ESG investments impact firm performance. As of 2001, there were already well over two thousand unique studies (Margolis and Walsh 2001). As CSR and ESG approaches have gained in popularity, the quality of reporting and gains from such initiatives have raised questions about the profitability and the impact on firm performance. Many academic studies have found a bidirectional relationship between ESG and financial performance (FP), arguing in differing ways that the two aspects of firm performance feed into the success of the other (Martínez-Ferrero and Frías-Aceituno 2015; Assaf et al. 2017; Marti, Rovira-Val, and Drescher 2015). However, results are quite mixed. While the majority of studies have found a positive relationship, there have still been a portion of results that find mixed, negative, or no correlation at all (Margolis and Walsh 2001; Cwikel, Behar, and Rabson-Hare 2000; Margolis, Elfenbein, and Walsh 2009). Within these mixed results also lies the question of causality; are financially profitable firms more likely to engage in CSR or do firms that engage in CSR benefit from more financial profit?

As Peloza points out, however, the nature of firm performance variables and the litany of potential confounding variables make the blanket statement of CSR being financially beneficial difficult (2009). Economic studies of the CSR/FP relationship control for a variety of conditions with no universal standard, including industry, regulatory environment[23], firm size, or time frame. Even in a study that tested ESG and firm performance following a firm's signing of the United Nation's Principles of Responsible Investment found that there was no significant improvement of either aspect (Kim and Yoon 2020).

Given difficulties of good measurements and diverse quality of reporting, corporate responsibility and firm performance represents a complex relationship. Studies such as Ullman (1985) and Al-Tuwaijri et al (2004) found significant positive correlations in three-dimensional modelling by focusing on a particular dimension of ESG; social issues in Ullman's case and environmental for Al-Tuwaijri. Both papers essentially argued that disclosure, ESG performance, and economic performance were intertwined, to a generally positive outcome. They support good management theory in the supposition that effective management is conscious of social and environmental issues, to the benefit of firm ESG and economic performance.

In conjunction with the assertions made by Porter and Kramer, which focused on strategic, tailored CSR, several studies have found significant relationships when disclosures are tested alongside both economic and ESG-related performance. Ullman's (1985) positive correlation in a three-dimensional assessment of economic performance, social performance, and social disclosure was initially influenced by Freedman & Jaggi's examination of pollution disclosures, pollution performance, and economic performance (1982). This is expanded upon into the realm of overall environmental performance by Al-Tuwaijri, Christensen, & Hughes (2004), finding a

[23] Regulatory environment can be proxied by a range of options, such as headquarter-specific regulations, which don't necessarily reflect the firm's behaviors in every region that it is operational.

positive correlation between "good" environmental performance, environmental disclosure, and economic performance, largely thanks to good management theory. In brief, the causal link between transparent reporting and firm performance is just managers acting on state-of-the-art practices and responding to their external environment in effective ways. These examples highlight the interconnected nature of ESG accounting, which academia has largely focused on from an environmental standpoint as this is the easiest aspect of ESG to quantify. Firms that pay attention to their environmental footprint, even just in a waste or cost management manner, might be more attentive to their costs and, as a result, increase profit by minimizing said cost.

As Rodrigo et al point out, a majority of quantitative CSR literature takes a macro approach, which blurs the distinctions between industry specific impacts (2016). The industries that do tend to be highlighted are the financial sector (in that it is typically removed from the dataset or studied on its own) and controversial industries such as arms manufacturers. The tech sector is uniquely positioned in that it is, to an extent, the infrastructure for the financial sector and controversial industries. This connection the tech sector has to all others makes it uniquely vulnerable to backlash from public opinion and, as such, theoretically implies a diligent focus on social capital and toeing the proverbial line, at least for the largest within the industry that maintain quite public corporate personas.

Another way causality can be conceived is through the concept of social capital, essentially the social value a firm contributes to society and can manifest as trust and the opportunity for redemption (Hosseini 2006). Countries demonstrating higher degrees of social capital or trust concurrently produce stronger economic development (Putnam, Leonardi, and Nanetti 1994; Rafael La Porta 1997; Knack and Keefer 1997; Fukuyama 1995), and in the stock market, higher social capital is linked to higher participation (Guiso, Sapienza, and Zingales 2004). As such, the link

between transparent or impact investing has been touted recently as being almost a guarantee of success. In reports relating to financial tools, connections to ESG provide social capital and a degree of added trust from consumers. We would then expect firms exhibiting a high degree of trust and reputation in public opinion to better ride out any controversy they face and be more resilient in the short-term but have better long-term profitability.

Interestingly, with rising transparency and accountability through digital reporting and investigative activism, the rise of platformization has impacted the structure of ESG. Platformization is the shift from traditional, physical marketplaces to digital spaces, which allows for several key developments in the economics of tech firms. First, it creates the opportunity for massive data collection on consumers, merchants, and any other stakeholder who chooses to interact (or not, as a lack of data can also tell a story). This presents a major social concern as stakeholders react to any exposed data leaks. Second, it streamlines the supply chain process as products no longer need to be sent to a brick-and-mortar store but can instead be customized and sent directly to the customer[24]. Third, it changes the shape of markets and financial accounting in that new variables such as consumer awareness and engagement is more valuable than ever before. Consumers and interested parties can access and demand CSR reports and ESG metrics as a form of activism.

Firms like Facebook are essentially just multi-million-dollar advertising platforms thinly veiled as free social media platforms that are constantly seeking new ways to access consumer data to sell to third parties, which has served to bring up complex consumer privacy and protection issues. As the lines blur between industries and major tech firms seem to be constantly facing some form of resistance to acquisitions,

[24] This development, in theory, creates an opportunity for more efficient supply chain management, immediate modification of output in response to market signals, and more direct routes to reduce the environmental impact of transport. As with everything, though, any benefits are directly reliant upon the investment of the companies involved.

the threat of monopolies and the intensity of access to consumer data means that firms are able to create in-depth profiles of people, regions, or groups. This is all commodified and spread all over the world, meaning that variables such as the country of a firm's headquarters might impact some of the firm's behaviors (such as requesting permission to install cookies on a browser), but are not universal as these regulations are not universal. This further complicates the ethical arguments concerning what constitutes public data and how much firms are allowed to collect, utilize, and sell, all of which falls under the social umbrella of ESG issues.

With the evolution of ESG issues over time, such as the evolving arguments surrounding consumer data protections and reasonable expectations of privacy, this particular study takes an innovative approach to firm performance assessment as it explores the relationship between the variables as they evolve over time. The most common methodological approach is an aggregate assessment of one FP variable and an ESG metric. This misses several key factors in this relationship, such as the impact that intense globalization has had on traditional financial metrics as in the case of the assets wherein many large tech firms can plant their intellectual assets in a tax advantaged jurisdiction and lease it to its own subsidiaries, thus obfuscating both tax obligations and asset structures. Furthermore, ESG metrics have been evolving since their inception, meaning that while a firm may score poorly one year from a particular rating agency, it may suddenly score well the next year through no change in its behavior, but rather a change in the rating agency's methodology or weighting (Porter and Kramer 2006; Berg, Fabisik, and Sautner 2021; Tang, Yan, and Yao 2022). This study finds that over time, there is an increasingly positive relationship between some FP (ROA and ROIC) and ESG variables juxtaposed by a mixed results from other FP variables (ROE and ROS), demonstrating that broadly speaking, ESG can be positive from certain angles but that it can also come at a cost.

Considering the challenges of quantifying ESG and firm performance, this study has

chosen to examine the evolving relationship over time. In first testing the overall firm performance with ESG variables, we build upon the foundation laid by previous academics (Porter and Kramer 2006; Barnett and Salomon 2012; Buallay 2019; Orlitzky, Schmidt, and Rynes 2003). The fact that there are still contradictory findings (positive, negative, mixed, or insignificant) supports the argument that more targeted analysis is needed, to which this dissertation contributes. In examining the evolution of the relationship instead of searching for a single overall answer, this study finds that as the firm performance metrics evolve in the changing globalizing landscape and as ESG metrics are refined and redefined, the overall relationship between the two can strengthen. However, as in the case of the Mixed results, this relationship can also be confused when tested as aggregate or over time, as explored in the analysis in Chapter 4. As Porter and Kramer (2006) point out, the inconsistencies and lack of regulation in ESG reporting makes an assessment of performance challenging. With this in mind, the following analysis tests the quality of reporting alongside controversy as a means of exploring how the process of communication can influence, positively or negatively, firm resilience. While studies have conducted linguistic and content analyses (Orlitzky, Schmidt, and Rynes 2003; Akben Selcuk and Kiymaz 2017; Al-Tuwaijri, Christensen, and Hughes II 2004; Tsai and Wang 2017), results have varied. In the case of the tech sector, this study has found that the quality of the report itself does not appear to have any impact. Rather, the existence of the report itself, and the likely concurrent social media outreach, appears to be a strong enough signal to consumers that the firm is engaging in responsible practices.

1.5 Controversy & Resilience

The ESG Controversy Score is essentially a gauge of the negative impacts to ESG scoring. This is a measure of negative press, salient lawsuits, or ESG-related shocks that a firm experiences in a year. These controversies tend to result in social backlash,

contentious activist campaigns, and increased government oversight and regulation, none of which make regular business practices particularly easy for a firm (Swuste et al. 2020; McDonnell, Odziemkowska, and Pontikes 2021). They can be calculated using different metrics or different weighting parameters, depending on the data provider. It is difficult to get access to a data analysts' proprietary methodology, as funny enough, the industry that pushes for greater transparency also suffers from a lack of transparency itself. For example, some may give greater significance to controversies surrounding human exploitation, while others may favor environmental damage. These inconsistent calculations lead to skewed results when looking at overall ESG Scores, as firm performance varies drastically between rating agencies.

It is important to note that an ESG controversy that directly impacts one firm will indirectly affect the others in the industry, be it through increased awareness of particular issues or positive differentiation[25]. This is to say that when one firm is caught for unethical behavior, its industry peers take note and either position themselves to react in case they also experience blowback, or experience better financial returns as a result of standing out as the more ethical option to the firm at fault. These controversies manifest differently in the individual ESG pillars.

From an environmental controversy standpoint, the entire tech lifecycle is a potential challenge. Mining rare earths or conflict minerals can put significant pressure on local ecosystems, refining and manufacturing are notorious for producing harmful byproducts like contaminated water and noxious fumes, the active lifetime of technological products tend to use massive amounts of electricity, and the impact of e-waste is a major environmental concern as technologies aren't designed to decompose, so they end up leeching chemicals. Over the past twenty years, firms

[25] In this case, the fast-growing subindustry of ESG risk assessments are highly beneficial to firms. If they can find their potential weaknesses, they can be prepared in the event that they are expected to answer questions regarding ESG stances that they may not have otherwise considered, such as human trafficking within their supply chains or sexual harassment handling in their organization.

have been publishing variations of environmental reports in an effort to present themselves as environmentally conscious, but these reports are often curated in a way to make the firm appear a lot better on paper than it actually is. For instance, firms will fill their reports with promises to reduce their carbon footprint by 2030, while relegating to the fine print the fact that they are only referring to their Scope 1 emissions. As the biggest tech firms today are designed to outsource their manufacturing, the exclusion of Scope 2 or 3 emissions is essentially the exclusion of the parts of the firm that actually produce any sort of meaningful emissions.

Social controversies have evolved dramatically, and span child labor to persistent racism in both the real-life world of tech and the digital space of coding. Employee welfare issues have expanded over the last two decades especially, thanks to globalization and the digitalization of social causes, to include employees of suppliers. This means that a firm can face significant backlash for human exploitation that it was not aware of, leading to a growing, albeit arduous and resistance-facing, practice of supply chain auditing. The tech sector is rather notorious for its poor treatment of groups under government protection for gender, race, sexuality, or religious belief. Whether it is IRL[26], such as racist abuse and disenfranchisement (Alegria 2020; News 2021) or coded into the digital sphere (Buolamwini and Gebru 2018; Simonite 2020; Benjamin 2019; Angwin et al. 2016), active study is going into the social progress or repetition of antisocial practices, meaning that this is an evolving and incomplete field. Firms can get ahead of some of these issues, such as IBM's work to remove historically racially charged language from coding lexicons (such as master/slave, blacklist/whitelist[27]) (IBM 2019; Cimpanu 2020). However, given the scope of social issues, firms need to be careful to audit their internal cultures regularly to ensure potentially marginalized employees are not feeling tokenized or disenfranchised, as that can impact the firm if it is later exposed for a social scandal after it has been

[26] This is in reference to a common virtual term, 'In Real Life' or IRL.
[27] See: https://github.com/Call-for-Code-for-Racial-Justice/IBM-Inclusive-IT-Language

flaunting its accepting company culture.

Take for example of a governance controversy the case of the resignation of Mark Hurd, former Hewlett Packard (HP) CEO. While celebrated for his managerial ability to get results, Hurd was caught lying about using this managerial discretion to hire an adult film actress as an events hostess and misappropriating funds for various rendezvous between the two in cities that weren't even hosting HP events. After a thorough board investigation, he was given the opportunity to resign with a generous severance package worth over $20 million (Blodget 2011). Under Hurd, HP was at one point the world's largest tech company, dramatically increased operational efficiency, and went binge shopping on a range of smaller firms. However when his expense report coverups came out, HP's board may have put more effort into protecting him (as 2010 was significantly before #MeToo[28] took off), had it not been for declining revenues and several major tech trends that HP had missed during Hurd's tenure, such as the emergence of smartphones and sophisticated cloud computing (Burgelman, McKinney, and Meza 2017). While this is a clear example of a governance controversy, it did not seem to impact the wider industry. Sexual harassment is still rampant at all employment levels in the tech sector (Tech 2020), Hurd still made out with a golden parachute and a job of co-president at Oracle (Hernbroth 2019), and HP's profits still declined (Oremus 2014).

When a firm is hit with a scandal or controversy, as in all relationships, communication becomes key. Firms often release statements on their websites in the form of blogs, which are supported from an outsider's perspective by a history of reporting on similar issues. That is to say that if a firm experiences a sexual harassment claim, it is deemed significantly more authentic when the firm makes a statement if the firm has already published reports detailing its awareness of social issues and its efforts to

[28] While Tarana Burke began using the term in 2006, it didn't gain global recognition until 2017 after celebrities like Alyssa Milano began tweeting it. (Gill and Rahman-Jones 2020)

combat them. This can be a double-edged sword, however, with the primary deciding factor being how the firm phrases its immediate statement. If it acknowledges the lapse and makes demonstrable efforts to learn and rectify the situation, it can mitigate the damage. However, if a firm has long been touting itself as a champion of social protections and a healthy firm culture, only to be outed as being a rather toxic environment, then the reputation (and subsequently financial) damage will be worse.

Interestingly, there have been a few studies regarding situational firm performance, which is why I include a controversy index for understanding firm resilience in crisis. In discussing crisis-period returns, Lins et al (2017) use stock market returns as their primary indicator of firm performance in relation to social capital, arguing in favour of expanding upon previously used metrics of cash holdings and leverage (Duchin, Ozbas, and Sensoy (2010) and Almeida et al. (2012)). To support this argument and control for exogenous impacts on stock market returns, Lins et al tested the relationship between CSR and stock returns in the era of the Enron / Worldcom crisis, which arguably undermined the faith in the entire US stock market and found that firms with higher CSR performance outperformed firms with lower CSR performance. On a national scale, Lins et al also tested crisis-period returns in areas defined by the 2006 General Social Survey as having higher trust, finding a significant correlation with CSR and regional trust. Interestingly, using firm fixed effects models allowed them to test the relationship between CSR and stock returns before, during, and after the crisis, only finding significant correlations on returns *during* the crisis period itself, suggesting that social capital is a buffer only when needed most. Their findings extended beyond stock returns; during crisis, higher CSR firms had higher gross margins, sales growth, profitability, sales per employee, and ability to raise more debt than their lower CSR counterparts.

1.6 Methodology

This study is comprised of two hypotheses that utilize empirical testing; first, it will test the relationship between CSR and firm performance in the tech sector. Second, it will test the relationship between CSR reporting and firm resilience. Both hypotheses will be tested using panel data comprised of financial variables and ESG metrics. ESG metrics, or Environmental/Social/Governance metrics, are scores determined by Thomson Reuters based on an array of investments, costs, and impacts. As Thomson Reuters assigns a numerical value to ESG metrics, including ESG Controversies (E/S/G related negative impacts, measured by intensity of negative press deducted from an overall score of 100), it is possible to test ESG variables against traditional firm performance variables to explore potential relationships (Eikon). This involved testing a variety of firm performance variables (ROA, ROIC, ROE, and ROS), drawn from existing literature, with control and fixed effects variables. Thus far into testing, significant relationships are emerging between ESG and some firm performance metrics (ROA and ROIC), showing positive correlations between positive ESG scoring and positive firm performance variables. However, it also demonstrates mixed results with other FP variables (ROE and ROS), adding to the complexity of this body of literature in arguing that the positive relationship between ESG and FP may rely on how FP is measured and how ESG metrics are being refined over time. Building off existing literature, this dissertation seeks to explore the validity of these results within the tech sector, and the dynamic relationship between resilience and controversy.

The firm performance variables used in this study are Return on Assets (ROA), Return on Invested Capital (ROIC), Return on Equity (ROE), and Return on Sales (ROS). These accounting-based metrics are commonly used in CSR and firm performance studies as accounting metrics are available from all companies, are typically comparable, and tend to lend themselves better for annual studies as they are annual metrics than the more volatile market-based metrics (Barauskaite and Streimikiene 2020; van Beurden and Gössling 2008). There is an added analysis of Research and Development (R&D)

as innovation is vital in the fast-evolving industry of technological development (Padgett and Galan 2009; Jones and Williams 1998; Yu 2013; Kumar and Sundarraj 2016). It is interesting to note that in the process of testing, two distinct patterns emerged, leading to the FP variables to be divided into Positive (ROA and ROIC) and Mixed (ROE and ROS) groupings. While the two groups represent different types of metrics, there are obvious overlaps as the FP variables represent accounting-based metrics, in that they are all gauges of how effectively a firm creates values out of it its assets in one form or another (Testa et al. 2018; Sánchez-Ballesta and García-Meca 2007). For ease of visualization, the firm performance metrics are defined in the table below, while R&D is discussed further in Chapter 3.

Firm Performance Metrics	
ROA	Return on Assets (ROA) is a metric of firm profitability relating to total assets, generated by comparing net income to capital invested in assets (CFI). Management's efficacy is demonstrated by higher returns on economic resources, which indicates that a firm is effectively utilizing the assets it has invested in or created. ROA is apt as a measure of operational performance more so than a metric for gauging intangible assets, which have been assessed more thoroughly in the Research & Development section.
	ROA = Net Income / Average Assets or ROA = Net Income / End of Period Assets
ROIC	Return on Invested Capital (ROIC) is defined as a profitability or performance ratio producing the percentage ratio that demonstrates how effectively firms use investor funds in income generation (CFI). It is often treated as a measure of effective management practices from a development and expansion perspective, offering insight into the

	economic and managerial potential of a firm. Given that this metric is commonly implemented differently across companies, often citing the lack of a US Generally Accepted Accounting Principles (GAAP) definition, this study has used the ROIC as calculated by Thomson Reuters for consistency (Reuters 2016; SEC 2021).
	Return on Invested Capital (ROIC) = Net Operating Profit After Tax (NOPAT) / Invested Capital (IC) *Note:* NOPAT is calculated as EBIT x (1 - tax rate)
ROE	ROE demonstrates a firm's ability to create profit from equity capital, linked directly to shareholder equity. It is seen as an investment return that gauges a firm's competitive advantage within its industry (CFI).
	ROE = Net Income / Average Shareholders' Equity, where Shareholders' Equity = Assets - Liabilities
ROS	Return on Sales (ROS) is an indication of how effectively a firm generates profits on products, as a financial ratio indicating both profitability and efficacy of management. As managers outsource or bring manufacturing in-house, actualize returns on R&D investments in the form of products, or release a catalytic innovation, ROS will fluctuate.
	ROS = Operating Profit / Net Sales

There are innumerable ways in which the relationship between firm performance and ESG can manifest. One such manifestation is the relationship between firms and the governments they must work with, be it the government of their home country or a country they have expanded operations or sales in to. This relationship can be seen as borderline contentious, wherein opposing forces are working to accomplish their goals in constant wariness of the other. While government intervention can be

beneficial, significant regulations can also hinder firm performance and lead to foreign outsourcing (Niesten et al. 2017).

Drawing on existing literature, this study will utilize a linear regression analysis with balanced panel data (Carnini Pulino et al. 2022; Galbreath and McDonald 2010; Garcia, Mendes-Da-Silva, and Orsato 2017; Duque-Grisales and Aguilera-Caracuel 2019), utilizing the Thomson Reuters database (Carnini Pulino et al. 2022; Rajesh 2020; Garcia, Mendes-Da-Silva, and Orsato 2017; Duque-Grisales and Aguilera-Caracuel 2019). The control variables used are Market Value and Total Assets in line with a significant portion of previous work that control for firm size and this study controls for year and firm fixed effects (Boukattaya, Achour, and Hlioui 2021; Margolis and Walsh 2001; Buallay 2019).

The data for this study has two distinct sources, the first of which has been collected from the Thomson Reuters database. This study utilizes information collected from the Thomson Reuters database, as it offers a wide range of both financial and ESG data, frequent updates, and history as a trusted source of financial data (Aouadi and Marsat 2016; Caglio, Melloni, and Perego 2019). It is comprised of financial and ESG data for 142 firms that has been organized using STATA. Firms were chosen with a reasonably balanced panel dataset in mind and consist of firms that have both firm performance and ESG scores for a majority of the period spanning 2004 - 2018. The second source of data are websites and digital firm archives, consisting of accessible, consistent reports that fall under the broad CSR umbrella for the time period of 2005 – 2018, which were collected and run through several linguistic analysis packages using RStudio, an open-source data analysis software. This time frame was chosen to control for and examine the broader impact of the 2008-2009 financial crisis, as well as to consider the expansive international growth of the tech sector during this time. As non-financial CSR reports were uncommon in the early 2000s, this selection process resulted in the initial dataset of 142 firms being whittled down to 21 firms.

The ESG variables are further divided from an overall ESG Score into three distinct pillars of Environmental, Social, and Governance concerns. These are represented in the table below, taken from the Thomson Reuter's ESG Data Methodology Report of 2017. This weighting practices does lend a degree of bias to the outcome of this study, but weighting is a common practice amongst ESG rating agencies so the bias would be present in any data set tested.

Pillar	Category	Indicators in Scoring	Weights
Environmental	Resource Use	20	11%
	Emissions	22	12%
	Innovation	19	11%
Social	Workforce	29	16%
	Human Rights	8	4.50%
	Community	14	8%
	Product Responsibility	12	7%
Governance	Management	34	19%
	Shareholders	12	7%
	CSR Strategy	8	4.50%
TOTAL		178	100%

Figure 6 Individually Weighted ESG Pillars

These datasets are being tested with the ESG Controversy Score in mind as well, which Thomson Reuter's ESG Data Methodology details as "…calculated based on 23 ESG controversy topics…and measures a company's exposure to environmental, social and governance controversies and negative events reflected in global media. During the year, if a scandal occurs, the company involved is penalized and this affects their overall ESGC scores and grading. The impact of the event may still be seen in the following year if there are new developments related to the negative event, for example lawsuits, ongoing legislation disputes or fines. All new media materials are captured as the controversy progresses. All Controversy scores are fully automated and objective[29]. We calculate an aggregated controversy percentile rank across E, S and G, using all 23 controversy topics" (Eikon).

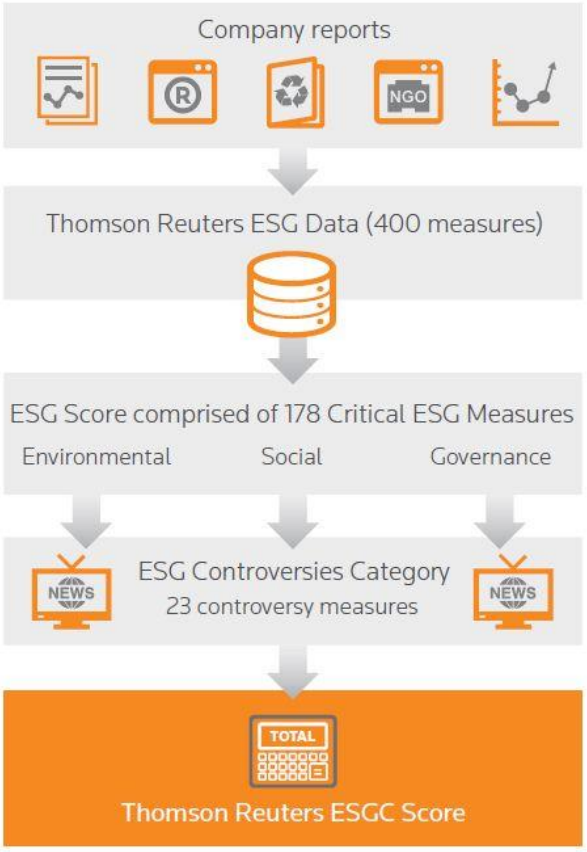


Figure 7 Thomson Reuters ESG Data Methodology

The discrepancy in time frames, between 2004 – 2018 and 2005 – 2018, is largely due to the scarcity of CSR reports available in 2004. If the study had gone back that far, it would have resulted in under 10 firms for the second dataset, hence the decision was made to start the process from 2005. This difference does not impact the overall findings. While both datasets will explore the relationship between CSR, firm

[29] This statement from the Thomson Reuters ESG Methodology publication is rather presumptuous, as all coding is done by fallible humans and true objectivity is a matter of major philosophical debate.

performance, and resilience, D21 will provide the more significant insights as it focuses on those firms that are consistently reporting non-financial CSR data. In reality, significant relationships found in 2004 may help account for the rise in CSR reporting amongst other firms, as the arguments in favor of the positive impact of CSR were well established and steadily diffusing throughout private business. There is an immediately distinct difference in the two datasets, as firms from D21 average higher ESG scores. This is likely due to the exposure factor, in that publishing CSR reports signals to consumers and investors that the firm is investing in its community responsibility. This finding supports signaling theory in the sense that the publication of the report means more than its readability, as no significant correlation between readability and performance was found (explained in more detail in Chapter 4).

It is worth noting, however, that the ESG Controversy Score is calculated by deducting *from* 100, so while these firms tend to average higher ESG Scores, they are also hit with significantly more controversies. For instance, a Social Pillar Score of 49 out of 100 is designed to start at zero, so the scores will be considered generally lower. However, the Controversy Score is reduced from 100, so while the number itself may be higher than the Social Pillar, it does not indicate significantly better or worse scoring as they are calculated on different scales. This is evident in Table 1 below, wherein the ESG Score, Environmental Pillar, Social Pillar, and Governance Pillar all have means in the 40s – 50s, whereas the ESG Controversy Score's mean is 88.07. The descriptive statistics below are intended to give the reader an idea of the scope and presentation of the statics used in this study.

Table 1: Descriptive Statistics of ESG Variables

	(1)	(2)	(3)
	Mean	S.D.	N
Dataset 142 (2004 - 2018)			

ESG Score	46.37	19.58	2,096
Environmental Pillar	42.1	30.1	2,091
Social Pillar	49.01	24.31	2,091
Governance Pillar	54.22	22.08	2,096
ESG Controversy Score	88.07	25.67	2,091
Dataset 21 (2005 - 2019)			
ESG Score	64.24	19.71	315
Environmental Pillar	62.87	25.65	315
Social Pillar	61.49	23.99	315
Governance Pillar	69.08	20.23	315
ESG Controversy Score	71.49	34.52	315

Notes: This table displays the Descriptive Statistics for the primary ESG Variables. The ESG Score is a combination of all the subscores, including the three pillars and the ESG Controversy Score. The ESG Controversy Score is calculated by *deducting from* 100, as opposed to all other ESG Variable scores, which are *out of* 100.

Dataset 21 is a subsect of Dataset 142. It represents firms that have consistently published a variety of voluntary, non-financial reports since 2005.

From the descriptive statistics in Table 1, several key points are immediately evident regarding the differences between the two datasets, D142 and D21. In D142, the larger and more globally representative dataset, ESG variables tend to score lower on average while the Controversy Score is lower as well (in the sense that 88 out of 100 is less of a deduction than 71 out of 100). D21, comprised of a smaller selection of firms with longer standing published CSR reports, has stronger individual ESG variables scores, but also a significantly more impacted Controversy Score. This is likely due to increased scrutiny brought about by the publication of CSR reports, as will be explored later in the following chapters. In both datasets, the standard deviation is fairly even across the board, suggesting that variation within both datasets is

consistent.

This study is comprised of two hypotheses; first, it will test the relationship between CSR and firm performance in the tech sector. Second, it will test the relationship between CSR reporting and firm resilience. Both hypotheses will be tested using panel data comprised of financial accounting-based variables and ESG metrics. ESG metrics, or Environmental/Social/Governance metrics, are scores determined by Thomson Reuters based on an array of investments, costs, and impacts. As Thomson Reuters assigns a numerical value to ESG metrics, including ESG Controversies (E/S/G related negative impacts, measured by intensity of negative press deducted from an overall score of 100), it is possible to test ESG variables against traditional firm performance variables to explore potential relationships (Eikon). This involved testing a variety of firm performance variables, drawn from existing literature, as well as all necessary control variables. Thus far into testing, the two trends that emerged of Positive and Mixed results both resulted in distinct patterns that support the argument that certain FP results are impacted by similar factors, such as ROA and ROIC following the same bell-shaped positive curve over time in their relationship to ESG metrics, while ROE and ROS have similarly jagged spikes and drops into negative correlations. It demonstrates that the same factors are impacting these calculations. Building off existing literature, this dissertation seeks to explore the causality and validity of these results within the tech sector, and the dynamic relationship between resilience and controversy.

The firm performance variables reflect the most used metrics in CSR literature: Return on Assets (ROA), Return on Invested Capital (ROIC), Return on Equity (ROE), Return on Sales (ROS), and Research and Development (R&D) (Galant and Cadez 2017; Margolis and Walsh 2001). Each firm performance variable demonstrates a different relationship to ESG variables, but two distinct patterns emerged. ROA and ROIC followed a similar trajectory and strength of positive correlation, while ROE and ROS

were positive in aggregate testing but erratic and predominantly negative in testing over time. As such, the ROE and ROS metrics cannot be argued as being wholly positive, even with the positive aggregate relationship. That is not to say that there can be no benefits to ROE or ROS from ESG, merely that the relationship is significantly more complex. The positive and mixed findings suggest that value can be generated from ESG investment in differing ways, and may be caught by one metric when missed by another. In this way, this analysis also lends itself to the ongoing debate cited by Gentry and Shen (2010) as to whether or not firm performance variables can be treated as unidimensional, in the sense that good firm performance is good firm performance regardless of how it is measured. While all four accounting-based firm performance metrics demonstrate a positive relationship with ESG metrics in aggregate testing, the shape and significance of the relationship over time differs so the argument could be made for either side of this debate.

In this grouping of firm performance variables, R&D is clearly the outlier. As Oh at al so concisely put it, "value creation requires innovation, and CSR provides an opportunity for innovation" (2017: 3). The relationship between CSR investment and R&D is measure of dynamic growth and absorptive capacity, which is why it was included in this study. Absorptive capacity, a term coined by Cohen and Levinthal in 1990, states that innovative capabilities are hinged on a firm's ability to recognize the value of and to integrate external information, quantified by a firm's R&D investment. Given that the data for this study was drawn from an industry wherein innovation and R&D are core necessities for survival, including this metric in the study of firm performance is a natural fit. Schumpeter's Creative Destruction theory (1976: 81) posits that capitalism is defined by an evolutionary series of innovations, each one destroying previous technologies and creating new products and opportunities. In the tech sector, this has historically manifested as constant, aggressive innovation (Thierer 2011; Bresnahan 2004). Each product must be released with fanfare, clear personality branding, and usually a snide comment about how it is superior to the competition.

This requires the constant development of a firm's intellectual capital. The 'technical capital' produced through R&D feeds into the theories of strategic CSR and good management theory, both of which essentially treat CSR investment as a management perspective tool for innovation and risk management (Padgett and Galan 2009).

In the second half of this study, I collected all relevant CSR reports dating back to 2005 for linguistic analysis, an assessment of the readability and linguistic accessibility of a publication. There are a variety of ways to assess how accessible a piece is, with the most common metrics relying on sentence length and word complexity to determine roughly what reading level a person would need to be in order to comfortably understand the piece (Courtis 1997; De Franco et al. 2015). It is interesting to note that while these metrics are assessing sentence and word complexity to gauge accessibility, none take into account the length of the publication itself. Even as a lifelong book lover, I found it difficult to get through HP's 127 page *2017 Sustainable Impact Report* (HP 2017).

Building off the work of Nazari et al (2017) and Nilipour et al (2020), this study averaged the Flesch-Kincaid, Gunning Fog, Coleman-Liau, SMOG, and Automated Readability metrics to provide a single metric of readability in the form of an average US grade level required to understand the text. In order to do this, I utilized RStudio, an open-source coding software, to run the linguistic analysis package, produce a result, and average the results across the five readability metrics. These are the commonly used metrics to assess the reading accessibility of documents, working off several key measures as detailed below.

Index	Measure
Flesch-Kincaid	Word length and sentence length

Gunning Fog	Average sentence length and number of complex words (three syllables, with common words excluded)
Coleman-Liau	Letters per 100 words and sentences per 100 words
SMOG	'Simple Measure of Gobbledygook' Number of three syllable words in thirty sentences
Automated Readability Indexes	Number of characters per word and number of words per character

Several academics settled for only one or two of these metrics, arguing that two metrics are a solid enough gauge of readability if one is focused on sentence readability or length and the other focused on the ease or level of words used (Courtis 2004; Klare 1975). However, as the purpose of these indices are to quantify accessibility and expose potential obfuscation, this study decided to include all five for robustness of testing (Nazari, Hrazdil, and Mahmoudian 2017; Nilipour, De Silva, and Li 2020). Courtis argues "…the difficulty for the researcher is to identify the presence of obfuscation, separate deliberate intent from artefact and then, if needed, separate the non-malicious intent from the malicious" (2004). That is to say that these analyses should also take a qualitative approach to assessment and involve a human reaction to authenticity.

The following chapter details the historical evolution of CSR, which provides context and development. This progress has set the foundation for writing up the hypothesis chapters that test the development of the CSR / firm performance relationship and, which I can address with careful testing and thorough research.

Chapter 2

From CSR to ESG: The evolution of reporting and transparency

This chapter will track the evolution of the concept of Corporate Social Responsibility (CSR) from roughly the 1950s through today, examining the hypothesis *how did the evolution and institutionalization of CSR lead to an increasing standardization of ESG?* The primary focus will be the evolving dynamic between private business, third party international organizations, and the progressive demands of society. As globalization and technological diffusion grew throughout the evolution of worldwide information accessibility through both media and technological innovations, the role of business in society underwent several reevaluations that reacted to and built upon one another. As society reacted to a well-publicized controversy, be it environmental or social in nature, the delicate balance between firms and governments shifted, often resulting in targeted legislation and international pacts. The power and reach of firms have been repeatedly challenged as firms struggle to hit the ever-moving target of responsibility.

As technology evolved through internet usage to wearable tech, firms gained access to unprecedented amounts of data on consumers which brought up a slew of questions. Is it ethical for firms to profit off data unknowingly harvested off its own consumers? How much can MNCs influence politics before it crosses a line into a form of neo-paternalism? The questions addressed in CSR and ESG literature have had to adapt to shifting social values, challenges to traditional assumptions, and the major power growth of MNCs. These factors have changed the conversations around CSR from broad management theories into targeted, issue-, industry-, and geographically-specific analyses as academia has grappled with the ever-evolving shape of responsibility.

This chapter explores the evolution of CSR as a theoretical concept into ESG, the measurable, quantifiable, testable product of the process of standardization and global recognition. While a full history that did justice to the impact of social welfare movements, corporate influences, and governmental regulations is far beyond the scope of this dissertation, this chapter seeks to curate important points that led to major changes in an evolving field. This will cover major shifts in the theoretical and practical applications of CSR, as well as the technologies that drive and shape this field. Laying this foundation is crucial for understanding how we got to where we are, what shaped this path, and how that's likely to impact future developments.

2.1 CSR is nothing new

Early industrialist Robert Owens (1771 - 1858) was among the first factory owning social reformers and a prime example of paternalism. Owens was incredibly progressive for his time in that he significantly improved factory conditions, created the first adult night school, and put restrictions on child labor in his factories. In the midst of the machinery-centric Industrial Revolution, Owens sought to 'humanize' work and treat his employees better than the national average through a factory village equipped with a primary school for employee's children, library, and non-denominational chapel. To quote Siméon (2017, p. 2), "…the village was used to test his deterministic intuition that the careful engineering of the laboring classes' material, moral, and intellectual environment would provide a valuable answer to the social and economic upheavals of the new industrial age. Factory workers lived in employee housing, shopped at the local firm-operated cooperative, and sent their children to the local firm-sponsored school. While these benefits were unheard of for their time, they came with significant risks. If a factory worker lost their job, they lost their housing, children's education, and community. This early manifestation of

paternalism, wherein the firm-controlled employee life in their supposed interest, clearly demonstrates the kind of overreaching influence and control that later academics would use to delineate between appropriate social investment and controlling paternalism, as explored again later in the Pullman Experiment of 1893 to rather disastrous effect as a worker's strike resulted in bloodshed (Reiff 2000).

As the expectation of responsibility between business and society has evolved there have been landmark legal cases to explore the legal validity of what would today be defined as CSR. Highlighted by Wren (2005) and Carroll (2008) are two particular cases, the West Cork Railroad Company and Steinway. The West Cork Railroad Company attempted to compensate workers when it was dissolved in 1883, only to be blocked by Lord Justice Byron in the UK who ruled that the board of directors could only spend firm funds to carry on the business and that charity had no place in business. In 1896, however, a US court ruled in favor of piano manufacturer Steinway buying a track of land adjacent to their factory, intended to 'improve employee relations' with the establishment of a church, school, and library (Pillay 2015). Legal rulings were inconsistent and entirely case dependent as early social innovators tried to establish the differences between CSR, philanthropy, and blatant theft of shareholder capital. Depending on the social norms of the time and place, any investment seen as excessive such as employee welfare could be treated as an abuse of managerial power, in the sense that it was stealing profits from the well deserving landed gentry and giving it to the undeserving working class, while some business leaders did exactly that and have been lauded as visionaries (Jenkins 2011).

Another famous case was the Tata Group, a multinational conglomerate based in India. Social investment was built into the firm's founding principles and the firm does not appear to have faced any legal resistance to social investments. Founded in 1868, the group still operates by the mentality of its founder, Jamsetji Tata: "In a free enterprise, the community is not just another stakeholder in business, but is in fact the

very purpose of its existence" (Group). Reflecting on the history of the firm, Shah states, "…over two-thirds of the Tata companies are held by the Trusts, and these Trusts are focused on social welfare initiatives" (2014). This early manifestation of CSR, in a time before the term existed, was a cultural expression of community investment rooted in philanthropy and communal investment[30]. What makes the Tata Group's efforts impressive is that the investments are maintainable and community-driven, in the sense that they invested in ways for the community to support itself through education and economic empowerment. Among the top ten core principles of Tata Group's CSR strategy are that efforts be 'relevant to national & local contexts', are 'participative & bottom-up', and are 'strategic & built to last' (Group). These goals were designed to be sustainable in local communities, such as educating children who can grow up to educate the next generation and so on. Built into the foundation of the firm, these efforts predate any legal regulations for community investment, but rather demonstrate a cultural awareness of firm impact on local communities (Shah 2014).

However, it is vital to note that the Tata Group's efforts were not the norm at the time, and the firm has made an effort to grow its social efforts with the times. Generally accepted practices of the era allowed for child labor, lower wages for women, and unsafe working conditions. Tata Group's efforts in this regard were voluntary and progressive and exemplary, especially during the Industrial Revolution as children were valued as workers for their ability to do minute tasks for less pay and working conditions for anyone in a factory were hazardous at best.

[30] Emphasizing the necessity of sustainable development and genuine community impact, the firm has been committed to investing 30% of its profits after tax into community development programs across India (Hopkins 2007). These programs focus on a variety of issues, including but not limited to health (AIDS awareness & education), economic empowerment (rural development plans & micro insurance), and education (supporting eight primary schools, nine high schools, and a college directly).

The social movements to limit pregnant women and child labor might be considered the first CSR measures, but most often initiated by social activists outside of business so legislated mostly against the will of businesspeople. Child labor laws began implementation in the early to mid 1800s, initially restricting the hours and conditions under which a child could work, and partially intended to create more opportunities for adult male workers who were viewed as losing jobs to the less-likely-to-unionize children. By the time the International Labor Organization (ILO) was established in 1919, most European and some countries beyond had some form of child labor laws with wild variations in place, but simply crossing a soft border meant that children could still be exploited. Officially created out of the Treaty of Versailles post WWI, the ILO was the first truly specialized office in the League of Nations. It was driven by the deplorable factory conditions that plagued the Industrial Revolution and reached shocking heights during WWI, and idealistically strove for peace through economic and social justice [31] (ILO ; Carroll 2008; Lee and Carroll 2011). The ILO was particularly unique as one of the few global tripartite organizations, in that it connected workers, employers, and governments at an organizational and international level. As employers began to feel the pressure of national regulations, factory conditions slowly began to change.

Archie B. Carroll (2008), one of the most prominent and recurring voices in CSR literature, stressed that the Industrial Revolution was a time of increased firm focus on workers with the intention of increasing productivity. The social issues raised included living conditions with the growth of slums, poverty among workers, and the role of women and children in harsh working conditions. In short, social reform was linked to productivity gains in the factory as well as broad moral concerns concerned with averting labor unrest. Management historian, Daniel A Wren (Wren 2005), argued the concern surrounding factory conditions in the UK and US were focused largely on the

[31] The Constitution of the ILO was drafted in 1919 by representative of its initial signatories; Belgium, Cuba, Czechoslovakia, France, Italy, Japan, Poland, the United Kingdom, and the United States.

employment of women and children, which fed in turn into fears regarding the growing slums and worker unrest. These concerns were met by the industrial betterment/welfare movement, which Wren depicts as '…an uneven mixture of humanitarianism, philanthropy, and business acumen' (Carroll 2008, p. 2). For example, industrialist John H. Patterson of National Cash Register (NCR) emerged in the late 1800s through the early 1900s as an early proponent of the industrial welfare movement. At a time when mass production and big business took off, and with the rise of the socialist movement in major industrial economies, investing in labor relations became perceived as an increasing necessity. The 19th through mid-20th centuries were defined by a range of labor and welfare struggles, resulting in constantly shifting balances of power that were heavily impacted by technological developments, war, and the rise of powerful and unified socialist and union movements along with sometimes violent strikes that challenged the power disparity between employers and workers (Lim 2019; Carroll 2008). Businesses' mostly voluntary and minimalist efforts to improve worker welfare was mostly reactive to social unrest and legislated measures.

A publication in the *Journal of the Textile Institute Proceedings* ('The Industrial Welfare Movement' 1923), in discussing the emergence of the Industrial Welfare Movement in the UK, argued that the turning point was the demand for factories to increase their workforces by up to eight times normal capacity in order to meet the needs of the war effort for WWI. Particularly for 'heavy trades', such as manufacturing, there was a sudden need to feed and house a significantly larger workforce and employ more women during the war. In the UK, "Before the war the number of industrial firms with any form of 'welfare' activity, apart from sports clubs, was certainly less than fifty. Today there are considerably more than 1,000 large firms playing welfare supervisors or similar executive to watch over the interests of their employees" ('The Industrial Welfare Movement' 1923). The Industrial Welfare Society, founded in 1918, published three key points that would prove relevant for the next

hundred years; (1) the industrial welfare movement was growing exponentially (albeit in differing names through the coming decades), (2) employers must benefit along with employees from welfare expenditures, and (3) it must be in the interest of and of interest to the workers themselves, otherwise there is no reason for them to partake in any of these initiatives .

As social dynamics evolved between employers and workers, corporate charity and philanthropy began to conceptually diverge from the overall idea of being a 'good employer'. Annual donations to community initiatives were not enough to justify the untenable working conditions, and as Carroll notes, the distinction between *personal* and *business* philanthropy was hazy at best, as well-known names such as John D. Rockefeller and Cornelius Vanderbilt began spreading their wealth beyond the traditional business model (2008). While philanthropy has its benefits as manifesting as art patronage, educational institute endowments, and community project investments, it is insufficient when it comes to actual improvement of social and working conditions. Further, the legal infrastructure wasn't necessarily in place to account for *corporate* philanthropy. In the 1930s, the US Congress was lobbied by business leaders for a 'five-percent amendment' in the form of a tax break for charitable contributions, further blurring the lines between personal and business benefits of philanthropy (Frederick 2006).

Leading up to the development of concepts such as good corporate citizenship or CSR, there was the industrial welfare movement. The early 1900s saw the surprise emergence of employee welfare supervisors and a managerial shift toward more humane working conditions, especially following WWI ('The Industrial Welfare Movement' 1923). During WWII, as women stepped into factories to take over for the men sent to the front lines, a whole new wave of empowerment began in the workforce. By the end of WWII, industrial welfare was a core component of managerial practices (Woollacott 1994). This was around the same time as the

growing welfare state movement which foundationally shifted the perception of poor people away from being victims of their own moral ineptitude, and toward a growing awareness of situational factors; Sir William Beveridge, the 'father' of the welfare state movement, cited the three factors working against the poor as a failure of communication between employers and workers, seasonal fluctuations of demand, and technological innovation that led to industrial decline (Benassi 2010). This shifting narrative began lending more autonomy to workers and began assigning more social responsibility to managers and employers, a kind of humanization of the workforce and management. While any form of corporate benevolence was celebrated, this shifting dynamic between employees and employers meant that firms were experiencing the beginnings of corporate *social responsibility*.

There have been several distinct eras within the CSR evolution, with prominent academics defining different time periods according to different characteristics. For example, Patrick Murphy's 1978 publication established four eras of CSR; (1) up to the 1950s as the Philanthropic era; (2) 1953 – 1967 was the Awareness era; (3) 1968 – 1973 was the Issue era; and (4) 1974 – 1978 was the Responsiveness era (1978). The Philanthropic era was characterized by a lack of distinction between CSR as manifestations of industrial and social welfare initiatives and philanthropy, as the two concepts began the process of academic separation in the early 1900s in practice Up to the 1950s was the 'philanthropic' era, characterized by companies donating directly to charity instead of launching in-house initiatives. From 1953-1967, the 'awareness' era blossomed in acknowledgement for the responsibilities of businesses in relation to wider society and communities. Following this was the 'issue' era from 1968 – 1973, wherein companies targeted particular social problems such as discrimination or ecological abuses. 1974 to 1978 is the 'responsiveness' era as companies made targeted shifts to their internal structures and expanded their CSR activities.

In comparison, Frederick (2006) only had three primary delineations between CSR

eras; (1) 1950s – 1983, defined by the emergence and struggle of the concept of CSR in general[32], (2) 1984 – 1991, the development of values and corporate culture, and (3) 1990s – 2005, the merging of corporate morality and the environment. In the grand scheme of civil justice movements and the growing political power of large firms, Frederick's eras were rather sparse.

Arguably the most influential CSR historian, Archie B Carroll provided a six part CSR timeframe, starting alongside Murphy with the (1) pre-1950's build up to CSR as essentially a confuddled mix of philanthropy and paternalism with a healthy dose of industrial welfare mixed in, (2) 1960s spread of broad CSR in the form of managerial theories, (3) 1970s accelerated growth, (4) 1980s evolution of complementary concepts such as social responsiveness that paired business development with social good, (5) 1990s saw considerable growth in similar specialized literature like sustainability, and (6) the 21st century has focused on significantly refining the research and managerial practices of CSR. In line with Wollocott's (1994) crediting of women in industry, Carroll centers CSR as initially a managerial issue that arose following the World Wars and the changing shape of business following the industrial welfare movement. Once CSR was accepted as a solidly management issue following the 1960s, it entered a phase of financialization through the 1970s and 1980s when managers began arguing that it was not only necessary for worker retention, but for business growth. This line of argument faced some backlash with Friedman's (1970) seminal work, to be discussed later, but eventually recovered from the Friedman shock and got back on the same trajectory it was on before as it became more specialized and accepted a degree of responsibility as necessary.

The timelines put forth by Murphy, Frederick, and Carroll follow similar trajectories,

[32] The term 'Corporate Social Responsibility' was initially introduced in 1953 by Howard Bowen, but it took time for the term to develop a generally accepted understanding, even if a specific definition remain elusive.

wherein CSR started as broad philanthropy or controlling, if well-meaning, paternalism before it began to take shape as CSR in the 1950s. Many of these concepts emerged from worker welfare movements, which would later fall under the 'social' pillar of CSR, before having environmental concerns layered on top in the 1960's. As a concept, CSR faced resistance and mixed reactions through the 1960s before reaching a point of general acceptance by the late 1970s, early 1980s. This resistance is most notably enshrined in Friedman's (1970) shareholder value argument and some academic calls for general deregulation by the end of the 1970s. However, by the 1990s CSR was being refined into more specific usages such as sustainability or corporate citizenship but remain largely specialized as shareholder value thinking became ascendant, which still set the stage for the 21st century for further development and implementation. To demonstrate these progressive overlaps, Figure 8 below shows the timelines established by Carroll, Murphy, and Frederick. As indicated, the 1950s through the 1980s were primarily spent fighting for legitimacy, followed by acceptance and integration.

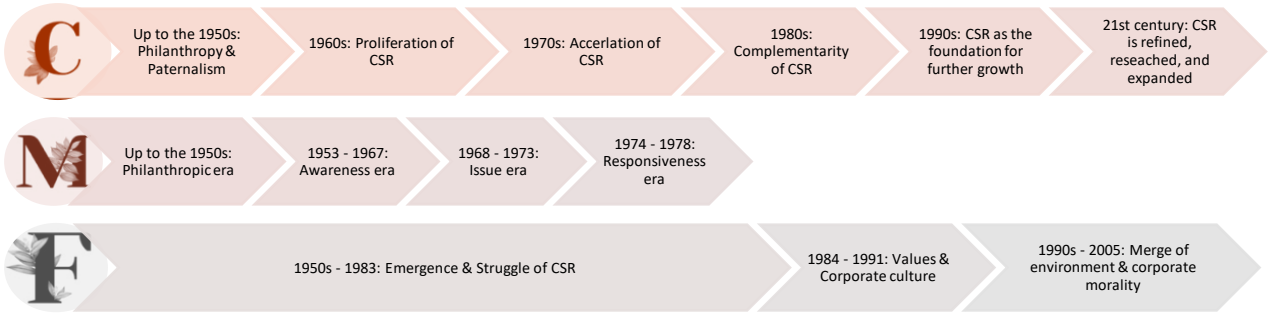


Figure 8: Timeline representing Carroll (C), Murphy (M), and Frederick (F)'s CSR eras

2.2 1950s: The emergence of CSR as a concept

Howard Bowen's 1953 *Social Responsibilities of the Businessman* is typically cited as being the original usage of the term 'Corporate Social Responsibility', for which

Carroll crowned Bowen the 'Father of Corporate Social Responsibility' (2008). Carroll also cheekily points out that there was an apparent lack of business *women*, suggesting that gender issues hadn't quite scaled up to academia or board rooms at that point. The foundation of Bowen's definition of CSR rested on the argument that decision making power and social impact had become concentrated within several hundred firms. As these firms had increasingly significant impact on the daily lives of citizens, Bowen's definition of social responsibility highlighted the "…obligations of businessmen to pursue those policies…which are desirable in terms of the objectives and values of our society" (1953: 6). It is worth noting that Bowen's definition of the *doctrine of social responsibility*, which refers to the overarching concept of CSR, is immediately economic as he states "…voluntary assumption of social responsibility is, or might be, a practicable means toward ameliorating economic problems and attaining more fully the economic goals we seek" (1953: 6). In a few short lines, Bowen defines the concept of social responsibility as intrinsically connected to both overall society's values and businesses.

The 1950s were defined by academia's newfound CSR focus on management practices and management's focus on adjusting to this new lexicon. Carroll describes it as less a time of action and more a time of talk, as what was beginning to emerge as CSR was still a muddling of firm-specific welfare initiatives and philanthropy. Bowen's landmark publication launched academic writing on CSR, followed by Eells's *Corporate Giving in a Free Society* (1956), Heald's *Management's Responsibility to Society: The Growth of an Idea* (1957), and Selekman's *Moral Philosophy for Management* (1959). These discussions centered on the legal ability and social duty of management to engineer quasi-autonomous CSR investments. While they offered the first guidelines for the ethically aspirational businessman and created the foundations of CSR literature, they failed to fully structure how to approach and implement CSR practices.

William C. Frederick claimed that one pivotal misrepresentation regarding CSR was that it is something that companies are subjected to, whereas in his experience, it is more often something that companies have spearheaded, such as the fight against child labor (Schuman 2017). As Frederick states, "CSR, in whatever form it takes, *serves* corporate interests and goals" (2006: 7). He presents CSR as being a natural component of capitalism and "an integral part of the free-enterprise market economy", a manifestation of firm values as the firm exists within society. This argument is reliant on CSR initiatives being voluntary, an intentional and unforced expression of social commitment on the part of the firm. The overall dynamic between business and society was one of mutual growth, referred to as "interpenetrating systems", "complex adaptative systems", and "a spontaneously evolving, self-organizing relationship" (2006: 11). In discussing Frank Abrams' (1951) [33] statement in the *Harvard Business Review (HBR)*, Frederick sets the stage for the early 1950s CSR perspective as one of managerial duty in serving not only shareholders, but "…employees, customers, and the public at large", an early manifestation of what we would later deem stakeholder theory . As a flurry of perspectives began to dominate the *HBR* throughout the late 1950s and 1960s, calls for CSR used religion, philosophy, history, and basic ethics to convince business executives that to ignore their social impacts was no longer an option. The 'social' aspect of CSR was far ahead of its environmental or governance counterparts in this era.

Opposing this voluntarist viewpoint, Oliver Ohmann (1955) argued that the demands placed on managers were a mere distraction from the actual problems facing the labour force, which were rooted in a loss of personal and spiritual satisfaction. "Abundance without Satisfaction" meant that there is no attainable balance between firm and society, and as such, focusing on matters like raising wages are less a cure

[33] Frank Abrams was the Chairman of the Board of Directors for Standard Oil of New Jersey, now known as Exxon, and an early vocalist in favour of good corporate citizenship from the business executive side of the discussion.

and more a misplaced bandage. Ohmann states, “I am convinced that the central problem is not the division of the spoils as organized labor would have us believe. Raising the price of prostitution does not make it the equivalent of love” (1955: 34). Essentially, the status quo was perfectly viable and workers needed to find satisfaction in their lives through religion instead of working conditions. Ohmann was essentially arguing that the rising recognition of firm responsibility should manifest as managers taking on roles of personal leaders and encouraging spiritual fulfillment. There is no call for legislation or regulation, only the advocacy for more religion in businesses as a means of quelling any sort of worker dissatisfaction.

Ohmann was not alone in his objections. Theodore Levitt also stood against this rising tide, with a scathing article which argued that CSR was only undertaken as a defensive maneuver when a firm was attacked, and one which could quickly slide the entirety of society back into feudalism. His article paints well-intentioned businessmen as being backed into a metaphorical corner by demands for “routine social-economic amenities which people seemed clearly intent on getting”, yet were not receiving from the local nor the “Brobdingnagian” federal government (1958). Taken within the context of the Cold War, Levitt’s concerns of “People’s Capitalism” being thinly veiled Communism may have explained his opposition to social initiatives, as he argues that businessmen who are strictly profit-oriented, as good capitalists should be, are locked out of large business conferences and fancy speaking events “…where social responsibility echoes as a new tyranny of fad and fancy.” This kind of reactionary response to the looming threat of the evils of CSR would prove a recurring theme, foreshadowing Friedman’s (1970) seminal critique.

Fredrick defined three core concepts of CSR in the 1950s. First, that corporate managers are essentially public trustees, an evolution from paternalism which took shape in the 1920s and spread more widely in the 1950s. Second was the struggle of balancing claims to corporate resources, which was a clear challenge in the

stakeholder era (and still remains the most common critique). Third was the most commonly understood facet of CSR, philanthropy or corporate contributions, which took popular form in the public eye as the Community Chest movement sprouted circa 1920, wherein grassroots organizations and firms invested in funding pots for community needs. According to Sophia Muirhead, philanthropy and corporate contributions were in a period of 'innovation and legalization' in the 1940s and 1950s, subject to managerial whims with little to no oversight or consistency.

2.3 1960s – Majority versus the Pure-Profit Minority

The 1960s saw a surge in attempts to formalize and define CSR, resulting in a crucial shift in academic and business perspectives toward the economic utilization of CSR as tool for financial benefit and not merely an expenditure. CSR has taken many forms, but the focus on quantifying CSR and giving management resources for CSR implementation emerged in this decade. Keith Davis posited a succinct definition in that social responsibility is "…businessmen's decisions and actions taken for reasons at least partially beyond the firm's direct economic or technical interest" (Davis 1960). These decisions served to generate social power, as firms improved labor conditions and, consequently, larger community relations through educational and social initiatives. This social power could be harnessed and used to generate returns, as the discussion of CSR shifted from a social *responsibility* to a source of economically useful social *capital*. Davis was arguably the first to point out long term economic returns for CSR, for which Carroll crowns him the "runner-up to Howard Bowen for the 'Father of CSR' designation" (2008). Serving as the foundation for a shift in CSR literature toward the dynamic between CSR and firm performance, Davis' argument of economic returns set the stage for the coming decades. In many respects, as does many other studies discussed below, this dissertation will follow this line of discerning quantitative returns from CSR investment, a clear indication that Davis' impact upon this academic narrative was pivotal.

Emerging from the laissez faire economics that had fluctuated in the Western world, five primary theories crystallized throughout the 1960s: Management as a Trustee, Christian Ethics, Balance of Power, Alarmists, and Capitalist Ethics Reformulated. At the forefront of these theories, Management as a Trustee argued that corporate managers should work in the public interest and with a careful avoidance of abuse of power. This argument was heavily influenced by the surge of anti-big business in the US, with the rise of protest against existing power structures, especially large institutions (Waterhouse 2017). Christian Ethics essentially said that so long as businesspeople operated as good Christians, nobility of purpose and the framework of religious doctrine would guide an ethical hand. Balance of Power was the supposition that having strong businesses counterbalanced by a strong government and regulatory sector would protect both sides from abuse by the other and best serve society as a whole (Galbraith and Bartel 1983). In response, the Alarmists warn of ever-increasing concentrations of power in the hands of the few, be it private business, government, or any other institution. As technology and overall organization of power grow, Alarmists argue that business responsibility is impeded by the corrupting impact of power on individuals. The Capitalist Ethics Reformulated theory, which argued that the largest number of citizens should have access to property and ownerships, in a sense converting them from passive bystanders to active owners, is the only means to encourage social responsibility as loyalty to the system and society would grow. This line of argument tapped into a democratization of property rhetoric. However, as each of these perspectives emerged, Frederick (2006: 15 - 20) noted a distinct lack of clarity on the actual responsibilities of the businessperson. Concerns regarding the concentration or abuse of power focused on the motivations of managers and owners did not detail an actionable response. In fact, there is a degree of optimistic naivety in the Management as a Trustee and the Christian Ethics theories, both of which rely on a vague concept of morality that is entirely subjective, as well as suggesting that what has been the primary objective of the businessman, to earn

money, is easily replaced by an overwhelming commitment to a sacrificial mentality of management. Thus the infancy of CSR as a concept lacked definition and clarity that allowed for quixotic, vague, and unstructured theories to vie for attention.

However positive as CSR's newfound presence may sound, the dawn of the 1960s also brought to light the "managerial nightmare" of trying to balance an array of potentially conflicting interests (Frederick 2006: 17). Such conflicting interests and priorities remain a common critique of stakeholder theory. Being answerable to all stakeholders, managers, along the lines of General Electric's Richard Eells who cited the 'well-tempered corporation' as needing to be mindful of all necessary players and their concerns, ranging from employee dignity to supplier reliability to shareholder profits, provided little guidance. This theory proved even more complicated in the late 1960s and 1970s with the significant rise in multinational firms, notably emerging from the US and UK, which complicated the audience for CSR still further (Camfferman and Zeff 2007). As American firms moved into Europe and took advantage of opportunities for innovation and flexible cross-border trade, they immediately were confronted with foreign resistance for their social, economic and organizational power, which was often described as corporate colonialism exemplified by Jean-Jacques Servan-Schreiber's *Le Defi Americain* (The American Challenge, 1967). This began a deeper assessment of corporate responsibility as globalization and internationalism began spreading awareness of certain human rights standards in Western countries and humanizing the people at the lowest rungs of the supply chain, as opposed to the separationist mentality that essentially reduced foreign labor to an emotionally detached abstract concept.

In 1967, Walton put forth his own definition of CSR in a series on the role of business and businesspeople within society, which notably included the provisions that CSR have an element of voluntarism, a corporate connection to other voluntary organizations, and the understanding that CSR might not return easily measured

economic benefits such as immediate financial returns or sudden surges in sales (Walton 1967). This served as a cautionary argument to academics beginning to get excited about the economic benefits posited by Davis, as it was the first argument posed that brought up short- and long-term benefits, a challenge that persists today. Walton attempted to reorient the growth of CSR literature back to its focus on management, warning against getting too eager to quantify and monetize CSR as the results academics sought may be harder to find than they'd like.

2.4 1970s – Environmental activism bolsters and legitimizes CSR

The late 1960s and 1970s, however, added another now prominent yet so far neglected dimension to CSR to include environmental concerns (Hoffman 2001). April 22, 1970 was the first celebration of Earth Day. It was held following years of efforts to establish environmental organizations, with the 1969 Santa Barbara oil spill and resulting mass protests serving as necessary catalysts to encourage action. Bolstered by the momentum of concurrent youth-led protests focusing on environmental and human rights matters, such as anti-pollution and anti-war demonstrations, the bipartisan support for the establishment of Earth Day led to the creation of a slew of legislation (Margolis and Walsh 2001). The US Environmental Protection Agency[34] (EPA) (1970), the Clean Air Act (1970), and the Occupational Safety and Health Act (OSHA) (1971) were among the most prominent. This series of events marked a unique shift in public mentality as social movements found a way to impact federal regulations on businesses, at a time when the concept of a firm owing a degree of responsibility to society at large was widely accepted, and the particularities of that social dynamic were in the process of being further defined. This marked the

[34] It is worth noting that Nixon's establishment of the EPA wasn't entirely motivated by a love of nature, but as a strategic political move to take an environmentally-minded opponent, Senator Muskie, down a notch. Nixon apparently associated environmentalism with the anti-war movement of the 1970s, which was a sign of a weakening American culture in his eyes. (Hoffman 2001).

beginning of regulated CSR, as firms were now being held to higher standards due to their impact on the common spaces of the environment. The idea of rampant financial growth at the cost of workers and the environment was being challenged by publications such as the international coalition Club of Rome's *Limits to Growth* of 1972, which argued for constraints on growth, that economic growth might be the problem, and fostered an reorientation of multinational firms toward a more holistic, less strictly financial mentality (Meadows et al. 1972). This stage of CSR development marked a tipping point from CSR as a freeform concept that included vaguely circumstantial ethics, philanthropy, industrial welfare actions, and stakeholder interests that reacted quickly to the hot-button issues of the day, down the path of standardization of practices and metrics through clear compliance measures.

Increasing involvement of international non-governmental organizations (INGOs) and their publications such as the 1970 Committee for Economic Development (CED) *A New Rationale for Corporate Social Policy*, the 1971 CED *Social Responsibilities of Business Corporations*, and the Club of Rome's 1972 *The Limits to Growth* highlighted and advocated for an increasingly global responsibility for business. These publications by respected INGOs relied heavily on themes of sustainable development, which emerged as a concept following the 1972 Stockholm Conference (Egelston 2013), as defined by limiting pollution and the interconnection between important human rights and labor issues. They were presented in a manner that avoided demonizing businesses, and instead highlighted the power and opportunities of managers to impact significant change through a systemic, strategic, and proactive social policy.

Yet, simultaneously, while public policies and international focus had been rising in favor of CSR objectives, Milton Friedman (1970) published his landmark anti-CSR article, *The Social Responsibility of Business is to Increase Profits*, in part as a reaction to these efforts. Drawing on Levitt's earlier rhetoric, Friedman argued that anyone in

favour of CSR was “preaching pure and unadulterated socialism” (1970: 1). Friedman argued that ‘responsibility’ can only belong to an individual, not to an artificial construct such as a business corporation, thus the responsibilities typically associated with CSR are placed squarely on executives and managers. These leaders, however, have a direct fiduciary responsibility to the owners and investors in the business first, so redirecting firm funds toward social initiatives would be tantamount to “Taxation without representation” (1970: 2-3). Cheffins (2020) argues that Friedman's landmark essay launched the ‘Shareholder Value Revolution’, which fit well with the investor-oriented capitalism (Jensen and Meckling 1979) of the time that focused on deregulation (Schiller 2020) and principal-agency theories that focused on the ability of consumers to influence change through purchasing power (Alchian and Demsetz 1972). Friedman’s essay caused friction between the shareholder approach and the nascent CSR stakeholder movement, which was gaining traction and interest in both academia and business literature.

However, and in parallel, CSR approaches took a significant conceptual step as non-financial reporting began in the 1970s even as shareholder value was swinging back into public view and becoming the standard way of assessing business by the 1980s. One such 1973 assessment by the first third-party consulting firm, Ernst & Ernst and written by Dennis Beresford, proposed a study on ‘social measurement disclosures’ of Fortune 500 companies, with additional academic publications focused on non-financial reporting starting in 1975 (Parket and Eilbirt), 1976 (Bowman and Haire), and 1979 (Abbott and Monsen), and a report on additional recommendations in 1976 (Epstein, Flamholtz, and McDonough ; Fifka). The Financial Accounting Standards Board (FASB) in the United States was also established in 1973 as a private, non-profit organization focused on setting standards and improving upon the existing financial Accounting Principles. However, as the primary US reporting standards body, the absence of generally accepted public social disclosure standards was notable at a time when in academia, regulators, and activists were beginning to establish key social

measurements. However, the increasing dominance of shareholder value perspectives by key selective academics and industry-backed regulators influenced the FASB approach to favour industry (Ramanna 2015), which stalled any formalized implementation of social reporting standards.

In terms of environmental standards, scholars in the 1970s began to focus more intently on the cost of operationalizing CSR standards. Bragdon and Marlin (1972) examined the impact of environmental controls on firm profits, starting with traditional economic models of the time, which were used to support a trade-off argument. These models were used to say that a firm could either be profitable or be environmentally conscious, but that using scarce resources to reinvest in environmental programs would, ultimately, result in a tradeoff affecting firm profits. In their examination of the paper and pulp industries, Bragdon and Marlin found that in an industry that is closely reliant on natural resources, there existed a strong correlation between higher profits and (however desirable) effective pollution controls, the result of efficient management practices that balanced financial savings and pro-environmental efficiency (Hoffman 2001).

In the 1970s, firms increasingly focused on environmental concerns as limiting pollution in accordance with society's primary values of the era, which forced often reluctant compliance measures. Sethi (1975) offered a stable definition of CSR with a cogent foundation, rooted in the understanding that business practices need to evolve with social norms. Performance must be "…to a great extent culturally and temporally determined. A specific action is more or less socially responsible *only* within the framework of time, environment, and the nature of the parties involved" (1975: 59). Essentially, random acts of supposed goodwill do not necessarily mean that a firm is performing well under the heading of corporate responsibility unless they comply and conform with contemporary social norms, whether regulations existed or were enforced or not. An example of this would be if a firm stopped

employing children in a country where the employment of children was both culturally and legally unacceptable, in the sense that this particular action was not an act of corporate responsibility, but merely abiding by baseline legal obligations as a sort of legal and transactional compliance. This perspective did not address areas of the world where child labor or other detrimental labor issues were accepted or not enforced--leaving aside the lack of environmental standards across the globe.

Wolozin (1971) presented a powerful argument that urged firms to move beyond minimum legal compliance and to challenge existing norms as environmental concerns were essentially sidelined and weak. He argued four necessary changes for true CSR, in (1) emboldening environmental agencies and "…protecting it from the invasion of self-serving major polluters", (2) increasing relevant legislation and regulation, (3) an update of the existing economic models for a more era-appropriate analysis, and (4) expanding the idea of social costs and reassessing consumer sovereignty (Wolozin 1971). Conceptually, this was a CSR shift toward consumer agency and posed a strong argument against the growing political power of large firms. The focus shifted from managerial influence to the protection of legislative powers and consumer interests from 'self-serving' firms, reinforcing the perspective of private business versus public interest. These points are rooted in the evolving idea of social and environmental costs of businesses and highlight the imperative need for CSR policies that evolve with the times and social norms. The growing visibility of social and environmental issues were the direct result of the rise in environmentally focused government agencies and international NGOs working to impact significant influence on industries through coordinated social movements, but growing public awareness takes time to translate into actual legislative impact. Essentially, Wolozin argued that established government agencies were green-tinted window dressing without enforceable mechanisms and active compliance on the part of firms, and that nothing would actually change until there were significant legislative and regulatory changes. Firms could not be expected to voluntarily go beyond legal measures.

For instance, with the 1973 establishment of the International Accounting Standards Committee (IASC), a joint commitment by the United States, UK/Ireland, Netherlands, Mexico, Japan, Germany, France, Canada, and Australia, financial reporting and accounting standards began the arduous process of international standardization. Inspired by two decades of growing internationalism, manifesting as surging foreign direct investments (FDI) and the exponential expansion of multinational corporations (MNCs), inconsistent accounting practices allowed for firms to take advantage of lax regulations outside of their home countries to expand quickly (Camfferman and Zeff 2007). However, these accounting standards focused on more standard financial accounting measures rather than CSR or what we would now call ESG investing standards.

This era of CSR conceptualization also began the first set of articles that began to empirically test Corporate Social Performance (CSP) against firm performance to move beyond the direct tradeoff model that implied that CSR raised costs and therefore reduced profits, which was an empirical problem to be tested and solved. In the 1970s, 18 studies of such type were published; of these, 13 made CSP the independent variable to test the impact of corporate social standards upon firm performance. These predominantly showed a significant positive relationship (10), followed by zero results (6), with trailing studies showing mixed or zero results (1 each**).** When CSP was set as the dependent variable, and testing explored the impact of firm performance upon social performance, 2 of the 3 studies found a positive relationship while the third found no relationship (Margolis and Walsh 2001). These were landmark studies that sought to provide the business case for CSR beyond ethical or social normative goals.

Bowman and Haire (1975) furthered the argument in favor of *strategic* CSR (SCSR), presenting the case for an inverted-U shaped curve wherein CSR investment is good

up to a certain zenith point, followed by decreasing marginal returns. Thus effective leadership should be capable of balancing appropriate CSR expenditure against overextension and excess, essentially moderating CSR behavior by meeting or strategically exceeding industry norms. This study was the first to effectively model CSR returns in a manner that was intuitive and realistic, beyond the social impact-based arguments of previous management literature. The important point was that these studies argued that CSR was not just good for society but good for business too, providing a managerial justification for it beyond the ethical justifications.

Further studies trying to link CSR to firm financial performance from the point of view of investors, now called ESG investing, followed with more ambiguous results. In 1978, Aldag and Bartol conducted the first vote-count review of existing literature focusing on CSR or CSP and Corporate Financial Performance (CFP) (1978). This review proved increasingly critical of the means of measuring CSP that had been tested, such as those by Parket and Eilbrit (1975) or Bowman (1978), arguing that the soft information approach of these studies were questionable.

Fogler and Nutt (1975) presented one of the first empirically studied cases of institutional investors being asked whether they would avoid investing in firms that were deemed at the time to be 'socially irresponsible'. However, in their assessment of nine paper companies, the authors found results consistent with efficient capital markets. In this scenario, the socially conscious investors who sell their shares in a polluting paper producer were essentially creating a bargain for the less environmentally motivated investors, who bought up the shares and kept the market relatively balanced. Significant impact upon stock returns would be unlikely without significant institutional change (Fogler and Nutt 1975; Wolozin 1971). In another study, Alexander and Buchholz (1978) presented two possible scenarios for stock market performance and social responsibility, the first being that socially conscious management may simply be well trained and adaptable enough to run a good

company, as supported by Wolozin's findings of a 7.28% stock appreciation by stronger CSR firms over their less socially conscious peers. In contrast, there is also the possibility that a focus on social responsibility will result in a competitive disadvantage and excess cost, which is, supported by a study by Vance (1975) wherein business students and businessmen were surveyed on their perceptions of the social responsibility of 45 to 50 leading firms, which found a negative correlation between stock market performance and surveyed perceptions in the sense that the students and practitioners largely believed that CSR was more of a cost than a benefit. In returning to Wolozin's basic institutional premise, Vance's study is an argument in status quo culture and reinforces that nothing will change unless it is done structurally and institutionally.

To make these changes, Buehler and Shetty (1976) placed the onus for change upon proactive managerial agency in keeping with the management-centric and social evolution themes of the 1970s. Social influence of the time has grown up through grassroots organizations to international coalitions, all the way to direct government actions. The authors found that a higher percent (40% versus 23%) of firms surveyed were actively implementing socially motivated structural changes, externalized in the forms of urban investments, consumer affairs, and environmental awareness. This typically manifested in the form of new or updated company policies and targeted mission statements, with a slightly smaller portion focusing on new internal organizational elements of the same focus. Their study demonstrated that firms were actively in the process of reassessing their structures and processes, and that some acceptance of the necessity of social investments was diffusing through the business community. This was in response to increased external pressure from social activist groups and governments, showing that the ramping up of pressures from sources other than just consumers was effective in affecting change.

From a reporting standpoint, Abbott and Monsen (1979) found further evidence of

increased social awareness as some firms began to release non-mandatory social statistics while faced the first instances of pressure from governments to institute formalized reporting. In 1978, US Secretary of Commerce Kreps attempted to rally support for a social activity report to become mandated for firms with no success, but this would be a key indicator to the savvy manager about reporting requirements on the horizon. The authors succinctly describe the business environment of the time as a "peculiar paradox…the large corporation has been….the symbol of economic progress and yet a consistent object of criticism for instituting problems for which it has traditionally divested itself of responsibility" (1979: 501). The evolving firm interest in social reporting served as a means of connecting with consumers, as if the firm were assuming the opportunity to explain itself for previous responsibility divestment. Firm branding and image took on a deliberately social nature, as consumer satisfaction demanded. The important shift in the late 1970s, in spite of the trend to shareholder value, is that firms began recognizing consumers as potential demand agents for positive social change, exemplified by the increase in consumer protection norms and at least brand or advertising image.

However, this new shift toward reporting was not purely altruistic, as it appears to be driven largely by brand management. This initial growth period of CSR reporting manifested as advertisements and small sections in annual reports, neither of which were subject to significant oversight or accountability. Described as an era of empty promises and "eco-pornography," firms were largely interested in capitalizing on perceived good behavior rather than investing the significant time and resources to audit their practices and supply chains (Marlin and Marlin 2003). As general consumer preferences began demanding businesses take some form of responsibility, the progressive social movements of the 1960s and 1970s managed to change broad social values. This progress set the stage for the coming eras of widespread CSR implementation, demands for transparency and accountability, and interest rising to an international scale.

2.5 1980s – Institutionalization and normalization of CSR

The 1980s saw an increased call for more precise CSR measurements as a reaction to an increased focus on civil rights and racial issues through divestment activism (Sherwood and Pollard 2018) for instance, in reaction to the South African Apartheid (Margolis and Walsh 2001). A series of international efforts rose up to challenge them in a variety of forms, such as the 1981 African Charter on Human and Peoples Rights. This regional agreement laid out over twenty rights, focusing predominantly on social and personal security issues, such as the freedom from discrimination or torture, equality and equal protection under the law, and the duty to promote human rights . From an economic perspective, inequality and social issues were tackled by the likes of the 1983 founding of the Grameen Bank by Muhammad Yunus, for which he and the bank won a Nobel Peace Prize. The bank focused on microcredit loans and bringing financial options to underserved regions throughout Bangladesh, the first organized financial institution of its time to implement an effective and widespread social program of its kind (Yunus, Moingeon, and Lehmann-Ortega 2010). Targeting South Africa directly, protest disinvestment led investors and firms to pull out of South Africa (CFI), marking a key turning point for ESG investing (Sherwood and Pollard 2018).

In the 1980s, researchers began exploring the relationship between CSR and firm performance, but found that precise measures of CSR were wholly inadequate (Cochran and Wood 1984), and thus invalidating any clear relationship between social responsibility and firm performance. One of the most common tools for measuring CSR, reputation indices, run the risk of being limited by scope and influenced by bias within relatively small samples sizes, which leads to concerns of a lack of clarity especially when considering causality. Even firm performance metrics were found wanting, as investor returns rarely controlled for risk or industry and accounting

measures were impacted by firm accounting practices, economic growth rates, and lacked controls (Cochran and Wood 1984). Aupperle, Carroll, and Hatfield (1985) echoed these concerns and they called on researchers to go beyond content analyses and reputational indices to develop concrete empirical tests for CSR impacts. As research was leaning more heavily by now toward the impact of CSR on financial performance, the authors highlighted the need to focus on firm performance metrics that could not be manipulated by managers, and to be conscious of the possibility that a single metric to answer to this massive question may simply not be possible. This led to academics advocating for more robust metrics and testing methods and set the stage for innovative testing measures and interesting new questions, such as focusing on what exactly a firm was trying to communicate in these reports and to whom.

Ullmann (1985) followed up this line of thought by arguing that the key terms in CSR literature, content analysis tools, and reputational indices were problematic and lacking refinement. He also challenged the fledgling practice of attempting to measure social performance in much the same way as financial performance as this practice attempted to quantify a complex and largely intangible concept before there existed an agreed-upon methodology to do so, highlighting the "visibility of an industry" as an intervening and impactful variable in examining the dynamics between social disclosure, social performance, and economic performance. In this sense, consumer awareness and industry transparency pose a significant impact on the outcomes of measuring CSR. As pressures from society steadily increased surrounding social and civil issues, alongside the growing acceptance and operationalization of CSR efforts among businesspeople and academics, returns on managerial investment in CSR demonstrated a similar growth at the level of corporate performance. Ullmann (1985: 554) noted that relevant decisions could be easily influenced by variables such as "firm size, industry and company visibility, external pressures, and executive values", all of which are impacted by industry or firm transparency or lack thereof. Without

verifiable disclosures, firms and industries could avoid the controversy limelight by obfuscation and clever shifting practices to hide any ill deeds.

Within the shareholder value and financialization atmosphere of the 1980s, Cheffins (2020) points out the rise of incentive-heavy executive pay still prioritized financial returns that indicated that evaluation of firm behavior and performance was still firmly rooted within the traditional single-bottom-line mentality. CSR was not necessarily reaching the C-Suite at all, even as academia was beginning to regularly publish on a positive relationship between CSR and financial performance. Empirical analyses of Corporate Social Performance (CSP) in the 1980s were fairly balanced between CSP as the independent or the dependent variable, with both usages finding predominantly positive correlations, followed by mixed results, and trailing significantly with zero correlation (Margolis and Walsh 2001). By this time, a distinction arose between CSR, as the intangible responsibility of a firm, and CSP, or the actions taken by the firm to meet these responsibilities. CSR was circulating through academia and mid-level managers, primarily focused on social and governance issues, but was still treated as unnecessary work by the executive board level instead of being diffused through corporate culture. This would change with the rising focus on environmental issues.

In response to social and, in particular, environmental movements, private firms had to begin taking a more proactive approach to environmental initiatives, during which time several key international developments took place. Growing influence from INGOs forced environmental issues to the forefront of social concern. In 1981, The European Commission established the Environmental Directorate-General, followed by the 1983 World Commission on Environment & Development, the 1987 UN adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer, the 1987 Brundtland Commission publication *Our Common Future*, and the 1988 Intergovernmental Panel on Climate Change. Each study was a landmark in its own right and together they form a picture of international coordination to challenge

potential environmental threats associated with globalization, such as the exportation of waste via outsourcing polluting industries to developing countries.

As the global stage focused more intently on firms and their environmental impacts, environmentalist Jay Westerveld coined the term 'greenwashing' in 1986 (Watson 2016). Referring to the practice of marketing a firm as being more environmentally friendly than it actually is, the most notorious example of greenwashing is the mid-1980s media push by Chevron, an oil company that released a marketing campaign called People Do, portraying employees as defenders of wildlife. It won Chevron both an Effie advertising award but also the designation of the 'gold standard' in greenwashing from environmentalists. In what may be the more succinct example of greenwashing, as Chevron was running ads portraying an abiding commitment to nature, it was also violating the Clean Water Act, the Clean Air Act, and had numerous oil spills in wildlife refuges.

Another disaster, the 1989 Exxon Valdez oil spill, marked a major turning point for environmental standards. As a reaction to this spill, the Coalition for Environmentally Responsible Economies (CERES) was established and released a 10 point set of principles highlighting transparency, management responsibility, and environmental sustainability. The 10 principles are (1) protection of the biosphere, (2) sustainable use of natural resources, (3) reduction and disposal of wastes, (4) energy conservation, (5) risk reduction, (6) safe products and services, (7) environmental restoration, (8) informing the public, (9) management commitment, and (10) audits and reports (Smith III 1993). These principles were comprehensive and visible enough to catch the interest of several Fortune 500 firms, while simultaneously being pioneering enough to expand beyond an environmental checklist that was restricted to environmental metrics. Meaning that instead of asking firms to check off a box as to whether or not they recycle, the CERES principles established that environmental concerns included public transparency in communication and auditing, social concerns and safety, as

well as sustainable design and execution, but it is important to note that the CERES Principles were entirely voluntary and lacked any enforcement mechanism.

The IASC also began focusing more intently on harmonizing with adjacent institutions in an effort to streamline procedural standardization, starting in 1987 with the International Organization of Security Commissions (IOSCO) and in 1988 with the Financial Accounting Standards Board (FASB). While this membership committee allowed each individual institution the opportunity to influence international discussions and the IASC Financial Reporting Principles that were trialed in 1989, they failed to set meaningful policy standards in place and essentially remained independent (Ojo 2016). While financial reporting standardization was openly discussed as being necessary, it was evasive in actual practice. However, the IASC was innovative in that it worked with a consultative group, advisory council, and steering committees that were comprised of industry experts, while also inviting open comment through its Standing Interpretations Committee, a practice that would inspire future organizations.

This era was notable for firmly establishing that the general public expected firms to step up their CSR efforts. From social advocacy groups to international regulatory organizations, external demand for CSR and CSR reporting was on the rise. However, within businesses, it was a still a niche group of firms actually investing in any sort of social reporting. Even those that were reporting faced skepticism over authenticity, accountability, and transparency as concerns over greenwashing came out. Those concerns would only grow and hit mainstream media in the coming decades.

2.6 1990s – CSR Hits the Mainstream

Building off the environmentalism from the 1960s through the 1980s, the 1990s saw a

surge in international conventions, watchdog organizations, and backlash against 'race-to-the-bottom' globalization. Internet publicity rose as both an invaluable tool for firms and a global coordination system to shame firms when they were caught violating social norms, as Nike learned first-hand in its infamous child labor scandal. Overnight, the firm went from being iconic to hugely problematic when they were exposed for inhumane working conditions in their supply chains following Jeff Ballinger's report on Indonesian supply chains. It led to Nike launching supply chain audits, a trend that would slowly start to spread to other industries as well.

Globalization, the fall of communism and international human rights abuses with its perceived "race-to-the-bottom" and anti-globalization movements that accused business of lowering labor, environmental, and safety standards as they moved abroad shaped social movement focus during the 1990s, building off the social and environmental focuses of previous decades. Due to this increased awareness of the ways in which businesses could benefit from practices deemed unethical (human rights abuses, excessive pollution) even if they were unaware, calls for positive action from firms spiked at the end of the 20th century (Margolis and Walsh 2001). At the same time, international government efforts gained greater traction, such as the 1990 establishment of the European Environment Agency (EEA) by the EU, coming into full force by late 1993. An important distinction being the creation of the European Environment Information and Observation Network (Eionet), a clear indication that the arguments for increased institutional oversight and authority were catching interest. This coordinated approach connected an overarching intergovernmental agency, the EEA, with local and national organizations, demonstrating a strategic approach to regional legislation and regulation. Governments all over the world recognized that it was time to coordinate their regulatory dynamics to MNCs as further exponential growth appeared inevitable, essentially sparking an influx of multilateral agreements targeting environmental safeguards. As Porter and Linde (1995) pointed out, firm mentalities to environmental initiatives had been erroneously portrayed as a static

cost, when it was actually dynamic, evolving, and potentially financially beneficial tool (1995). Under the umbrella of CSR, however, environment impacts were not the only source of concern, as globalization created a plethora of new opportunities for corruption and abuses as firms moved production to lower labor cost areas around the world.

Corruption concerns, the 'G' in ESG, swept the international stage in the 1990s, encouraged on October 1st, 1996 by then head of the World Bank James Wolfensohn in a speech concerning the 'cancer of corruption' (Hough 2013). Following the 1993 establishment of Transparency International by ex-World Bank employees, the global stage was zeroing in on the dangers of corruption and the frustration with having little to no actionable metrics of it (International). Anti-corruption efforts existed before Wolfenson's momentous speech, but there was a slew of intergovernmental responses such as the 1996 Inter-American Convention Against Corruption, the 1997 OECD Convention on Combatting Bribery of Foreign Public Officials in International Business Transactions, and the 1999 Council of Europe Civil / Criminal Law Conventions on Corruption. In response, some firms began engaging social auditors to assess their business practices, wherein the auditor had reasonable access to employees and management in an effort to succinctly analyze the corporate culture and risk potential (Marlin and Marlin 2003). This auditing was intended to be a preemptive move in the event that more stringent legislation followed the onslaught of intergovernmental efforts, so that this small selection of firms were prepared.

The internationalization of financial standards setting in response to the exponential globalization of MNCs was met with the targeted international responses detailed above, as well as the 2003 United Nations Convention Against Corruption (Adeyeye 2012). These standards laid the foundation for quantifying and refining CSR into measurable, reportable data as they sought to measure environmental (ie carbon emissions, recycling), social (ie employee demographics and treatment for protected

classes), and governance (ie anti-corruption initiatives) work. With the 1999 creation of the Euro, global standardization of financial reporting became more important than ever as the financial playing field became that much more standardized. The IOSCO implemented the IASC guidelines for its own member states, while pushing for increased transparency via scrutiny of financial statements (Fritz and Lammle 2003; Ojo 2016). As calls for harmonization gained momentum, the process was divided into material and formal; material harmonization is standardized materials and practical applications, while formal harmonization refers to the rules and regulations, both local and international, used by member states.

As the Cold War drew to a close in the early 1990s, the West pushed capitalism and free markets. The surge in technological innovation spending coupled with exponential globalization of MNCs resulted in massive, largely unchecked firms expanding rapidly. As these global value chains permeated the world economy, Western countries focused on knowledge capital[35] over less complex manufacturing, and subsequently outsourced the physical production of a product to China or Southeast Asia. This allows firms to invest heavily in their image in Western countries as being environmentally and socially conscious, while simultaneously exporting the environmental costs of production to developing countries. Western firms also benefitted from lower labor costs thanks to lower safety regulations and lower wages in developing countries, culminating in a massive WTO protest in Seattle in 1999 and the emergence of new NGO watchdogs (French and Wintersteen 2009).

In this context of post-communist globalization, CSR theorists created new standards of conceptualization. Wood (1991) delineated three levels of CSR operationalization of the time; 1, legitimacy, which functions at an institutional level; 2, public responsibility at an organizational level; and 3, managerial discretion, at the individual level. This

[35] Knowledge capital is comprised of the intangible intellectual properties of a firm, broken into three subsects of human, relational, and structural capitals.

built upon the work of the 1960s – 1980s that expanded beyond the managerial-focused literature, into a more expansive and, in a sense, holistic understanding of how CSR decisions manifest (1991). Breaking down the operationalization of CSR, especially in a time of rapidly growing globalization, lessened the pressure on individual managers and elevated the concept of CSR to an organizational and firm culture issue.

In 1991, Carroll released a visualization for CSR that would become a cornerstone of subsequent literature, in the form of a CSR pyramid. It would prove foundational to the literature as it detailed what was necessary for firms to do and what would constitute going above and beyond, all of which constituted a degree of responsibility to the firm's society.

Figure 9: Carroll's Pyramid of Corporate Social Responsibility *(Carroll 1991)*

The 1990s also saw a spike in academic studies focusing on the CSR and firm

performance relationship. Building off the same dynamic as the 1980s, significantly more studies used CSP as the independent variable, with 23 finding positive correlations, 6 zero, 3 negative, and 7 with mixed results. When CSP was used as the dependent variable, 5 studies showed a positive correlation while only 1 had mixed results (Margolis and Walsh 2001). Carroll (2008) portrays this decade of CSR as being heavily influenced by themes of globalization, which this surge in CSP and firm performance studies supports. Utilizing CSP as the independent variable to test firm performance gained popularity within management studies in particular as the idea of being an inherently 'good' or 'effective' manager could be closely tied to socially conscious behavior or investment in CSR. Cottrill (1990) made the argument against studying CSR as if it were merely a firm level variable, failing to take into consideration the significant impact of industry-specific realities. These advances focused on a more holistic perception of CSR that took it beyond the responsibility of a single firm and extended it to the firm's global impact.

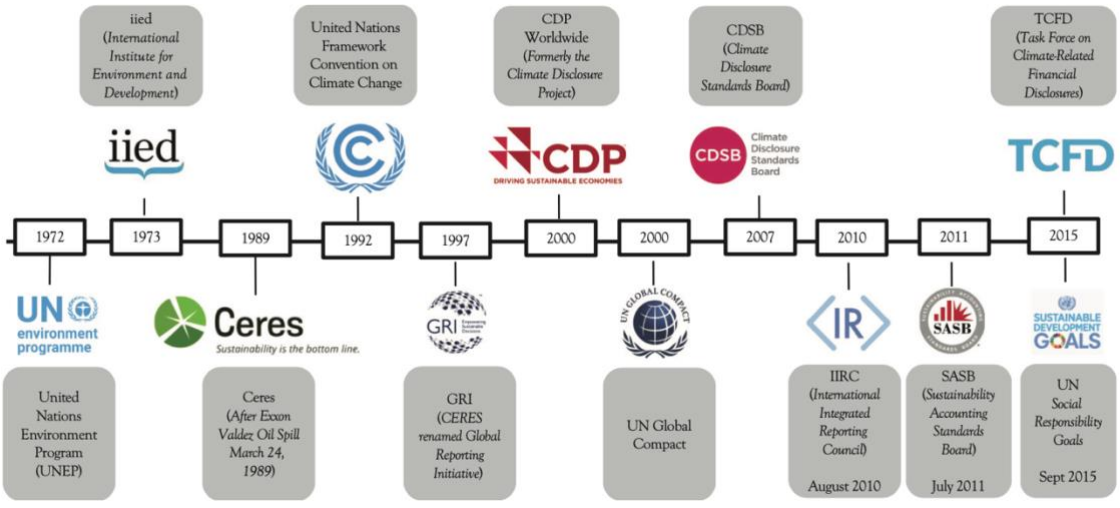


Figure 10:Timeline of major ESG standard setting events (Dolan and Zalles 2022)

As Figure 10 demonstrates, following the Exxon Valdez oil spill and subsequent public

anger, CERES was founded as the first global and institutional accountability instrument in 1989. It was vital in being the first organization of its kind to focus on measuring and harmonizing social standards, paving the way for the development of the GRI. GRI initially focused solely on environmental concerns before expanding into social, governance, and economic issues. Focusing on transparency and accountability, the GRI published standards for firms to use as both a self-assessment tool and a public communication (GRI). As the 1990s drew to a close, the GRI had inspired the newfound reporting practice of joint environmental and social reports alongside traditional financial reports. While hugely influential in the reporting space and deemed "the *de facto* global standard" (KPMG 2008: 20), the GRI was not able to fully unify the reporting standardization market as the major institutional support was simply too fragmented at the time (Hahn and Kühnen 2013). As such, other reporting frameworks and metrics were commonly used, such as references published by the UN. While the GRI came about in, technically, the midst of other organizations cropping up of the same nature, it really marked the first CSR-focused standard with lasting power. The longevity of the GRI is likely based on its foundation in environmental sustainability and the growing conversations around climate change, as well as the GRI's expansion into human rights and governance issues. This pattern of environmental onus expanding to include human rights issues would appear in other international organizations such as the UN as well.

Influenced by the 1992 UN Framework Convention on Climate Change, the United National Global Compact (UNGC) is a collection of 10 principles spanning human rights, labor standards, environment, and anti-corruption efforts. Introduced in 1999, the UNGC serves as both a voluntary ethical checklist and a support network focused on the intersections of human rights and environmental protections. It helps to coordinate support between involved companies and UN resources, as the McKinsey Report noted in a 2004 survey, conveying that over 75% of respondents felt the Compact had strengthened their relationships with the UN (Bitanga and Bridwell

2010). In an effort to weed out weak commitments, the UNGC has actively delisted companies from its commitment listing who no longer meet their standards. It has still received criticisms for potentially weak governance, generalized criteria for validation with possible loopholes, and a lack of funding equating to a lack of necessary support (2010). However, the UNGC offered firms the chance to openly signal themselves as being ethically responsible while simultaneously creating opportunities for connections with the UN and other large international organizations. In this sense, it was akin to joining an international club of forward-thinkers who recognized the growing demands for CSR, transparency, and accountability. Large MNCs such as NTT Data Corp, Dell Technologies, and Hewlett Packard have signed on as it is increasingly becoming a sign of international goodwill.

The importance of these initiatives strengthened quantification and global harmonization of CSR efforts. As CSR developed a more quantifiable nature and its impact on firm performance was widely accepted, CSR authors focused on shifting the narrative away from CSR as a separate, voluntary set of decisions by management, and toward the idea that CSR should be inherently ingrained in firm culture, albeit in different firm implementations. One important notion, developed by John Elkington (1998), introduced the idea of the Triple Bottom Line, wherein firm performance was measured by social, environmental, and economic accomplishments. This approach challenged the basic idea of capitalism that focused on profit maximization at all costs, contributing to the literature challenging the sustainability of such a singular-bottom-line, shareholder value mentality. Around the turn of the century, traditional means of firm value and performance would face a fundamental transition.

2.7 2000s – ESG, Responsible Investing, and CSR Come Together

At the turn of the century, CSR reporting and ESG began to boom. With the exponential rise in responsible investing and legislation from countries all over the

world aimed at increasing transparency, accountability, and reporting, MNCs had to figure out the big questions of CSR communication: who they were designing these reports for, what and how to report, where to publish them. With the growing interest in firm's communicating positive information about their ESG practices came the seedy underbelly of obfuscation, greenwashing, and flat out lying.

Riding the tide of the anti-corruption movements of the 1990s, third party auditors began to hit the scene and more ardently call out firms for greenwashing and corruption. These auditing firms were especially necessary after the 2006 Siemens corruption scandal, wherein the MNC was ordered to pay over $1.6 billion in fines. Even after Siemens' home country of Germany adopted the OECD's 1997 Convention on Combating Bribery in 1999, Siemens' expansion onto the NY Stock Exchange brought it under the US's 1977 Foreign Corrupt Practice Act, and being selected as one of Transparency International's corporate members in 1998, the firm was found guilty of a massive slew of bribes for projects all over the world (Berghoff 2017; Venard 2018). For all its published anti-corruption rhetoric, the culture within Siemens didn't change.

This highlighted a major challenge to come in the ESG landscape, in that it was one thing to *say* that a firm has staunch anti-corruption or pro-environmentalist policies and an entirely different thing for the firm to actually do it. This risk of obfuscation and greenwashing only became more complex with the rising prevalence of the internet and the globalization of tech firms, as communication became easier online but also easier for firms to simply say what they wanted without proving it. Within the tech sector, the entire nature of firm valuation changed and, with it, the shape and focus of the industry. This change would make rockstar CEOs who identified with the average person in the struggle against big government controls, pushing a theme of resistance to overreaching control and actively investing in lobbying against regulations as it would stifle creativity. This wild-west mentality stymied regulatory

efforts and slowed the efforts of international ESG organizations to push for reporting regulations.

The Dot Com Bubble of 2000 was an inflation that occurred as adoption of the internet and technological diffusion surged, resulting in tech firm Initial Public Offerings (IPOs) that could more than double in value in a single day, with little actual revenue in place. This marked a distinct shift in value assessment and stock valuations, spearheaded by the tech sector & firms exploding onto the NASDAQ at the end of the 1990s. Stocks were sought after for potential growth, market share, and user reach, rather than revenues (Ljungqvist and Wilhelm Jr 2003; Morris and Alam 2012). The building of tech start-ups were defined by an obsessive growth, making huge acquisitions and excessive marketing investments (Halton 2019). This sudden growth launched the tech sector as global value chains grew and intensive research and development (R&D) raised concerns about the sustainability of such global environmental and social impacts.

The Dot Com Bubble drastically altered the face of finance in the tech sector. With so many startups in the 1990s receiving funding for potential growth and consumer access instead of the traditional sales revenues, firms were breaking into the tech sector with millions of dollars raised on the promise of an innovative product in a whole new world of potential markets. As these firms competed for the most daring new idea, they challenged established anti-trust and privacy laws, copied ideas off one another and bundled them in to their own offerings[36], and explored exciting new ways of demolishing the competition (Spar 2001). The 'growth before profits' mentality meant that tech firms were expanding at previously unheard of rates, often buying other firms and buying into unregulated technologies, such as uncontrolled

[36] Such as Microsoft creating Internet Explorer after failing to purchase Netscape's Mosaic, the first major web browser. Microsoft quickly took over market share after bundling Internet Explorer into its software packaging, and Netscape is now a relic.

surveillance technologies (Postman 1985) or overly controlled encryption technologies (Spar 2001). Morris and Alam (2012) eloquently describe '…the bubble period of the 1990s as a pyramiding chain letter where momentum investing displaced fundamental investing'. Following the Dot Com Bubble, financing sources tightened the previously open purse strings while smaller startups dropped like flies. This left the market both inaccessible for new entrants as well as dominated by a few names that managed to weather the storm, creating an industry sector well primed for a rise in monopolies (Srnicek 2016; Atal 2020). This had two major impacts on the trajectory of CSR, as it changed traditional financial valuation into more of a risk-based assessment which led to rising focus on CSR as a risk mitigation tool and led to an increased focus on governance issues in MNCs in response to the potential for monopolies. Essentially, firms could get bigger than ever before with governments that were unprepared to keep them in check, and these firms were recognizing that a little social or environmental investment could go a long way to keeping the public on their side.

This shift away from traditional concepts of firm valuation, such as earnings or sales, toward concepts based on reach potential of digital services largely offered for free or for subscription, dramatically shifted not only the financial landscape of the tech and adjacent sectors, but its fundamental structure. A sort of Shumpeterian creative destruction defines this evolution, as ideas are released onto the industry by pragmatic tinkerers before being commodified by firms and regulated by governments. An example of this would be the emergence of Napster in 1999, a free software for sharing and downloading music files. Following uproar from the music industry, widespread usage from consumers, and a slew of awkwardly dramatic warnings suggesting people 'wouldn't download a car' to dissuade them from downloading music, lawyers targeted the most active users of Napster. In a move that further revolutionized the music industry, Apple then released iTunes in 2003 which mimicked the opportunity to download music but for a fee, with resounding success

(Zuboff 2019: 29). This is particularly salient to CSR enthusiasts as it made the concept of governance a personal issue. The potential for monopolies and greater private business impact on consumers' actions brought the concept of governance out of the theoretical space and squarely into consumer's daily lives. Firm behavior directly impacted the individual, and firms had to quickly figure out a way to mitigate stakeholder reactions.

During this time of market turmoil, Intel published its first CSR report in 2001, followed shortly by Microsoft in 2003. Given that these kinds of reports were virtually unheard of, the decision to create and publish them could be attributed to a degree of foresight as managers understood early on that positive public sentiment would be a benefit. With the internet being fairly new in the early 2000s and access still quite limited, it wasn't like the average consumer would stumble upon these reports on a company website. This lends credence to the argument that they were initially published in good will and as a response to shifting global values. As traditional concepts of financial valuations shifted for the tech industry away from brick-and-mortar accounting and into intangibles and knowledge capital, the awareness of the need for sustainability and scrutiny of ethical signaling grew in proportion.

By this time, CSR was swiftly becoming a widespread and widely accepted concept. As evidenced in the graphs below, there has been a drastic rise in reporting and GRI compliance since the turn of the century.

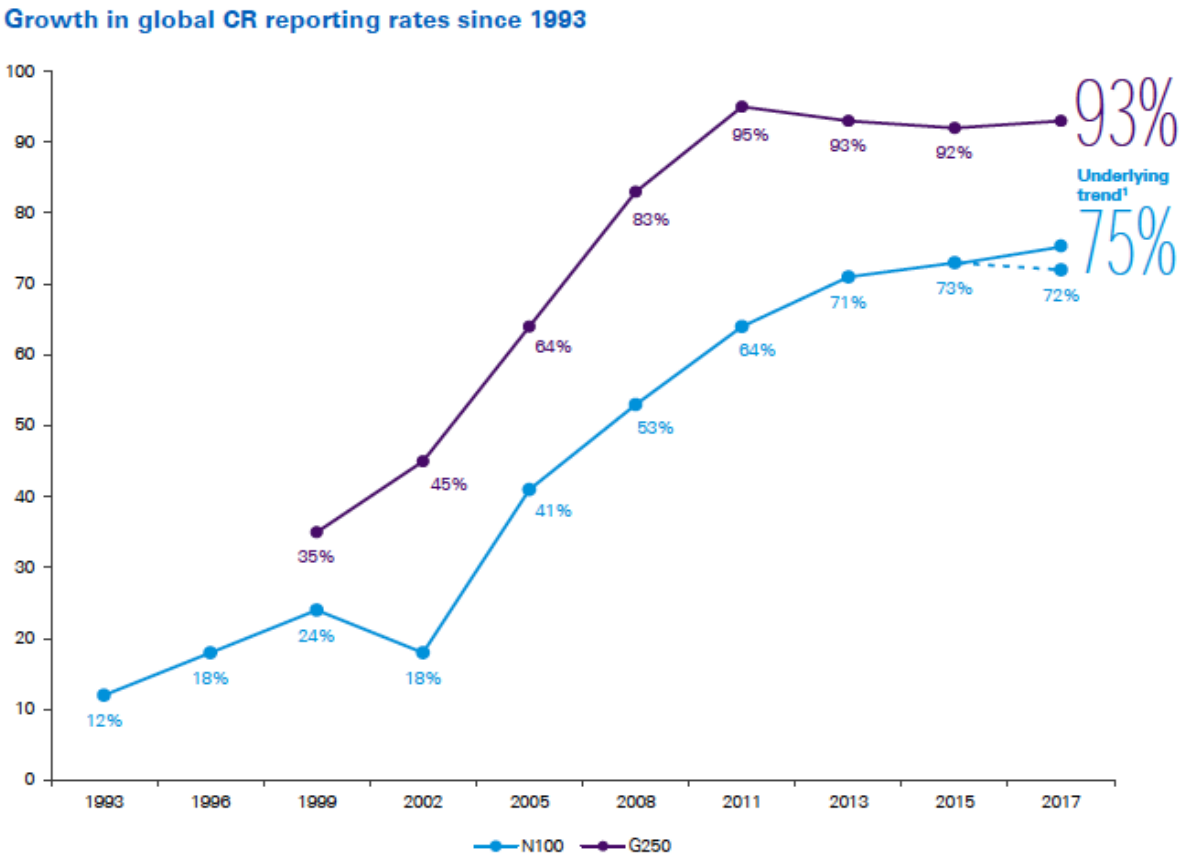


Figure 11: KPMG Survey of Corporate Responsibility Reporting 2017

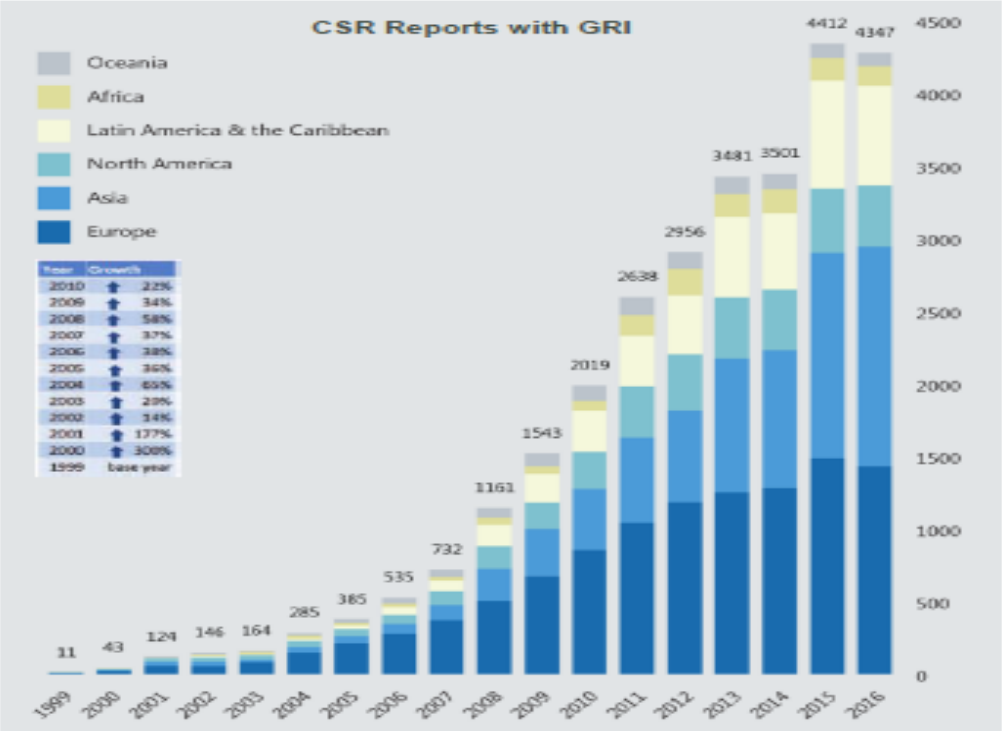


Figure 12: CSR Reports with GRI[37]

Amidst the general rise in CSR reporting, Ruf et al (2001) cautioned against sweeping assumptions as research evidence needed time to mature. Shifting social values, evolving national and international institutions, and economic development will be constantly impacting the arguments and manifestations of social performance. Different countries have different ideas of what defines social investment, influenced by cultural norms. While there is no singular standard for defining these CSR investments yet, the GRI is currently the closest. These evolutions were becoming increasingly important to MNCs with the 2000 UN Millennium Declaration, release of the 8 Millennium Development Goals (MGDs), and the July 26, 2000 signing of the UN Global Compact (UNGC), all indicators of the growing shift in global norms that emphasized collaboration and responsibility. The UNGC, a set of principles

[37] Source: http://www.verdantix.com/blog/sustainability-reporting-hits-a-plateau-as-the-number-of-reports-using-the-gri-guidelines-falls-for-the-first-time

encouraging businesses to adopt policies that took into consideration human rights, social issues, and the environment, was intended to be a network to connect firms, INGOs, and governments. International sentiment took on a collaborative stance as the impacts of globalization and diverse, international supply chains made it apparent that national legislation wouldn't be enough to tackle these issues.

CSR literature had evolved beyond seeking legitimacy by this point and was fully entrenched in setting parameters and narrowing the scope of what defined 'CSR'. Lantos (2001) broke strategic CSR into four separate components: economic, legal, ethical, and altruistic. The author found a way to agree with Milton Friedman's earlier resistance to CSR while still concluding that it is good for business, as he argued that *altruistic* CSR is not a legitimate form of business, while the other three components were perfectly valid. This argument contributed to the focus on separating philanthropy and corporate contributions from CSR, as it integrates CSR as a conscious business strategy, uniting performance goals with environmental and social goals as they are mutually reinforcing and a means of measuring risk. Werther & Chandler (2005) arguably began the focused literature on Strategic CSR (SCSR), building upon the work of Lantos and the arguments that CSR could be a targeted business stratagem while offering a form of social insurance for MNCs as they navigate an increasingly complex global business field.

Christmann (2000) presented the argument for Complementary Assets in environmental management when testing against firm performance. This resource-based view found that the existing process innovations in a sample of chemical companies balanced the economic investment of 'best practices' in environmental costs and cost advantage, meaning that firms possessed the necessary innovation to benefit from both a firm performance metric as well as improved environmental practices. Given the steady concern for environmental issues, especially as valued by Western countries, arguing in favor of existing innovation that can serve all three of

Elkington's bottom lines was a boon to the CSR-favoring academics. This fueled the pro-CSR movement as the concepts of strategic CSR, good management theory, and essentially any other version of mutual benefit gained momentum in the early 2000s.

The European Commission released a publication in 2001, *Promoting a European Framework for Corporate Social Responsibility*, which focused heavily on social and environmental issues. As can be viewed from the Chart above, Europe often led the way in creating new CSR initiatives and regional standards that *de facto* became global benchmarks. This was followed in 2001 by the FTSE4Good Index Series launch, a series of benchmark and tradeable indexes for ESG investors. Intergovernmental institutions and investing bodies were clearly responding to the surge in demands, both from society at large and from the exponential growth in academic publications for the widespread adoption of CSR, as is evidenced by the explosion in variations of impact or ESG investing (Clark, Emerson, and Thornley 2014).

These demands led to an opening for what Christensen would deem 'catalytic innovation', wherein entrepreneurs can break into an industry with a product that is socially conscious, sustainable, scalable to differing needs, and shocking to the existing structures. Christensen made the important point that CSR or green initiatives could create value and differentiate one's products from other brands. These disruptive businesses generally share 5 primary aspects: the focus must be on systemic social change, meet a need that is either neglected or overserved[38], produce something that is considered 'good enough', generate some form of social support (manpower, resources, donations), and they are often discouraged by existing competition as having unattractive business plans. This approach builds CSR and stakeholder value into the fabric of the firm from the initial launch, as opposed to trying to change the existing firm culture (Christensen et al. 2006).

[38] By 'overserved', the authors mean that the existing solution may be more complicated that necessary for a majority of the customers served, and that a simplified version would suffice.

In 2005, CSR literature experienced another major shift. The term 'ESG' first cropped up in a UN Global Compact Report from Former UN Secretary General Kofi Annan and authored by Dr. Ivo Knoepfel, *Who Cares Wins: Connecting Financial Markets to a Changing World* (Compact 2005). This publication, in conjunction with the International Finance Corporation (IFC) and the Swiss Government, was a result of the challenges of quantifying CSR, the language of which has been arguably too vague to be properly codified. While CSR focused on either voluntary or compliance measures at the corporate level, ESG initially focused on investors seeking to serve socially conscious investors and minimizing ESG-based risks. ESG was initially proposed for investment firms and financial institutions as they were encouraged to integrate environmental, social, and governance issues in their research projects, asset management, and securities brokerages as consumer-investor-pension funds increasingly demanded 'green' or socially conscious investments. The history of 'ESG' is rooted in Socially Responsible Investing (SRI), with the UN Principles for Responsible Investment (PRI)[39] launched at the New York Stock Exchange (NYSE) in 2006 and the Sustainable Stock Exchange Initiative (SSEI) launched the year after. A year later, the UN Environmental Program Finance Initiative (UNEP-FI) published a report which "gave first evidence on the financial relevance of ESG issues and discussed at length the concern of fiduciary duty in the use of ESG information in investment decisions" (Eccles, Lee, and Stroehle 2020; Sherwood and Pollard 2018). This concentrated shift in quantifiable CSR investment in the financial sector diffused steadily into adjacent MNCs, beginning with internal calls for changes in the form of SRI investment packages and expanding into green financing based on proof of ESG adherence. ESG investing also encouraged greater firm CSR compliance along these lines. From its establishment, firms signing on to the PRI have grown steadily and significantly, even maintaining growth during the 2008-2009 financial crisis.

[39] Over $89 trillion USD in assets as of 2018 and growing exponentially, especially with the 2020 surge in SRI and Green funds.

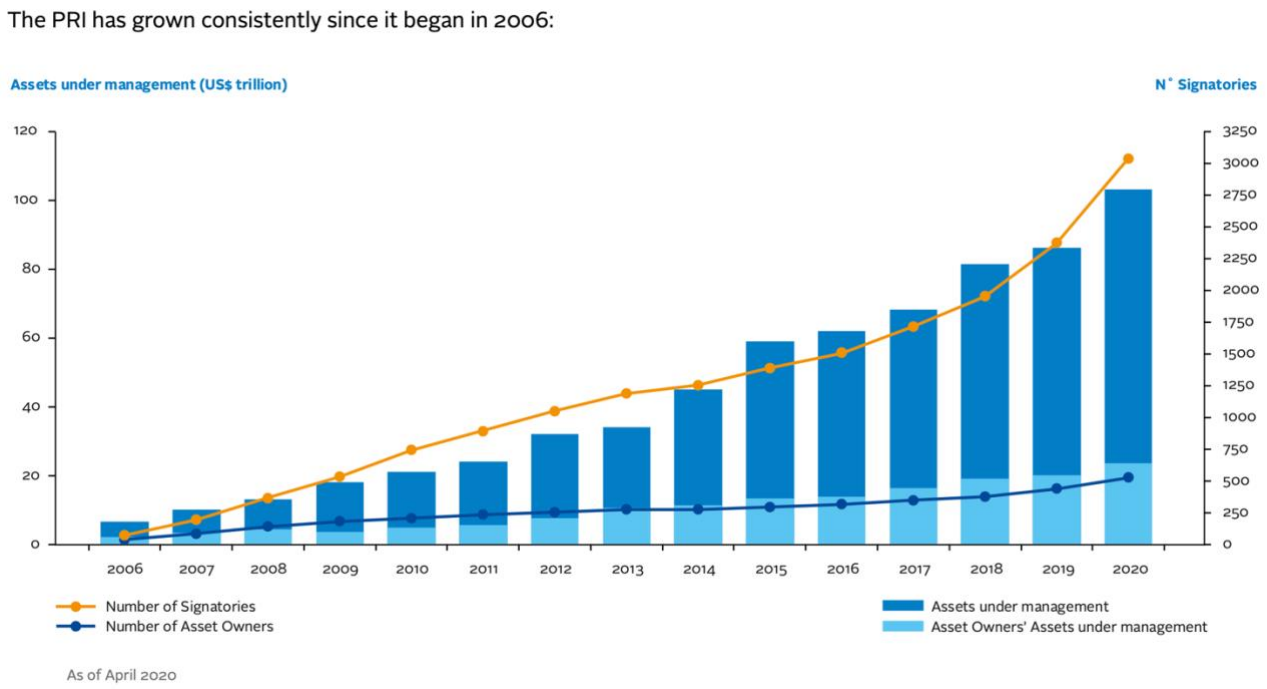


Figure 9 UNPRI Assets Under Management, 2006 - 2020 (UNPRI 2020)

Labor-focused INGOs began gaining significant traction at this time as well, with the establishment of organizations such as the Fair Labor Association in 1999 and the China Labor Watch in 2000. As with Nike's experience of exporting less savory environmental and social costs to Asian countries for the cost-savings, firms during this time were faced with a twofold pressure as calls for social and environmental consciousness gained support.

Akin to the challenges of anti-corruption, the early 2000s saw a reevaluation of logic behind the policies and practices that had been taken for granted up to this point (Hough 2013). Hough presents a threefold explanation for this structural shift; first, investigative journalism exploded in the late 1990s, with the opportunity to reach a much larger audience thanks to technological developments and the spread of the internet. Second, academic and business rhetoric had been undergoing a fundamental shift as it began questioning systemic biases and flaws, as opposed to laying all the

blame on the shoulders of a single manager. Third, as the Cold War drew to a close, alliances between the West and newly democratizing countries were delicate as the West was cautious of the potential for corruption being sewn into the institutional fabric of new institutions. This focus on anti-corruption manifested initially in the 1993 establishment of Transparency International, a global governance watchdog with a Corruption Perceptions Index, the first large-scale corruption index . The establishment of Transparency International marked a surge in international, industry specific organizations such as the Electronic Industry Citizenship Coalition (EICC) in 2004, later rebranded as the Responsible Business Alliance.

By this point, firms realized that they needed to get ahead of any potential issues, as Intel demonstrated in 2009. After an April letter to leading US tech firms warning of conflict minerals in supply chains from John Prendergast, founder of the Enough Project, Intel launched a deep dive into their supply chain to figure out the scope of the potential damage. Conflict minerals, also referred to as 3TG (Tin, Tungsten, Tantalum, and Gold), refer to minerals that are sourced in conflict regions, such as the Democratic Republic of Congo (DRC), and that are a high risk of having been mined under coercion or forced labor[40]. The 3TG designation may be soon replaced as calls for the addition of cobalt grow. Given the enormity of the challenge, as networks span raw material suppliers, smelters, and manufacturers, Intel's director of global citizenship, Gary Niekerk, decided to focus on tantalum, as electronics producers consume 60% of the world's supply. After mapping out an extensive, global network, Niekerk honed the focus on smelters. This marked the last opportunity for source verification, as once processed it can no longer be tracked to an individual country, let alone a guaranteed conflict-free mine. Once Niekerk had it narrowed down to

[40] To properly delve into conflict minerals or blood diamonds would be beyond the scope of this dissertation. However, the 2006 film *Blood Diamond* did a lot to raise awareness of the inhumane conditions under which precious stones and minerals were being extracted in the DRC and tells a story leading up to the 2003 establishment of the Kimberley Process, a means to ensure mining that is free from conflict conditions (Haufler 2009).

smelters, he faced a new challenge in that smelters rarely had any interest in tracing out their supply chains, be it from the complexity of doing so or the potential revelation of resources sourced from conflict regions. The easiest option for a smelter would be to simply stop sourcing from a country like the Democratic Republic of Congo (DRC), where tantalum is sold by both legitimate artisan miners and coerced miners under the control of warlords. In blacklisting the DRC, over 100,000 artisan miners risk being starved of income, and as Sheffi succinctly put it, "damaging the legitimate economy of the country would only fuel further unrest" (2015). As Intel mapped 90% of its supply chain for microprocessors, identifying over 130 individual smelters, it realized that the scope of the challenge was beyond its scope. To actuate change, Intel needed to partner with other industry leaders and change the overall commonly accepted practices. To do so, Intel partnered with the EICC to promote ethical, social, and environmental practices within the tech supply chain via voluntary set of standards (Osburg 2016). After seeing the blow dealt to Nike following its sweatshop scandal, MNCs had to take potential controversies seriously, especially the ones that had, until this point, been largely hidden from their primary markets.

Examples such as Intel demonstrate the logic behind Scholtens' argument that causation runs from financial to social performance manifesting in firms investing in CSR initiatives when they can comfortably do so, beyond basic business practices (2008). The discussion of causality gained importance during the 2008-2009 financial crisis, as an opportunity to test the impact of social capital built up by CSR investments. Lins, Servaes, and Tamayo found higher profitability, sales per employee, and overall growth in firms with higher CSR intensity during the financial crisis, arguing that the trust instilled in stakeholders acted as a form of shock buffer in the face of a market downturn. Trust is the foundation of the financial system, so when that faith was shaken during the crisis, the social capital that high-CSR firms had built served as a cushion, resulting in stock returns that were, on average, four to seven points higher than their lower-CSR counterparts (Lins, Servaes, and Tamayo 2017;

Stiglitz 2008). However, Weir found that Systems Integrated, an automation services firm, actually abandoned some environmental reporting practices during the financial crisis. In this instance, environmental reporting was challenged by concerns that it failed to generate the necessary value to accommodate the cost (2016). This suggests that the commodification of the environment was still seen as an operation cost to be judged against a narrow concept of returns, and a pursuit that can be abandoned given the necessary circumstances.

This early days of the 2000s saw the shift toward stakeholder-centric theories (Barnett and Salomon 2012) with rising public demand for accountability and transparency. These demands coalesced into public outrage with the exposure of firms for violating social norms, wrecking environmental havoc, and benefitting from inhumane conditions in their supply chains. As ESG became more quantified, it started becoming easier to profile a company in the context of its profits versus community investments. At the same time, the lines between profit and ESG investment became increasingly more blurred as arguments centered on the economic benefits of pro-social behavior, citing returns on positive stakeholder engagement. CSR had come a long way from its days as a vague theory for management; as ESG, it was on its way to becoming a line item on a financial report.

2.8 2010s – The standardization of ESG

As it rose firmly to prominence, the language around CSR evolved firmly beyond 'managerial duty' and into a financial tool that had to be taken into consideration on spreadsheets and in board rooms. Porter and Kramer argued that it should be reframed as Created Shared Value (CSV), broken into three avenues; (1) reconceiving products and markets, (2) redefining productivity in the value chain, and (3) creating supportive industry clusters (2011). The authors make the point that as businesses are seen as negatively impacting communities, governments respond by imposing

regulations and sanctions that hinder firm flexibility and financial performance. To redress this, firms should invest in community partnerships and mutual growth under the umbrella of CSV. Chandler and Werther, in keeping to the more traditional term of SCSR, broke it into five components[41] with a focus on generating shared value, a concept of rising importance in CSR literature as academics were consistently studying the dynamic between financial and accounting metrics and ESG metrics.

By this point, CSR was a commonly used term. ESG was on the rise in narrower circles thanks to its financial services roots and would overtake CSR as the most commonly used acronym as of 2020. The broad umbrella that CSR offers as a term is easier to apply to general conversations, with demonstrable spikes that generate significantly more interest, as in 2011.

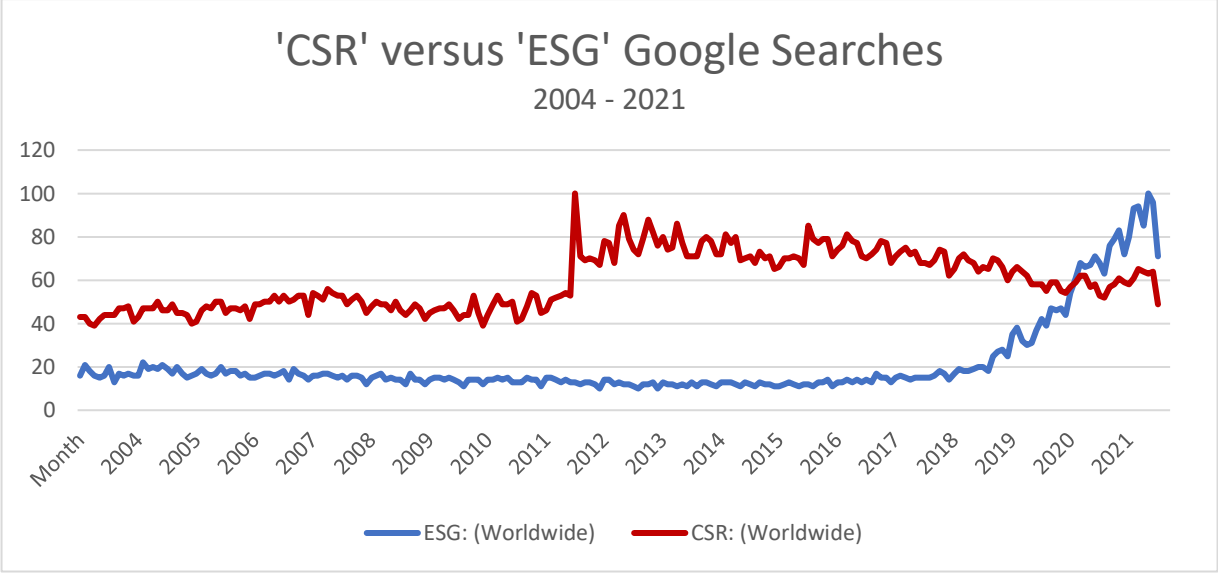


Figure 10: 'CSR' versus 'ESG in Google Searches

The EU and international organizations took on the mantle of leading the CSR charge.

[41] These five components are; (1) complete incorporation of CSR into a firm's strategic planning and culture, (2) all firm actions are directly related to core operations, (3) firms seek to understand & be responsive to stakeholders needs, (4) firm goes from short to mid/long term planning, and (5) firms optimize the value created.

In 2011, the European Commission published the *Renewed EU Strategy for CSR for years 2011-2014* which was followed in 2014 by the EU Directive 2014/95/EU, under the title Non-Financial Reporting Directive (NFRD), which requires large firms (of more than 500 employees) to publish social and environmental impact reports, impacting over 10,000 firms across the EU. These developments were further bolstered by not only CSR Europe's 2015 release of the *Enterprise 2020 Manifesto,* but by the 2015 signing of the Paris Agreement. The Paris Agreement connected 196 countries in a commitment to limit global warming to below 2 degrees Celsius compared to pre-industrial levels, a challenge that is only possible if all major economies of the world participate. Many firms have taken up the language used in these publications to bolster the perceived authenticity of their self-published, non-standardized, non-regulated CSR reports (Klaus et al. 2022).

The International Standards Organization (ISO) released ISO 26000 in 2010, the first of their standards to focus solely on social responsibility. Until this point, the scattering of reporting recommendations were rarely subject to stringent audit or certification. In the case of the UNGC, firms could publish a brief on their websites that alleged a commitment but were not required to prove that commitment. This was important as it built upon the work of the GRI toward ESG standardization and industry uniformity in social investments.

Progress was also made among the investor community, one of the more important disciplining mechanisms for firms who wanted to attract additional investment. Large investment firms, pension funds, and sovereign wealth funds proved particularly important. In 2011, the NBIM, Norway's sovereign wealth fund, revised its governance expectations for portfolio firms to incorporate ESG metrics (Williams and Aguilera 2009), followed by the 2017 launch of the Network of Central Banks & Supervisors for Greening the Financial System (NGFS). ESG was steadily diffusing throughout the financial sector, but by this point so closely tied with the tech sector that any change

in one sector rippled through the other. Arguably investor interest in ESG also helps expand firm-level CSR initiatives to ensure investment compliance. 2012 marked the launch of the Sustainable Stock Exchanges (SSE) signatory initiative, a joint effort between the UN and industry leaders to help stock exchanges ingratiate ESG standards into their listing requirements. James Zhan, Chair of the SSE's Governing Board and Director of Investment and Enterprise for UNCTAD, directly cited the "broader sustainable development movement" inspiring the creation of targeted UN programs such as the SSE, as it impacts the entirety of the global investment chain (Initiative 2020). Increasing international legislation and industry cooperatives meant significantly increased oversight and, as calls for quantifiable ESG reporting had been rising for a decade, a higher demand from within MNCs for results and reporting. Chandler and Werther (2005) argued that CSR efforts had to be integrated into day-to-day operations, as the old model of corporate contributions was simply an outdated concept and insufficient as a strategic usage of CSR in its functionality as social capital and a reputation buffer. Korschun, Aggarwal, & Rafieian (2016) found that the firms that presented themselves as being 'values-oriented' were held to a higher social standard than those still relying on the 'results-oriented' model of accounting. That is to say that if a firm signals its ethical behavior, it is exposed to more risk in the event that it is found wanting, whereas firms that do not try to portray themselves as being notably ethical suffer less loss of customers in the event of a scandal. Social capital was both a boon and a potential risk.

It took until June of 2017 for the EC to release guidelines of its own for the NFRD. In 2021, the EC proposed an amendment to the NFRD, called the Corporate Sustainability Reporting Directive (CSRD), which would expand coverage to all companies listed on regular markets (saving micro-enterprises), require an audit of the report, and to meet more detailed standards. It also recommends a digital 'tag' on all reported information, which would feed into a central database as part of the New Capital Markets Union Action Plan (CMU), intended to encourage free flowing trade

and investments through the EU. This plan was designed with the intention of supporting digital and green transitions throughout the EU economy (Commission). This policy implementation is the result of the normalization and globalization of CSR and ESG metrics, and was further supported by the 2018 EC *Action Plan for Financing Sustainable Growth*, the latest in a direct roadmap approach by the EC to effectively guide the European economy toward sustainability.

A 2018 report by the Chartered Financial Accountants (CFA) Institute found a consistently rising engagement from 2015 to 2017 in professional considerations of ESG issues, with Governance being given priority (64% in 2015 up to 67% in 2017), followed by Environmental (50% up to 54%, respectively) and Social (49% up to 54%), and 27% of survey respondents admitting that they did not consider ESG factors. Those who did not consider ESG issues did so because of a lack of demand from investors or clients, demonstrating a conflict with academic arguments that consumer demands for ESG implementation have increased to an almost commonplace point (Institute 2017).

Firms that choose to invest in corporate political activism, such as Microsoft's Political Action Committee (MSPAC) annual publications[42] started in 2009, have found varied consumer responses. If a firm presents itself as 'values-oriented' (guiding principles are shaped by the firm's core beliefs), then consumers expect the firm to engage in political activism. On the flip side, firms that are 'results-oriented' (decisions are based on financial performance alone) are not expected to invest nearly as heavily. Interestingly, firms that violate either perception are at an increased risk of losing business (Korschun, Aggarwal, and Rafieian 2016).

[42] These reports have appeared under the 'Public Policy Engagement' heading of Microsoft's report archive, which includes: Advocacy and Trade Memberships, Corporate contributions, MSPAC State Candidate Contributions, MSPAC Non-Candidate Committee Contributions, and MSPAC Federal Candidate Contributions.

Regarding SRI, Kell (2018) details the primary difference between ESG and SRI metrics is the slant, in the sense that SRI tends to scan for negative traits such as a firm operating in an industry deemed inherently unethical like arms manufacturing or tobacco. ESG metrics tend toward positive slants, focusing on quantifiable actions and investments on the firm's behalf, such as investing in being carbon neutral or demonstrating increased diversity in leadership positions. These positions have, in the last 10 - 20 years, become increasingly focused on sustainable development. Within investment organizations, Amel-Zadeh and Serafeim (2018) argued that the primary impediment to ESG implementation was simply the lack of streamlined reporting standards, even as the surveyed investors noted the investment and performance benefit of full integration. This is particularly poignant as data from MorningStar shows that ESG-focused global funds received $350 billion in 2020, up massively from $165 billion in 2019 (Nauman 2021). There is reasonable concern that this may represent a 'Green Bubble', akin to the Dot Com Bubble of the early 2000s. As valuations focus more heavily on virtue signalling and potential for widespread reach (such as Netscape's *potential* market reach in the Dot Com Bubble instead of traditional valuation techniques), there is the risk of stock market and fund investment overextension. While this creates incentive for firms to focus more on the ESG impacts of their actions, it also runs the risk of creating a negative case study in the event of a green bubble pop. That is to say that if funds invest heavily only for the market to drop, as has happened before, then investor faith in the ESG movement may be shaken, resulting in a return to old habits. However, given the steadily increasing consumer focus on sustainability and social causes, it is unlikely that any damage to the overall ESG movement would be permanent. Rather, in the event of a green bubble pop, it is more likely to result in calls for greater oversight, accountability, and international regulation.

As Dr. Karthik Ramanna wrote for the Financial Times on January 17th, 2021, 'ESG-speak' has become more common from CEOs, yet is in dire need of three primary

accounting rules: Prudence, Dual Reporting, and Matching. Prudence is the necessary skepticism when firms publish self-inflating reports, Dual Reporting would allow for context of ESG statistics to show actual progress or regression, and Matching would allow for the necessary contextualization of ESG efforts as a fundamental part of business instead of a one-off expense to be written off and forgotten about. This way, basic accounting principles establish ESG measures as improving, fundamental practices, and build off existing FASB foundations (Ramanna 2021).

KPMG has been a leader in CSR Report publishing, and for the last decade has published its own survey of Corporate Responsibility Reporting, using data collected from the G250 (250 of the world's largest Fortune 500 companies by revenue) and the N100 (global sample of 4900 companies, consisting of 100 top revenue companies in 49 countries). The KPMG Survey of Corporate Responsibility Reporting of 2017 shows that every industry they track is showing a reporting rate of 60% or higher. A rising number of corporations are also incorporating the UNSDGs, with 43% of G250 and 39% of N100 reporting corporations referencing them in their CSR Reports (KPMG 2017). Trends are showing steady growth or maintained percentages, indicating that there are positive or sustained reporting habits.

As of 2020, countries signed on to the Paris Agreement will begin submitting Nationally Determined Contributions Reports (NDCs), to be submitted by government agencies. As countries are reporting as single units, governments are motivated to regulate industries that may negatively impact their overall findings. Firms are thus encouraged to outsource even more of their environmentally detrimental manufacturing, to lobby national governments and international oversight organizations like the UN to not target their industries, and to control the reporting requirements to keep themselves in the clear. These reports are essentially report cards for each of the signatory countries as they report on the progress of goals they've committed to and commit to goals for the next year's NDC. It is increasing the

responsibility of governments to regulate and control their industries, especially those with major environmental impacts like agriculture, tech manufacturing, or oil and gas. This can be used to measure countries against each other for further motivation.

It has not all been forward progress, unfortunately. In October of 2020, then-President Trump finalized the *Financial Factors in Selecting Plan Investment* rules, which arguably discouraged 401(k) and qualified retirement plans from considering ESG oriented plans. Private pensions included in the Employee Retirement Income Security Act (ERISA) of 1974 were restricted from investing in ESG vehicles if it risked sacrificing investment returns or taking on additional risk, and were directed to select plans based solely on financial considerations. This anti-ESG rhetoric has since been parroted by GOP leadership such as Pence and DeSantis (Eccles 2022), but appears to be limited to ring-wing America.

September of 2020 marked a unique, if not triumphant, moment for CSR. If CSR remained more of a discussion point among social progressives with the rise of shareholder value, the financial crisis of 2008+ and climate change called into question a pure shareholder value perspective that was eventually embraced by the World Economic Forum along with 61 major multinational companies in January 2021 that advocated "stakeholder capitalism metrics". The Big Four accounting firms (Deloitte, EY, KPMG, and PwC), in association with the World Economic Forum (WEF) and the International Business Council (IBC), committed to establishing a set of unified ESG standards for 2021 implementation (Tett 2020). This partnership published a white paper called *Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation*, spearheaded by IBC head Brian Moynihan, chief executive of Bank of America, which targeted the 130-odd MNCs in the IBC to adopt standardized ESG into their 2021 reporting. The unified standards consist of 21 core metrics and 34 extended metrics, ranging from emissions to pay and gender ratios to governance targets. This project would be the first international

step toward standardized reporting and would likely replace or integrate the existing GRI and SASB metrics. The benefit of being a private sector, global approach to standardization may well be more successful than the limitations of national policies.

Another example of the leading influences of the financial sector pushing ESG-minded standardization, Europe's largest activist investing group Cevian Capital announced that it would utilize its vote to challenge groups that failed to factor ESG metrics into executive pay by 2022 or that practiced 'ESG box checking' (Mooney 2021). Responsible investing surged during the coronavirus pandemic, as Morningstar reported sustainable funds outperformed non-ESG funds spanning one, three, five, and ten years, including throughout the coronavirus pandemic (Barkway 2021). In early 2021, the SEC launched the Climate & ESG Task Force in the Division of Enforcement, a strong display that the era of loose regulations and washing practices was coming to an end.

While these are positive developments, there are still some concerns. For instance, 2021 saw the announcement of ESG Book, a free digital platform of sustainability data with support from Deutsche Bank, HSBC, and Swiss Re. Making data accessible is fantastic, but the concern is in the collection method. ESG Book would let companies "…manage and keep ownership of their ESG data in real-time" (Reuters 2021a). This level of autonomy over disclosure may have been the norm when CSR first hit the reporting scene, but recent pushes for transparency and regulation render this approach suspicious at best. Still, firms are investing in how they collate and disseminate ESG data, as is evidenced by the surge in relevant job listings.

With this dramatic rise in governmental regulations and NGO oversight, there has been a significant increase in demand for ESG-related jobs, especially during the Covid-19 pandemic. With the shock to global economies and supply chains, firms have repeatedly been called upon to 'build back better'. Some firms took advantage

of this shock to their benefit, with findings supporting that increased media attention during Covid-19 having a largely positive impact on ESG scores (Akhtaruzzaman, Boubaker, and Umar 2022). However, ESG initiatives did not necessarily protect stock prices to the extent that some invested parties may have hoped (Pavlova and de Boyrie 2022), as Demers et al (2021) found that stocks were better shielded from shocks during Covid-19 thanks to intangible assets rather than ESG scores, which would be difficult to differentiate in the tech sector as the two variables (intangible assets and ESG scores) have grown in tangent.

2.9 Conclusion

As academic theories grew from questioning the responsibility of firms to testing how investments in firm responsibility could financially benefit the firm, an interesting shift took place. The concept of stakeholder grew in prominence out of the shareholder perspective and the impact of firm behaviors, from a social perspective, spread beyond its immediate sphere of influence. This is to say that the scope of a firm's impact widened as more information became available thanks to the internet, as globalization diffused supply chains across the world, and as MNCs suddenly had to take stances on complex socio-political issues in response to consumer and governmental pressures. MNCs can no longer operate in obfuscation or get away with quietly lobbying politicians for anti-competitive advantages. Too many watchdog organizations have risen up to demand more transparency and accountability as stakeholders have demanded seats at the same tables at shareholders.

The evolution and institutionalization of CSR into ESG has been a process fraught with resistance, exposure of hypocrisy, and relentless optimism. From the emergence of CSR as a theory of management that stressed going above and beyond to the enshrinement of duty-of-care laws in the EU and reporting requirements from stock market exchanges all over the world, the general public seems to have collectively taken the stance that businesses cannot operate as if they are free from social

responsibility. While that responsibility manifests differently in different countries depending on cultural and social norms, there seems to be a global acknowledgement that firms must be held to some degree of accountability (Visser and Tolhurt 2010). As the world gets more interconnected and global value chains become even more globalized, this accountability will only become more important and more closely scrutinized. This is evidenced by the recent due diligence laws enacted in France (Loi de Vigilance, 2017), the Netherlands (Dutch Child Labor Due Diligence Law, 2017), Germany (Law on Supply Chain Due Diligence, 2021), and Norway (Transparency Act, 2021) (Krajewski, Tonstad, and Wohltmann 2021; Silvia 2012). These laws ensure that firms are responsible for human rights abuses within their supply chains, ensuring supplier auditing and careful assessment of the entire global value chain, as suddenly firms are unable to claim innocence through ignorance.

While CSR is not a new concept, it has undergone many challenges to reach its current form, from legitimacy to application. The standardization process was significantly influenced by the financial sector through metricization and risk evaluation, which influences the constant focus on how ESG impacts firm performance. As it becomes standardized, it becomes a quantifiable line item on a spreadsheet, which can be both good and bad. It can be good if it encourages firms to invest in more environmentally friendly practices, to invest in DEI initiatives, and to ensure ethical practices in their board rooms. It can easily slip into the bad if it becomes nothing more than a signaling practice in greenwashing or rainbow washing. The benefits can be excellent for society if they are authentic, and for that, many more watchdog NGOs are going to lead the charge as the Big Four Accounting Firms don't appear to be doing anything meaningful. That is the challenge of this ESG endeavor being a private business effort; as a private firm hires a private auditor (Big Four), the auditor wants to ensure future big contracts and so it slaps on a gold star regardless of the firm's actual accomplishments. Maybe the fine is cheaper than the payout from

the private firm. Whatever the reason, the coming years will rely more and more heavily on independent organizations, like watchdog NGOs and SMOs, to hold firms to account.

CHAPTER 3

ESG and Firm Performance

3 Introduction

Financial performance metrics and ESG scores in the tech sector have evolved over the last two decades to reveal a dynamic relationship which was shaped by global social and economic forces forcing sustainability issues to the forefront, a wave of NGOs holding multinational firms to account for ethical issues, and the rise of responsible investing. These influences, in building off existing CSR literature, were tested by the hypothesis, *is ESG positively correlated with firm performance?* This analysis distinguishes itself from previous authors by analyzing the relationship between firm performance and ESG metrics over time, whereas most studies implement aggregate testing. In taking a time frame approach, we find that the positive relationship between ESG and two firm performance metrics, ROA and ROIC, fluctuates over time while remaining positive. This is juxtaposed by the mixed results of ROE and ROS, wherein no significant relationship is revealed. As ROA and ROIC are long term management metrics, these findings overall support the Porter thesis of ESG being a manifestation of good management.

Previous studies of the firm performance and ESG relationship have lost a degree of nuance by only taking the aggregate relationship rather than exploring how it evolves over time, missing the key points in mutual development. As such, this chapter explores the primary firm performance metrics used to test the economic benefits of CSR, exposing two distinct patterns. The difference between Positive and Mixed and their variations in magnitude over time demonstrate that these relationships are volatile and subject to social influences, shifts in firm valuation measures, and the continued refining of ESG metrics. The mixed results of previous studies regarding the ESG and firm performance relationship may have found confusing results largely due

to the aggregate nature of their testing, as the influential fluctuations cited here mean that variations in significance are not consistent across time, ergo the testing circumstances are causing confusion in the testing. This study attempts to address that potential confusion in studying the progression of the relationship as opposed to studying the aggregate relationship. The two patterns discussed later in the chapter support the argument that global influences such as asset shifting for tax purposes, supply chain globalization, and platformization are all significant factors in the ESG and firm performance relationship.

As the tech sector grows exponentially, spreading influence through decentralizing services and the evolution of platformization, its impact on every aspect of human life grows. Platformization, the process by which increasingly more of the global economy is shifting onto digital platforms to the benefit of firms operating these platforms, changes the complexity of the relationships between multinational corporations (MNCs) and countries considering geo-political restraints while creating access to a borderline infinite amount of data (Poell, Nieborg, and van Dijck 2019). As Van Dijck put it, this shift is giving firms "…unprecedented economic, societal, and geo-political control…tech companies have turned products into data services where customers pay mostly with their personal information and attention" (2020: 2). This growing daily reliance on technology makes it vital to examine the ethical considerations of a field that impacts everything from healthcare to digital safety to the calls for a flat global tax rate for multinational companies. This concern need not negatively impact tech firms if they pay attention to CSR/ESG issues and integrate them into their strategy implementations. Strategic research and implementation can be mutually beneficial for both economic bottom lines and society at large. Consumers even voted some tech firms to be the most ethical of publicly traded, profit oriented firms with Microsoft, NVIDIA, and Apple topping the charts (Capital 2021; Crofts and van Rijswijk

2020: 76)[43].

Apart from public good will, there is a demonstrable positive financial aspect, which HP has reported. In 2017, HP calculated $700 million in new revenue as being directly connected to sustainability disclosures, notably highlighting their recycling innovations. HP's CFO, Nate Hurst, emphasized the significance as a "…38 percent year-over-year increase in sales bids with sustainability requirements" (Clancy 2018). The 25-year-old Planet Partners program that HP launched to collect and reuse ink and toner cartridges is a prime example of the firm's focus on circular economy and strategic CSR, as it is both economically and environmentally beneficial. The firm saves in new materials costs, reduces their carbon footprint, and generates positive public sentiment after decades of growing environmental concerns.

Environmental concerns have risen in the tech sector as the long-term impacts of improper disposal and unsustainable mining practices have come to light. Improper disposal of electronic waste (e-waste), a dramatically increasing problem as electronics ranging from phones to refrigerators are cycling through shorter lifespans due to limited repair options and more frequent replacements with newer models, can leech chemicals and heavy metals into groundwater. As of 2019, merely 17.4% of the world's e-waste was recycled, leaving 44 million metric tons (Mt) of high-value metals and minerals including gold, platinum, and copper to be lost to dump sites, a 21% increase over the last five years (Forti et al. 2020). Modern technologies rely heavily on several key minerals, including the conflict minerals commonly referred to as 3TG (tin, tungsten, tantalum, and gold, with cobalt being informally added in the last few years). These minerals are found all over the world, including conflict regions

[43] Note that Facebook was excluded from this high ranking as it continues to face criticism for data privacy invasion, low transparency, and manipulative marketing tactics. The tech firms that were up-voted were mostly technology hardware (such as Apple) and software (such as Microsoft) (Capital 2021).

such as the Democratic Republic of Congo (DRC), where miners can be forced at gunpoint to work in inhumane conditions to fund a local warlord. In response, several global efforts have arisen, including intergovernmental guidance[44], international initiatives[45], or legal supply chain transparency mandates[46].

Social issues also include supply chain concerns in the form of labor conditions but extend further into the stakeholder welfare approach. This means that the safety and quality of life of anyone deemed a stakeholder, which is loosely defined as anyone impacted by or invested in the firm and its practices, falls under the umbrella of a social issue. In the case of conflict minerals, the social concern would be for the children, individual miners, and communities that are subjected to inhumane treatment and forced labor. On what might be considered the opposite end of the tech Global Value Chain (GVC), the publication of *Gender Shades* by Buolamwini and Gebru (2018) and the subsequent firing of Dr Timnit Gebru briefly dominated headlines, as the paper exposed the radical difference in artificial intelligence (AI) efficiency at identifying racial or gender difference, with the most negatively impacted group being darker-skinned females (34.7% error rates) as compared to lighter-skinned males (0.8% error rates). With growing implementation of AI and machine learning (AI/ML) for law enforcement all over the world, the technology that firms produce needs to be refined in a manner that effectively serves a wider audience than just white males, without endangering marginalized groups as defined by gender expression or race (Perez 2019; Walch 2019).

Governance issues typically refer to the actions of upper management, including the

[44] Referring to the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.
[45] Such as the Responsible Minerals Initiative, a joint venture launched in 2008 by members of the Global e-Sustainability Initiative and the Responsible Business Alliance.
[46] As in the US SEC's adherence to section 1502 of the 2010 Dodd-Frank Act, which mandates the reporting on sources of 3TG minerals.

decision to headquarter European offices in Ireland (known for its tax incentives), engaging in monopolistic practices, and balancing the sporadically tumultuous relationships between governments and MNCs (typically regarding the contracting of firms to help the government with actions that could be invasive to its population, such as the attempted push for backdoors to be built into Apple iPhones for US law enforcement). The transparency associated with a strong CSR culture has been linked to lower cases of tax avoidance, often attributed to managerial accountability to its board manifesting as ESG-tied managerial incentives, lower degrees of risk, and moderate levels of investment (Armstrong et al. 2015). While Social and Governance issues are typically distinct, there is considerable overlap in this industry as technologies rapidly evolve and the impacts and ramifications of these new technologies are explored.

The Social aspect, typically understood as a firm's relationship with stakeholders and customers, is complicated by issues such as data privacy wherein the data collected by user activity is often commodified for usage and sale by the platform firm. Governance issues are primarily firm leadership decisions, which in the event of data collection and sale, would manifest as transparency decisions by upper management or the decision to withhold disclosure. For example, when a user engages a service like Google or any of its offerings, like GoogleMaps or GooglePay, Google's parent company, Alphabet, gains access to the user's search details, location information, and purchasing habits. This data can be sold to advertising firms for targeted marketing campaigns, logistical firms for traffic information, or financial firms for specific servicing demographics. In its entirety, this issue is both a matter of social and governance concern.

The rise of Global Value Chains (GVCs)[47] posed several ESG opportunities and

[47] GVCs are defined by the OECD, wherein "…different stages of the production process are located

challenges. Firms like Apple have outsourced most of their supply chains, with designs from California using parts manufactured in Japan and assembled in China, resulting in a total workforce over 750,000, of which merely 63,000 are directly employed by Apple (West 2018). The resulting efficiency that Tim Cook is credited with has been defined by fast production, highly digitized supply chain and stock data, and a product mentality akin to perishable goods wherein the 'lifespan' of a product for sale is assumed to be quite short[48]. This streamlining also allows Apple to keep its internal labor costs low, outsourcing the need to train and maintain specialized manufacturing and production workers to third party firms domiciled in countries with less stringent labor laws, such as FoxConn, a Taiwanese firm in China that handles the majority of Apple's final product assembly. From an environmental standpoint, this is essentially the outsourcing of environmental costs from a Western firm to an Asian country, leaving the burden of manufacturing waste on a third party. Socially, Apple[49] faced backlash after FoxConn's suicide scandal, wherein 14 employees took their lives after citing unsafe working conditions and extortionately long hours in 2010 (Berg 2018). From a governance stance, the combined presence of manufacturing and sales in China has put Apple in a complicated position, especially considering the differing ideas of appropriate government data monitoring between China and the West (Nicas, Zhong, and Wakabayashi 2021).

One benefit of this shift to GVCs is the perpetual assessment process, wherein systemic efficiency, resource use and allocation, and transportation logistics are all

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across different countries. Globalization motivates companies to restructure their operations internationally through outsourcing and offshoring of activities…the past decades have witnessed a strong trend towards the international dispersion of value chain activities such as design, production, marketing, distribution, etc" (OECD).

[48] This works as the cultural hype that Apple has built means that new products sell out quickly and are typically restocked relatively quickly, often shipped directly from the manufacturers as Apple only keeps a single, central warehouse in California. This creates a sense of urgency when new products are released, often touted as being leaps and bounds ahead of the previous version. Unfortunately, this results in a shorter product lifespan which generates mountains of e-waste.

[49] Note: FoxConn also manufactures for Dell and Hewlett-Packard, not just Apple.

captured in data and can be continually refined. As MNCs constantly adjust for strategic, highly efficient systems, they can detect weaknesses or waste, such as the loss of a significant amount of rare earth or conflict minerals in products that could have been recovered for reuse, which inspired recycling and product buy-back initiatives. This continuous assessment allows firms of supply chains to quickly react to the major issues of the day, be it a large environmental focus following a natural disaster or a social scandal following explosive revelations of human rights abuses – or, alternatively, to bury any exposed controversies that might arise. Emerging inflection points in supply chain management such as the Internet of Things, as defined by Fawcett and Waller (2014), are primarily defined by technological development; (1) development of Big Data and predictive analysis, (2) additive manufacturing, (3) autonomous vehicles, (4) evolution of materials sciences, and (5) borderless supply chains. Within this framework, firms can optimize GVCs every step of the way with data that is perpetually being refined, decentralized production and manufacturing, and highly dynamic systems that can be quickly modified. Modern tracing technologies allow for real time assessments of ESG data that was inconceivable in human history as data and transparency reach new heights.

Concurrent to this internal firm focus on refining the supply chain for increased flexibility and optimizing the perks of globalization for streamlined GVCs, there was an expansion into other sectors. Following the 2008-2009 Global Financial Crisis, faith in traditional banks dropped significantly. This shaking of faith in traditional institutions led consumers to look elsewhere for more trustworthy organizations that would be held to a higher social, ethical, and governance standard. Shortly thereafter, the tech sector began pressing more openly into fintech, such as Apple's ApplePay and the rise of BitCoin. Both these innovations were marketed heavily as being safer options, with ApplePay offering a level of protection between consumer banking details and

BitCoin utilizing BlockChain[50] for decentralized security that wouldn't be undermined by seemingly nefarious banking institutions. To benefit from these shiny new security features, consumers had to invest in Apple products and buy in to cryptocurrencies, which in turn shifts trust away from traditional institutions and into private industry that presented itself as being a shade of anti-establishment.

The growing trust and reliance on the tech sector, in its range of products and services, is matched by calls for increased transparency in everything from supply chains to governance practices. Internal transparency can either be the decision of management or a result of employee action when they feel a collective line is being crossed, as with the case of Google's attempted collaboration with the US Pentagon to increase drone strike efficiency, dubbed Project Maven. Transparency in governance and employee activism tend to go hand in hand, especially in the tech sector with its culture of being the rebel with a heart of gold. The internal backlash was enough to lead the firm to drop the project in 2018, with over 4,000 employees from all levels signing petitions and releasing information to external media sources (Wakabayashi and Shane 2018). The criticism highlighted Google's motto since 2000, 'don't be evil', which was subsequently quietly replaced in early 2018 with 'do the right thing' after innumerable petitions and media cited the development of warfare technologies as decidedly 'evil' (Crofts and van Rijswijk 2020; Sreenivasan and Conger 2018). The loss of a contract offering $9 to $15 million, with the likelihood of it leading to more lucrative future contracts, was apparently justified in Google's economic reckoning in the face of employee resistance[51].

[50] While BitCoin is not an offering by any of the tech firms studied in this paper, it is important to make note of the impact that the introduction of cryptocurrencies has and is having on the financial sector. Dropping trust in traditional financial institutions has led some consumers to seek out alternative options, which is allowing for the democratization of financial offerings in the sense that the intentional creation of alternative banking also creates opportunities for traditionally underserved communities to access new financial instruments.

[51] This resistance isn't exactly universal, as Microsoft and Amazon, Google's primary competitors in cloud-computing services, have still been actively pursuing Pentagon contracts without nearly the same reported employee pushback (Wakabayashi and Shane 2018).

Examples such as Project Maven reflect the trade-offs that a firm must negotiate in mitigating employee concerns, meeting SMO demands for transparency, and participating in the political sphere. These trade-offs within a firm's balance sheet reflect the complexity of modern decision making. In an industry requiring such specialized employees, employee influence and satisfaction are a significant consideration. As such, the relationship between firm performance (FP) and ESG scores are subject to conflicting results depending on industry, nature of the FP metric, and particularities of the socio-political circumstances of the day (such as a large-scale human rights scandal impacting a firm, as with the repeated human rights concerns within China impacting Apple's relationship with FoxConn, but not to the extent that Apple has officially ended the relationship).

This study has chosen to focus on the tech sector, as it is connected on a foundational and growing level to virtually every other sector, it is global in both supply chain and product diffusion, and the large players are powerful enough to impact national policy. As technology has evolved, it has become more and more a part of daily life, in the forms of tracking health data from wearables, targeted marketing data collected from casual internet searches, and innumerable others that crop up every day. In this sector, the argument for what falls under 'ESG' concerns is constantly evolving as global debates around data privacy laws, multinational transparency, and the sheer scope of the tech supply and life cycle grow in intensity and international focus (Nollet, Filis, and Mitrokostas 2016).

In this chapter, I analyze several key FP metrics and how they interact with ESG variables, revealing two distinct relationships wherein a strong relationship (Positive) emerges for ROA and ROIC while a weaker, confused relationship (Mixed) emerges for ROE and ROS. There have been over two thousand unique studies of the CSR/FP relationship, with varying, occasionally contradictory, results that are attributed to

differing industries, FP metrics, control variables, or methodology. This study approaches the question by examining the four most often used metrics of firm performance: Return on Assets (ROA), Return on Invested Capital (ROIC), Return on Equity (ROE), and Return on Sales (ROS) (Margolis and Walsh 2001; Orlitzky and Benjamin 2001; Velte 2021). Given the innovation-heavy nature of the tech industry and the work of past studies, this study will also include Research and Development (R&D) as a metric to be tested alongside ESG variables (Padgett and Galan 2009). Each of these measures tells us something different about the significance of ESG for firm performance, so that arguing any single metric can tell the entire story risks rampant misinterpretation, as is evident in the differing strengths and evolving relationships between the different FP variables.

The pattern demonstrated in the Positive metrics (ROA and ROIC) appears consistent; strong, positive significance when tested both as an aggregate score and when broken down by year, with the most impact coming from the Environmental Pillar. However, the Mixed metrics (ROE and ROS) demonstrate conflicting results. When taken as an aggregate score, the magnitude is positive but weak. In contrast, when plotted by year, the resulting graph is jagged and often dips into the negative sphere and the Environmental Pillar 's impact is primarily negative. This relationship is less consistent and more prone to sudden jumps, with a negligible difference in the significance of the different pillars. As these results are clearly mixed, they cannot be deemed significant or singularly positive, even with the positive relationship demonstrated in the aggregate regression testing. These findings are analyzed in more detail throughout this chapter.

These initial findings suggest a dynamic relationship among the many facets of ESG and firm performance, with significance shifting as the nature of the industry itself evolves. This is to say that with industry-wide shifts such as toward global platformization or the rising trend of tech firms holding more intangible assets, the

dynamic between factors such as ESG and ROA will change, in this case remaining significant across the years with reasonable fluctuations.

It is important to note that the differences in testing can translate to real world ramifications. As more C-Suite executives see their compensation packages tied to ESG goals, the approach to CSR has become more deliberately strategic. If a manager can invest in social capital by doing something good, attract the best talent through appealing company values, *and* make a personal profit at the same time from an ESG-based bonus, it seems like a win/win. If that same manager is also in an environment that highly values efficiency and shareholder returns, they may wish to only focus on the reports that support the positive ESG and ROA or ROIC relationship. This impacts managerial decisions and the directions of the firm moving forward (Aggarwal 2003; Armstrong et al. 2015; Bebbington, Larrinaga, and Moneva 2008).

This chapter is structured as follows. First, an overall discussion of the FP – ESG relationship, including an in-depth discussion of variables and past literature. Next, the four accounting-based metrics are split into two groupings of Positive (ROA and ROIC) and Mixed (ROE and ROS) and these differences are discussed. Then there is an analysis of R&D as it pertains to ESG, before a discussion of the implications of these findings and suggestions for further research.

3.2 Dynamics of ESG and Firm Performance

While the relationship between CSR and FP has been historically difficult to define, this analysis will take a critical look at how that relationship has evolved and what factors impact it. Academics have long debated about which firm performance metric to use, the appropriate control variables, industry and time impacts, and what exactly the varying degrees of significance or complete lack thereof actually *mean*. Even the

discipline of the researcher themselves can change the directional significance of the findings regarding corporate financial performance (CFP) and CSR performance (Orlitzky 2007). Which comes first, economic performance or social investment? Is there any way to distinguish between the two as to study one's impact on the other, as if they weren't interconnected factors? This discussion has grown in importance as firms experience exponentially growing influence on strategic decisions from external, non-traditional industrial forces (Prahalad and Hamel 1994; Waddock and Graves 1997).

Growing socio-political pressures of larger multinational companies (MNCs) have been exacerbated by concurrently growing political visibility. For these globalizing MNCs, CSR investment and visibility can be translated to social capital[52]. However, some still argue that the benefits to any social capital, when balanced against the financial investment and opportunity costs involved, remain to be proven definitively. If the variety of studies and their sometimes-contradictory results are to be believed, as with this study, then there simply is no single, definitive answer to the question of financial benefits to CSR. Rather, a macro approach may be taken to provide broader, general insights while the practical application of findings should be taken on a case-by-case basis, meaning that strategic CSR is not one-size-fits-all and needs to be tailored for real-world use. This highlights a potential weakness of this study, as the macro approach to testing demonstrably favors ROA / ROIC over ROE / ROS (Julian and Ofori-Dankwa 2013).

Conceptually, this financially strategic approach to CSR has taken center stage over the last two decades. Porter, Serafeim, & Kramer refer to the implementation of profit-driven social change, also referred to as strategic CSR, as *shared value* (2019).

[52] Social capital is well defined by the OECD (2001) as '…access to information and influence through social networks also confers private benefits … can be used by individuals or groups to exclude others and reinforce dominance of privilege." At the root of this power exchange is a degree of trust, which can be earned and lost quickly.

The idea is that firms can institute programs that are mutually beneficial to both the firm and society, thus creating value from both the intrinsic value of greener or more socially beneficial practices and the social goodwill generated. These approaches are most effective when the ESG issues are considered central to the firm's fiscal strategy and culture, and often result in improved shareholder returns over time.

As has been pointed out by Waddock & Graves (1997), approaches to studying the CSR / CFP dynamic have largely been challenged by a lack of nuance regarding particular industry and the unique impacts upon it. As such, using the same set of variables for drastically different industries is likely to yield significantly different, unidimensional results. When taken into consideration that ESG variables range from LGBTQ+ representation to carbon offsets to anti-takeover poison pills, the study of the relationship between CSR and CFP must take a more tailored approach to avoid obfuscation, confusion, and generalization. The authors found three distinct associations in academic findings, of negative, mixed, and positive. The negative association, supported by Aupperle (1985) and Friedman (1970), argues that firms incur undue costs when investing in CSR-related endeavors which should be paid for by other institutions such as governments, the cost of which reduces firm value and shareholder income. Neutral associations, such as those argued by Ullman (1985), suggest that there are simply too many potentially confounding variables and influences to accurately gauge a significant relationship between CSR and CFP. The positive association, by authors such as Moskowitz (1972), argue that firms are perpetually balancing implicit and explicit costs[53], and as such if a firm attempts to cut corners via irresponsible implicit costs, it will result in higher explicit costs. This leads directly into juxtaposed theories, *good management* and *slack resources*, essentially an examination of causality (Alexander and Buchholz 1978).

[53] Explicit costs are defined as those with distinct monetary value that are recorded in accounting ledgers. On the other hand, implicit costs are intangible and internal, more akin to an opportunity cost of producing an asset internally versus contracting it out to an external provider.

The findings of Lin et al (2019) explore two primary theories in CSR literature, *good management theory* and *slack resources theory*. Good management theory argues that greater CSR investment is indicative of higher caliber of management, which will therefore also result in stronger financial performance (Freeman 1983; Prahalad and Hamel 1994). Slack resources theory, on the other hand, suggests an opposite directionality in that excess financial (or otherwise) resources allow firms to invest more significantly in CSR initiatives (McGuire, Sundgren, and Schneeweis 1988). This was framed as the trade-off hypothesis, wherein reasonable financial investments were made in CSR practices with the knowledge that it might not immediately bear economic fruit but would still be a worthwhile investment for the litany of other potential benefits. These benefits could be framed as a form of positive externality, as firms would, in ways that are difficult to quantify, benefit from positive brand associations and the social capital of positively perceived corporate citizenship.

In conjunction with good management theory, there is the argument that economic and ESG variables are highly interconnected. Al-Tuwaijri, Christensen, and Hughes (2004) found an interdependent relationship amongst economic, environmental, and social performance metrics. As Ullman (1985) first suggested, inconsistencies in the results of academic testing are largely due to the exclusion of consideration regarding inclusive management. Essentially, managers that tie in ESG considerations to economic performance yield better results, as they are more likely to critically assess the activities of the firm, invest in employee welfare, and focus on projects that improve product performance from an environmentally sustainable standpoint. This study finds that when using metrics that are firmly rooted in managerial efficacy (ROA and ROIC, namely), the relationship with ESG metrics is strongest and, when the regression coefficients are graphed across the time period, reveal a smooth rise in significance with softer dips, suggesting that this is an approach that is more controlled and suffers less dramatic drops in the event of an ESG controversy.

Conversely, when using metrics that rely more heavily on profitability and are impacted by external stakeholders (ROE and ROS), the aggregate relationship is statistically weaker and conflicts with the results over time. When these regression coefficients are graphed across time, the pattern is more jagged with a peak in 2009 followed by a drop again, meaning that using these metrics to gauge firm performance are tricky and much more volatile for researchers and practitioners alike.

Building off the works of Waddock and Graves (1997) and Margolis and Walsh (2001), this study has selected a range of financial performance variables to test. This is done in part to accommodate the individuality of the industry sector, as well as to provide a comprehensive, multifaceted, detailed analysis of the significance in the CSR / CFP debate. Waddock and Graves used Return on Assets (ROA), Return on Equity (ROE), and Return on Sales (ROS) in their assessment. Margolis and Walsh also found a significant number of studies that used Return on Invested Capital (ROIC), so this has been factored into the panel data set as well. It is important to note that these are all accounting-based metrics, a singular bottom-line mentality that has long been challenged in CSR literature by Elkington's (1998) theory of the Triple Bottom Line, wherein firm performance should not merely gauged by financial performance, but also by social and environmental performance. In this theory, singular financial metrics are insufficient for the current scope and complexity of multinational firms, and must be replaced with a more nuanced, holistic view of firm performance.

As Peloza (2009) points out, these firm performance metrics are end state outcome metrics, as opposed to intermediary or mediating metrics[54], meaning that they are a single end-point measurement. End state outcome metrics are further divided into internal accounting approaches (which will be used for this study), market approaches,

[54] Peloza's example is "…decreased energy consumption (the mediating variable) reduces operating costs (the intermediate outcome), which increases the firm's share price (the end state financial result)" (2009, pp 1522). Intermediate outcome metrics are further divided into cost-based, revenue-based, and integrative approaches.

and perceptual approaches[55]. The benefit of using an internal accounting approach is the perception is largely influenced by firm perception, meaning that value is enhanced or negated based on internal firm valuation more than external factors, as would be the case with market or perceptual approaches, both of which are more volatile and less under the control of the firm itself. These metrics of profitability are most appealing to management, so the efforts to quantify ESG have a concurrent legitimizing effect, fueling arguments that investment in ESG practices is beneficial, rather than detrimental, to a firm's bottom line. Accounting-based approaches are the most used and demonstrate the strongest positive correlation between firm and social performance, with 70% of accounting-based studies reporting positives compared to only 53% of market-based studies. This supports a unidirectional argument that firm performance impacts CSR, but the same significance doesn't exist vice versa. According to Peloza, this is due to accounting metrics being a reflection on past performance, juxtaposing market metrics which project future performance. However, Peloza tends to argue in favour of taking a short-term perspective on CSP/CFP, suggesting that the primary pitfall of accounting metrics is that it makes it impossible to examine the impacts of a single initiative as it gets lost in the wider financials of the firm and bevy of other CSR initiatives. This is most true when examining social or governance initiatives[56], as quantifying their impacts can be more challenging that calculating the savings from energy conservation or recycling.

In their survey, Margolis and Walsh found that in the 95 studies surveyed, which chose to test Corporate Social Performance (CSP) as the independent variable, 42 found a positive correlation with firm performance, 19 found zero correlation, 4 found negative correlation, and 15 were mixed. In the same batch of tests, 21 firms also used

[55] While perceptual approaches, such as consumer or investor surveys, are likely the most commonly used tool in overall CSR literature, they are more appropriate for management or marketing studies than this particular study.
[56] However, these individual pillars of ESG are inherently interconnected. CSR has been argued as a means of mitigating or delaying the extension of government oversight and regulations. Maintaining market flexibility, decreasing perceptual risk, and lower the cost of access to capital as a result of investing in improving environmental practices led to overall lower costs (Sharfman and Fernando 2008).

CSP as the dependent variable, with 14 finding positive correlations, 3 finding zero correlation, and 4 finding mixed results. These studies demonstrated the challenging nuance of exploring causation in financial and ESG performance, as confounding factors such as country (including legislation and efficacy of regulation), firm size, and state of local and international economies produced varying results.

Friede, Busch, and Bassen (2015) have since expanded upon the work by Margolis and Walsh and many others, to coordinate a review of over 60 reviews that produced 2200 unique[57] underlying studies focusing solely on the relationship between ESG and Corporate Financial Performance (CFP). Their analysis divided its dataset between vote-count studies, which essentially list the number of positive/negative/mixed studies, and meta-analytical studies, which offer an effect size ratio[58]. Of the vote-count study, which consisted of 35 reviews analyzing 1816 studies, 48.2% found a significant positive relationship, 23% found a neutral relationship, 18% were mixed, and 10.7% were negative. The 25 meta-analysis studies, drawing from 1902 studies, found an overall correlated *r* of 0.118, supporting a statistically significant relationship between ESG and CFP[59]. This is relatively consistent with Peloza (2009), who found 63% showing positive relationships, 22% showing mixed or neutral results, and 15% finding a negative relationship between CFP and ESG. While there is clear consensus that the majority of studies find a positive relationship, there is still a significant portion of studies that argue otherwise, as in the case of this study that found both positive and mixed results.

[57] The authors initially collected 3718 studies, but after removing overlapping representation, whittled their sample down to 2200 unique studies.

[58] Cwikel et al (2000) made the argument that meta-analyses loses nuance as it lumps all the relevant studies together regardless of quality of research, whereas vote-count studies don't take into account the sample size or the size effects, also losing significant nuance. In this regard, there isn't exactly a good alternative that accuratly reflects the full breadth of research.

[59] It is worth noting that in the survey of meta-analyses, only one study was not strictly focused on Environment, Social, or Environmental/Social issues, but rather focused on funds. The lack of focus on Governance was evident in the vote-count surveys to a lesser degree, with 4 studies either focused on or including Governance and 5 studies focusing on funds.

Busch & Friede (2015) pulled data from 25 existing meta-analyses to generate a sample size exceeding a million observations, revealing a 'highly significant, positive, robust, and bilateral CSP-CFP relation.' Stepping further, economic academics such as Lin, Law, Ho, and Sambasivan (2019) explored the directional causality of the CSR and CFP relationship. The authors separated their study into Prospective and Retrospective approaches. Using Panel Vector Autoregression (Panel VAR), the authors drew inspiration from Waddock & Graves (1997) in testing their CSR variable against a set of firm performance variables while utilizing lagged years to test for a directional causation. In support of a tradeoff hypothesis, this study found a "strong and substantial negative impact" (2019: 401) of CSR upon firm performance, yet a positive relationship when direction is reversed and the impact of firm performance on CSR is tested. Interestingly, their results demonstrated that a negative shock to CFP resulted in an *increase* in CSR. This suggests that CSR was utilized as a reactionary tool in the event of a negative shock, a tactic that has been in use for decades in the event of a firm scandal, with responses in the form of major philanthropic or community donations or generic promises to 'do better'. While this helps to cushion the blow, it is still a post hoc strategy, meaning that the firm must still suffer said blow before it reaps the benefits. However, as these and other authors note, many studies it built upon had failed to account for R&D (Waddock and Graves ; McWilliams and Siegel 2000). As such, this dissertation will study R&D alongside firm performance variables, as it is uniquely important in the quickly evolving world of tech that depends more highly on technology-oriented innovation and basic research.

However, when examining directional causation, it is important to note that different aspects of the ESG metrics, such as the individual Environmental, Social, and Governance Pillars, will have unique relationships with each firm performance variable. This is the case with Scholtens (2008), who found that impact flowed from financial to social performance, but not significantly from social performance to financial. This fails to address the range of subcategories under the heading of social performance,

each of which may have its own unique relationship to firm performance. This relationship can be further complicated based on the ratings agency used (Halbritter and Dorfleitner 2015). In examining stock performance, Nelling and Webb also found a unidirectional causality wherein financial success resulted in greater employee-centric CSR investments, but that CSR did not significantly impact economic returns (2008).

Martínez-Ferrero and Frías-Aceituno found support for a positive bidirectional relationship between CSR and market value, expanding the debate beyond traditional returns-based metrics (2015). Their study focused on multinational firms, highlighting intense globalization and increased demands for transparency and social accountability as the driving factors behind CSR being reframed as sustainable competitive advantage. By using panel data and simultaneous equations based on the generalized method of moments estimators, the authors found evidence supporting a 'synergistic circle', wherein positive bidirectional evidence is present among each sub-index of society, human rights, environmental, and board scores. As such, CSR becomes a tool for reputation management and developing firm image, while simultaneously reducing negative activism and allowing for the monitoring of stakeholders and relevant parties (Adams 2002). Interestingly, firms which perform better in CSR metrics also demonstrate less earnings management, a form of accounting manipulation designed to present a stronger financial return than actually generated, a manifestation of transparency that would also strengthen stakeholder relations (Scholtens and Kang 2013).

Akin to this 'synergistic circle' is the concept of the 'virtuous circle', a theory suggesting that the benefits of CSR and financial performance are innately cyclical. The concept of 'doing well and doing good' has manifested in a variety of forms in CSR literature, suggesting that firms which invest in their environmental impact, employee welfare, or board diversity are likely to reap the rewards in economic terms.

For example, greater gender diversity at a managerial level has shown statistically significant positive impacts on accounting returns, albeit with a less significant relationship with market-based metrics (Post and Byron 2015). This is attributed to a broader range of expertise and experiences, creating a space for more creativity and more diversified approaches to thrive.

There are notable shortcomings to this monetary-centric cost-benefit analysis, as it risks devaluing periphery shareholder interests and missing intangible costs and benefits (Kelman 1981; Lowry and Peterson 2011; Arogyaswamy 2020). Kelman argued that in environmental, safety, and health regulations, monetary metrics may be misleading, not to mention that often in these situations, "benefits outweigh costs". One consistent point raised is the distinction between short- or long-term value added, as well as the initial investment cost tallied against the long-term economic benefits. These benefits range from simple economic returns to greater employee satisfaction to the deferment of government interference via regulation (Davis 1971).

Narver (1971), while agreeing with Friedman's point that the responsibility of the firm is profit-maximization, argued that value maximization is also dependent upon active management of externalities, also known as social responsibilities, in order to reduce risk in increasingly sensitive markets. It is in the firm's best interest to act before these responsibilities are codified into legislation and regulation. Additionally, resource waste manifesting as environmental pollution is inefficiency on the part of the firm, so the process of cleaning up the firm's impact is mutually beneficial to both the economic and environmental bottom lines (Porter and Linde 1995). In this sense, strategic CSR can be used as both a vehicle of social capital as well as provide immediate economic return in the form of reduced expenses and increased efficiency.

It is also important to note that many of the firms in this study are large multinationals. As Muller (2018) argues, the internationalization process itself is

nonlinear, with detrimental financial impacts rising until a breaking point wherein the firm has established itself and built enough social capital to begin benefitting. This infancy period is hampered economically by firm unfamiliarity in new markets (Marano et al. 2016), skepticism (Jamali 2010; Jeppesen, List, and Folmer 2002; Kellenberg 2009; Mazutis and Slawinski 2015), and bias (Campbell, Eden, and Miller 2012; Pant and Ramachandran 2012). The author demonstrated this U-shaped curve tracing the path to legitimacy for both internationalization and corporate social performance, arguing that the time spent earning consumers trust is a necessary developmental period that, if successfully passed through, results in positive international perceptions (Kostova and Zaheer 1999), such as trustworthiness (Suchman 1995), and manifests economically in reduced business costs (Medina 2004; Sethi and Judge 2009) and positive firm communication(Doh, Littell, and Quigley 2015).

The majority of quantitative CSR literature takes a macro approach, which blurs the distinctions amongst industry specific impacts and dynamics within this context (Rodrigo, Duran, and Arenas 2016). The industries that do tend to be highlighted are the financial sector (in that it is typically removed from the dataset) and controversial industries such as arms manufacturers. The tech sector is uniquely positioned in that it is, to an extent, the infrastructure for the financial sector and controversial industries, positioning it to be both impacted by and able to influence the focus on internal industry issues and adjacent-industry issues. Lightning-fast algorithms to track markets or missiles stemmed from the same basic machinery as the smartphone a child uses to watch Dora the Explorer. This connection the tech sector has to all others makes it vulnerable to backlash from public opinion and, as such, theoretically implies a diligent focus on social capital and toeing the proverbial line. As technology evolves to a deeper integration into daily life, and as tech firms continue to rise in global economic scale and impact, the breadth and scope of ways that ESG can result in positive social capital, or a public relations nightmare will only grow. O'Mahoney and

Vecchi (2005) find a significantly positive connection between information & communications technology (ICT) capital and firm output growth, finding that investing in technological infrastructure is economically beneficial to a firm, but the resulting increase in output and economic range that a firm experiences as a direct result would come with its own set of potential opportunities or challenges.

3.3 Methodology

The hypothesis this study seeks to explore posits a significant, positive relationship between firm performance and ESG scores in the tech sector. However, as there are a variety of commonly used firm performance variables, this hypothesis is tested by regressing ESG scores with several different FP metrics over the timespan 2004 - 2019. Interestingly, this study found mixed results as some FP metrics (ROA and ROIC) showed a relationship of strong positive magnitude with the ESG metrics, while others (ROE and ROS) were muddled and conflicting. This offers nuanced insight into the actual FP/ESG relationship, as there are several particularities of the tech sector that are explored in the discussions below, such as having social scandals like sexual harassment or pay discrimination while still being perceived as a sort of social champion of free and just societies. Perhaps the tech sector has managed to build its cultural perception in such a way that it can come out with more win-win situations than most other industries, thanks to its GVC maneuverability and perceived adaptability.

Table 3, below, is an overview of the descriptive statistics for Dataset 142. It is comprised of data for 142 firms within the tech sector from 2004 to 2019 on several firm performance variables (ROA, ROIC, ROE, ROS, and R&D) and several ESG variables (ESG Scores, Environmental Scores, Social Scores, Governance Scores, and ESG Controversy Scores). The firm performance variables are logged, as their original values would be too large in scale to the ESG scores to determine a relationship

otherwise.

Table 3: Descriptive Statistics of Variables

2004 - 2019

	(1)	(2)	(3)	(4)	(5)
	N	Min	Max	Mean	S.D.
Firm Performance Variables					
Return on Assets	2,019	-4.43	4.49	1.90	0.98
Return on Invested Capital	1,987	-3.22	5.16	2.32	0.91
Return on Equity	1,971	-6.21	1.67	-1.89	0.86
Return on Sales	1,464	-8.61	9.90	2.82	2.81
Research and Development	1,595	13.61	1,324.04	19.70	1.71
ESG Variables					
ESG Score	2,217	3.94	95.21	49.89	21.30
Environmental Pillar	2,226	0.00	99.08	43.61	30.25
Social Pillar	2,226	0.19	98.47	50.15	24.55
Governance Pillar	2,231	1.17	98.53	54.30	22.27
ESG Controversy Score	2,226	0.54	100	88.08	25.64

Notes: This table displays the firm performance variables in their logged form. ESG variables are not logged.

Of the immediate observations from Table 3 are the average scores among the ESG Pillars. The Environmental Pillar (43.61) is significantly lower than its Social (50.15) or Governance (54.30) counterparts. This demonstrates several key points: the heightened criticism surrounding environmental concerns is likely holding firms to higher standards than Social or Governance concerns, which started gaining traction

more recently and have been harder to assess due to low industry transparency and the challenges of quantifying social or governance initiatives. International demands for environmental reporting predate the first home computer, so there are already detailed assessment materials and governmental regulations in place for well-known environmental issues (such as improper e-waste disposal and the costs of manufacturing), whereas issues in the Social and Governance realm such as data privacy and monopolistic behavior are still being actively defined and explored. This leads to questions regarding the significance of the relationship between firm performance and a variety of ESG variables, of which the most prominent is the overall ESG Score.

These ESG issues are often interconnected, which the divisional framework of measuring ESG as individual pillars can obfuscate as it fails to fully demonstrate these nuances. A prime example of this would be the presence of conflict minerals in global supply chains. Objectively, it exists as an environmental concern, in that illegal mining practices can do significant lasting damage to local ecological communities; a social concern, in that the miners in such conditions are often coerced into working in inhumane conditions through physical threats or violence; and a governance concern as MNCs have been called out for working alongside governments that fail to protect the vulnerable in their workforces, such as Venezuela or the Democratic Republic of Congo (DRC). When Intel learned of the threat of conflict minerals in their supply chain in 2009, they took immediate action but that action took several years to reach their published non-financial reports (Sheffi 2015). Since emerging as an ESG issue, conflict mineral legislation has come out of several individual countries, as well as been addressed in international organizations such as the UN and EU.

It is important to keep implementation time frames in mind as well. When implementing social causes, such as sexual harassment training for employees, policy can be put into place significantly more quickly than actual corporate culture changes,

as circulating internal documents can be done quickly without guaranteeing a suddenly safer environment. Regarding delayed implementation on the governance side, the argument can be made that rather than taking a tokenized approach to electing minorities to the Board of Directors, it is better to take the time to find the appropriate candidates and wait for current Board member terms to expire naturally. These box-ticking points do not necessarily equate to actual change within the organization, but the announcement of their intention serves as positive ESG signals that are increasingly being treated as positive market signals, regardless of validity (Fancy 2021).

Table 4: Relationship between Firm Performance Variables and ESG Scores

	(1)	(2)	(3)	(4)	(5)
	Log (ROA)	Log (ROIC)	Log (ROE)	Log (ROS)	Log (R&D)
Log (ESG Score)	0.727***	0.754***	0.278***	0.226**	0.251***
	(0.051)	(0.052)	(0.052)	(0.088)	(0.037)
Firm Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
R-Squared	0.6184	0.6295	0.6306	0.9620	0.9595
Observations	1808	1794	1784	1369	1448

Notes: The panel data represented here is of 142 spanning 2005 - 2018. All data here has been collected from Thomson Reuters DataStream. Firm Controls used are Log (Total Assets) and Log (Market Value). Standard errors are clustered at the Firm Level. Statistical significance at the 10, 5, and 1 percent is displayed by *, **, and ***, respectively.

The data presented previously in Table 3 has been regressed to reveal the relationships in Table 4 between ESG Score and firm performance. Immediately evident in the aggregate testing is the difference between the Positive metrics (ROA

and ROIC) and the Mixed metrics (ROE and ROS), wherein the Positive metrics have a significantly stronger relationship with ESG Scores by a solid margin. What this means, in taking ROA as an example, is that at a significance of 0.727, a 10% increase in ESG score correlates to a 7.27 increase in ROA. R&D is left out of this dichotomous grouping as its results fall outside the demonstrated patterns and it is not a Return metric, but rather a freestanding metric.

An interesting relationship occurs when assessing R-squared of firm performance variables. For the most part, just over 60% of the data can be explained by the model (ROA at 61.84%, ROIC at 62.95%, and ROE at 63.06%). However, 96.20% of ROS and 95.95% of R&D can be explained by this model. This suggests two interesting outcomes; first, that a relationship of stronger magnitude is apparent for a smaller percentage of the data (ROA, ROIC, and ROE), meaning that ESG more significantly impacts these variables the majority of the time, but not always. Second, ROS (0.226**) and R&D (0.251***) demonstrate less impact on ESG metrics, yet that relationship holds true for more of the data tested, suggesting that it is a more consistently reliable relationship than the first, if less impactful. These two results both support the general hypothesis that ESG is good for firm performance and furthers the argument that it is good for firm performance in a variety of manifestations. This tends more toward the theory of good management in that it is a consistent, strategically beneficial outcome rather than a responsive benefit as would be expected from slack resource theory.

In-depth analysis of the FP variables allows for significantly more nuance, as these variables have been impacted by the shifting financial valuations since the turn of the century.

3.4 Positive

ROA and ROIC are two commonly used accounting metrics. The Corporate Finance Institute define ROA (CFI 2022a) as a metric of firm profitability and ROIC as a profitability or performance ratio (CFI 2022b). Both metrics gauge a firm's management ability to profit. It is particularly interesting that these two metrics are so closely correlated in this study as one of the drawbacks of ROA is that industries tend to calculate it differently, while ROIC is more universal in that it can be used to compare firms with differing capital structures (Qian and Zhu 2018; CFI 2022b). However, it is important to note that both metrics gauge long-term results based on managerial strategy, demonstrating a strong correlation between the good management practices of strategic planning and the positive impact of ESG.

Both the metrics tested here, ROA and ROIC, demonstrate both a strong, positive relationship when tested as an aggregate and when plotted across time. This reinforces the arguments of a positive relationship as it is consistent in different forms. However, as they are different metrics, it is necessary to examine them separately before continuing the analysis of their joint pattern in relation to ESG metrics. As such, the next section will be an analysis of ROA, then ROIC, before a discussion of the implications of their joint relationship.

3.4.1 Return on Assets

Through ROA, management's efficacy is demonstrated by higher returns on economic resources, which indicates that a firm is effectively utilizing the assets it has invested in or created. ROA is apt as a measure of operational performance more so than a metric for gauging intangible assets, which have been assessed more thoroughly in the Research & Development section.

Lin et al found that as much as 51% of CSR variation can be attributed to ROA, while only 13% of ROA variation is related to CSR (2019, pp 12). Their results find that firm performance impacts CSR performance in support of slack resources theory, in that first and foremost a firm must have the excess capital to then invest in CSR initiatives. This presents as a sectoral opportunity for tech, as ROA has been consistently growing with a 5 Year sector average of 9.07% exceeding the S&P average of 6.86% as of July 2021 (Reuters).

Table 5: The Relationship Between Return on Assets and Primary ESG Scores

	(1)	(2)	(3)	(4)	(5)
	Log (Return on Assets)				
Log(ESG Score)	0.727***				
	(0.051)				
Log(ESG Controversy Score)		0.729***			
		(0.051)			
Log(Environmental Pillar)			0.815***		
			(0.067)		
Log(Social Pillar)				0.730***	
				(0.051)	
Log(Governance Pillar)					0.733***

					(0.051)
Firm Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	1808	1816	1460	1816	1821

Notes: Standard errors are clustered at the Firm Level. Statistical significance at the 10, 5, and 1 percent is displayed by *, **, and ***, respectively.

As Table 5 demonstrates, ROA and ESG metrics show a consistently significant relationship across the ESG metrics. This relationship shows that ESG Scores have an impact on ROA which speaks to the argument of strategic CSR and good management theory in that this positive relationship can be attributed to intentional investment in ESG issues. That is to say that when firms are particularly conscious of the management of their assets, it coincides with conscious decisions to prepare for potential ESG issues, such as investing in more environmentally beneficial machinery or improving labor conditions, especially as the strongest relationship exists between ROA and the Environmental Pillar at 0.815***. In the process of assessing their assets, they are revealing potential weaknesses or ESG related risks. These risks can be in the form of harsh working conditions in supply chains, highly polluting manufacturing processes, or any other potential blow to firm reputation. This is further supported by the significant relationship between ROA and ESG Controversies, suggesting that the impact of such a controversy is not only significantly impactful, but can have lasting ramifications. As such, firms investing in strategic ESG policies preemptively benefit from two key points: first, the process of evaluation offers a tool for self-assessment which can help firms attain relevant certifications, and second as an opportunity to assess risk and organize risk management preparations in the event of an ESG controversy.

As demonstrated in Figure 11 below, the individual ESG Pillars demonstrate a consistent pattern over time wherein the Environmental Pillar has a stronger

relationship to ROA.

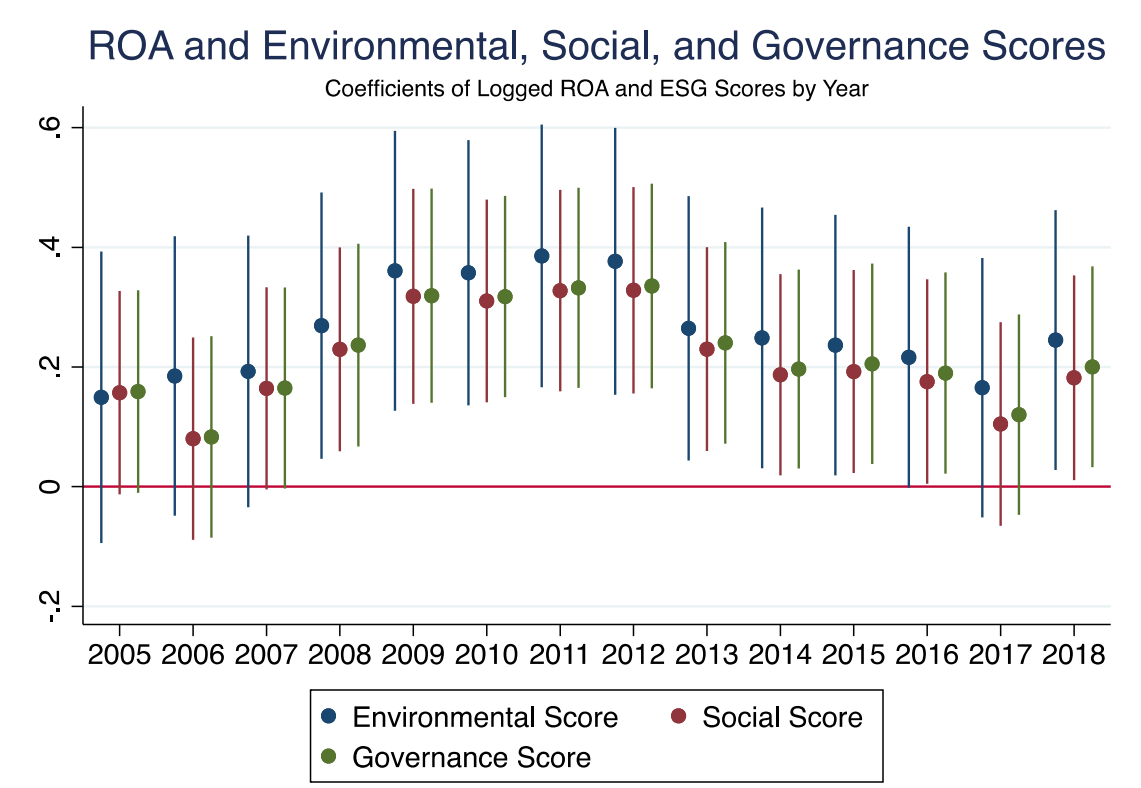


Figure 11

The Environmental Score has held a consistently stronger significance alongside ROA, with a notable spike over Social/Governance dip in 2006. Otherwise, the relationship has remained relatively consistent over the years with the Environmental pillar having higher significance than the other two. When the progression of simple ESG variables are plotted alongside firm performance, however, a less impactful relationship appears.

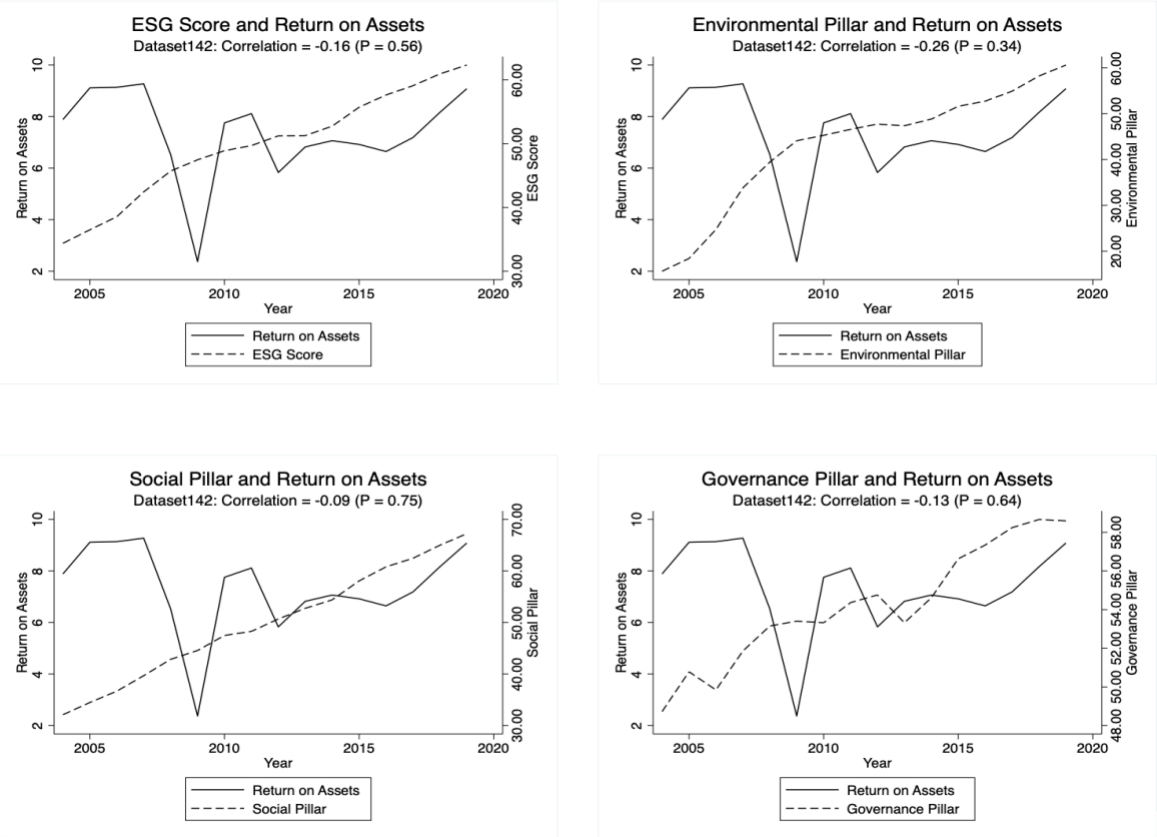


Figure 12: ROA and ESG Score Correlations

Interestingly, while ROA has been found to have a strong relationship to ESG performance by previous studies, the tech sector may prove an outlier due to its complex relationship with assets, be they intangible or outsourced. As the graphs in Figure 8 indicate, overall ROA in the tech sector has experienced significant fluctuations. The drastic fall following the 2008/2009 Global Financial Crisis (GFC) resulted in the lowest ROA yet did not appear to impact the ESG metrics which have been steadily rising since 2004. Nor did this fall impact the significance of the relationship, as demonstrated in Figure 11; if anything, the relationship appears strongest during the GFC and immediately after, suggesting a heavy reactionary investment in ESG to aid in the recovery process.

3.4.2 Return on Invested Capital

According to the Corporate Finance Institute, Return on Invested Capital (ROIC)[60] is defined as a profitability or performance ratio producing the percentage ratio that demonstrates how effectively firms use investor funds in income generation (CFI). It is often treated as a measure of effective management practices from a development and expansion perspective, offering insight into the economic and managerial potential of a firm. Given that this metric is commonly implemented differently across companies, often citing the lack of a US Generally Accepted Accounting Principles (GAAP) definition, this study has used the ROIC as calculated by Thomson Reuters for consistency (Reuters 2016; SEC 2021).

In the case of ROIC, Lin et al found the weakest relationship of their study. With only a 10% impact of CSR on ROIC variation, and a staggering 12% impact of ROIC on CSR, it would appear that the ambient temperature in the mail room would have a more significant impact on the relationship of CSR to firm performance (2019, pp 12). Ergo, it was interesting that ROIC should demonstrate the same magnitude and significance as ROA, which is generally accepted as having a strong positive correlation to ESG. The ROIC metric is complicated in the tech sector, as semiconductor manufacturers tend to have higher capital intensity than their software-focused industry partners. In breaking with Lin et al, this study finds that ROIC has demonstrated one of the stronger FP/ESG relationships as an overall sector. This relationship is explored in Table 6 below.

[60] Return on Invested Capital (ROIC) = Net Operating Profit After Tax (NOPAT) / Invested Capital (IC)
Note: NOPAT is calculated as EBIT x (1 - tax rate)

Table 6: The Relationship Between Return on Invested Capital and Primary ESG Scores

	(1)	(2)	(3)	(4)	(5)
	Log (Return on Invested Capital)				
Log(ESG Score)	0.754***				
	(0.052)				
Log(ESG Controversy Score)		0.757***			
		(0.051)			
Log(Environmental Pillar)			0.875***		
			(0.067)		
Log(Social Pillar)				0.758***	
				(0.052)	
Log(Governance Pillar)					0.760***
					(0.051)
Firm Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	1794	1802	1447	1802	1807

Notes: Standard errors are clustered at the Firm Level. Statistical significance at the 10, 5, and 1 percent is displayed by *, **, and ***, respectively.

Akin to the dynamic between ROA and ESG, Table 6 demonstrates that the ROIC and ESG relationship is consistently significant with variations appearing between individual ESG Pillars. This finding supports good management theory, as ROIC is used to gauge potential growth based on managerial efficiency. In an industry such as tech

that is so heavily reliant on perpetual growth and innovation, the reinvestment of capital is an indication of both faith in the current trajectory of the firm, but also faith in the firm's ability to respond to externalities such as an ESG-related controversy or a competitor releasing a competing product.

ROIC also takes into consideration the amount of capital firms garner after accounting for debt equity. In an industry such as tech which tends to invest heavily in R&D, debt equity is high. Cowling et al (2021) found significant decline in external funding sources as a result of the global financial crisis, which particularly impacted high-tech innovative firms as smaller firms often require external funding to maintain their R&D.

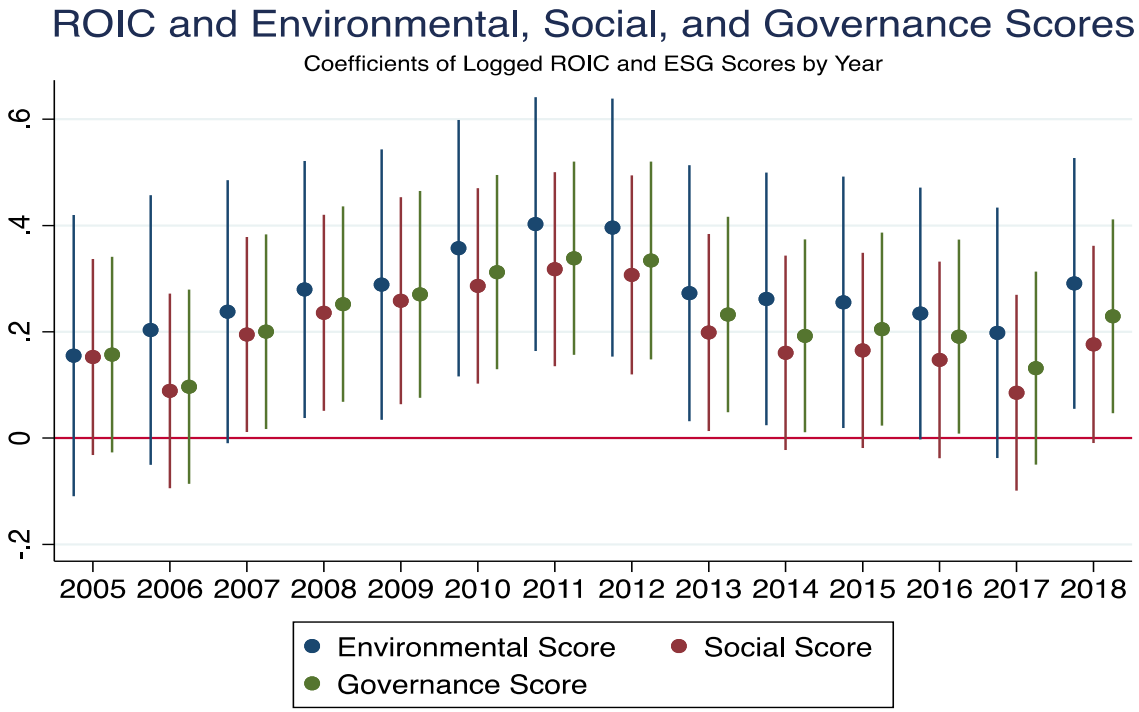


Figure 13: ROIC and Environmental, Social, and Governance Scores

Coefficients of Logged ROIC and ESG Scores by Year

As Figure 13 demonstrates, the significance of the coefficients over the allotted time period fluctuates, but retain the basic pattern of strong Environmental significance, moderate Governance significance, with the weakest relationship being the Social

score. From a managerial perspective, reinvesting capital in environmental initiatives is a surefire means of generating social good will. From a Governance standpoint, the decision to reinvest capital is made by upper management, explaining the marginally stronger correlation of the Governance Pillar over the Social Pillar. Capital investment has fluctuated over the past decade, with tech firms making a habit of buying smaller firms to diversify their products while simultaneously stockpiling cash or investing excess funds in stock buybacks. This shift in focus may explain the variations in significance in the years following the global financial crisis, when firms had to quickly adapt to a shifting economic horizon while attempting to plan for any future shocks.

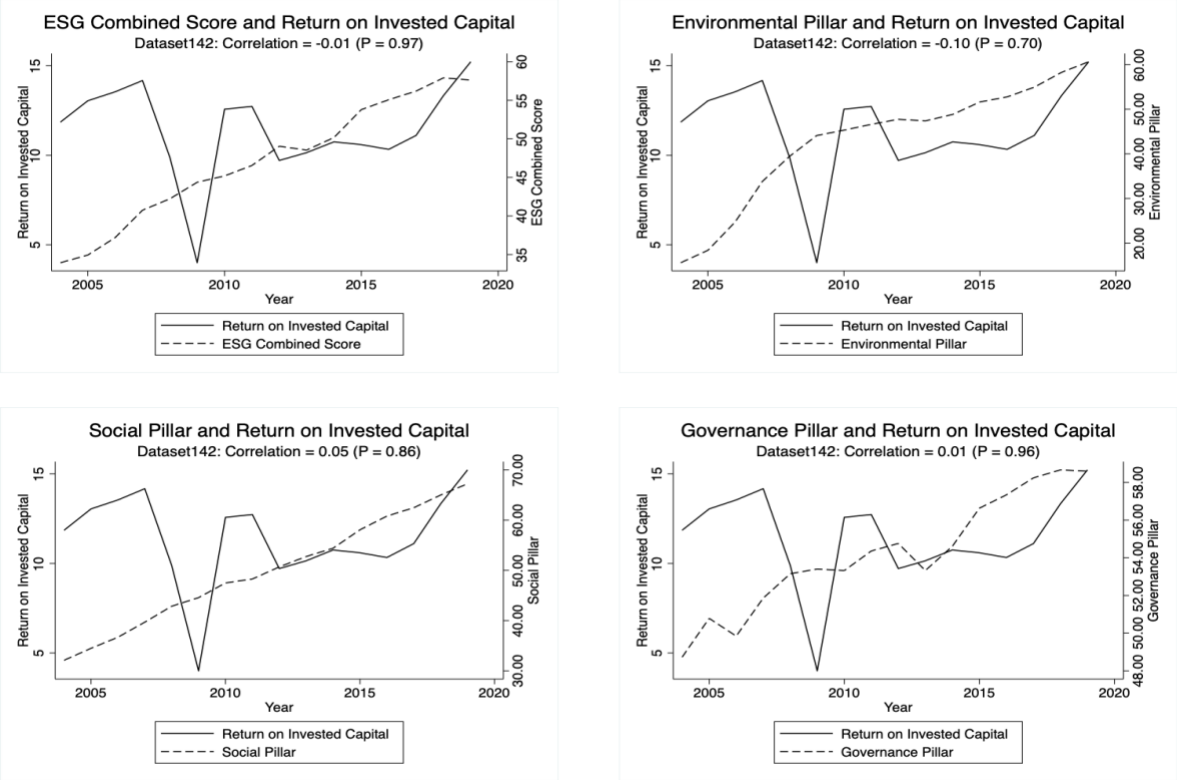


Figure 14: ROIC and ESG Score Correlations

Akin to previous metrics, very little correlation appears when ESG metrics are graphed alongside ROIC as in Figure 14. In fact, virtually no correlation is evident between the aggressive fluctuations of ROIC and any of the ESG metrics, other than the fact that both trend toward positive growth.

3.4.3 Discussion

Similar patterns emerge when testing both ROA and ROIC alongside ESG metrics. First, when the Positive variables were tested alongside the individual ESG Pillars, it revealed a trend wherein the Environmental Pillar (0.815*** for ROA and 0.875*** for ROIC) had a stronger correlation than either Social (0.730*** for ROA and 0.758*** for ROIC) or Governance (0.733*** for ROA and 0.760*** for ROIC). While these differences are not massive, they are important indicators of where managerial value lies. This managerial value is apparently focused primarily on environmental issues, which makes sense following the previous discussions of growing consumer, governmental, and INGO focus on environmental issues over the last several decades. This split furthers the argument that, in the context of the tech sector, Social and Governance issues are perceived by stakeholders as having significant overlap. When it comes to topics that have been growing in public attention such as AI ethics or consumer privacy / protections, one could argue that it falls into both the Social and Governance spheres.

In studies, the Environmental Pillar is often separated from Social/Governance as it is significantly easier to measure and track, and as environmental concerns have dominated global efforts for decades. Within this context, variations between Environmental and Social/Governance Pillars are to be expected. Environmental awareness has been demonstrated as having a strong positive association with overall profitability, with one particular result of this being the international rise of relevant regulations and recommendations from organizations ranging from governments to the OECD, UN, and MSCI (Brogi and Lagasio 2018). As the Environmental Pillar

demonstrates a stronger relationship in this context, it is likely that MNCs benefit from reacting quickly to timely environmental issues raised via statements and commitments to actions, such as promising to reduce carbon emissions. In a global discussion where climate change has become a household term, there are constant updates on environmental challenges. However, they are multifaceted and constantly evolving, and sustained pressure and focus on specific firms for specific issues are difficult for NGOs and grassroots organizations to maintain.

The similarities between ROA and ROIC pose an interesting phenomenon. Both assets and invested capital are likely to be focused on pro-environmental initiatives, given the aforementioned social pressure. It is likely that asset and capital management are intrinsically connected to governance and social interests, especially as assets in the largest firms shift toward intangibles and capital investment is complicated by leverage, debt, and share buybacks. As previously stated, the nature of ROA and ROIC as long-term management strategies likely influences the positive relationship as ESG returns may take a while to fully flourish.

3.5 Mixed

ROE measures a firm's ability to generate profit building off shareholder equity, while ROS measures operational efficiency through the ability to maximize income off consumer purchases. Both metrics are reliant on managerial and organizational efficiency to produce returns that supersede costs, both obvious and hidden, meaning that management must be conscious of the impacts of its actions on the relevant stakeholders, be they shareholders or consumers. Diminishing shareholder equity may result in loss of confidence or managerial position, while reduced ROS suggests

diminishing efficiency and clogging up of the GVC system. However, both are relatively short-term metrics that are heavily influenced by external inputs in the form of investors and consumers, meaning that there is less immediate control from a management standpoint than with ROA and ROIC.

As Julian and Ofori-Dankwa (2013) argued, institutional structures of developing versus developed economies impact the relationship between CSR and firm performance, the latter for which the authors used ROE, ROS, and Net Profitability. In their argument for the Institutional Difference Hypothesis, they found a negative correlation between CSR and firm performance, arguing that first and foremost, financial availability varying between institutions leads to different CSR investment outcomes. In keeping with their findings, this study also found that the relationship between ROE / ROS and CSR is not definitely positive, but rather produces mixed results that could be argued as positive (aggregate testing) or negative (testing across time). As firms in developing economies are less likely to have easy access to capital or to experience governmental pressure to invest in CSR initiatives, they are less able to act on responsibility-minded projects. In the case of larger firms, increased access to capital also allows for increased opportunities to utilize bribery as a means of evading compliance measures, a primary demonstration of a governance controversy. With this in mind, it must be pointed out that the macro approach of this study loses nuance between institutional structures, and the ROE / ROS and ESG correlation is likely to be heavily influenced by firms in developed economies in its aggregate positivity.

Juxtaposed to the Positive, the relationship with the Environmental Pillar is more complex. While the overall significance is the highest of the three pillars, in line with the Higher Significance findings, the *coefficients* are lower when plotted over time. This may suggest that the while the relationship is significant between ROE/ROS and the Environmental Pillar, it is most noticeable in a negative light when environmental

issues are being stacked against a firm.

The next section will be an analysis of ROE, then ROS, before a discussion of the implications of their joint relationship. Both metrics offer mixed findings between being tested as an aggregate regression versus being plotted over time, hence the variety of studies that find mixed results.

3.5.1 Return on Equity

Return on Equity (ROE)[61] first emerged as a firm performance metric in *Choosing Socially Responsible Stocks* by Milton Moskowitz (1972) in studying the food processing industry, only to be followed by Edward Bowman's study of minicomputers (1978) using the same methodology. Bragdon and Marlin (1972) used both ROE and earnings per share to test firm profitability, arguing that traditional economic perspectives didn't serve the dynamic relationship of firm performance and ESG cost/benefits (De Lucia, Pazienza, and Bartlett 2020; Buallay 2019).

Lin et al (2019, pp 12) used ROE found that a 20% variation in ROE can be explained by CSR with a converse relationship of only 18% impact. As Table 7 below demonstrates, there exists a significant relationship between ROE and ESG metrics, but this relationship is significantly weaker than that of ROA or ROIC with ESG metrics. The significance may be due to the usage of ROE has an investor-centric financial performance tool, and the strong degree of investor faith in the tech sector even after traditional investing metrics were essentially inverted during the 2000 Dot Com Bubble and subsequent crash, wherein firm values were assumed from intangible

[61] ROE = Net Income / Average Shareholders' Equity, where Shareholders' Equity = Assets - Liabilities

growth and consumer access rather than sales or traditional metrics. However, the lower significance in comparison to previous FP variables is likely due to the impact of debt on the calculation of ROE, as major players in the tech sector (Apple, Microsoft, and Google to name a few) have been hoarding cash and avoiding debt in an effort to increase flexibility, to such an extent that the S&P500 average for total debt/equity is 157.51% compared to the tech sector's mere 17.68% as of 2021 (Richardson 2015; Reuters 2021b).

Table 7: The Relationship Between Return on Equity and Primary ESG Scores

	(1)	(2)	(3)	(4)	(5)
	Log (Return on Equity)				
Log(ESG Score)	0.278***				
	(0.052)				
Log(ESG Controversy Score)		0.267***			
		(0.052)			
Log(Environmental Pillar)			0.281***		
			(0.065)		
Log(Social Pillar)				0.268***	
				(0.052)	
Log(Governance Pillar)					0.271***
					(0.052)
Firm Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	1784	1793	1446	1793	1797

Notes: Standard errors are clustered at the Firm Level. Statistical significance at the 10, 5, and 1 percent is displayed by *, **, and ***, respectively.

As Table 7 demonstrates, there is a marginally higher significance between the

Environmental Pillar (0.281***) and ROE as compared to the Social (0.268***) or Governance Pillars (0.271***). As mentioned previously, the Environmental Pillar is the lowest when plotted by year, as demonstrated in Figure 15, suggesting that this relationship is most impactful when negative.

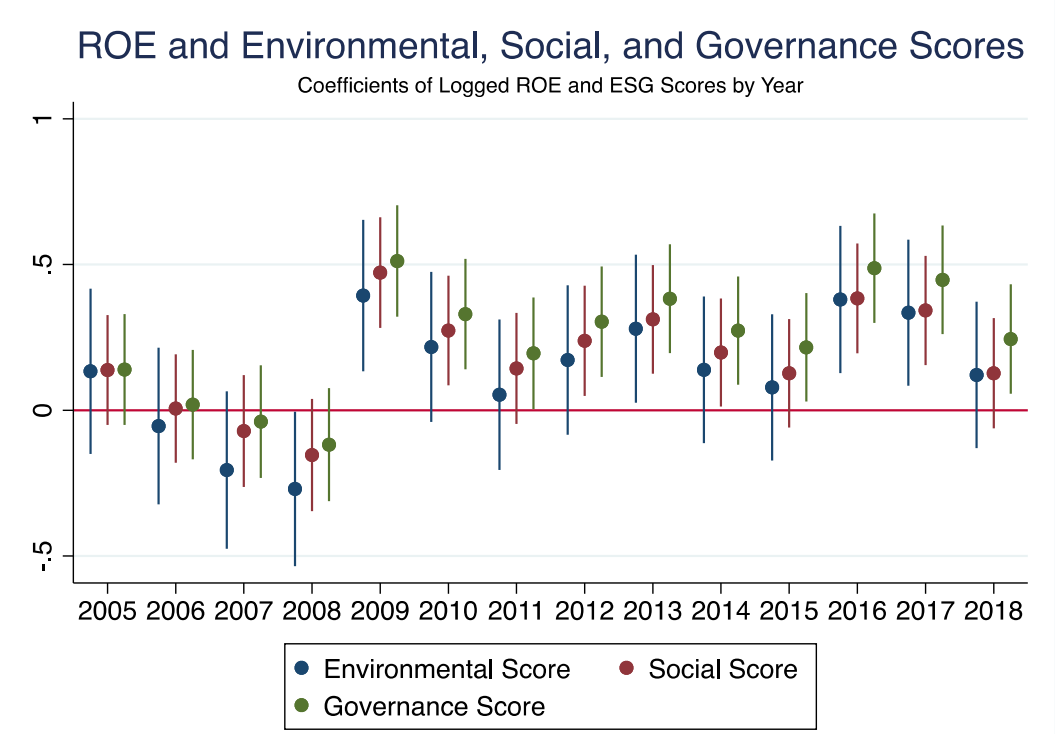


Figure 15: ROE and Environmental, Social, and Governance Scores

Coefficients of Logged ROE and ESG Scores by Year

The coefficients demonstrated in Figure 15 for ROE vary by year, with distinct jumps and drops. In relation to firm equity, ESG was negative associated until 2009, the middle of the global financial crisis, when it suddenly spiked in significance. This recovery period is marked by interesting, dramatic shifts in the coefficients of firm performance and ESG pillars. ROE, as a metric focused on the efficiency of profit generation, would have been impacted by this period as several tech firms skyrocketed in the global playing field to break records of firm size, such as Apple

officially becoming the first trillion dollar company and Alphabet (Google) not far behind (Selyukh 2018; Bond 2020; Smith 1988).

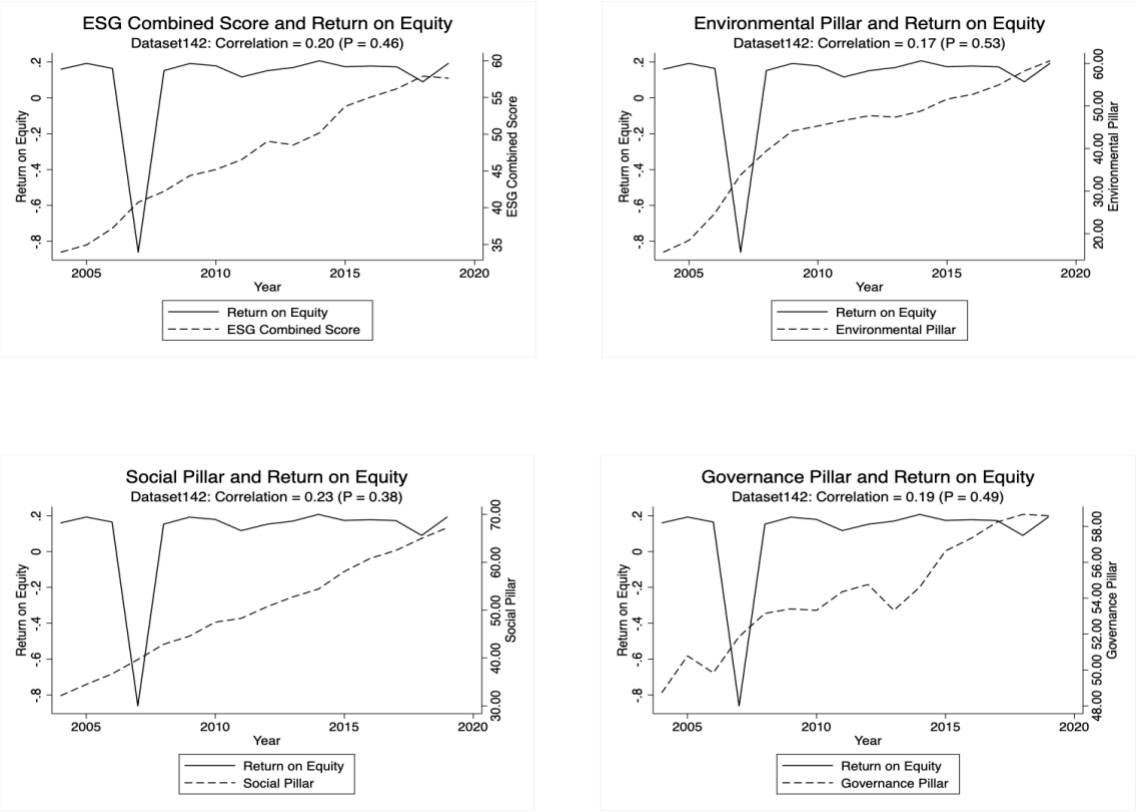


Figure 16: ROE and ESG Score Correlations

As Figure 16 demonstrates, the massive drop in ROE during the 2007 GFC did little to openly impact any of the ESG metrics. Rather, they continued to grow steadily in spite of this sharp decline and sudden recovery, with the Environmental Pillar and Governance Pillar both rising at a slightly sharper rate during the same ROE drop.

3.5.2 Return on Sales

Return on Sales (ROS)[62] is an indication of how effectively a firm generates profits on products, as a financial ratio indicating both profitability and efficacy of management. As managers outsource or bring manufacturing in-house, actualize returns on R&D investments in the form of products, or release a catalytic innovation, ROS will fluctuate.

Ruf et al (2001) found a significant positive correlation between growth in CSP and sales growth for both the current and subsequent years. Conventional CSR arguments dating back to the 1970s posited that any benefits to ESG investments would take years to realize and risk being confounded by externalities, so Ruf's findings challenged this notion by finding both short *and* long term benefits (Davis 1960).

Table 8: The Relationship Between Return on Sales and Primary ESG Scores

	(1)	(2)	(3)	(4)	(5)
	Log (Return on Sales)				
Log(ESG Score)	0.226**				
	(0.088)				
Log(ESG Controversy Score)		0.218**			
		(0.088)			
Log(Environmental Pillar)			0.261**		
			(0.118)		
Log(Social Pillar)				0.217**	
				(0.088)	
Log(Governance Pillar)					0.217**
					(0.088)
Firm Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	1369	1374	1077	1374	1374

[62] ROS = Operating Profit / Net Sales

Notes: Standard errors are clustered at the Firm Level. Statistical significance at the 10, 5, and 1 percent is displayed by *, **, and ***, respectively.

Considering the rate of innovation in the tech sector and the years spent developing new products, it is possible that the fluctuations in major product releases impacts the ESG relationship. In other words, a product that takes two years to release may have been designed with the focused social values of two years ago, such as environmental impact, but a major humanitarian crisis can skew public opinion toward favoring social focuses. As with Shiller's argument of narrative economics, the current power of media and public forums heavily impacts economic returns and fluctuations, resulting in significant impact when public opinion suddenly shifts (2017).

Essentially the same relationship is present with ROS as with ROE in terms of ESG significance. In like with all other FP variables, the Environmental Pillar was the most significant (0.261**), while Social (0.217**) and Governance (0.217**) trailed slightly behind. However, when plotted by coefficient by year, the same primarily negative pattern emerges.

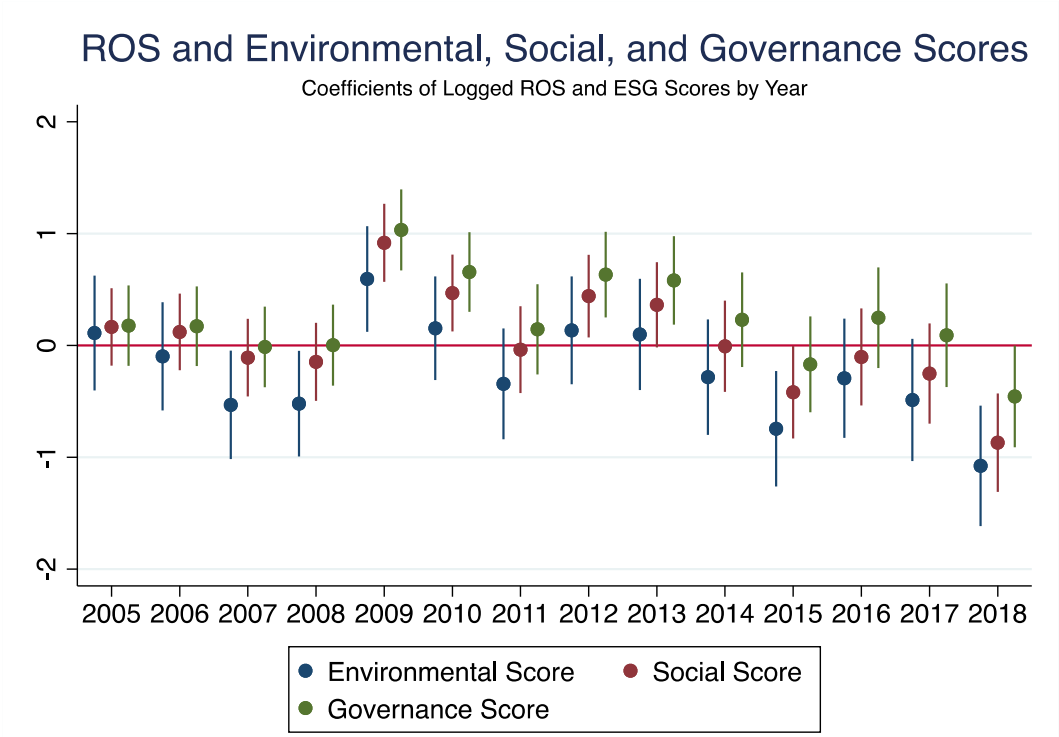


Figure 17: ROS and Environmental, Social, and Governance Scores

Coefficients of Logged ROS and ESG Scores by Year

Figure 17 demonstrates this consistency, with any negative interaction with the Environmental Pillar being the most impactful. This is in juxtaposition to the findings of a positive relationship in aggregate testing, lending support to the argument of a mixed, confused relationship.

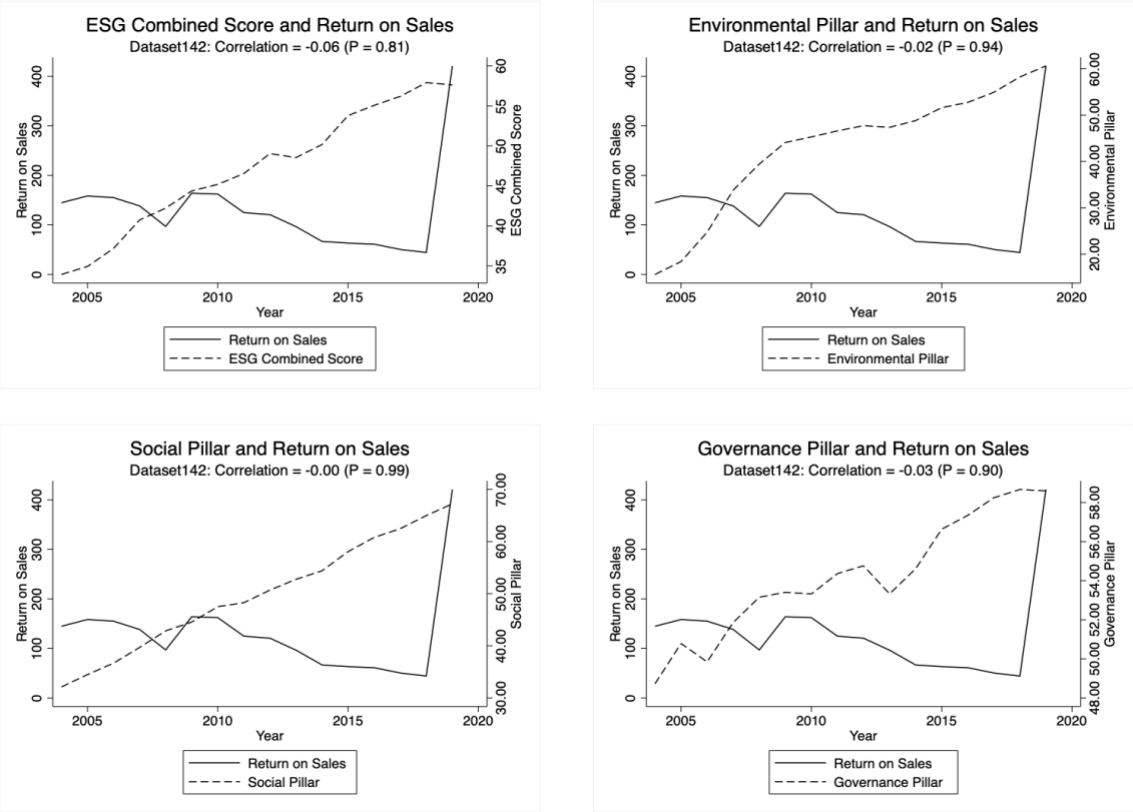


Figure 18

The above Figure 18 does not demonstrate a relationship between ROS and ESG metrics but does demonstrate a volatile ROS. As sales are dramatically impacted by global and national economic health, economic uncertainty, such as that generated by the GFC, can have a lasting impact as a new generation of consumers approach large tech investments with degree of trepidation. There is the obvious necessity for updated hardware and software to compete in a global market that has kept the tech sector rising at staggering rates, pitted against unfavorable trends such as stagnant minimum wages in the US & UK (discouraging what may be a larger consumer base if they had more disposable income), rising concerns regarding e-waste, and consumer pushback over products designed with intentionally shorter lifespans.

3.5.3 DISCUSSION

ROE and ROS both reveal conflicting results, hence their designation as the 'Mixed' category. While their aggregate relationships are positive, they demonstrate no sustained positive relationship with any demonstrable impactful magnitude over time. This suggests that while ROE and ROS can be impactful factors with ESG, the relationship is volatile and inconsistent, making it complex for academics to throw their support fully behind.

Following the trend set in Positive grouping, the Environmental Pillar (0.281*** for ROE and 0.261** for ROS) demonstrated the strongest relationship with Social (0.268*** for ROE and 0.217** for ROS) and Governance (0.271*** for ROE and 0.217** for ROS) Pillars trailing behind in the Mixed grouping. However, the strength of this relationship does not hold over time and is conversely impactful. This means that the environmental pillar is negatively related to firm performance over time, which feeds into the confounded relationship between ESG and firm performance metrics.

One major factor that may be impacting the relationship between ROE and ROS with ESG metrics is the length of time. ROE and ROS are arguably most significant as short-term metrics as they tend to reflect the quick responses that stakeholders may have to major events, positive or negative (Cremers, Pareek, and Sautner 2021; Yan and Zhang 2009). As such, as metrics they are subject to higher fluctuations from external pressures. ESG metrics are also argued as most effective when taken from a long-term approach, as it can take several years for the impacts of a CSR initiative to manifest. These manifestations can include lower risks to allow for easier access to capital when needed, (Porter and Linde 1995).

3.6 Research and Development

Within the tech sector, Research and Development (R&D) is a critical factor in contextualizing firm performance. As Crofts and van Rijswijk (2020) sum it up, "these companies are at the forefront of technological innovation and may be caught up with the factual question of what *can* be done rather than the normative questions of whether it *should* be done" (2020: 76). As R&D isn't a measure of *return*, its relationship to ESG is expected to express itself differently as it is a means to a long-term financial gain.

This study takes into consideration the suggestions of previous authors that highlight the importance of considering R&D in firm performance (Padgett and Galan 2009). Padgett and Galan build off resource-based view theory (RBV), which focuses on the crucial role of resources in firm performance, especially concerning intangible resources. The impact of R&D on CSR metrics has been supported in previous research (McWilliams and Siegel 2000; Hull and Rothenberg 2008), building off the argument that innovation must be considered when examining CSR and firm performance, a factor which can be obfuscated when using traditional accounting or market metrics.

As Xu and Liu (2021) argue, intellectual capital and intellectual property is the driver behind firm competitiveness and sustainability. This is especially true in the tech sector as firms tend to hold their Intellectual Property (IP) in either primary markets, such as the US, or in tax efficient markets, such as Ireland. Most western tech firms have stepped back from parts manufacturing themselves and are outsourcing to third party manufacturers, predominantly in China, as is the case of Apple divesting itself of Intel's processing chips in favor of in-house designs to be manufactured in Asia. This allows firms to operate off their developing intellectual property, increasing the significance of R&D to firm competitiveness and overall financial performance while shifting the source of profits to design, branding, and other increasingly intangible assets (Danko et al. 2019). Xu and Liu found significant results to support previous

literature in favor of a positive correlation between intellectual capital and several firm performance metrics, including ROA and ROE, while R&D has been found to be significantly correlated with CSR (Bouquet and Deutsch 2008; Prior, Surroca, and Tribó 2008). In conjunction, Yu (2013) found an inverted U relationship in technological diversity and firm performance wherein the positive impacts were significantly increased with stronger absorptive capacity, suggesting the development of intellectual capital is as important as the firm's ability to assimilate it.

The tech sector needs constant innovation in order to remain relevant or risk obsoletion, which is complicated by the major ESG controversies impacting tech sector efforts (everything from illicit conflict mineral mining through unsuitable labor conditions and up to aggressive monopolizing tactics). The environmental impact of everything from tantalum mining in the Democratic Republic of Congo through chemical leeching in landfills due to improper electronics disposal in Sweden have left the tech sector little choice but to acknowledge the limited lifespan of its products and attempt to rectify some shortcomings, such as Apple's new recycling programs that focus on recapturing viable conflict minerals to both keep them from landfills and save Apple the need to reproduce an existing part (Julander et al. 2014; PhysOrg 2007). As governments, third party NGOs, and consumers call for increased transparency, firms can no longer risk playing dumb when it comes to potential children in their work forces in factories far removed from Western view. The expectation for non-exploitative and even socially transformative behavior has expanded beyond Western borders, as demonstrated in Bartlett and Beamish's MNC typographies ranging from exploitative to transformational (2018). With a surge in legal push-back from governments, spearheaded by the EU's focus on tax deals and incentives that keep tech firms paying next to nothing for their intellectual capital, firms are increasingly being brought to light on behavior that is no longer considered acceptable practice.

Table 9: The Relationship Between Research and Development and Primary ESG Scores

	(1)	(2)	(3)	(4)	(5)
	Log (Research and Development)				
Log(ESG Score)	0.251***				
	(0.037)				
Log(ESG Controversy Score)		0.246***			
		(0.037)			
Log(Environmental Pillar)			0.152***		
			(0.037)		
Log(Social Pillar)				0.253***	
				(0.038)	
Log(Governance Pillar)					0.247***
					(0.037)
Firm Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	1448	1457	1255	1457	1462

Notes: Standard errors are clustered at the Firm Level. Statistical significance at the 10, 5, and 1 percent is displayed by *, **, and ***, respectively.

Table 9 shows that R&D is consistent with ROE and ROS in terms of significance alongside ESG metrics, for the most part in aggregate testing. However, the surprisingly low significance of the Environmental Pillar is in line with the notoriously environmentally unfriendly nature of the tech sector. Actual environmental investment in R&D would manifest as increases in recycled material usage, investment in cleaner manufacturing practices, stepping up the ability to cleanly recycle outdated tech, or even taking responsibility for the weaknesses in AI (Buolamwini and Gebru 2018; Simonite 2020).

Given the rising demands for CSR implementation (Vartiak 2016; McPherson 2018;

Chong 2017) coupled with a rising global focus on environmental issues in response to climate change[63] (Lampert et al. 2019, pp. 4), the lower significance of the Environmental Pillar as demonstrated in Table 9 is particularly interesting[64]. By the scales used thus far in this research, this Environmental Pillar score is already the lowest at 0.152***, as well as when compared to the Social (0.253***) or Governance (0.247***) Pillars. This may indicate that environmental initiatives take significantly longer to implement from an R&D standpoint, considering the research, governmental approvals, and retrofitting of facilities necessary to implement environmental changes. It is also further complicated by the fact that many of the biggest tech firms today are outsourcing their manufacturing, suggesting that further studies would benefit from closely examining this relationship of firms individually throughout the GVC.

[63] The authors found 77% of respondents in 20 countries cited environmental concerns in 2019 up from 71% in 2014.

[64] Firms have been called upon to invest in greener manufacturing practices, source materials from environmentally conscious suppliers, and reassess product lifespans to ensure that items can be recycled, repaired, or repurposed. This process, of course, takes time to research and implement.

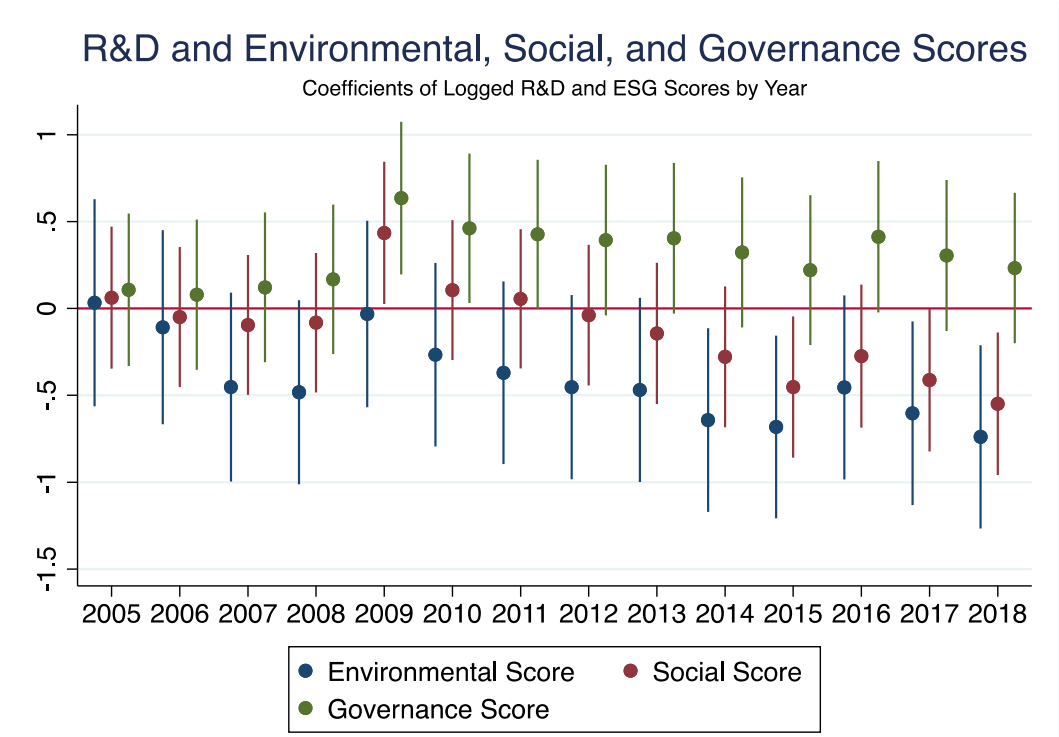


Figure 19: R&D and Environmental, Social, and Governance Scores

Coefficients of Logged R&D and ESG Scores by Year

As Figure 19 demonstrates, the relationship between R&D and ESG metrics are less consistent than with the previous firm performance metrics. The environmental coefficient is consistently negative, the social coefficients fluctuate above and below the zero line, and the governance coefficients are typically positive. Due to the complexity of R&D in the tech sector, this points to three separate arguments. First, environmental initiatives cannot be developed quickly or significantly enough to positively impact R&D, as the tech sector is still a major pollutant (manufacturing and e-waste) and consumer of electricity and fuel sources (servers and global shipping). Second, the social impacts of developing technologies cannot be truly fathomed until the technology is released on the general population, such as the detrimental aspects of social media which weren't recognized until fairly recently. Since it is difficult to tackle a problem before you're aware of it, firms have to react to damaging exposés or calls to arms from NGOs that suddenly ask them to make significant changes to

socially damaging algorithms. Third, the governance score is likely to remain positively correlated with R&D as the nature of the tech sector requires constant innovation, so investing in new products is likely to be well received. Even the matter of tax avoidance can play in a firm's favor, if shareholders are happy enough with their dividends to turn a blind eye to a bit of profit shifting.

R&D projects have had both positive and negative outcomes. One such positive would be Apple's recycling robot, Daisy, which is both a highly effective means of breaking down recycled electronics and a means of generating social capital. However, when a cute amorphized robot is pitted against international human rights disputes, there's only so much that a cute PR campaign can do. This is especially true when the call is coming from inside the house, as Google's pulling of Project Maven proved. When engineers learned that they were working on a Department of Defense project to improve AI's recognition ability for military applications, there was a mass resistance from within the firm. Microsoft experienced a similar internal revolt, which led to it ending its $74 million investment in AnyVision, a facial recognition firm that supplied the technology used by the Israeli government in its suppression of Palestinians (Meyerson-Knox 2020). Clearly, environmental initiatives are time consuming to invest in and follow through on but yield less internal resistance. Firms are being held to higher social and governance standards as increased transparency (be it voluntary from the firm or due to a scathing exposé) is coupled with employees demanding greater personal satisfaction from their jobs.

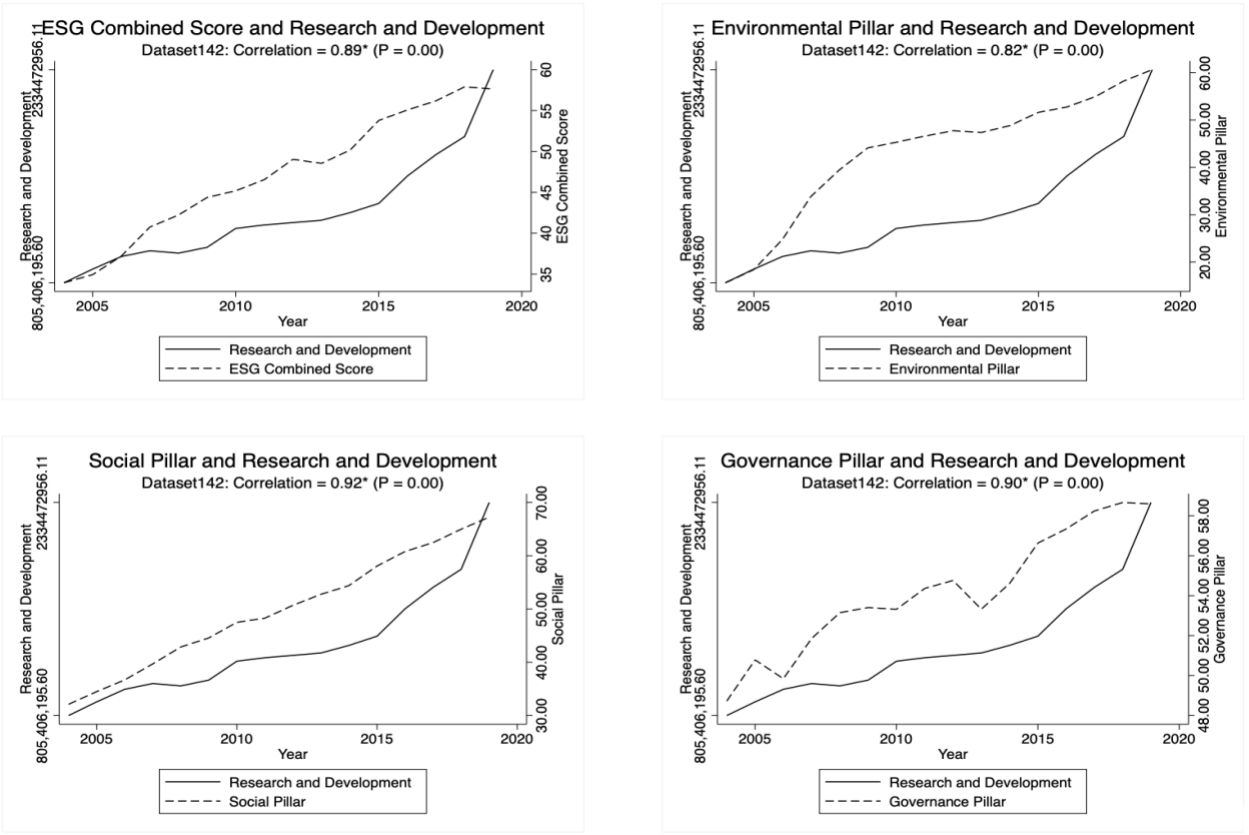


Figure 20: R&D and ESG Score Correlations

Figure 20 shows an interesting concurrent evolution in R&D. Of all the metrics, this is the closest trajectory with the least variation. However, this correlation does not denote causality. It is entirely possible that the growing focus on ESG issues and reporting has led to the steady growth of ESG scores, while the need for constant innovation has spurred the development of R&D.

3.7 Discussion and Conclusion

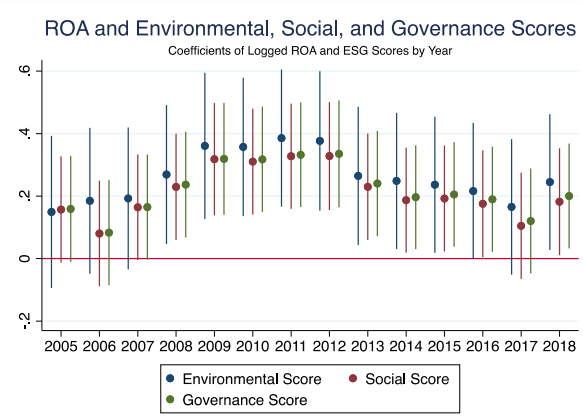
Given the evolving, globally expanding nature of the tech sector and the maturing regulations of ESG, a single metric to gauge firm performance in this context would be inherently insufficient. The unique insights offered by each CFP variable offer specific pictures of how ESG and CFP coexist and evolve, yet several interesting trends

have emerged. It is likely that as the tech sector decentralizes and expands, the relationship with traditional CFP metrics will become more obfuscated and complex.

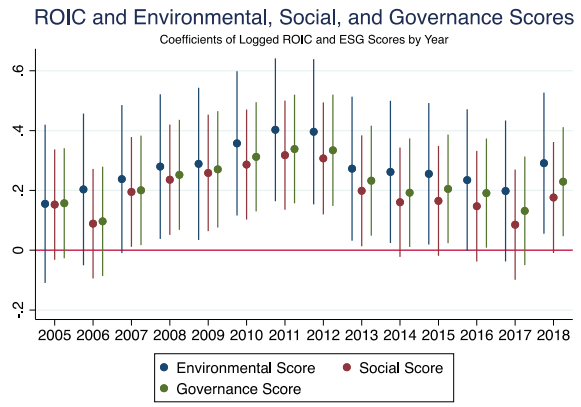
One interesting phenomenon that arose for the traditional firm performance metrics (ROA, ROIC, ROE, and ROS) was that the significance of the Environmental Pillar as the outlier amongst the three Pillars. As calls for environmental awareness due to climate change have risen, MNCs have had to step up their response. A common criticism of self-published CSR reports is the lack of concrete statistics and measurable goals, as often reports simply say that a firm plans to reduce its carbon footprint or go carbon neutral by a certain year with no explanation on how it plans to do so. These calls for greener supply chains and increased transparency come with a cost for MNCs, as internal and third-party audits often reveal ESG risks that may leave the firm vulnerable. This leads to the following patterns discussed, as the graphs are essentially divided between the positive relationship of strategic, internal management valuation of ESG issues (ROA and ROIC) and the mixed relationship of external, less informed, more volatile perceptions of stakeholders (ROE and ROS).

Two distinct patterns emerge when the graphs of coefficients are taken side by side. The first pattern, shown in Graphs 14 and 16 below, shows a gentle bell-shaped curve wherein the significance of ESG coefficients rose in the years following the GFC. The Positive FPs, ROA and ROIC, are both consistently positive bell shapes with the least significance noted in 2006, between the dot com bubble and the GFC, and the highest points of significance in the years immediately following the GFC while the world was in recovery. For both these firm performance metrics, the Environmental Score has consistently demonstrated the strongest significance, drastically so in 2006, 2011, and 2018. Both ROA and ROIC have been highlighted as management-efficiency metrics, which explains their similar outcomes. As both are the result of management's investment in ESG initiatives, the results of Graphs 14 and 16 are really showing the emphasis that management places on ESG initiatives during this time frame. Following

the GFC, rising focus on ESG initiatives, with environmental efforts in the lead, demonstrate that MNC management was particularly sensitive to social perception and strategically invested in efforts to generate social capital.

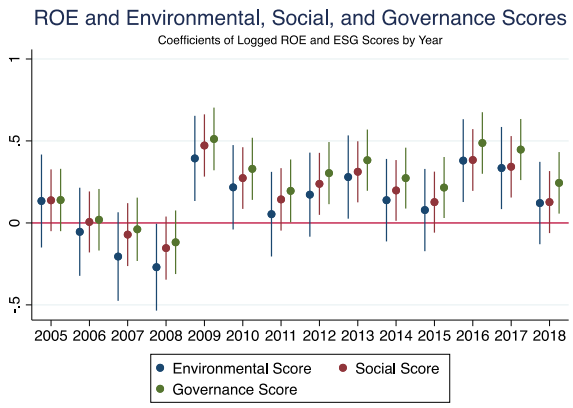


Graph 14

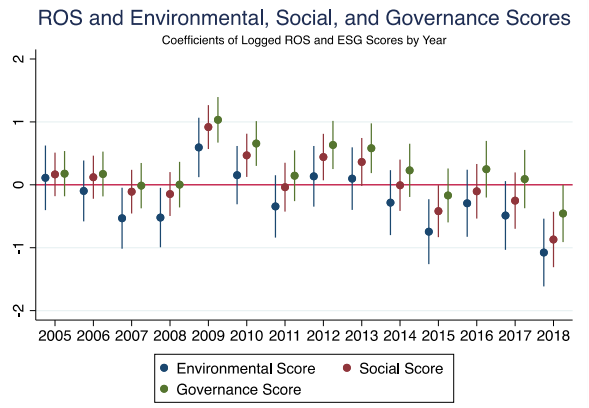


Graph 16

The second pattern that emerges is the ROE and ROS regressions in the Mixed grouping, with dips during the GFC but a sharp, dramatic spike in 2009 that tapers off gradually, with smaller peaks and valleys, in the following years. ROE / ROS differ from ROA / ROIC as ROE is a focus on investor benefits and ROS is consumer driven, juxtaposing the internal management nature of ROA and ROIC. This means that ROE and ROS are both strongly impacted by stakeholders outside of internal management. The results of Graphs 18 and 20, therefore, are less strategic and informed that those of Graphs 14 and 16, which accounts for the more erratic pattern that emerges as opposed to the smooth curve above.



Graph 18



Graph 20

Graphs 18 and 20 likely dip in 2007 and 2008 as a result of the GFC, with the spike in 2009 as a result of the investments into social capital that MNCs focused on in the rising significance of 2007 and 2008 in Graphs 14 and 16. The subsequent variations could be impacted by social movements and the growing global social action against climate change and gender/racial inequality, international pressure on massive MNCs to meet mandates such as those shaped by the Paris Agreement (effective as of November 2016), or the results of public outrage such as when it was exposed that Apple updates were causing older phones to slow down when newer phones were about to be released.

However, the conflicting relationship between the aggregate ESG / FP testing found in the mixed grouping complicates the overall analysis. One could argue that it invalidates the entire assessment, while another could argue that the aggregate testing is more or less meaningful than the testing over time. If taken as a snapshot in a particular moment, these findings can be meaningful or muddled. As these results conflict with the aggregate testing results, it is difficult to argue definitively how the relationship plays out. It is likely that if tested on a micro level, in the case of a single firm or smaller dataset, the relationship between ESG and the Mixed variables would play out much differently (Platonova et al. 2016).

The complexity of the relationship between FP and ESG is also in part be due to the rapidly growing platformization of the tech sector, wherein firms are diversifying offerings to include subscription services, digital hosting services, analytics and cloud computing (Atal 2020; Gillespie 2010). While this does call for increased demand for servers, which eat up a dramatic amount of electricity, large firms are seeking to offset this negative in their environmental balance sheets by purchasing carbon offsets, mediated by the fact that data centers have proven surprisingly effective at scaling up data processing without increasing electric consumption by too significant a margin (van Berkel, Hernandez, and Yu 2020). While firms had traditionally purchased energy from third parties, this new dynamic offers the additional bonus of improved environmental scoring for purchasing renewable energy while not reducing the amount of energy required. Currently, the tech sector is the largest industry purchaser of Power Purchasing Agreements (PPA)[65] (Conca 2021) . This marked a distinct shift among the largest tech firms toward increased intangible assets & digital products, outsourcing manufacturing to third party firms primarily in Asia while offering the opportunity to house their intellectual capital in tax efficient jurisdictions.

The exception to this smooth growth of ESG is the Governance Pillar, which experienced significantly more pitfalls and drastic rates of growth than the other metrics. The fallout of the 1999/2000 Dot Com Bubble took several years to realize, as concerns around monopolies and anti-competition practices steadily grew globally. The EU has taken a rather strong stance on tech firm governance in the form of tax evasion, as MNCs have proven themselves prone to base erosion and profit shifting

[65] A Power Purchasing Agreement (PPA) is a long-term contract between a consumer (in this instance, an MNC) and a supplier of renewable energy, wherein the firm purchases energy directly from the supplier. This gives the supplier guaranteed income to maintain and improve upon its renewable energy plants, while the MNC often received tax benefits and an improved environmental score. On several PPA websites, the incentives listed include some variation on social capital, such as image promotion or increased public approval (such as RWE or Octopus Energy).

(BEPS) practices and tax avoidance (Bennedsen and Stabile 2021). This is best evidenced by the 2016 tax avoidance case brought against Apple and Ireland, wherein Apple was accused of receiving illegal tax benefits from Ireland. In the largest corporate tax fine in history, the EU Commission ordered Apple repay € 13 billion in unpaid Irish taxes, which the Irish Dáil Éirann rejected and subsequently formally appealed. The decision was officially repealed in July of 2020, dealing a significant blow to the EU's ability to challenge tax haven benefits while protecting Ireland's tax sovereignty, which is protected within the EU. The current US/UK/EU discussions regarding a global 15% tax rate for MNCs, which would significantly impact massive tech firms, is facing resistance from several countries including Ireland who are concerned for their local economies should it no longer be particularly financially beneficial for MNCs to headquarter there. The Irish government's 12.5% corporate tax rate has been attractive to many large US tech firms as they'd face a 21% tax rate on home soil. This global tax rate would supersede recent plans by the EU and UK to institute a digital tax, which would impact most tech MNCs as they've expanded beyond design and manufacturing into hosting software subscriptions and media (for example, Apple has expanded into media with AppleTV+ and Microsoft has long had Microsoft Office products as subscription services). These examples demonstrate the volatility of governance in the tech sector, likely heavily impacted by the culture of destructive innovation and 'move fast and break things' that defined the early days of tech firm growth, pitted against the reality of massive MNCs trying to operate in markets all over the world while carefully choosing which government projects to take on and how to navigate relationships with authoritarian regimes.

That's not to say that governance is dominating the ESG conversation. Environmental concerns had been at the fore of international conversations leading up to 2010, with a slew of international conventions, regulations, and guidance on environmental impact growing since the 1960s, as discussed in the previous chapter. However, in the case of the Positive metrics, the significance shifts. As previous graphs demonstrate,

the environmental, social, and governance pillars have all grown at different rates with significantly varying surges and plateaus. Environmental scores were in a state of dramatic growth leading up to 2010 before easing on the growth rate, whereas social scores have steadily been rising. As social issues have been so prevalent in the tech sector since it burst into general consumption in the 1990s, in the form of data privacy, protection from government surveillance, and the working conditions of laborers throughout the supply chain, the significant impact of the social pillar upon a commonly used metric for firm performance is logical.

As an industry that has grown exponentially over the last three decades to include five out of the ten world's largest firms (Ross 2021), the tech sector has faced constant challenges. As international organizations push the merits of a circular economy and remanufacturing, tech firms have had to reassess beyond the innovations to create new products, both digital and physical, but also the entire product lifespan and impact from cradle to grave (Gu et al. 2015; Yamaguchi and Bouyssou 2020). This forced self-reckoning has pushed technological advancements, such as incredible advances in assistive technologies starting with Microsoft's 1988 joint venture with the TRACE Center[66] to incorporate auditory signals for keyboard and mouse usage for people who are deaf or hard of hearing (Schroeder 2000). This led to a slew of adaptive technologies intent on creating accessibility for a wide variety of physical challenges, including visual, auditory, and dexterity, eventually leading to the establishment of the annual Microsoft Ability Summit launched in 2010 (Lay-Flurrie 2020). Since that innovative collaboration in 1988, Microsoft has made accessibility a core part of its ESG identity. The benefits to developing assistive technologies are not limited to use by people who need them, such as voice recognition technology. While forms of voice recognition technology have existed commercially for decades, with Texas Instruments releasing a doll, 'Julie', that was programed to "think and talk" in

[66] The TRACE Center, out of the University of Wisconsin, is a research and development institute focusing on accessible technologies.

1987 (APNews 1987), it has also doubled as an assistive technology primarily for the visually impaired. This is to say that as technologies evolve, they are rarely single purpose.

The economic benefits of investing in R&D to develop environmentally or socially beneficial products can be, as Davis suggested in 1960s, difficult to fully separate out or reconcile on a balance sheet. The multipurpose, developmental opportunities of these technologies allow for adaptation and numerous forms of benefit, which can be lost as a single line item on a financial spreadsheet. It is important to take into consideration the intangible value and social capital gained when firms invest in intelligent, ground-breaking developments, which can easily be inspired by taking on a social or environmental cause, while being cautious to not subsume the Triple Bottom Line into a single 'ESG' gauge. In inspiring researchers and developers to explore values-oriented goals, firms can benefit from social good will, economic returns, and opportunities for future expansion.

In support of existing literature, this study finds both a positive and a mixed relationship between ESG ratings and firm performance. However, it deepens existing analyses by examining this relationship over time and taking into consideration the changing financial valuations and refinement of ESG metrics. Two distinct, positive patterns emerge, demonstrating that while ESG can be positive for firm performance, the manifestation of that relationship may change over time or due to external forces. Overall, the findings presented in this chapter support good management theory in finding that positive financial performance and positive ESG scoring are connected.

Chapter 4

Reporting and Resilience

4.1 INTRODUCTION

This chapter explores the relationship between firm performance and ESG through the lens of reporting and resilience to major shocks. The hypothesis tests the question, *is CSR reporting beneficial for controversy recovery and firm resilience?* This is investigating if the act of reporting and the linguistic accessibility of reports are beneficial to a firm's ability to recover from a shock, building upon the previous findings wherein a significant relationship is evident in some firm performance metrics (ROA and ROIC). However, as with Selcuk and Kiymaz (2017) and contrary to my initial expectations, findings suggest a largely nonexistent relationship between content analysis and any benefits of reporting. Interestingly, the mere act of reporting is significant and results in stronger ESG performance for firms with consistent CSR reporting. As this study focuses on the tech sector, it is possible that the culture within the sector and those passionate about it doesn't entirely lend itself to reading long-winded reports. Rather, in the digital age of blogs, tweets, and tiktoks, tech firms that wish to connect with their target consumer audience are better off limiting their communications to 270 characters rather than 100 pages of engaging infographics. This opens a whole new digital world for mass communication and reputation control.

The rising global demand for ethical firm behavior and transparency means that firms will, first and foremost, try to control how they are perceived in the event of a controversy. This means building a reputational foundation that can cushion the firm, essentially an investment in consumer sympathy in case of any negative publicity. Building this foundation over time means that firms are typically perceived as more authentic, which makes CSR reporting a more effective tool for firms in the long run

(Lin, Yang, and Liou 2009). While this may begin as superficial, Mintzberg's emergent strategy argument is that this pro-ESG posturing will steadily become institutionalized, resulting in actual structural and cultural changes within the firm (Mintzberg 1987; Waddock and Graves 1997, pg 13). For example, as C-Suite executives openly commit to accountability and transparency, racial and gender pay gaps significantly decreased (Castilla 2015). Benefits of a positive ESG reputation, and conversely the negative impacts of a poor reputation, can be both tangible[67] or intangible[68] (Doorley and Garcia 2015).

However, that is not to say that all findings have been consistent regarding the importance of CSR reporting itself. ESG disclosure itself does not appear to significantly impact firm performance, with only 26% of studies that focused on disclosure itself finding a positive correlation when compared to 53% of studies that found a positive correlation between ESG metrics and firm performance (Whelan et al. 2021). However, as Fatemi et al find, the value of ESG disclosure itself may be negligible in terms of financial performance but it plays a significant moderating effect on negative effects from controversies or negative externalities (2018). The argument goes that while positive reporting can lessen information asymmetry and encourage positive relations, insufficient or unconvincing disclosure can be seen as "…'cheap talk' or 'greenwashing'" (2018: 45).

Through the lens of political CSR, there is a partial shift away from nation-states and toward massive multinational corporations in working toward the eradication of public issues, with firms presented as more of a 'part of the solution' than a disconnected bystander. In arguing that firms are responsible for negative externalities that impact the public, such as environmental erosions, governments are

[67] Positive tangible impacts such as attracting better employees, increased profitability, free press.
[68] Positive intangible impacts such as positive emotional responses from customers, more sympathetic social responses in response to controversies.

given an opportunity to share the burden of responsibility for these issues and can redirect the onus onto private firms as MNCs are expected to either reactively or preemptively address these issues. As described in the literature review, Bartlett and Ghoshal's classifications of MNEs (exploitative, transactional, responsive, and transformative) define their relationships with the governments of countries they operate within, meaning that every country-business dynamic is different. While governments have been actively implementing legislation to hold MNCs to account, passing laws are a notoriously slow process. This necessitates alternative solutions in the quest for transparent reporting, such as stock market listing requirements or intergovernmental organization and NGO pressure, also referred to as 'soft law' such as OECD or UN Guidelines (Zerk 2006). Soft laws are published by large enough organizations that governments have been known to adopt adapted versions of the recommendations into actual, binding law. In this sense, it is wise of a firm to be conscious of the direction that legislation may be heading by monitoring regulatory publications and specific ESG issue focuses, such as a trend toward environmental protections or worker's rights. Firms should be aware of the potential for legislation and regulation as one persistent argument for CSR investment has been to get ahead of such governmental interferences, as few politicians are likely to waste their platform trying to control industries with positive social perceptions. The combination of voluntary standards organizations like GRI and ratings organizations like CSRHub, supported by industry-specific organizations like CleanTech, means that firms are receiving significant pressure from a range of specialized analysts who have little problem with calling firms out for poor ESG behaviors.

To make the most of these potential reputational benefits, firms will often choose to publicly emphasize environmental or social causes[69] like ESG signposts to validate the

[69] Environmental and social metrics are more convenient for firms to report on, as they are easier to quantify and require less major structural overhaul than governance initiatives would. For instance, increased recycling initiatives and instituting a basic maternity leave policy are easier to accommodate

firm as ethical. However, these leanings toward particular ESG issues can lead to distraction or obfuscation when ESG is presented as an overall score, as is demonstrated in Figure 24 below. This graph shows HP's overall ESG scores, in the heavy black line, as it relates to the individual scores of environmental, social, and governance pillars. In reading a report that simply said HP's ESG score is 80.11 out of 100 in 2018, the average person may be surprised to learn that this includes an environmental pillar score of merely 59.94 out of 100. Given HP's heavy communication regarding its recycling programs, the poor performance of the environmental pillar may be surprising. While HP presents itself as being environmentally conscious, the nature of its industry's manufacturing and digital carbon footprint means that it would be difficult for any tech firm to actually rate highly on environmental causes.

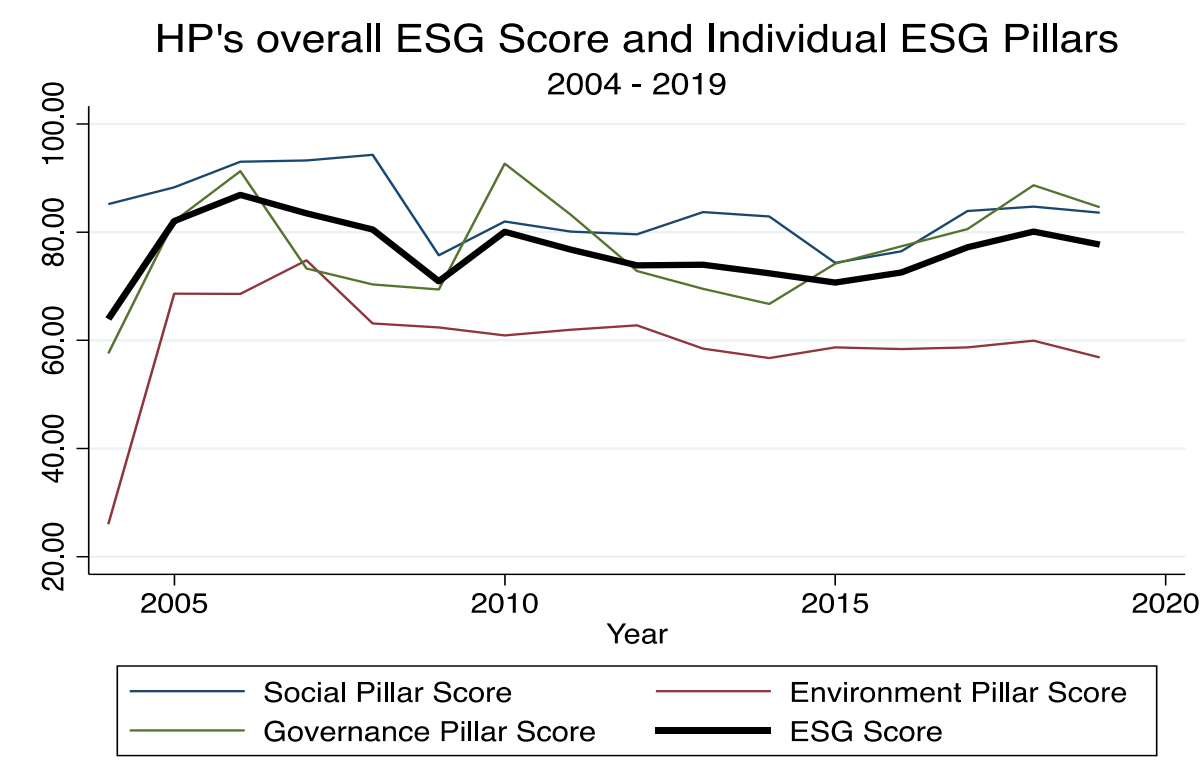


Figure 21: HP's Overall ESG Score and Individual ESG Pillars

than the multi-year, corporate culture overhaul that would be necessary to change an all-boy's-club mentality in the C-Suite into an inclusive, gender balanced space.

As key institutions[70] press toward accountability and standardization, it is important to understand how voluntary non-financial or CSR reporting has impacted the ESG landscape. Voluntary non-financial reporting has been in practice in varying forms for decades and stands as an interesting snapshot for the era between when firms were informally held to more socially defined ethical standards and when those standards become legally mandated in the merging of non-financial and financial reporting. Reporting calls began the process of standardization following significant NGO pressure, with the 2012 UN launch of the Sustainable Stock Exchanges (SSE) which launched voluntary firm ESG disclosure from a number of exchanges, including several branches of NASDAQ. This voluntary milestone set the stage for later mandatory filings.

From the view of institutional theory, the growing impact of bureaucratization makes this standardization inevitable, as the influence of rationalization[71] is significantly aided by the connecting impacts of modern technology and globalization (DiMaggio and Powell 1983b; Weber 1968). Essentially, global and technological interconnectedness (such as through social media and easy access to international media outlets) allows for significant social influence of one firm or country on another, and the tendency to adopt practices that appear to be working for successful others means that firms and countries are likely to take on their own adaptations of these practices, dubbed *institutional isomorphism* by Dimaggio and Powell (1983a). This sets the stage for informal reporting standardization, as firms look to their peers to see how and what they're reporting before formal standardization is implemented.

[70] Institutions such as the UN, governments, the Big Four Accounting Firms, and stock exchanges.
[71] Rationalization, in Weber's sociological definition, refers to the supposition of traditions with modern concepts of rational thought, such as Western dismissal of tribal healers like shamans in Africa resulting in the decline of these local healers and a rise in Western-influenced doctors. While some argue that it is progress, it also contains an element of dismissal of these practices that may have been effective, yet did not meet the social constructs of the rationalizing group.

This steady homogenization results in most tech firms reporting on their environmental impacts (with a tendency to leave out hard data, commitment to dates for significant changes, and transparent methodologies) and social investments (typically consisting of an anti-slavery statement with no genuine accountability as firms can claim ignorance concerning subcontractors, claims of increased diversity that border on tokenization, and a nice statement about how many hours their employees volunteer with a stock photo of laughing adults that contains at least one person of color and one woman).

In the realm of voluntary reporting, there exist dichotomous drives as detailed by Mahoney et al, of either signaling or greenwashing (2013). Signaling theory suggests that "good" firms advertise their "good" deeds through standalone CSR reports to effectively communicate with stakeholders. Greenwashing theory, which would be more aptly referred to as Washing theory due to the spectrum of ways in which firms can misrepresent their ESG impacts, juxtaposes Signaling theory in that it suggests firms pose as "good," while not actually investing the money or effort that a "good" firm does. Essentially, Signaling theory says firms that do "good" advertise it, while Greenwashing theory says firms that fail to do "good" also tend to advertise themselves as on par with the "good" firms. Recent analyses of self-published firm reports have stressed the lack of detailed, quantified data and goals, meaning that firms have mostly been making broad statements about their ESG intentions but failing to provide distinct metrics or benchmarks to assess progress (Lock and Seele 2015; Pucheta-Martínez, Bel-Oms, and Olcina-Sempere 2018; Golob et al. 2013).

These benchmarks can also be split between *do-good* (akin to transformative MNCs, as defined above) and *do-no-harm* (also describable as transactional MNCs) Corporate Social Performance (CSP), of which do-good has demonstrably greater reputational and financial returns (Crilly, Ni, and Jiang 2016; Muller 2018; Bartlett and Beamish 2018). Do-good CSP is the preemptive, voluntary investment that generates

social value, but is not mandated by social or legal means, also conceptualized as a *strength*. Do-no-harm CSP, on the other hand, entails meeting the minimum legal or social standards to ensure that business practices don't actively cause human or environmental damage, also referred to as risk minimization or a *concern*[72]. The common critique of CSR reports as lacking demonstrable benchmarking means that these kinds of figures, that demonstrate preemptive or reactive actions, are lost to stakeholders. However, these are not stagnant characteristics, as Heal's description of CSR is "a program of actions to reduce externalize costs or to avoid distributional conflicts" (McWilliams and Wendt 2014: 255), a shallow representation that essentially defines all of CSR as do-no-harm CSP.

This is not to argue that firms always invest heavily in whatever will protect the firm's reputation. If the investment or payoff is significant enough, firms may be willing to temporarily sacrifice their reputation in favor of financial gain (Romer 1984; Akerlof 1980; Hong and Kacperczyk 2009). It might not be worth it in the long run, as negative tonality in media reports can impact a variety of financial factors, such as debt financing (Naumer and Yurtoglu 2020) and firm value (Hwang and Kim 2017).

Social initiatives are not just good for a firm's PR. As Pink explores in his book on motivation, *Drive*, there has been a distinct rise in firms characterized as *purpose maximizers* beyond the traditional *profit* maximizers (Pink 2011). These manifest as a variety of firm structures, social businesses such as Muhammad Yunus's Grameen Bank, and increasing governmental support such as the 2011 European Commission's Social Business Initiative (EC). These purpose maximizing firms launch their business plans with strategic CSR built into the fabric of their firm, offering demonstrably positive emotional associations for employees and investors alike (Amatulli et al. 2018;

[72] The strength versus concern terminologies, as used by some CSR academics, are essentially the same as do-good and do-no-harm but are more often used when generating economic models for testing (Gazizova, Lara, and Osma 2019).

Maignan and Ferrell 2001; Brammer, He, and Mellahi 2014). In doing so these firms are developing brand loyalty, and are often able to charge a premium for products that leave the consumer feeling that they've done some good for the world, such as Apple's Product(RED)[73] initiative that, over the last 15 years, has donated a portion of specific product sales to the Global Fund to fight AIDS. These products differ in no way to the standard Apple product, except that they come in highly distinguishable shade of red. However, beyond the positive emotional response brought on by socially beneficial shopping, studies have found CSR initiatives improve employee creativity, loyalty, satisfaction, and commitment, suggesting that this brand loyalty permeates employees as well as consumers (Brammer, He, and Mellahi 2014).

The allure of a value-centric workplace can be what draws in the most appealing talent, in some cases even being the deciding factor between potential firm employment, especially for younger, high-value employees (Kim and Park 2011). A reputation for ethical behavior, however, must be constantly monitored. Lin-Hi & Blumberg state, "…reputation is a perceptual construct that resides in the minds of stakeholders" (2016: 185); as such, this construct needs to be perpetually assessed in case of sudden shifts or firm failure (Choi and La 2013). Reputation can be a fickle thing, as Helm & Toldsdorf (2013) found that in the event of a crisis, having a positive firm reputation may actually be detrimental to firm recovery, as supported by expectancy violations theory which states that subjects can react more strongly when unanticipated violations of social norms occur. If consumers expect positive ethical behavior based on a firm's history and emphasis of their values, then a violation of that perception is more costly than if the firm had said nothing at all. A trust that took years to build could be lost in an instant.

Perceived transparency in a firm's communication strategy is equally as important.

[73] https://www.apple.com/uk/product-red/

Firms that acknowledged the simultaneously self- and society-serving nature of their CSR initiatives experienced stronger stakeholder support, as skepticism was lessened, and firms were seen as more honest. Conversely, firms with weaker reputations which presented their motivations as purely society-serving versus simultaneously self- and society-serving experienced significantly stronger backlash (Kim 2014). This trust also manifests in the form of purchasing intention, as CSR in conjunction with overall corporate ability acts as a mediating effect following negative publicity (Lin et al. 2011). However, while the authors specify that this is most true for strategic CSR, it cannot fully subsume the impacts of negative press if a firm fails to maintain a reputation of trust[74].

These negative impacts are often portrayed as manifestations of a larger issue, such as the repeated anti-trust challenges that Microsoft has faced in both the US and the EU (Curley 2008; Gray 2001). While Microsoft is the firm that faces the challenges, the outcomes of these proceedings will impact not only other firms within the same industry, but public perception of the nature of the tech sector. Even as Microsoft neared a monopoly in the personal computer realm, it still retained a devout following of PC fans. The arguments on behalf of Microsoft were largely that the firm was simply trying to maximize product efficiency and produce the best possible machine for its consumers, with no intention of deliberately monopolizing a market. If Microsoft makes the best products, then consumers will choose them. However, this consumer-centric narrative fails to account for what has been described as 'predatory' or 'bullying' behavior on Microsoft's part toward smaller firms. To keep public sentiment on its side, Microsoft needs to reinforce this idea that they work honestly and in the interest of the public and consumers, in order to challenge the perception of the tech industry as being inhospitable to smaller firms, and essentially comprising

[74] Maintaining a reputation of trust and authenticity is paramount for firms working to protect a reputation for trustworthiness. It is awkward when your firm's 63 page code of ethics is sold on eBay as a novelty collector's item following your blistering demise for the staggering price of $8.99, as happened to Enron (Alsop 2004).

of just a few big firms who are willing to play dirty. This is compounded by the network effect of these platformed, diversified firms in the sense that if a consumer can access everything they need, including their social networks, they don't need to bother expanding into any other platform. Basically, if you're a Mac or a PC person, or an Apple versus an Android person, it is easy to keep buying tech from the same provider to ensure ease of access in cross access and connection, a bit like a self-feeding monopoly.

This is succinctly defined in the issue life-cycle, a three part evolutionary process starting with an issue as insignificant, then gaining increased public awareness, before culminating in the development of new standards and laws which socially and legally institutionalize the issue (Zygliodopoulos 2003; Helm and Tolsdorf 2013). This process of emergence to prominence ensures that firms are conscious of the issues affecting their industry colleagues, as the anti-trust cases that Microsoft has faced have impacted the entire tech industry, with global demands for increased transparency and competition (Ghaffary and Del Rey 2020).

As firms are reliant upon customers, serious shocks to their reputation and social acceptance can challenge their organizational legitimacy. Characterized as society's acceptance of an institution & the institution's actions, organizational legitimacy is contingent upon the efficacy of communication (Suchman 1995; Etter et al. 2016). As Etter et al cite, traditional quantitative methods utilize surveys, media, and accreditation organizations to assess organizational legitimacy, all of which factor into an institution's legitimacy construction. These three sources offer a variety of data, as surveys can be as general or targeted (focusing on a particular stakeholder group) as needed, media sources are specialized in reaching wide audiences and influencing judgments, and accreditation organizations portray themselves as being objective and impartial in their expert evaluations. Regarding the different natures of the sources, Etter et al states, "…they only partly account for the plurality of norms, values,

expectations, and concerns of ordinary citizens, actors that have been regarded as increasingly important from a normative perspective that calls for a stricter democratic accountability of corporate behavior" (Etter et al. 2016: 61). However, as social media grows and digital platforms create spaces of influence that firms cannot entirely control, the gatekeeping[75] to influencing public opinion is lessened.

Of course, these means of communication are not always perfectly transparent when it comes to firm motivation. De Jong and van Der Meer cited three basic motives for firm investment in CSR activities: intrinsic (also known as value-driven or altruistic), extrinsic (strategic or self-serving, rooted in economic remuneration), and stakeholder-driven (active avoidance of expectation violations theory and response to societal pressure) (2015) . However, these motives are not set in stone or perfectly categorical, and crossovers are entirely likely. What impacts the firm most is how their motives are perceived by the majority of the public, which is where the tone and strategy of firm communication through reporting becomes so pivotal. Take, for instance, Microsoft's work with spreading internet and digital access to underserved communities in the United States, Sub-Saharan Africa, and Asia through the 2017-launched Project Airband[76]. While being a socially worthwhile endeavor, this project also served to create new market space and grant access to new data and consumers.

This chapter will analyze the evolution of CSR reporting alongside key controversial shocks that impacted the nature of the tech industry, as firm communication has had to adapt swiftly to changes in social values, major financial system shocks, and evolving standards. It will utilize the dataset from the previous chapter, D142, and examine outcomes against a subsection of this dataset that was introduced in the

[75] The term 'gatekeeping' refers to the practice of limiting access to something based of specific criteria. A common example given is in reference to fandoms, wherein a person isn't seen as a 'true fan' of something unless they can answer obscure questions, like knowing who the head coach of a football team was in the 1970s in order to prove that you're a 'true fan'.
[76] https://www.microsoft.com/en-us/corporate-responsibility/airband

methodology section, D21. The smaller dataset represents firms that have been consistently publishing non-financial reports which were accessible from either the firm's website or one of several digital archives.

4.2 Reporting and Resilience

Leading up to the turn of the century, CSR reports were few and far between. Some firms, like Ben & Jerry's Ice Cream, had been tinkering with social auditors and published stakeholder reports since the 1980s (Marlin and Marlin 2003). This was far from common practice and there was no consistency or standardization amongst reports. Academics had been focused up to this point on the validity and managerial scope of CSR, largely approaching it as a conceptual discussion. In the 1990s, the academic discussion largely evolved beyond whether or not CSR was 'pure and unadulterated socialism' (Friedman 1970), and into how it would be best implemented and communicated, and began to focus on the measurement and quantification of CSR, leading to the takeoff of ESG (Ramanna 2020). This marked a pivotal shift in how CSR and ESG were perceived, as ESG is essentially the finance-industry inspired quantification of CSR. With this shift in perception, the original argument that CSR is voluntary began to wither as NGOs and stock exchanges began asking for self-audits and non-financial reporting. The emergence of ESG represents the path to nonvoluntary reporting and ESG investments.

Following the adage coined by Peter Drucker 'what gets measured gets managed', it would stand to reason that the development of CSR reporting would result in improved ESG performance from firms. The managerial focus on shareholder returns as a primary gauge of firm performance that took hold of the business world in the late 1900s and early 2000s has since faced harsh critique, as even former proponent Jack Welsh, once General Electric's chief executive, has referred to it as "the dumbest

idea in the world" (Barnett 2015). It appealed to managers as an easily measured metric of success, especially as concepts like employee welfare or community impact are significantly more difficult to quantify. With CEO compensation tied to stock performance, there was little incentive to bother with a broad range of ESG issues. Cue the early 2000s surge of corporate governance reforms, intended to challenge the gluttony of firm leadership and upper level managers who readily sacrificed shareholder interests for profit, but was challenged by business lobbying that fought against market controls[77] (Laufer and Sethi 2006).

Consumers of the time were especially sensitive to supply chain related controversies, as this follows Nike's child labor scandal. In 1996, news broke that Nike's suppliers in Pakistan were exploiting children in their factories and the blowback hit Nike hard. This scandal revealed the pluralism of western business ethics, wherein firms like Nike could technically meet the labor and governance laws of their primary market while exploiting unjust labor conditions within their supply chain (Scamardella 2014). The Nike case sparked a wave of anti-child labor social activism, building up to a protest against the World Trade Organization in Seattle in 1999 regarding the disagreements between watchdog NGOs and businesses over where exactly responsibility for labor standards lay and what role businesses had (Scoville 2002). This push for firm responsibility and the widely spreading NGO arguments that firms had a duty of care to employees throughout their entire supply chains was a defining characteristic of the turn-of-the-century business environment and proved that MNEs were vulnerable to mass protest.

Tech firms focused on communicating with stakeholders in the buildup to Y2K, a global concern that computers, and subsequently every system run by computers, would crash when the year turned from 1999 to 2000 as programming language had

[77] These market controls include proposals such as the Financial Accounting Standards Board (FASB) standards, which focused on corporate crime and tightened stock option guidelines.

been using two-digit years ('99' instead of '1999') and would suddenly need to shift to four digits. It is likely that the public concern surrounding Y2K was one of initial reasons for a strong investment in connection with stakeholders, to provide reassurance that firms were actively conscious of stakeholder concerns. From 1997 through the dawn of 2000, firms that invested in Y2K preparations received more investment and outperformed their peers in stock valuations, denoting a stakeholder preference for what is viewed as strategic investment and issue-specific preparation (Schmitt-Grohé and Uribe 1999; Garcia-Feijóo and Wingender Jr 2007). Combined with the economic strains of the Dot Com Bubble in 1999-2000, significant focus was being paid to the tech sector and its very real impacts upon the lives on consumers.

The 2000 Dot Com Bubble changed the tech sector in two drastic ways. First, the way a firm's value was understood changed from actual financial returns to the potential for consumer engagement, essentially shifting from a solid accounting figure into a conceptual projection. This focus on potential consumer connection was coupled with a new frontier of user data collection, which led to the rise of platform capitalism and the reshaping of the tech sector. Second, tech firms were shaken by the market crash of the Dot Com Bubble. Enthusiastic investor faith was suddenly shaken, and concerns were cast over firm management and performance. In response, CSR reporting in the tech sector began just after the Dot Com Bubble with Dell's Environmental Progress Report (2000) and Intel's Global Citizenship Report: Vision & Values (2001). Given that one motivation for voluntary reporting is the avoidance of new regulations and increased governmental interference, it would be reasonable to argue that one driving force behind the launch of these reports would be to placate governmental concerns and soothe any panic around the potential for a second bubble pop. As this period marks the start of the exponential growth of the tech sector, minimizing any form of governmental restraints was clearly of utmost importance.

One of the more commonly used third-party guidelines are those provided by the

Global Reporting Initiative (GRI). With its first set of standards published in 2000, it was a timely option to meet a sudden interest in environmental reporting. As discussed in the Historical Overview, the GRI was established as an evolution of a previous environmental organization, CERES, with the intention of streamlining and organizing primarily environmental standards. It has since expanded to include more social and governance standards and has become a leading proponent of standardization and framework offering.

During this time, academics argued that the rise of the tech sector would ultimately lead to lower carbon emissions, decreased energy usage, and lower overall environmental impact as transportation and logistics costs dropped due to increased efficiency and technological developments (Romm 2002; Goldfarb and Tucker 2019). This environmental benefit was a direct result of the sudden efficiency of computing power while ignoring the rapid rise of energy-hungry servers, and the world has been becoming more efficient as a result of technological developments which allow for overall less waste and the potential for lower emissions, especially when tech firms invest in sustainable energy sources. Capitalizing on that perception of tech firms creating efficiency in industries across the board and keeping with the wave of environmental action that had been building in the West since the 1970s, tech firms started with voluntary environmental reports to communicate with stakeholders and keep intense government scrutiny from impeding growth. With the internationalization of global value chains, firms have had to take into consideration operational, environmental, and governance laws for numerous countries, which has arguably resulted in general 'better corporate governance practices' (Matos 2020).

With CSR reports hitting the virtual shelves, some management academics shifted their focus to how the writing of these reports impact performance. If a report is concise, written to a reasonable comprehension level, and includes verified data, will it be better received? Conversely, if a report is so obfuscated as to basically be an

alphabet soup of buzzwords with no real meaning, will consumers react negatively? For many academics, the efficacy of communication[78] matters which presents two major points: appropriate degrees of jargon and data communicated for the general public versus communication efficacy for informed internal and external stakeholders who may be interested in standards and financial performance.

While many academics have found a relationship between reporting and firm performance, it is possible that it is partly due to the novelty of this kind of reporting being accessible to public stakeholders (Zahller, Arnold, and Roberts 2015; Yusoff, Mohamad, and Darus 2013). The argued connection is that increased communication and transparency will have a positive impact as investors will have more complete information (considering Bloomfield's IRH, improved data for investors is likely to lead to more efficient markets overall), consumers will have a stronger emotional connection to a firm (a firm's social capital can lead to both increased brand loyalty and controversy buffering), and governments will impose less regulations (if firms are exceeding government regulations in terms of environmental performance, for example, the government is less likely to interject any prohibitive regulations). The existence of almost *any* form of CSR reporting will be perceived as brownie points when compared to their less communicative peers, which is a testament to overall communication efficacy even if stakeholders don't actually read through the reports. The less technical reports, such as social impact reports, may be comprised of predominantly flowery language and well-chosen imagery to evoke a feeling of supporting a good cause. Accountability for these reports is sparse, unlike the GRI reports which can be verified, but at over 150 pages of technical information is significantly more tiresome to read. This leads to two separate veins of communication, the first being generally accessible for the public and the second being the more technical presentation of data, both of which should have some

[78] The concept of 'effective communication' is interesting here, as obfuscated reports may be deemed effective by a manager who is seeking to blur negative performance.

bearing on how CSR reports are formulated. The connections that many academics have made between the linguistic quality of disclosure and firm performance can be boiled down to good management theory, supporting the assumption that quality managers will produce higher quality CSR initiatives and, subsequently, higher quality reports and deliver higher performance.

These factors all contribute to the singular goal of avoiding governmental regulations wherever possible while polishing brand reputation. A great way to do this is by getting ahead of it in the form of industry-specific organizations designed to set the standards, in a 'for the industry, by the industry' kind of way. An example of such an organization would be the Institute of Electrical and Electronics Engineers (IEEE, pronounced 'I-triple-E'), which claims its foundation in 1884 as the AIEE[79] before merging with the IRE[80] in 1963 to form its current form. The IEEE now offers research that intentionally imbues ethics into production, such as IEEE 7000-2021, the *Standard Model Process for Addressing Ethical Concerns During System Design.* This standard offers "…consideration of ethical values throughout the stages of concept exploration…management and engineering in transparent communication with selected stakeholders for ethical values elicitation and prioritization….involving traceability…in the concept of operations, ethical requirements, and ethical risk-based design" (IEEE 2021). Clearly, the emphasis on ethical systems design is a priority.

Following the motivations behind publishing CSR reporting is the matter of how firms communicate with stakeholders. In the modern internet era, firms are able to communicate with their stakeholders by releasing voluntary reports, statements, or blogs directly on their webpages. This communication can be broken down into two separate dichotomies: instrumental or deliberative, and published or unpublished tools (Seele and Lock 2014). When these communications are non-interactive and

[79] American Institute of Electrical Engineers
[80] Institute of Radio Engineers

offer no immediate means by which stakeholders can actively engage with the material, it is *instrumental*, as in CSR reports or websites. If there is an opportunity for stakeholders to communicate directly with the firm, it is a *deliberative* tool, such as a blog or social media post. If it is *published*, then it is made available to the public; conversely, *unpublished* materials such as internal strategy documents are not intended for release and will only receive feedback from a narrow set of chosen participants.

Through these channels, stakeholders have greater access to firms than ever before. Web 2.0, a term popularized circa 2004 by Tim O'Reilly to describe an evolution from the first manifestation of the internet wherein users could access but not actively interact with websites, describes the shift of the overall internet into its modern platform structure with more accessible participation, communication, and collaboration online (O'Reilly 2005; Newman et al. 2016). The corporate blogs, sustainability websites with firm-produced resources, and even the ability to 'build your own report', as pictured below from Intel's CSR website, are all intended to give stakeholders the feeling of active participation and significant influence in a firm's environmental or social practices (Fieseler, Fleck, and Meckel 2010; Capriotti and Moreno 2007) . Capriotti and Moreno find that firms tend to focus primarily on environmental and social issues, although they "…disseminate on those sites a limited conception of what corporate responsibility is" (pg 221), allowing firms to steer conversations away from governance or economic impact issues while still offering a degree of stakeholder accessibility. These deliberative access points also allow firms to collect data on the issues that more of their stakeholders express an interest in, giving firms the opportunity to tailor voluntary reporting and public narratives to maximize positive impact and build a more solid reputation. Although, while these additional communication methods (interactive websites, communication via blog) offer stakeholder data, the majority of firms in this study chose to communicate CSR through instrumental tools in the form of digital report archives that do not offer any

portals for stakeholder engagement. Realistically speaking, even the Intel 'Build Your Own Report' function is less *actual* engagement with stakeholders and more of an opportunity to give the impression of engagement and control to users, since all it does is allow one to put together a piecemeal report.

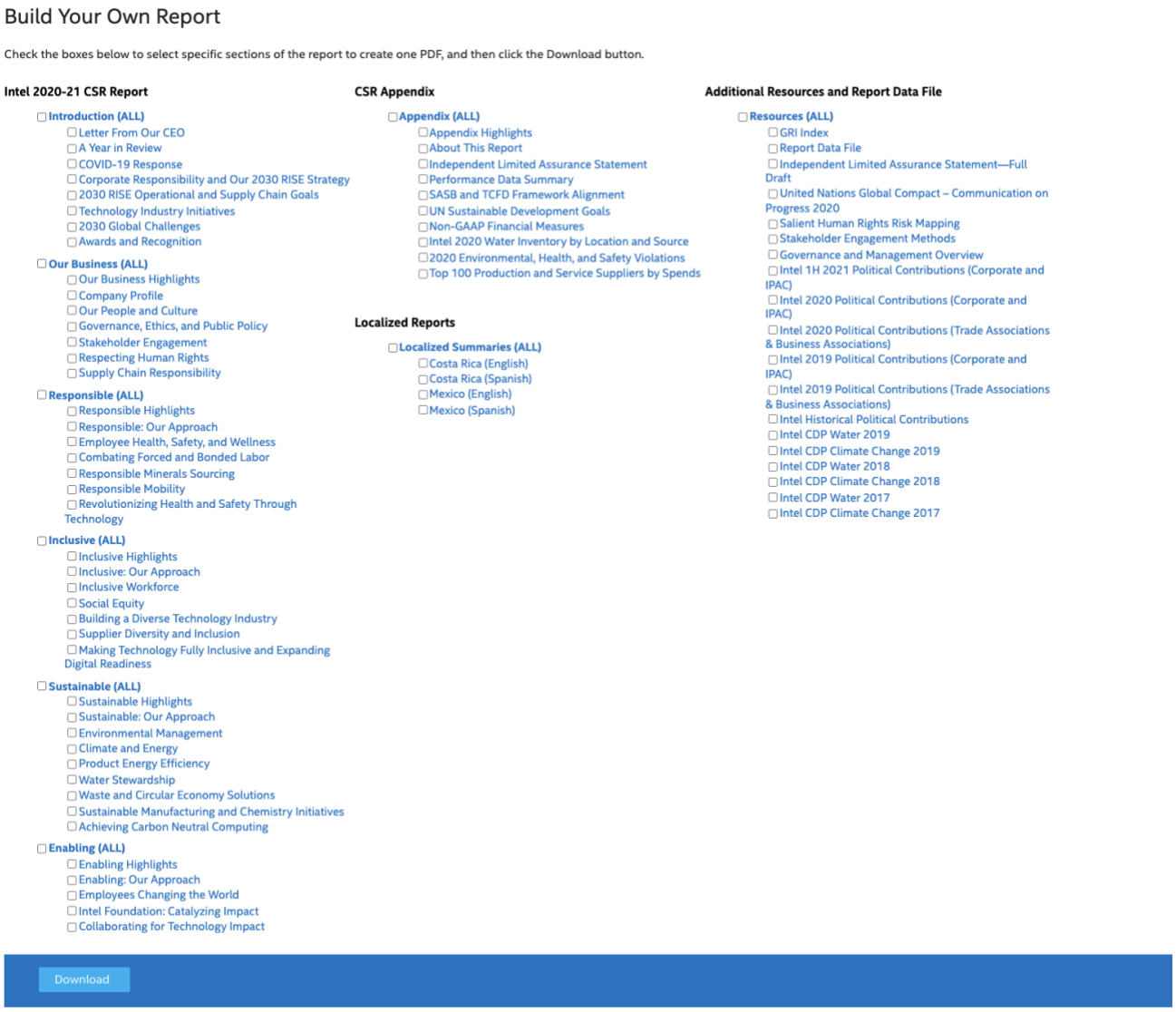


Figure 22: Intel's 'Report Builder' option from its CSR Portal[81]

[81] https://www.intel.co.uk/content/www/uk/en/corporate-responsibility/csr-report-builder.html

The websites that firms use to present their CSR materials may be the most impactful moment of this dialogue with shareholders. Few common people will be motivated to read through a sixty-page paper, so the majority of impact needs to be upfront, easily accessible information, with engaging imagery. From the goal of attracting as much attention as possible, the long-published CSR report is less efficient than the firm's CSR website. CSR reports have been relegated to tools used by investors and highly committed individuals, while websites serve as dynamic snapshots for the casual observer. In this context, the presence of the CSR report archive is a form of virtue signaling to the common stakeholder, offering a snapshot of the firm's behavior without a heavy a burden of proof as they are publishing typically unaudited reports.

There are two broad groups of audiences for CSR reports, the broader public and invested expert groups. Of the two, the broader public tends to be less critical of reports, less informed about regulatory nuances (such as firms investing in necessary environmental infrastructure in response to anticipated emissions caps), and more likely to feel personally betrayed by corporate scandals. Invested expert groups, such as SMOs, NGOs, and industry advocacy groups, approach these reports from a more analytical standpoint. With these two groups in mind, non-financial reports must be simultaneously carefully informative, accessible to a reasonable reading level, and, in the interest of the firm protecting itself, not comprised of too much detailed data that could be used against the firm later. That is to say that if a firm gives highly detailed data alongside its ESG goals and then fails to meet them, it may face backlash from invested audiences who say that the firm isn't doing enough. At the same time, the most common critique of CSR reports is the lack of detailed data and calls for fuller transparency and accountability. Communicating fully enough to satisfy a majority of the audience, the cost of a proper global value chain audit and assessment (sizeable for large multinationals with complex supplier chains), and the potential backlash of accountability make this a tight rope to walk.

The style by which a firm communicates CSR initiatives also impacts the benefits to its economic bottom line, as volume is less important than the variety of ESG disclosures and the appropriateness of the report for the target audience (Yusoff, Mohamad, and Darus 2013). With the shift to CSR pages on company websites, there is more opportunity for variation in communication. Of three primary features that define website usage (if a page is interactive, presentational, or simply content), a study of the websites of Fortune 500 companies found that most CSR websites were comprised of presentational features[82] with much less significant content features[83] and interactive features[84] (Gomez and Chalmeta 2011). Essentially, firms are using CSR websites as repositories for instrumental communication, seeking little actual engagement with stakeholders. Given the tools available for communication and collaboration like social media and newly established CSR-focused employees, firms have every opportunity to authentically engage with stakeholders.

As CSR reporting is becoming more commonplace, the lack of uniform standards means that the variety of data collected and released is substantial. ESG data ranges from deep within a firm's supply chain to the gender balance of its C-Suite and every nuance in between, meaning that ESG ratings agencies are having to process considerable amounts of data using varying proprietary methodology[85]. To aid in this,

[82] 95% of website content was hypertext and heavy positively reinforcing imagery, with only 70% giving access to annual CSR reports.

[83] While 97% of firm websites provided goals and objectives, actual data was less impressive. 77% presented CSR achievements, 37% discussed future plans, and a mere 32% mentioned Board of Directors engagement.

[84] While firms are turning more toward online CSR engagement with stakeholders, there is still significant resistance to creating interactive opportunities. The most common version of interaction available was a 'share this' feature where users could forward reports (40%), but any tool to communicate directly with the firm through contact forms (18%) or social media (18%) were severely limited.

[85] MSCI has 37 issues across the three ESG pillars with 10 distinct themes, Sustainalytics uses 70 indicators per industry further refined into 3 dimensions (preparedness, disclosure, and performance), RepRisk has 28 ESG issues with future risk projections assigned any of 45 "hot topic" tags, and the ISS's has over 380 factors with each industry assigned a minimum of 240. There's a massive spread of methodologies even amongst these four of the top rating agencies (Doyle 2018).

machine learning and AI are being developed to help process and analyze firm data, an effort in part seeking to expose washing practices and raise the baseline for transparency (Borrett 2021b, 2021a). This challenges a firm's ability to single-handedly control the narrative around their ESG investments, which impact not just firm reputation but also impacts scores assigned by ESG rating agencies.

These ESG rating agencies, such as MSCI or Sustainalytics, are also a potential point of confusion. Each accounting firm currently has its own proprietary process of analysis, with agencies either focusing on a particular industry, assigning weighted values within the ESG frameworks depending on industry specifics, or simply publishing a blanket approach without industry-specific considerations. The problem with the latter is an obvious lack of nuance, as different industries face different challenges. For instance, a paper mill is less likely to be concerned about data privacy than a social media firm, so weighting data privacy the same for both industries would offer skewed findings. However, increasingly narrow ESG indices also risk specific, target oriented analysis that fails to properly highlight the lack of firm transparency and available data (Paredes-Gazquez, Rodriguez-Fernandez, and de la Cuesta-Gonzalez 2016). However, the benefits of ESG-issue specific rating agencies, such as those that focus primarily on environmental issues (such as CDP[86]), are that they can offer detailed and specialist-informed insights that generalist ESG agencies may lack. Yet even within these ESG-issue specific rating agencies can be significantly different weighting systems, wherein one very specific issue such as carbon emissions in developing countries may be more relevant for some firms than others, resulting in overall inconsistent ratings.

In juxtaposition to increasingly specific rating agencies are composite indices, which aggregate data into a single, overall score, typically with extra data available such as

[86] https://www.cdp.net/en

different ESG pillar scores. However, when scaled up to the composite index level, scores risk obfuscation as one particularly strong scoring aspect may essentially nullify a particularly low scoring aspect (Paruolo, Saisana, and Saltelli 2013; Salvati and Zitti 2009; Escrig-Olmedo et al. 2013). These scores may still prove useful in a general analysis, but as reporting transparency and standards become more commonplace and more financial products become tied to ESG scoring in different ways (such as investment funds that factor ESG scores into their products under the label of sustainable investing, which has been rising exponentially in the last 10 years), generalized scores will become less and less useful. These products will need to justify how they are having a positive global impact, and a vague answer like 'because they scored well' on such a wide range of potential pros and cons will not suffice. Instead, there is likely to be a trend toward increasingly specific funds that can only invest in products that meet certain ESG standards, such as being net zero (E), having a supportive parental leave policy (S), or a demonstrably diverse board and upper management (G). In this sense, composite indices may still prove useful in the future, but they will face demands for greater methodological transparency, especially regarding their weighting practices, which their customers will need to be aware of when using these indices in their products.

It is a notable limitation of this study (and all academic studies that rely on third party data collection and processing for production of ESG metrics) that the data collected from Thomson Reuters is influenced by any bias built into their analysis[87]. As the Thomson Reuters data is marketed for production of financial products, it is likely to be sensitive to issues which may be timely and which can impact firm performance or returns, such as major ecological crises or major social and governance controversies, such as highly evident gender bias or anti-competitive behavior. The variation in ESG

[87] There are a vast range of individual indicators utilized by separate ESG agencies. Berg at al assessed Asset4 (282 indicators), Sustainalytics (163), RobecoSAM (80), KLD (78), MSCI (68), and Video Eiris (38). Berg, Koelbel, and Rigobon (2019).

agency metrics impact academic findings, influence investor decisions, and complicate firm strategies for improvement if said firm is receiving mixed signals, again stressing the issue of appropriate communication for the target audience.

Scores between separate ESG rating agencies can vary dramatically, as the below snapshot comparing three separate agency average scores in 2021 demonstrates. Consider Apple, the largest company on the graph by market capitalization, with ESG scores ranging from 29 (Sustainanalytics), to 66.2 (S&P Global), to 92.9 (MSCI), all calculated out of a perfect score of 100. These scores are used by two primary stakeholder groups that impact firm performance: investors who used this data to assess firm risk and sustainability[88] and common consumers who are using these tools to decide where to spend their money.

[88] Assessing sustainability in the investment sphere incorporates environmental and economic sustainability. Investors are looking for firms that are planning to adapt to climate change, that are positively reporting on NGO commitments like the UN SDGs, and are aware of the environmental and social impacts of their global value chain. The absence of this awareness suggests that a firm is unprepared for what is currently voluntary reporting but is on the path to becoming mandatory.

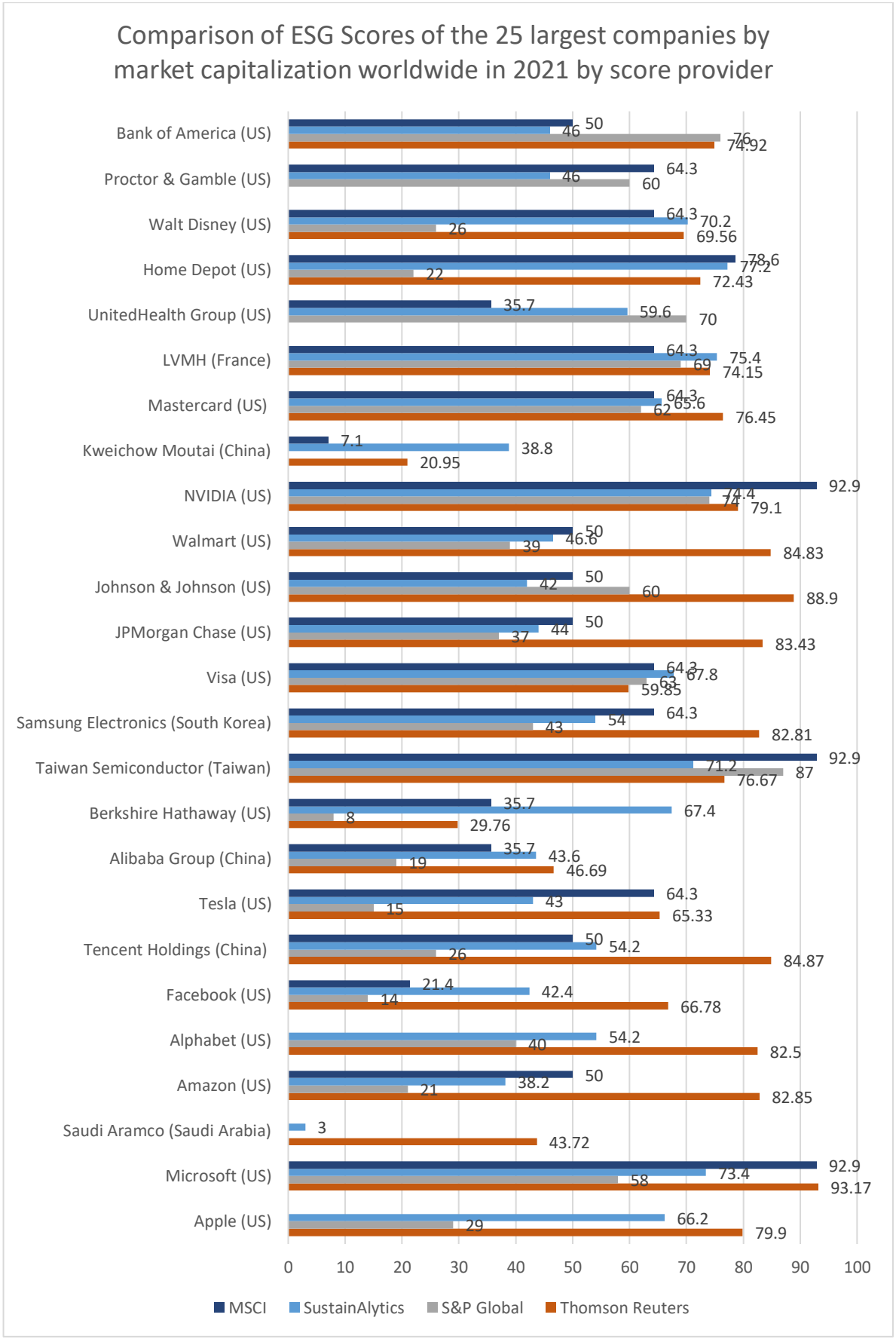


Figure 23: Comparison of ESG Scores by Providers, 2022

As Berg et al (2019) found, there are three primary points of divergence between agency ratings metrics; *scope divergence* refers to the metrics chosen to be included in the overall score such as lobbying or CO2 emissions, *measurement divergence* is the process by which a metric is measured in the sense that one agency may define environmental impact differently than another, and *weights divergence* which are agency biases as to which factors are more or less significant. This trifecta of challenges means that the rating agency itself is a significant impact on management decisions to invest in a firm, a bias that will need to be addressed in future initiatives as the Big Four accounting firms are looking to collaborate on a singular set of ESG metrics (Tett 2020).

Further, there is a significant *rater effect* found wherein firms that rate higher in one dimension tend to rate highly in others, suggesting that ESG rating agencies assign analysts by firm versus ESG indicator (Berg, Koelbel, and Rigobon 2019). This added level of potential bias, and the luck-of-the-draw between getting a sympathetic analyst versus a harsh critic, means that while ESG ratings are useful tools to understand a firm's CSP, they are heavily influenced by very human factors. Beyond individual rater effects, there are also institutional biases as Tang et al (2022) found that when firms share major shareholders with ratings agencies ("sister firms"), they tend to score higher[89]. These potential biases impact large capital allocations, investments, and portfolio management on a global scale. This casts serious doubts when considering how the Big Four Accounting Firms are already conducting seriously flawed audits of firms that are used in ESG analyses, especially as an audit or rating agency is not likely to score a firm as poorly as it may deserve if the agency is hoping to secure future business.

[89] Luckily for firms, there is a blossoming boutique consulting industry focused on helping firms choose the right rating agency for them, as in the case of Cometis, a German consultancy that advertises "Do you want to commission an ESG rating, but don't know with whom? Or improve existing ESG ratings? Then cometis is your right contact: Feel free to get in touch!" (Fischer 2021).

As non-financial reporting becomes more commonly regulated in different forms all over the world, it will eventually result in what has been termed *integrated reporting*. Integrated Reporting is the cohesion of financial and non-financial reporting, which is likely to improve the quality and quantifiable metrics of both reporting aspects. Regarding the 2020 *Carrots & Sticks* report, van de Wijs and van der Lugt state, "…[it] also signals maturation of reporting practice, the saturation of reporting requirements, and a growing interest in alignment of reporting standards and norms" (2020: 2). Requirement saturation is taking form in increased deference being given to reporting standards, primarily ones that require validation. In conjunction with this, a 2021 SASB Implementation Webinar listed the relevant guidelines as GRI, TCFD, SASB, IIRC, and NFRD[90], all of which integrated reporting will need take into consideration when merging. Guidelines such as the GRI are divided into issue sections, as demonstrated below, and are often seeking input from those invested in specific industries in the form of public comment periods. The first industry sector-specific standards were released in October of 2021 (GRI). These reporting standards are in a constant evolutionary state as they are adjusted for professional input, evolving issue awareness, and technical CSR development[91].

[90] The Global Reporting Index (GRI), Task Force on Climate-Related Financial Disclosures (TCFD), Sustainability Accounting Standards Board (SASB), International Integrated Reporting Council (IIRC), and the Non-Financial Reporting Directive (NFRD).

[91] 'Technical CSR development' is meant to refer to technologies that are developed in conjunction with CSR initiatives, for instance the evolution of Microsoft's accessibility software demonstrating that computers can be adjusted to accommodate the visually impaired, or the spread and lowering costs of recycling technologies that significantly cut down on the amount of micro plastics in the ocean.

Contents

Universal Standards

	Effective date
GRI 101: Foundation 2016	1 July 2018
GRI 102: General Disclosures 2016	1 July 2018
GRI 103: Management Approach 2016	1 July 2018

Topic-specific Standards

GRI 200: Economic	
GRI 201: Economic Performance 2016	1 July 2018
GRI 202: Market Presence 2016	1 July 2018
GRI 203: Indirect Economic Impacts 2016	1 July 2018
GRI 204: Procurement Practices 2016	1 July 2018
GRI 205: Anti-corruption 2016	1 July 2018
GRI 206: Anti-competitive Behavior 2016	1 July 2018
GRI 207: Tax 2019	1 January 2021
GRI 300: Environmental	
GRI 301: Materials 2016	1 July 2018
GRI 302: Energy 2016	1 July 2018
GRI 303: Water and Effluents 2018	1 January 2021
GRI 304: Biodiversity 2016	1 July 2018
GRI 305: Emissions 2016	1 July 2018
GRI 306: Waste 2020	1 January 2022
GRI 307: Environmental Compliance 2016	1 July 2018
GRI 308: Supplier Environmental Assessment 2016	1 July 2018
GRI 400: Social	
GRI 401: Employment 2016	1 July 2018
GRI 402: Labor/Management Relations 2016	1 July 2018
GRI 403: Occupational Health and Safety 2018	1 January 2021
GRI 404: Training and Education 2016	1 July 2018
GRI 405: Diversity and Equal Opportunity 2016	1 July 2018
GRI 406: Non-discrimination 2016	1 July 2018
GRI 407: Freedom of Association and Collective Bargaining 2016	1 July 2018
GRI 408: Child Labor 2016	1 July 2018
GRI 409: Forced or Compulsory Labor 2016	1 July 2018
GRI 410: Security Practices 2016	1 July 2018
GRI 411: Rights of Indigenous Peoples 2016	1 July 2018
GRI 412: Human Rights Assessment 2016	1 July 2018
GRI 413: Local Communities 2016	1 July 2018
GRI 414: Supplier Social Assessment 2016	1 July 2018
GRI 415: Public Policy 2016	1 July 2018
GRI 416: Customer Health and Safety 2016	1 July 2018
GRI 417: Marketing and Labeling 2016	1 July 2018
GRI 418: Customer Privacy 2016	1 July 2018
GRI 419: Socioeconomic Compliance 2016	1 July 2018

GRI Standards Glossary

Note: *GRI 303: Water 2016*, *GRI 306: Effluents and Waste 2016*, and *GRI 403: Occupational Health and Safety 2016* are not included in this document, since they have been updated and will be replaced by *GRI 303: Water and Effluents 2018*, *GRI 306: Waste 2020*, and *GRI 403: Occupational Health and Safety 2018*, respectively. *GRI 303: Water and Effluents 2018* and *GRI 403: Occupational Health and Safety 2018*, included in this document, will be effective for reports or other materials published on or after 1 January 2021. *GRI 303: Water 2016*, and *GRI 403: Occupational Health and Safety 2016* can continue to be used for reports or other materials published on or before 31 December 2020. Earlier adoption is encouraged.
GRI 306: Waste 2020 will be effective for reports or other materials published on or after 1 January 2022. *GRI 306: Effluents and Waste 2016*, can continue to be used for reports or other materials published on or before 31 December 2021. Earlier adoption is encouraged.

Figure 24: the Consolidated Set of GRI Sustainability Reporting Standards 2020

The point of all these different standards is to increase accountability and transparency. As such, the difference between what a firm says they are doing and what they are actually doing has become a point of particular interest especially as many firms report on their dedication to an arbitrary cause, such as climate change or

a particular UNSDG, but fail to report specific metrics by which their efforts can be gauged. This disparity has become significant enough that one of the main highlights in the 2020 KPMG Report *The ESG Imperative for Technology Companies* emphasizes consumer expectations and the failure of firms to provide transparent data (KPMG 2020). This disparity is the focus of the following analysis, with the accessibility of CSR reports assessed alongside corporate social performance.

This study follows the methodology of Nazari et al, who utilized the Flesch-Kincaid, Gunning Fog, Coleman-Liau, SMOG, and Automated Readability metrics in their assessment of narrative complexity as it pertains to social and environmental performance (2017). However, several other academics settled for one or two of these metrics (Humpherys et al. 2011; Hwang and Kim 2017; Klare 1975). The purpose of these indices are to quantify accessibility and highlight potential obfuscation. Courtis argues "…the difficulty for the researcher is to identify the presence of obfuscation, separate deliberate intent from artefact and then, if needed, separate the non-malicious intent from the malicious" (2004). While textual analysis is incredibly useful in gauging the readability, as typically measured by the level of education a reader should have to comfortably comprehend the material, it cannot accurately measure the quality of information provided. Textual analysis is a measure of accessibility, not necessarily quality of the report or data. For instance, while some reports may score well on readability, they may offer little accommodation for user engagement in the form of dynamic imagery or engaging language. In the event of highly stylized reports, screen readers for the visually impaired may struggle with picking out words, sentence flows, or data communicated via graphics unless a plain text version of the report is encoded into the website, which is unlikely as most of these reports are available as pdf downloads from digital archives.

However, textual analysis is still a useful tool in gauging general accessibility and communicative efficiency regarding particular targeted audiences. As Figure 25 below

demonstrates, the textual analysis scores fluctuated over the years as CSR reports have been tested, refined, and revamped. This demonstrates varying degrees of narrative complexity and restructuring. However, what this fails to show is an obvious, consistent relationship between ESG Scores and textual analysis, from which the conclusion can be drawn that narrative accessibility is not a particularly high consideration for the authors of these reports. As the higher textual analysis score denotes a higher level of education required to fully understand the language used, it is notable that firms appear to experiment with linguistic complexity. Overly technical language can be alienating for stakeholders, likely the reason that most reports, even amidst fluctuations, have attempted to maintain a reasonable baseline.

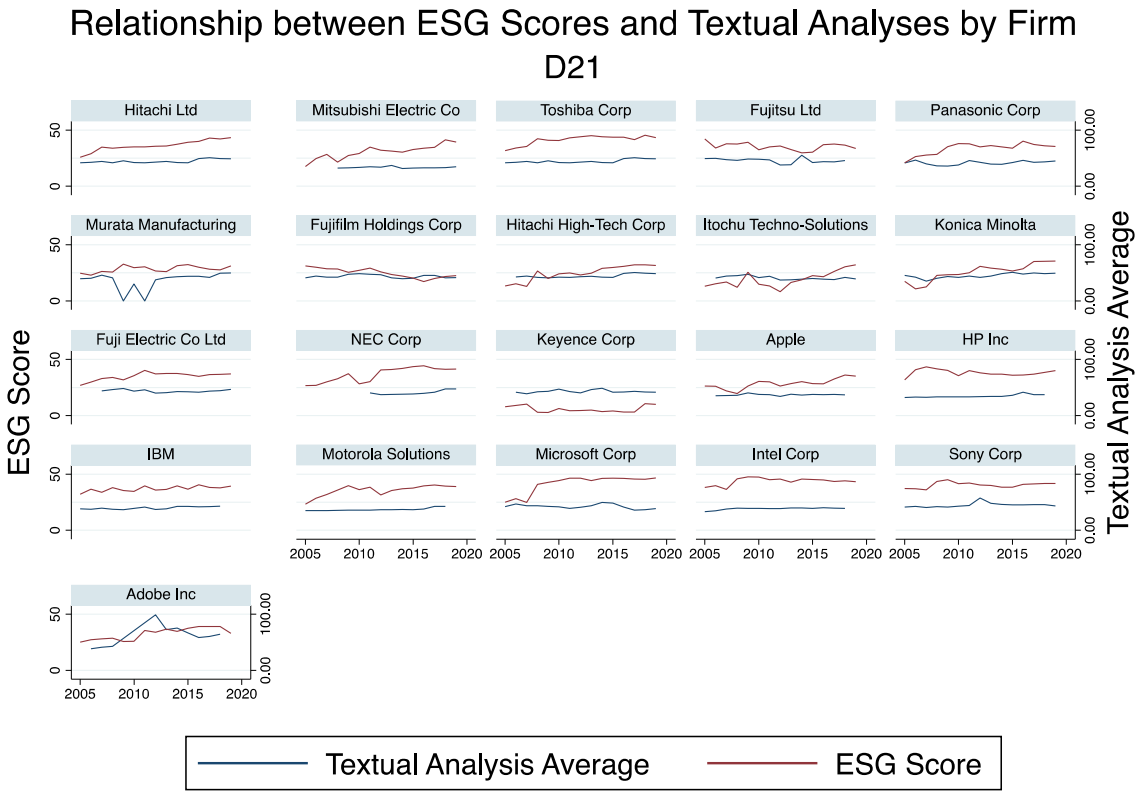


Figure 25: Relationship Between ESG Scores and Textual Analyses by Firm (D21)

As Figure 28 above demonstrates, the relationship between Textual Analysis scores and the primary ESG metrics of ESG Score and ESG Controversy Score (in Figure 29

below) is rather negligible. Textual Analysis is consistently insignificant when tested with ESG Scores. When tested with ESG Controversy Score, there are only two years wherein the null hypothesis can be rejected, 2009 and 2011. As the significance is negative, it suggests that more controversy was met with lower readability, and vice versa, less controversy meant better readability. As 2009 marked the low point following the GFC, this was a time when firms were experimenting with their voluntary reporting in the hopes of finding a means of communication to more effectively buffer their reputations. However, given the oddity of two nonconsecutive years being significant, it is more likely to be a quirk of statistics and simply a spurious result. As such, more thorough analysis of this relationship should be studied with a considerably larger dataset.

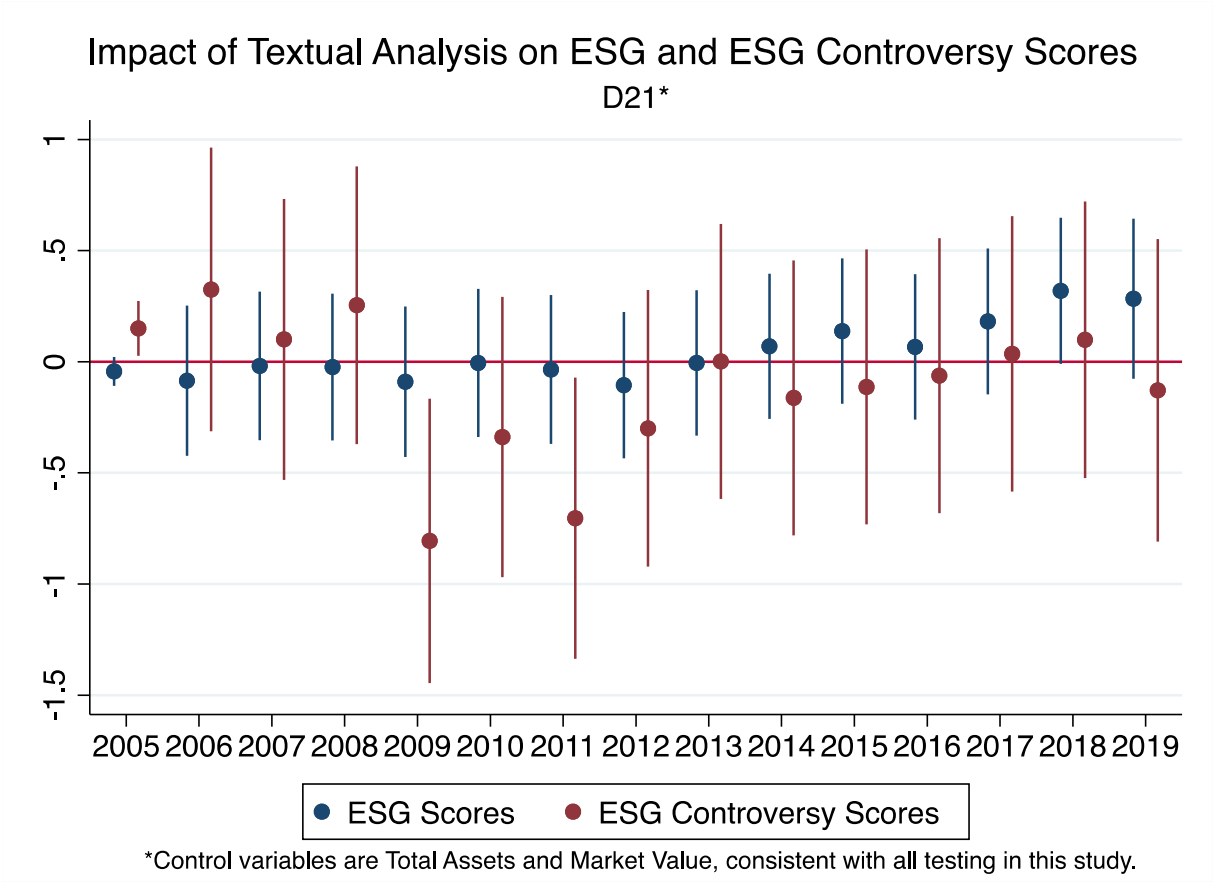


Figure 26

The lack of a significant, consistent relationship was surprising. As corporate communication has dramatically increased in accessibility, frequency, and necessity, the assumption in this study was that an effort would be made to make reports as convenient for stakeholders as possible. However, it seems that complexity, length, and an almost blinding number of pictures have become the norm. Apple's 2007 Supplier Responsibility Report started at 4 pages, compared to its 2020 Supplier Responsibility Report at 115 pages[92]. IBM's 2016 Environmental Report is 56 pages of soft reporting, with few solid statistics and lots of obviously careful phrasing to ensure that what appears to be a thorough report is actually more of a general statement of intent. For instance, IBM's 2017 Environment Report states its five-part strategy for energy conservation and climate protection (optimizing facilities and data centers, purchasing renewable energy, requiring clean production from suppliers, 'managing business travel', and increasing efficiency of logistical operations) which is followed by approximately zero actual statistics on these goals (pg 15). Instead, it immediately launches into a general statement of environmental progress, including the 'avoiding of 4.4 million metrics tons of CO2 emissions' (pg 16). This is an example of the kind of avoidant communication that invested stakeholders find so frustrating.

While avoidant communication like this may not register as obfuscation through a computer program, the result is the same. The reports published are weak on actual data, even when they attempt to abide by a reasonable reading level. Voluntary CSR reports were and still are received positively, although with rising calls for increased transparency from watchdog organizations. As voluntary non-financial reports are absorbed into financial reporting through government legislation and exchange requirements, it is likely that the reports with significant statistical data will be turned in to legal entities while quasi-puff pieces like CSR reports to date will continue to

[92] Report length steadily increased, from 2007 at 4 pages, 2008 at 14 pages, 2009 at 16 pages, 2010 at 24 pages, 2011 at 25 pages, 2012 at 27 pages, 2013 at 37 pages, 2014 at 40 pages, 2015 at 42 pages, 2016 at 33 pages, 2017 at 37 pages, 2018 at 59 pages, 2019 at 66 pages, and 2020 at 115 pages.

represent a non-binding, generalized expression of intent. Essentially, CSR reports will continue to be published as a tool for corporate legitimacy, social capital, and reputational buffering.

As Auden Schendler noted, "Measurement and reporting have become ends to themselves, instead of a means to improve environmental or social outcomes. It's as if a person committed to a diet and fanatically started counting calories, but continued to eat the same number of Twinkies and cheeseburgers" (2009). There are ways to make less impactful promises than suggested. Take this excerpt from Microsoft's CSR website:

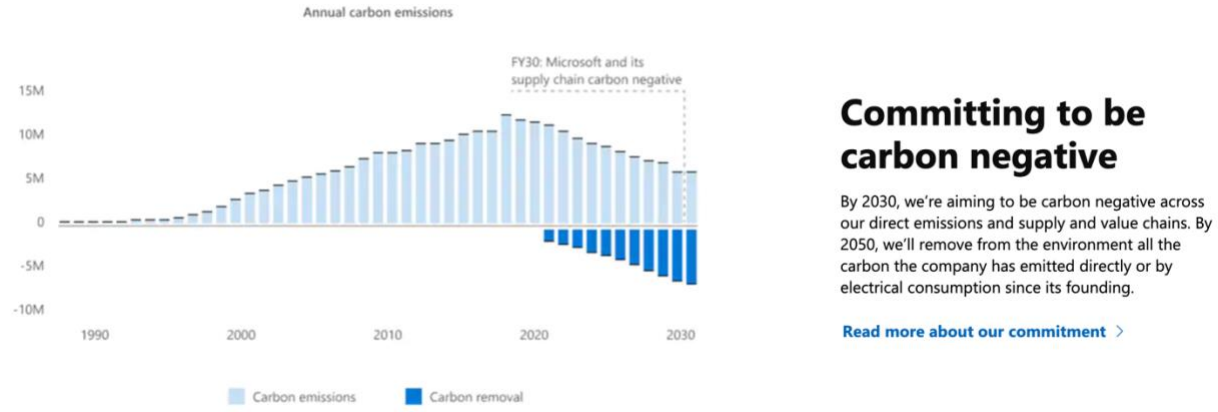


Figure 27: Taken from Microsoft's CSR Website, 28-01-2022

At first glance, Figure 30 looks like a great example of a firm addressing its carbon footprint. However, Microsoft only commits to carbon *neutrality* in their *direct* emissions. That means they can purchase just enough carbon credits to slightly-more-then offset the impact of their offices and stores. Considering the fact that most manufacturing is outsourced, Microsoft can put the burden of neutrality on suppliers and manufacturers. Essentially, the smallest sliver of carbon output from Microsoft is the part that it has chosen to tackle directly. As Kate Raworth noted in *Donut Economics* (2017), these approaches are based on maintaining the same degree of output and adjusting the environmental impact that follows development and

advancement.

These reports are a means of direct influence by a firm on its own reputation. Alsop cautions diligence and sustained effort, as firms tend to focus on reputation only when it is in danger (2004). As Lin-Hi and Blumberg eloquently stated, "reputation is a perceptual construct that resides in the minds of stakeholders" (2016, pg 185). This perception is heavily influenced by external sources, such as media outlets and NGO reports, rendering this perceptual construct in a state of constant flux. Reputation should be treated as complex and perpetually evolving, as even the reputation of the 'imperial CEO' can erode public trust in the entirety of the firm (Alsop 2004). For the Western tech sector in particular, high-profile CEOs have become almost a requirement for the biggest names, such as Bill Gates (Microsoft), Tim Cook (Apple), and Sundar Pichai (Alphabet/Google), not to mention the eccentric Elon Musk (SpaceX, Tesla). While this can generate a financially beneficial cult following for the firm, as these charismatic imperial CEOs tweet and charm their ways into popular culture, it also creates the potential for a poorly considered statement to damage firm reputation in an instant, resulting in the need for study of firm crisis communication before, during, and after an event. This has found that strategic sustainability (also referred to as 'anti-crisis sustainability') is more heavily influenced by media forces and innovation, while more general ESG investments such as social and environmental initiatives tend to aid in reputational stability and, as such, the recovery from a reputational crisis (Derevianko 2019).

The value of ESG reporting is demonstrated in the Graphs below. They represent a comparison of average ESG Scores (Graph 29), Environmental Scores (Graph 30), Social Scores (Graph 31), and Governance Scores (Graph 32) between datasets D142 and D21. To revisit the methodology section, D21 is a subsect of D142 of firms with consistent CSR reporting from 2005 to 2019. As Figure 31 demonstrates, the overall ESG Scores between the two datasets differ, with D21 having consistently higher

scores.

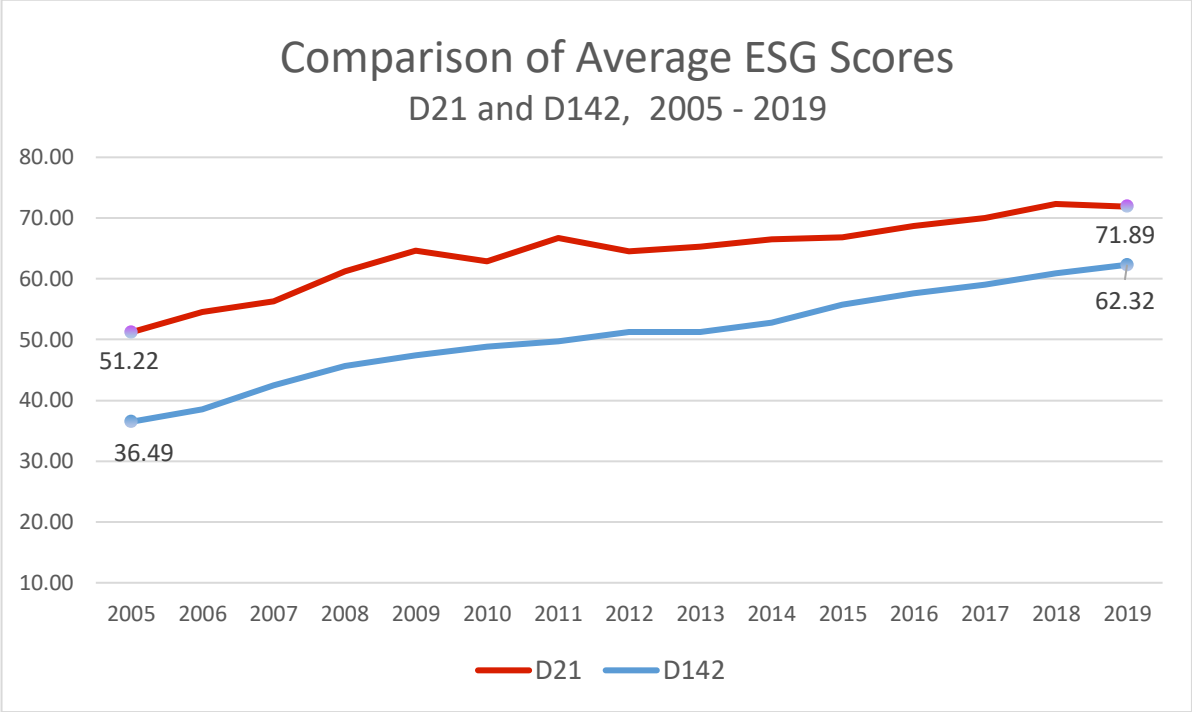


Figure 28

Figure 30 compares the average Environmental Pillar Scores of the two datasets. While it immediately demonstrates a higher score among the smaller dataset of reporting firms, D21, it also shows a significant spike in performance during and immediately following the Global Financial Crisis.

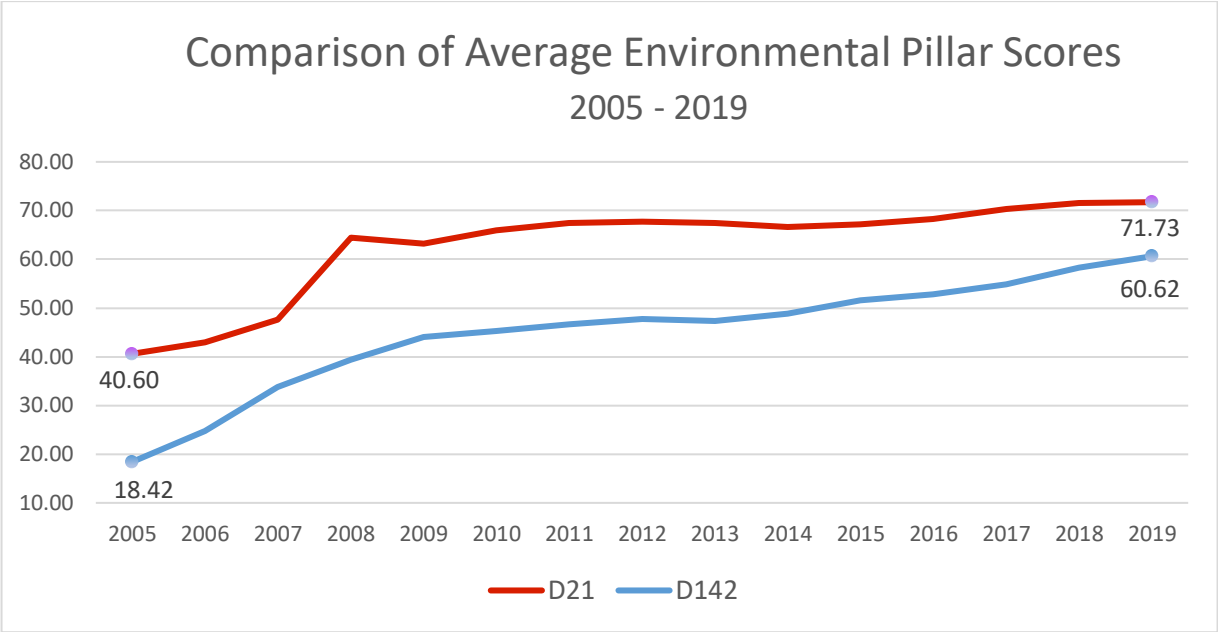


Figure 29

A similar trend is expressed in Figure 31, but with a much smaller spike following the GFC.

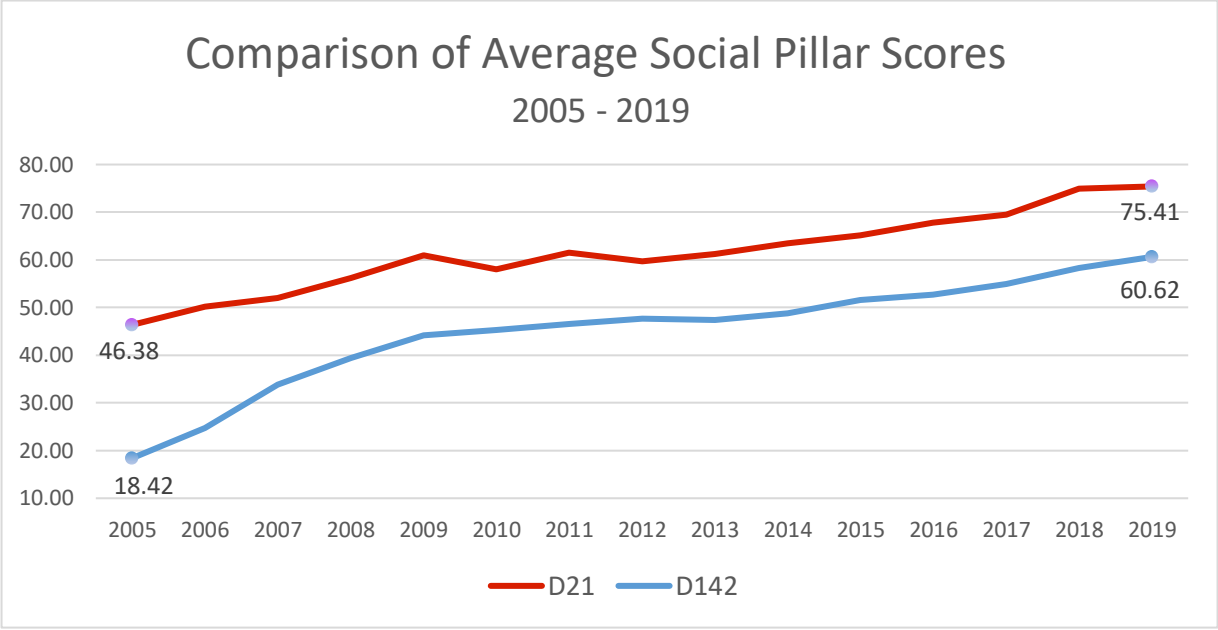


Figure 30

Finally, Figure 32 compares the average Governance Pillar Scores which demonstrate surprisingly little variation. While scores are consistently stronger in D21, there are also more ups and downs, likely impacted by the rising focus on sexual harassment claims, monopolistic practices, and invasive AI.

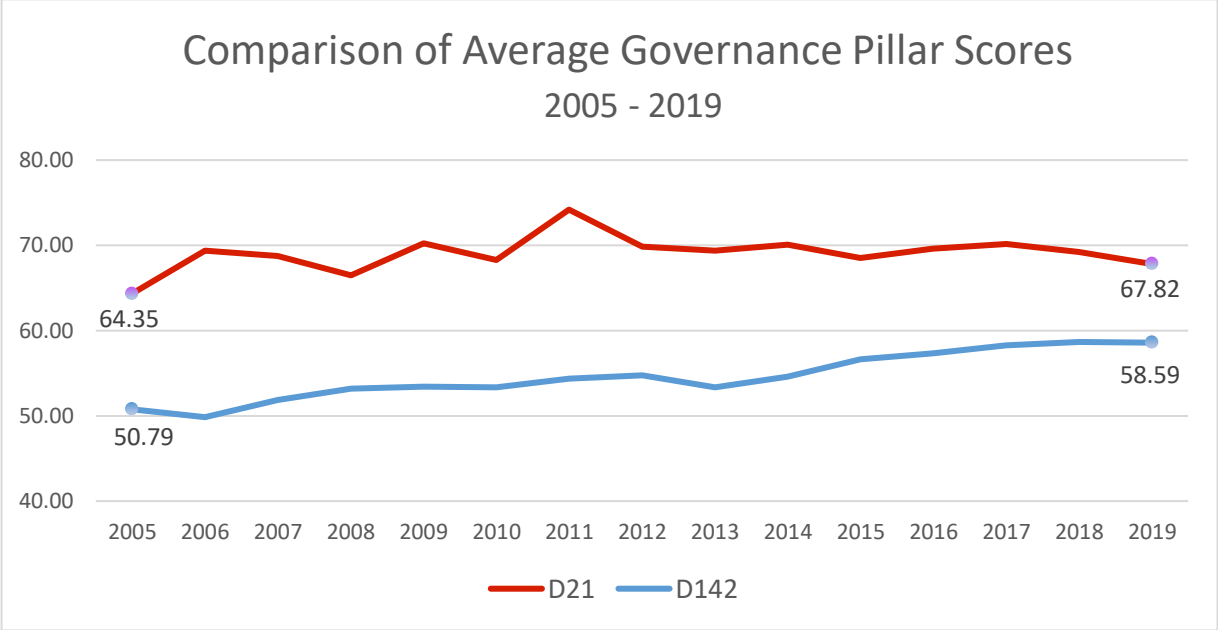


Figure 31

When discussing the strategic approach to CSR and reporting, it is important to consider who the target audience is. In this regard, there are several key stakeholder groups; general consumers, SMOs[93], and regulators. Firms need to keep consumers on their side, who are heavily influenced by SMOs and, indirectly, regulators. As such, communication is a delicate balance to strike.

The rising impact and reach of advocacy networks[94], both in community awareness

[93] Social Movement Organizations (SMOs) have been growing for decades, and many choose to cut their teeth, so to say, on particular firms or issues.

[94] *Advocacy Networks* is an international political economy (IPE) term, encompassing every working iteration of social investment from small social groups to international organizations that impact the rules regarding a particular issue. For instance, the advocacy network for human trafficking includes both the Guam Attorney General's Human Trafficking Task Force as well as Unseen Uk's Stop Slavery in the UK initiative (Fuentes-George 2016).

and collaboration, has dramatically raised their ability to coordinate campaigns against particular firms in the event that an ESG controversy is exposed, such as the role of conflict minerals in the tech sector. These advocacy networks can pool resources, be they monetary or man-made in the form of labor, in order to sustain prolonged campaigns targeting particular issues or firms. Given the development of technology, these campaigns can grow into global forces that demand reckoning at the highest intergovernmental levels such as the UN or EU. SMOs can pick up an issue at the first stage of its issue life-cycle, wherein is practically unheard of in mainstream media, and build social interest and engagement through the process of the issue entering public awareness and being institutionalized. This has dramatically increased the impact that NGOs can have upon firms, through direct, indirect, or interactive[95] means (Guay, Doh, and Sinclair 2004).

The combination of firm and media reports significantly reduce information asymmetry between firms and stakeholders, allowing for both greater firm exposure in the event of a crisis and easier communication for firms to their stakeholders in response to said crisis (Dash 2012). As positive social capital has a positive impact on firm financial performance, reacting quickly to stakeholder concerns is vital for firms, notable during the 2008-2009 GFC wherein firms with higher CSR performance outstripped their lesser performing peers (Lev, Petrovits, and Radhakrishnan 2009; Cheng, Ioannou, and Serafeim 2014; Shiu and Yang 2017). Ergo, CSR and standalone reports published by firms often directly or discretely address issues raised by stakeholders or media, utilizing these reports as a strategic tool for lessening the negative impacts of a scandal (Rudkin et al. 2019). In the event of a controversy, a history of publicly-available voluntary reports can be beneficial to a firm, as reminding stakeholders of pre-controversy positive behavior alongside an apology can lessen the financial and reputational damage (Kiambi and Shafer 2015). The authors found

[95] Interactive means would be a partnership between the NGO and firm, wherein both can influence the overall perspective of the issue in a collaborative way.

three basic crisis response strategies; apology, sympathy, or compensation. Stakeholders tend to prefer an apology, especially one that is supported by a firm's history of maintaining a 'good' reputation. In the event of a controversy that elicits strong emotional responses like anger, firms are cautioned from attempting the compensation strategy, as this can be perceived as a heartless pay off.

When considering the impact of positive CSR performance on firm resilience, one key aspect to consider is that investors have come to associate higher ESG scores with lower risk (Lins, Servaes, and Tamayo 2017; Heflin and Wallace 2017). This assumption is that firms have put in the work to audit their supply chains, assess their potential risks and weaknesses in firm culture, and are aware of their environmental impact. With this data in mind, the firm is expected to be working toward mitigating these risks in the interest of protecting itself from future controversy, being prepared for the imposition of heightened regulations or working to avoid the necessity for them and making thoroughly integrated plans for future development. In this case, 'integrated' is used along the lines of integrated reporting, which sees environmental, social, and governance issues as being equally vital to firm performance as economic factors. Integrated reporting is the holistic approach to financial and non-financial reporting that includes factors like environmental externalities in future projections to ensure firm preparedness. However, following a controversy, some firms will invest in sudden CSR initiatives, such as corporate philanthropic disaster responses, to attempt to capitalize on public good will to less positive impact than their proactive peers (Muller and Kräussl 2011).

Husted and Salazar (2006) argue in favor of *strategic* investments over altruistic CSR with social good in mind, supporting Friedman's criticized stance that a firm's social responsibility is simply to maximize profits. Margolis et al (2009) conducted a meta-analysis, utilizing 192 effects and 167 studies, and found the most significant correlations between charitable contributions, environmental performance, and

exposed misdeeds (referred to here as controversies), demonstrating a reactive relationship to mostly erratic measures, and controversies and donations are rarely preplanned.

In discussing crisis-period returns, Lins et al (2017) use stock market returns as their primary indicator of firm performance in relation to social capital, arguing in favour of expanding upon previously used metrics of cash holdings and leverage (Duchin, Ozbas, and Sensoy 2010). To support this argument and control for exogenous impacts on stock market returns, Lins et al tested the relationship between CSR and stock returns in the era of the Enron / Worldcom crisis, which arguably undermined the faith in the entire US stock market and found that firms with higher CSR performance outperformed firms with lower CSR performance. On a national scale, Lins et al also tested crisis-period returns in areas defined by the 2006 General Social Survey as having higher trust, finding a significant correlation with CSR and regional trust. Interestingly, using firm fixed effects models allowed them to test the relationship between CSR and stock returns before, during, and after the crisis, only finding significant correlations on returns *during* the crisis period itself, suggesting that social capital is a buffer only when needed most. Their findings extended beyond stock returns; during crisis, higher CSR firms had higher gross margins, sales growth, profitability, sales per employee, and ability to raise more debt than their lower CSR counterparts.

When expanded to an industry level, CSR practices and communication increased in the post-controversy period for most firms, not just the primary offender (Patten 1992; Gazizova, Lara, and Osma 2019). However, Gazizova et al found these post-controversy CSR practices were predominantly window dressing, as CSR disclosure quality went down and earnings management went up. Earnings management is the accounting version of CSR washing. It is the presentation of financial information in an overly optimistic manner that is not entirely supported by the data. This suggests that

firms are inherently reactionary when controversy impacts their industry, resulting in knee-jerk efforts to bolster their reputation and distance themselves from the offending firm. Firms may also dedicate a significantly larger amount of reporting to addressing broad issues without substantial change, such as increasing the amount of report coverage dedicated to environmental concerns following a significant environmental controversy[96] (Patten 1992).

It is important to note that when using terminology like 'resilience' regarding CSR and firm performance the meaning of the term can take several forms, just as 'sustainability' can imply economic, environmental, or a combination of the two. Resilience refers to a firm's overall ability to recover from a negative shock whereas supply chain resilience refers to a firm's global value chain being able to adjust to legislative or environmental challenges that arise in response to ESG issues or climate change[97]. Resilience can manifest as ESG risk assessments that plan for potential environmental challenges, shifting away from the reliance on non-renewable energies in favor of price-steady or price-diminishing options like solar and wind energy[98], and the flexibility to shift to different suppliers should existing relationships not meet the necessary standards.

For instance, an argument could be made both for and against the resilience of Apple's supply chain. While Apple has been publishing Supplier Responsibility Reports since 2007, it has also been contracting with FoxConn for final assembly since before

[96] As Patten demonstrated following the Valdez oil spill in 1989, oil companies operating in Alaska increased their voluntary environmental reporting from, on average, 0.6 pages in 1988 to 1.9 pages in 1989 following the spill (1992).

[97] Climate change challenges to supply chains can take many forms, from dwindling resources, to sporadic international regulations encouraging the use of renewable energy, to rising sea levels and logistical challenges in transportation. Risk analysis typically divides these into two categories, of the physical risks that include climate changes and the risks associated with the transition to a carbon neutral economy such as legislation and regulatory pressures.

[98] As renewable energies become more common, the price of access is likely to diminish over time, while non-renewables face cost-inhibitive regulations and taxes meant to steadily discourage their usage.

2000. FoxConn is well known for installing suicide nets following 17 suicides due to inhumane working conditions and impossible hours. Apple managed to distance itself from this controversy while continuing its relationship with FoxConn.

ESG Controversies can take many forms. The sheer global reach and impact upon daily lives exerted by technologies from smart watches to satellites have created opportunities for (intentional or otherwise) exploitation.[99]

The primary question of this section is to ask how significantly these ESG Controversies and ESG scores impact firm performance and resilience. This is particularly relevant to the tech sector as it contains many high-attention firms such as Google, Apple, and Microsoft, and the public nature of these firms means that both positive and negative ESG reports in mainstream media is more significantly impactful on firm performance than firms with less publicity. In fact, the aftermath of an ESG controversy can be increased investor and shareholder engagement with the affected firm, which can improve overall market value (Aouadi and Marsat 2016).

Firm reporting is influenced by a variety of industry- and country- specific factors, such as political exposure. Disclosures can be used to mitigate political costs in the event of a scandal, especially in environmentally sensitive industries (Lemon and Cahan 1997; Han and Wang 1998). An interesting phenomenon presented itself in the data collection for this project. When all firms were explored for accessible non-financial reporting dating back to 2005, only 21 firms remained out of the 142. Those

[99] In the digital realm of user privacy, wealthy western societies tend to dominate calls for increased transparency and accountability, while firms invest in goodwill projects in developing countries, such as Facebook's Free Basics initiative. Free Basics offered a so-called *walled garden* experience, with free internet access to a limited number of websites such as Facebook. After being banned in 2016 in India following civil society pressures concerned with net neutrality, the Free Basics program quietly expanded through 32 countries in Africa (Nothias 2020). Simultaneously celebrated as a step in the right direction for creating access to underserved areas, and criticized as digital colonization thinly veiled as aggressive marketing, the initiative has highlighted some unique challenges to strategic 'philanthropy'.

21 firms represented only two countries, the United States and Japan. This is likely due to the manufacturing-heavy histories and relatively open markets of both countries. As firms compete with one another in countries with accessible, flexible media and a clear motive to avoid further government regulation, it is in their best interest to engage with stakeholders as early as possible.

Figure 33 below represents the difference in ESG Controversy Scores between the two datasets, D21 and D142. It is important to note that ESG Controversy Scores are *deducted* from 100 rather than starting at zero like the other ESG metrics. This still means that a higher score is preferable as it indicates fewer negatively impacting controversies. D21, the subset of firms that had been consistently publishing CSR reports, demonstrated, on average, significantly more controversies than the larger dataset D142. This is likely due to several factors, such as the fact that D21 includes firms that are often in the public eye such as Apple, Intel, and Microsoft. These massive MNCs are held to higher standards than their lesser-known counterparts, especially when they publish reports talking about how environmentally friendly or socially responsible they are.

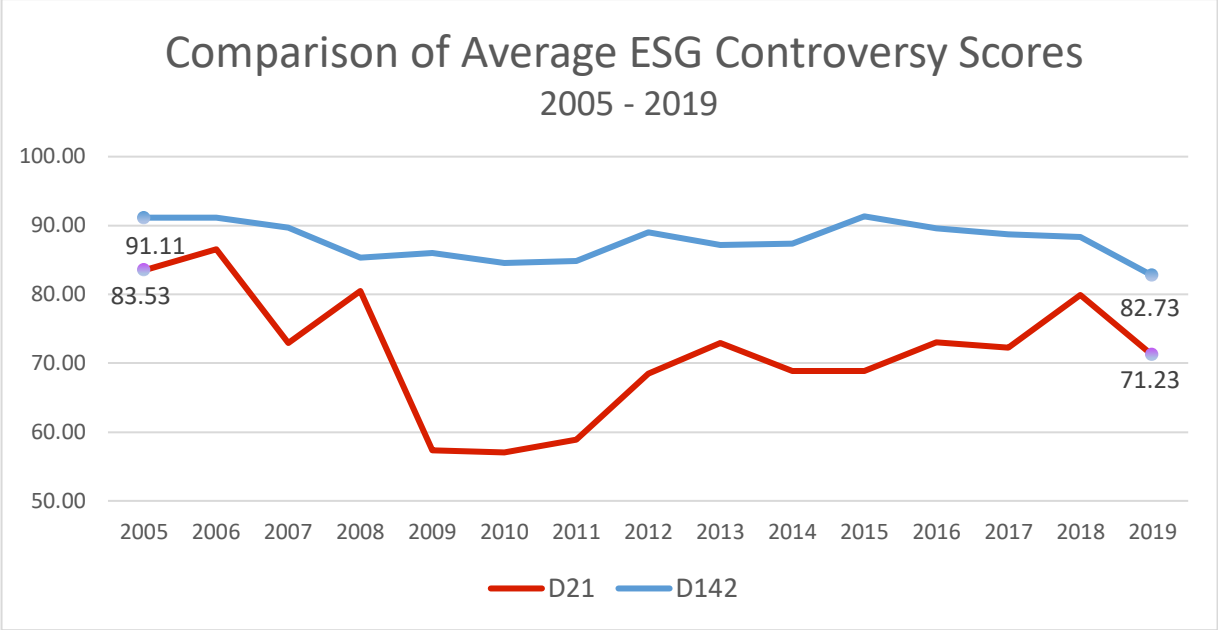


Figure 32

When examining the impact of ESG Controversies upon firm performance, findings differ. Some argue that CSR investment is only truly beneficial to firms with high public awareness, such as household names like Apple or Google, and as such ESG Controversies are only genuinely detrimental to these firms (Servaes and Tamayo 2013). Others find an interesting positive correlation between ESG Controversies and firm performance, perhaps furthering the adage of 'all press being good press', or merely the very human effect of not all good deeds going unpunished and vice versa[100] (Groening and Kanuri 2013; Aouadi and Marsat 2016). As Aouadi and Marsat found, when taken in conjunction with corporate social performance, controversies involving high-attention firms in countries of high press freedom were either harmless or value-enhancing. The reasoning is that these controversies flare up and draw

[100] Groening and Kanuri argue that within a firm, investor and stakeholder reactions to 'positive' or 'negative' events may be received with differing responses. For instance, in the event of a 'positive' CSR initiative, like a large charitable donation, some investors may applaud the strategic goodwill while others reject it as an unnecessary expenditure. In the event of a 'negative' CSR event, such as environmental damage, the costs of correction may outweigh the negative externalities to some investors. The balance of positive and negative perceptions are in constant flux and are subject to personal values.

attention to the positive ESG aspects of the firm, essentially turning negative attention into positive communication.

The first hurdle of this study was the impact of the Global Financial Crisis on the tech sector. As is evidenced in Figure 34 below, all firm performance metrics were deeply impacted by the GFC. In fact, the only time when all variables can fully reject the null hypothesis is during 2009, when firms were feeling the full effects of the crisis.

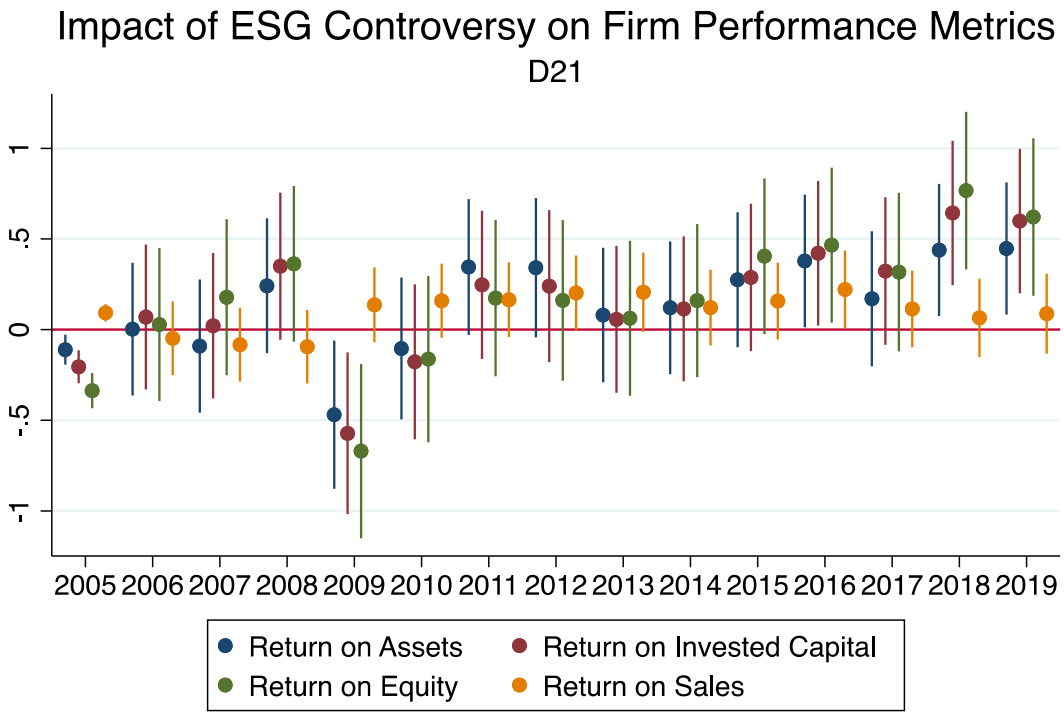


Figure 33

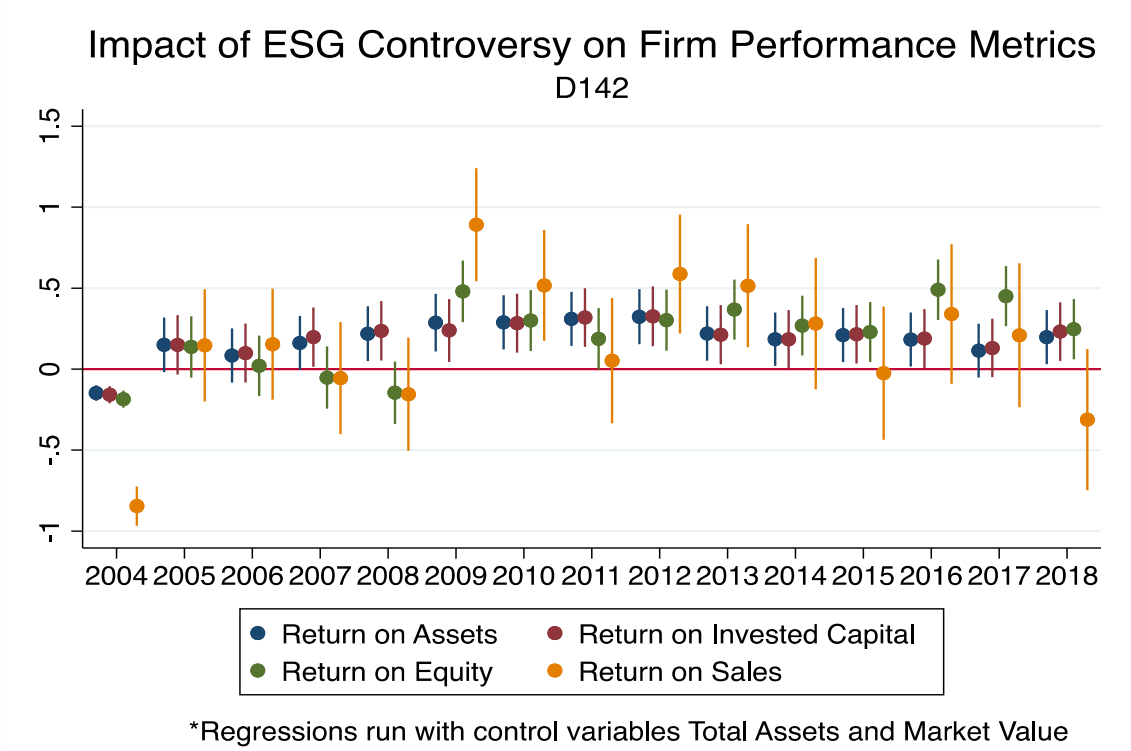


Figure 34

One major difference that stands out between the two datasets is the response to controversy by Return on Sales. The relationship is more positively significant in the larger dataset, D142, and significantly *lower,* yet less volatile, in the smaller dataset D21. This bodes well for firms in D21, as it means that their ROS is less impacted by controversies, suggesting that the reputationally mitigating effect of their social capital is softening the potential damage to sales figures following a controversy. However, for the larger industry sample D142, especially from 2013 onwards, ESG controversies have a significant impact on sales

As Figures 35 and 36 demonstrate below, the relationship between ESG pillars and Controversy scores are relatively consistent, with one major discrepancy: the firms in D21, which have a history of publishing CSR reports, are significantly *more* impacted on individual ESG pillars by controversies than the overall dataset D142. This supports the arguments of expectation violation theory, wherein firms are held to a higher

standard if they invest in presenting themselves as more ethically inclined, which manifests through the publication of CSR reports.

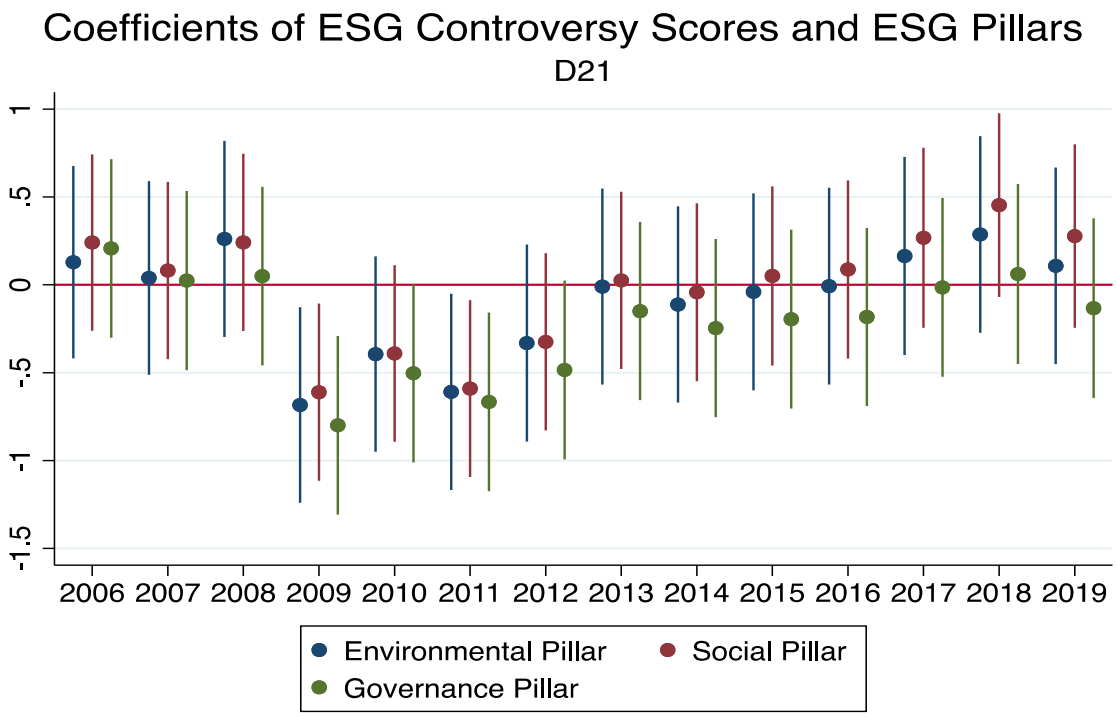


Figure 35

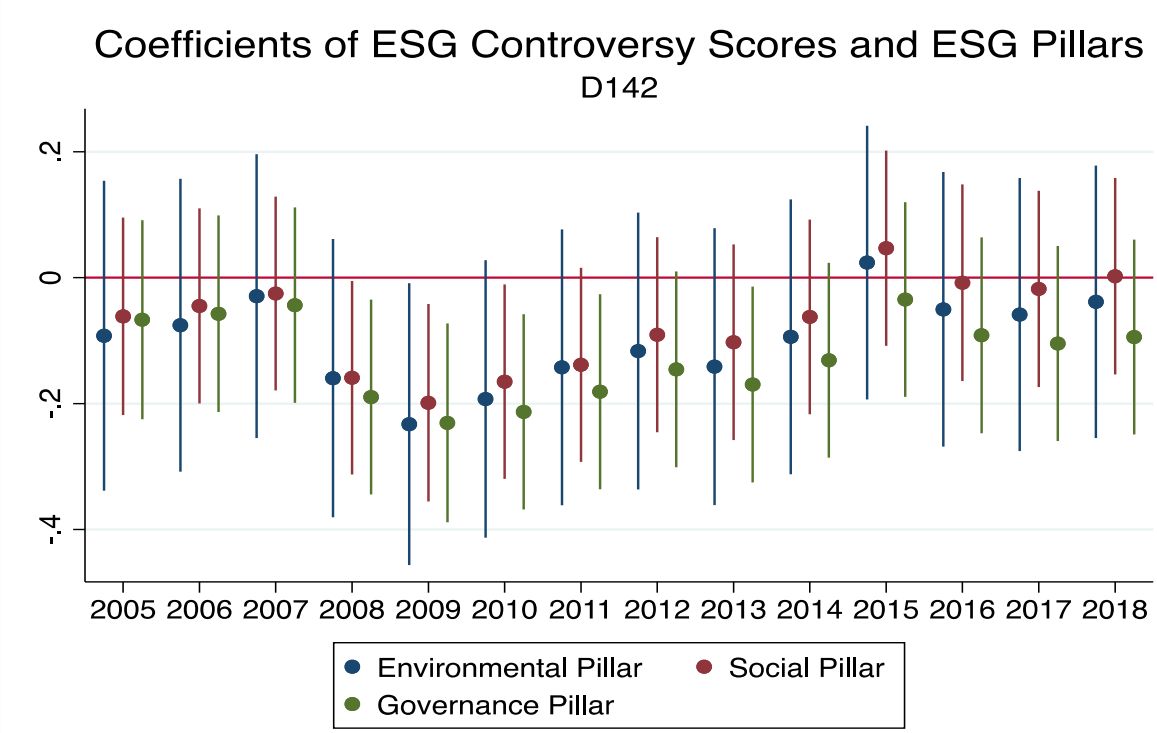


Figure 36

A study looking at a variety of CSR activities in Japan in and how they impact firm value found that the strongest association was with Occupational Health and Safety Management Systems (OHSMS) (Mitsuzuka, Ling, and Ohwada 2017). This is likely to contribute to the more dramatic significance of the social pillar in D21, as social controversies would be deemed more significant than governance or environmental ones in a culture that focuses on employee welfare to such an extent.

4.3 Discussion

Recently, an effort has been made to draw these separate standards and guidelines together, with many of the third party standards, such as GRI, publishing guidelines on how to incorporate the UN Sustainable Development Goals (SDGs) into a GRI framework (GRI 2021). However, as Gupta and Lebel point out, the intrinsic interconnectedness of the UN SDGs mean that the current approach of division by

industry leads to industry-specific adoptions of a limited number of UN SDGs, such as firms choosing to *only* advertise their commitment to SDG 13 (Climate Action) while not considering how it is connected to each of the 16 other SDGs (2020). These focuses tend to be oriented toward access (attaining minimum resource needs) instead of allocation (collective division of remaining resources), which fails to address deeply rooted structural inequality. The authors go on to use terms such as 'interdependencies' and connect the relationship between ESG performance and access to capital, both from a debt collector and equity investor standpoint, which emphasizes the multitude of impacts of this complex relationship.

In this same vein of unification, the VRF, CDSB, TCFD, and WEF will contribute their respective reporting standards and guidelines to the IFRS Foundation to produce the International Sustainability Standards Board (ISSB) in the interest of streamlining "…financially material sustainability issues" (SASB 2022: 2).

Further studies would do well to explore the country-specific divide between the US and Japan in this situation. As the two countries have led the world in high-tech industries and D21 was split between the two, CSR reporting in emerged in major tech firms in both countries at approximately the same time. This begs the question of causality, and if this concurrent development was part of the larger historical ties between the two countries of industrial development and innovation.

Overall, this study found a positive relationship with firm reporting in support of both good management theory and signaling theory. Interestingly, it found that in the case of the tech sector, the contents of the report appear less important than the existence of the reports themselves, as stakeholders such as consumers are looking more for a communicated investment into socially conscious behavior than an overwhelmingly long report. This is likely to shape the future of CSR communication, as investors seek detailed data available through integrated, mandated reporting while casual

consumers will seek out information from tweets, blog posts, and media articles. As the signaling nature of the report is beneficial, it is likely that these reports will continue to be published, largely in the interest of stakeholders such as investors and, by happy accident, academics.

Discussion and Conclusion

5.1 Summary of the Contributions of the Thesis

The hypotheses tested in this dissertation were designed to create a functional narrative as to the evolution, practical application, and strategic utilization of ESG. This dissertation was designed as separate empirical studies to accommodate the focus and methodological differences in each hypothesis, yet the overall findings are cohesive in that they present a solid support for the arguments of good management theory. It also serves to fill gaps in the literature by addressing the importance of time frame in empirical testing, as significant developments are lost when testing is data is aggregated over a significant time frame. Starting with the evolution of CSR into quantifiable ESG, then testing the impact of ESG on firm performance, and finally exploring how ESG may be beneficial in the event of a controversy provides a clear, in-depth analysis of the history, modern implementation, and potential future directions of ESG. In doing so, this dissertation manages to address several key topics in the larger ESG debate and contributes to the existing body of literature.

The first hypothesis, *how did the evolution and institutionalization of CSR lead to an increasing standardization of ESG?,* was demonstrated as CSR became quantified into ESG as influenced by international organizations and the financial sector, thus creating opportunities for strategic implementation that could be tested by academics and investors. This generated considerable interest in the concept of ESG and fueled the institutional isomorphism wherein firms adopted practices observed in other firms when deemed beneficial, as in the arguments that ESG is beneficial for firm performance.

This led into the second hypothesis, that asked *is ESG positively correlated with firm*

performance?, as with the increased focus on ESG came a wave of studies examining the impact of ESG on overall firm performance. In line with the Porter thesis, this study found that ESG is positively correlated with firm performance when it is a measure of good management and long-term strategic planning (ROA and ROIC). However, there is no demonstrable correlation when ESG is tested alongside short-term metrics that are heavily influenced by external factors (ROE and ROS). Taken in conjunction, these findings support the Porter theory of good management, while addressing a gap in the literature that fails to fully explain why certain firm performance metrics are not correlated with ESG. The innovative methodology that examined this hypothesis over a longer time frame rather than as an aggregate score allowed for a deeper analysis and revealed the importance of management and time frames.

This is further evidenced by the third hypothesis, which tested *is CSR reporting beneficial for controversy recovery and firm resilience?* Interestingly, it appears the publication of CSR reports is more impactful than the accessibility of the language, which contradicts findings of other authors such as Nazari et al (2017). The publication of such reports appears to generate significant social capital, creating a reputational buffer in the event of a controversy. It is important to note that in the process of generating a CSR report, the firm undergoes a process of self-audit and risk assessment, which contributed to stronger overall firm performance. This further supports the argument of good management, as a considerate manager is more likely to plan strategically for potential risks and to prepare the firm as best as possible against controversy.

The biggest impacts to tech firm performance have been the two major economy-wide hits of the GFC and the Dot Com Bubble. These two events shook the foundational structure, financial valuations, and public response to the entire sector, as the Covid-19 pandemic is currently doing. These events have forced major shifts to how the tech sector grows, interacts with stakeholders, and chooses to present itself.

Starting at the dawn of the tech sector boom with the idealistic renegade mentality that was essentially dominated by straight white men, to its modern focus on gender, ethnic, and other minority accessibility, the cultural evolution of this sector has been defined by constant challenges, simultaneous successes and failures, and global impact. As diversity slowly grows throughout the entire global value chain, from coding to product design to C-Suite leadership, the tech sector is forced to introspection regarding its culture, inclusivity, and accessibility.

The rising prevalence of IOT means that technologies will be further integrated into our daily lives, from our watches tracking heart rates in case of a heart attack to smart house tech optimizing energy usage to keep our homes warm. From the privileged position of a developed economy, data from every inch of our lives is being collected, quantified, marketed, and sold. Since it isn't a single-use product, data can be sold repeatedly to any party interested in marketing their products, tracking movements for GPS services, or gaining access to social media feeds to slip in political narratives.

The environmental impact from keeping ourselves plugged into to the newest technologies is massive. From the mining of rare earths and conflict minerals to the ecological burden of refining, manufacturing, and assembling, to the global transportation of parts and final products, to the relatively short lifespan of electronics, to their eventual discarding as e-waste. The consistent relationship between firm performance the Environmental Pillar demonstrates that these MNCs need to move forward with strategic awareness of their environmental impact, as it is consistently a major focus of activists, governments, and stakeholders all over the world.

This work contributes to the overall literature by analyzing the evolution of these global trends as they emerge. As CSR shifts in 2005 into ESG and evolves from a management theory into a measurable line item, the associated social theories

became institutionalized as well. The arguments of whether a firm has a responsibility to society or not became subsumed by the practical application of ESG implementation. Simply put, it is no longer a question of if a firm has a responsibility to society for its actions, but rather how a firm exercises its responsibility. Building upon this, the positive relationship between ESG metrics and firm performance metrics over a management-oriented long-term assessment, in conjunction with the findings that investment in CSR reporting bolsters resilience and dampens the impacts of controversies, leads to the conclusion that strategic ESG is a positive management tool for risk assessment and social capital. This work fits within the wider body of CSR literature while deepening the understanding of value over time and the evolving relationships involved.

5.2 What this means

The question of if a firm has any social responsibilities to the communities they operate in has grown into a question of how much, a debate that may never be resolved as societies and business environments continue to evolve. Impassioned arguments by idealists have shaped a lot of the ESG narrative, to its benefit. A firm is less likely to audit and change its entire global value chain without significant pressure, and even meeting somewhere in the middle is still positive development for both sides. However, while unrealistic idealism is good for pulling firms in the right direction, we can't realistically shut down all fossil fuel companies or proclaim the Metaverse a safe and inclusive space for all.

These changes take time, but there is significant evidence that we are moving in the right direction. More and more MNEs are tying executive compensation to ESG factors, which is shown to encourage more long-termism and strategic ESG planning (O'Connor, Harris, and Gosling 2021; Chouaibi, Rossi, and Zouari 2021). However, following the major uptake in ESG attention during the Covid-19 pandemic has been

increased scrutiny of the ESG landscape, including concerns over misguided fixations on particular elements of the ESG narrative that are limiting or quixotic. Essentially, there is concern that the different ESG rating agencies are inconsistent and biased (1in1000 and 2investinginitiative 2022), that so-called responsible investing or ESG funds are misleading in their supposed superiority (Demers et al. 2021). There are also the two conflicting concerns that the standardization of ESG metrics risks perpetuating obfuscation as aggregate ESG scores are misleading and can hide any manner of sins (Steffen 2021), while having a broad range of ESG rating agencies can deprive stakeholders of an effective means to compare firms across industries, allow for more strategic and selective firm reports, and greenwashing (Nayyar 2022).

The WEF is attempting to resolve these concerns through the establishment of the Stakeholder Capitalism Metrics, a four-pillared set of data points that are intended to transcend industry or region (WEF 2022). This can all factor into an increasingly common idea that we are approaching a kind of post-ESG world, wherein businesses are still being held to a higher standard through transparency and reporting, but that the rose colored glasses of the rise of ESG are taken off in favor of increased scrutiny and appreciation for complex situations (Fancy 2021), such as the current backlash against firms that have remained operational in Russia following its invasion of Ukraine (Tett 2022).

CSR investment and reporting has become commonplace, which would've been much to Friedman's chagrin. Especially in the tech sector, MNCs have accepted that their roles are much more political and social than they would've thought at the turn of the century. The impact this has on firm performance has been proved, disproved, and rendered inconclusive by an array of academic studies, yet firms continue to invest in social outreach, environmental reporting, and board diversification programs. Governments continue to implement laws setting gender diversity quotas, carbon emission caps, and parental leave requirements. Whether or not ESG is found to be

wholly responsible for firm performance is no longer the question, but rather how can it be best implemented to everyone's benefit?

5.3 Future Studies

Future studies would benefit from case studies of firms within GICS subsectors, such as semiconductors & semiconductor equipment or technology hardware. This would allow for more nuanced investigations of supply chain issues, comparative case studies of individual firms and events, as well as geopolitical considerations. While this dissertation took a macro approach to a complex issue, in-depth studies are invaluable to address unique aspects of firm performance and cultures.

Further studies can also build upon the unique relationship between gender or racial metrics alongside firm performance, reporting, and resilience. These two aspects of the social pillar are consistently important in the tech sector as it has a history of male-oriented whitewash and is regularly called out for being inhospitable and unwelcoming to women and people of color, not to mention members of the LGBTQIA+, certain religious, or disability communities. Numerous studies have found significant financial benefits to having a diverse management and board team, and it will be interesting to study the impacts that increased ESG reporting and diversified management have on firm performance in real-world case studies. Without diversity, specific group meets are not met by the simple fact that they are not recognized, as Sheryl Sandberg of Google detailed in her book, *Lean In*. She opens with an anecdote from 2004 about how she had to sprint (as well as a heavily pregnant woman with swollen feet can) across a parking garage to make it to a meeting because Google lacked designated parking spaces for pregnant employees. Afterwards, she waddled in (her words) to the office of Google founders Sergey Brin and Larry Page to insist on priority pregnancy parking, to which they readily agreed. It simply hadn't occurred to

them before (Sandberg 2012).

This work can also be expanded upon through in-depth analyses of the cultural landscapes of Japan and the US, to examine the factors that led to the early rise of reporting in these two high-tech countries. Cultural, institutional, and organizational differences may have contributed to the differences in reporting styles, but it is uniquely fascinating that CSR reporting rose up concurrently in two vastly different countries that shared a thriving, expanding high-tech innovative sector. The cultures within their tech sectors differ, which begs the question of if this is a demonstrably clear example of universal good management, or merely a coincidence?

Further, this study has helped lay the groundwork for future work to build off signaling theory wherein the readability of the reports is surprisingly unrelated to their impact. Analyses of the impact of CSR communication *beyond* reporting, in the form of social media or blogs, would diversify and lend insight to the study of corporate communication on the whole. In this context, the role of CSR reporting would stand as a snapshot in time that laid the foundation for future CSR communication to evolve organically.

5.4 Conclusion

This dissertation has been focused on the practical impacts of ESG on firm performance, controversy, and resilience. It has positioned itself within the literature by utilizing a different approach to ESG and firm performance testing by considering the time frame more closely than the aggregate findings, lending insight into why some metrics are positively correlated while others have no relationship. It has found that strategic, long-term planning is beneficial from both a financial and an ESG standpoint, as is further evidenced by the improved recovery from controversy and overall firm resilience. As such, this dissertation is well positioned to support

arguments of good management within the CSR literature.

As ESG continues this established trajectory toward integration and standardization, improved data collection will allow for more nuanced analysis. This dissertation may help serve as a launch point for a more holistic approach to ESG analysis that focuses on evolutionary influences and acknowledges the changing methodologies and ESG standards that influence implementation. Overall, it has found positive firm outcomes associated with ESG and argues in favor of good management theory and strategic ESG implementation.

For practical application, firms may build upon this analysis in crafting ESG plans that focus on short- and long-term goals, with the understanding that returns on this investment may take several years to appear on a balance sheet. In the current era of pro-ESG public sentiment and governmental regulation, it would be reasonable due diligence to utilize available ESG tools for risk analysis and strategic planning. The findings presented here fully support the value of a considerate ESG strategy for current financial performance and to insulate against excess damage in the event of a shock.

Overall, this dissertation has found positive long-term value to ESG investment, even as the concept of ESG undergoes a period of standardization or in the face of a controversy. These arguments have practical as well as academic value and can be built upon from either approach. This will ideally lead to future in-depth research further developing the methodologies and findings presented here.

References

Adams, C. A. (2002). "Internal organisational factors influencing corporate social and ethical reporting." Accounting, Auditing & Accountability Journal **15**: 223-250.

Al-Tuwaijri, S. A., et al. (2004). "The relations among environmental disclosure, environmental performance, and economic performance: a simultaneous equations approach." Accounting, Organizations and Society **29**: 447-471.

Alexander, G. J. and R. A. Buchholz (1978). "Corporate Social Responsibility and Stock Market Performance." The Academy of Management Journal **21**: 479 - 486.

APNews (1987) New Doll Thinks and Talks, Company Says.

Armstrong, C. S., et al. (2015). "Corporate governance, incentives, and tax avoidance." Journal of Accounting and Economics **60**(1): 1-17.

Arogyaswamy, B. (2020). "Big tech and societal sustainability: an ethical framework." AI & Society **35**: 829-840.

Atal, M. R. (2020). "The Janus faces of Silicon Valley." Review of International Political Economy: 1-15.

Aupperle, K. E., et al. (1985). "An Empirical Examination of the Relationship between Corporate Social Responsibility and Profitability." The Academy of Management Journal **28**: 446-463.

Bennedsen, M. and M. Stabile (2021). The Implications of the EU vs Apple Case.

Knowledge, Insead.

Berg, S. W. (2018) The human cost of an iPhone.

Bond, S. (2020) Apple Is The 1st American Company To Hit $2 Trillion Milestone. Business

Bouquet, C. and Y. Deutsch (2008). "The Impact of Corporate Social Performance on a Firm's Multinationality." Journal of Business Ethics **80**(Jul., 2008): 755-769.

Bowman, E. H. (1978). "Strategy, Annual Reports, and Alchemy." California Management Review **20**: 64-71.

Bragdon Jr, J. H. and J. A. T. Marlin (1972). "Is Pollution Profitable? Environmental Virtue and Reward: Must Stiffer Pollution Controls Hurt Profits?" Risk Management.

Bresnahan, T. (2004). Creative destruction in the PC industry. Conference on IT Innovation. Tokyo: 105-140.

Brogi, M. and V. Lagasio (2018). "Environmental, social, and governance and company profitability: Are financial intermediaries different?" Corporate Social Responsibility and Environmental Management **26**(3): 576-587.

Buolamwini, J. and T. Gebru (2018). Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification. Conference on Fairness, Accountability, and Transparency. S. A. Fredler and C. Wilson, Proceedings of Machine Learning Research. **81:** 1-15.

Campbell, J. T., et al. (2012). "Multinationals and corporate social responsibility in host

countries: Does distance matter?" Journal of International Business Studies **43**(January 2012): 84-106.

Capital, J. (2021). "2021 Overall Rankings." Retrieved 20-08-2021, from https://justcapital.com/rankings/.

CFI. "What is ROIC." Retrieved 05/06/2021, from https://corporatefinanceinstitute.com/resources/knowledge/finance/what-is-roic/.

Chong, K. (2017) Millenials and the Rising Demand for Corporate Social Responsibility.

Clancy, H. (2018) HP links $700 million in revenue to sustainability strategy.

Compact, U. G. (2004). Who Cares Wins: Connecting Financial Markets to a Changing World, United Nations and the Swiss Federal Department of Foreign Affairs.

Conca, J. (2021). Big Tech Companies Look to Clean Energy to Slake Their Enormous Thirst. Forbes. online.

Cowling, M., et al. (2021). "In the post-crisis world, did debt and equity markets respond differently to high-tech industries and innovative firms?" International Small Business Journal: Researching Entrepreneurship **39**: 247-288.

Crofts, P. and H. van Rijswijk (2020). "Negotiating 'Evil': Google, Project Maven and the Corporate Form." Law, Technology and Humans **2**: 75-90.

Davis, K. (1960). "Can Business Afford to Ignore Social Responsibilities?" California Management Review **2**(Spring): 70 - 76.

Davis, K. (1971). The Case for and Against Business Assumption of Social Responsibilities. Conference on Contemporary Challenges to American Business-Society Relationships. W. G. Scott. Los Angeles, California.

Doh, J. P., et al. (2015). "CSR and sustainability in emerging markets: Societal, institutional, and organizational influences." Organizational Dynamics **44**(2): 112-120.

Eccles, R. G., et al. (2020). "The Social Origins of ESG: An Analysis of Innovest and KLD." Organization & Environment **33**: 575-596.

Elkington, J. (1998). Cannibals With Forks: The Triple Bottom Line of 21st Century Business. BC, Canada, New Society Publishers

Fancy, T. (2021, 22-08-2021). "The Secret Diary of a 'Sustainable Investory' - Part 1." Retrieved 26-08-2021, from https://medium.com/@sosofancy/the-secret-diary-of-a-sustainable-investor-part-1-70b6987fa139.

Fawcett, S. E. and M. A. Waller (2014). "Supply Chain Game Changers—Mega, Nano, and Virtual Trends—And Forces That Impede Supply Chain Design (i.e., Building a Winning Team)." Journal of Business Logistics **35**: 157-164.

Forti, V., et al. (2020). The Global E-Waste Monitor 2020: Quantities, flows and the circular economy potential. Bonn/Geneva/Rotterdam, United Nations University (UNU)/United Nations Institute for Training and Research (UNITAR) – co-hosted SCYCLE Programme, International Telecommunication Union (ITU) & International Solid Waste Association (ISWA).

Freeman, R. E. (1983). "Managing the Strategic Challenge of Telecommunications." Columbia Journal of World Business: 8-18.

Friede, G., et al. (2015). "ESG and financial performance: aggregated evidence from more than 2000 empirical studies." Journal of Sustainable Finance & Investment **5**(4): 210-233.

Friedman, M. (1970). The Social Responsibility of Business is to Increase its Profits. The New York Times Magazine. New York, New York Times Magazine.

Gillespie, T. (2010). "The politics of 'platforms'." New Media & Society **12**(3): 347-364.

Gu, W., et al. (2015). "Quality design and environmental implications of green consumerism in remanufacturing." International Journal of Production Economics **162**: 55-69.

Halbritter, G. and G. Dorfleitner (2015). "The wages of social responsibility - where are they? A critical review of ESG Investing." Review of Financial Economics **26**: 25-35.

Hull, C. E. and S. Rothenberg (2008). "The Interactions of Corporate Social Performance with Innovation and Industry Differentiation." Strategic Management Journal **29**(July 2008): 781-789.

Jamali, D. (2010). "The CSR of MNC Subsidiaries in Developing Countries: Global, Local, Substantive or Diluted?" Journal of Business Ethics **93**(S2): 181-200.

Jeppesen, T., et al. (2002). "Environmental Regulations and New Plant Location Decisions: Evidence from a Meta-Analysis." Journal of Regional Science **42**: 19-49.

Julander, A., et al. (2014). "Formal recycling of e-waste leads to increased exposure to toxic metals: an occupational exposure study from Sweden." Environ Int **73**: 243-251.

Julian, S. D. and J. C. Ofori-Dankwa (2013). "Financial Resource Availability and Corporate Social Responsibility Expenditures in a Sub-Saharan Economy: The Institutional Difference Hypothesis." Strategic Management Journal **34**: 1314-1330.

Kellenberg, D. K. (2009). "An empirical investigation of the pollution haven effect with strategic environment and trade policy." Journal of International Economics **78**(2): 242-255.

Kelman, S. (1981). "Cost-Benefit Analysis: An Ethical Critique." Regulation **5**(33).

Kostova, T. and S. Zaheer (1999). "Organizational Legitimacy Under Conditions of Complexity: The Case of the Multinational Enterprise." The Academy of Management Review **Jan 1999**(1): 64-81.

Krause, R. (2021) Apple, Google Lead Tech Stock Buybacks As Financial Rebound In 2021. Technology

Lampert, M., et al. (2019). Global Rise in Environmental Concern. Trend Report, Glocalities.

Lay-Flurrie, J. (2020). "Looking Back at 10 Years of Learning at the Annual Ability Summit." Microsoft Accessibility Blog. Retrieved 27-07-2021, from https://blogs.microsoft.com/accessibility/ability-summit-2020/.

Lin, W. L., et al. (2019). "The causality direction of the corporate social responsibility – Corporate financial performance Nexus: Application of Panel Vector Autoregression approach." The North American Journal of Economics and Finance **48**: 401-418.

Lowry, R. and M. Peterson (2011). "Cost-Benefit Analysis and Non-Utilitarian Ethics." Politics, Philosophy, & Economics **11**: 258-279.

Marano, V., et al. (2016). "Home Country Institutions and the Internationalization-Performance Relationship." Journal of Management **42**(5): 1075-1110.

Margolis, J. D. and J. P. Walsh (2001). People and Profits? The Search for a Link Between a Company's Social and Financial Performance, Psychology Press.

Martínez-Ferrero, J. and J. V. Frías-Aceituno (2015). "Relationship Between Sustainable Development and Financial Performance: International Empirical Research." Business Strategy and the Environment **24**: 20-39.

Mazutis, D. D. and N. Slawinski (2015). "Reconnecting Business and Society: Perceptions of Authenticity in Corporate Social Responsibility." Journal of Business Ethics **131**(September 2015): 137-150.

McGuire, J., et al. (1988). "Corporate Social Responsibility and Firm Financial Performance." The Academy of Management Journal **31**: 854-872.

McPherson, S. (2018) 8 Corporate Social Responsibility (CSR) Trends to Look for in 2018.

McWilliams, A. and D. Siegel (2000). "CSR and Financial Performance: Correlation or Misspecification." Strategic Management Journal **21**: 603-609.

Medina, E. M. (2004). "Beyond the Ballot Box: Computer Science Education and Social Responsibility." The SIGCSE Bulletin **36**(Dec 2004): 7-10.

Meyerson-Knox, S. (2020) Microsoft Drops AnyVision.

Moskowitz, M. R. (1972). "Choosing Socially Responsible Stocks." Business & Society **10**: 71-75.

Muller, A. (2018). "When Does Corporate Social Performance Pay for International Firms?" Business & Society **59**(8): 1554-1588.

Narver, J. C. (1971). "Rational Management Responses to External Effects." Academy of Management Journal.

Nelling, E. and E. Webb (2008). "Corporate social responsibility and financial performance: the "virtuous circle" revisited." Review of Quantitative Finance and Accounting **32**(2): 197-209.

Nicas, J., et al. (2021) Censorship, Surveillance, and Profits: A Hard Bargain for Apple in China.

Nollet, J., et al. (2016). "Corporate social responsibility and financial performance: A non-linear and disaggregated approach." Economic Modelling **52**: 400-407.

O'Mahony, M. and M. Vecchi (2005). "Quantifying the Impact of ICT Capital on Output Growth: A Heterogeneous Dynamic Panel Approach." Economica **72**(Nov 2005): 615-633.

OECD. "Global Value Chains (GVCs)." Retrieved 20-09-2021, from https://www.oecd.org/sti/ind/global-value-chains.htm.

OECD (2001). The Well-Being of Nations: The Role of Human and Social Capital.

Education and Skills. Centre for Educational Research and Innovation, OECD.

Orlitzky, M. (2007). Doing Well by Doing Good: Objective Findings, Subjective Assumptions, or Selective Amplifications?, Paper presented at the Academy of Management Conference, Philadelphia.

Padgett, R. C. and J. I. Galan (2009). "The Effect of R&D Intensity on Corporate Social Responsibility." Journal of Business Ethics **93**(3): 407-418.

Pant, A. and J. Ramachandran (2012). "Legitimacy beyond borders: Indian software services firms in the United States, 1984 to 2004." Global Strategy Journal **2**(3): 224-243.

Peloza, J. (2009). "The Challenge of Measuring Financial Impacts From Investments in Corporate Social Performance." Journal of Management **35**(6): 1518-1541.

Perez, C. C. (2019). Invisible Women: Exposing Data Bias in a World Designed for Men. London, Chatto & Windus.

PhysOrg (2007) Shareholders Want a Greener Apple. Technology

Poell, T., et al. (2019). "Platformisation." Internet Policy Review **8**(4).

Porter, M. E. and C. v. d. Linde (1995). "Toward a New Conception of the Environment-Competitiveness Relationship." Journal of Economic Perspectives **9**: 97-118.

Porter, M. E., et al. (2019) Where ESG Fails. Opinion

Post, C. and K. Byron (2015). "Women on Boards and Firm Financial Performance: A

Meta-Analysis." Academy of Management Journal **58**(5): 1546-1571.

Prahalad, C. K. and G. Hamel (1994). "Strategy as a Field of Study: Why Search for a New Paradigm?" Strategic Management Journal **15**(Special Issue: Strategy: Search for New Paradigms (Summer, 1994)): 5 - 16.

Prior, D., et al. (2008). "Are Socially Responsible Managers Really Ethical? Exploring the Relationship Between Earnings Management and Corporate Social Responsibility." Corporate Governance: An International Review **16**(3): 160-177.

Reuters (2021, 06-07-2021). "Technology Overview." Retrieved 07-07-2021, from https://www.reuters.com/assets/curtainMainContentLoader?view=RSM-US-Curtain-MainContent-Sector-Technology.

Reuters, T. (2016). ROIC: Tax and Accounting New Hot Topic. Checkpoint Learning, Thomson Reuters.

Richardson, H. (2015) Relatively Low Leverage Gives Tech Companies Leverage. Market Realist

Rodrigo, P., et al. (2016). "Does it really pay to be good, everywhere? A first step to understand the corporate social and financial performance link in Latin American controversial industries." Business Ethics: A European Review **25**(3): 286-309.

Ross, J. (2021, 10-06-2021). "The Biggest Companies in the World in 2021." Markets. Retrieved 27-07-2021, from https://www.visualcapitalist.com/the-biggest-companies-in-the-world-in-2021/.

Ruf, B. M., et al. (2001). "An Empirical Investigation of the Relationship between

Change in Corporate Social Performance and FInancial Performance: A Stakeholder Theory Perspective." Journal of Business Ethics 32: 143-156.

Saunders, A. and E. Brynjolfsson (2016). "Valuing Information Technology Related Intangible Assets." MIS Quarterly 40(March 2016): 83-110.

Scholtens, B. (2008). "A note on the interaction between corporate social responsibility and financial performance." Ecological Economics 68(1-2): 46-55.

Scholtens, B. and F.-C. Kang (2013). "Corporate Social Responsibility and Earnings Management: Evidence from Asian Economies." Corporate Social Responsibility and Environmental Management 20: 95-112.

Schroeder, P. (2000, July 2000). "A Brief History of Microsoft and Accessibility." Access Issues. Retrieved 27-07-2021, from https://www.afb.org/aw/1/4/16165.

Schumpeter, J. (1976). Capitalism, Socialism, and Democracy. London, Routledge.

SEC (2021). "Reconciliation of Non-GAAP Financial Measures - Return on Invested Capital." Retrieved 13-09-2021.

Selyukh, A. (2018) Apple Becomes World's 1st Private-Sector Company Worth $1 Trillion. All Things Considered

Sethi, D. and W. Judge (2009). "Reappraising liabilities of foreignness within an integrated perspective of the costs and benefits of doing business abroad." International Business Review 18(4): 404-416.

Sharfman, M. P. and C. S. Fernando (2008). "Environmental risk management and the

cost of capital." Strategic Management Journal **29**(6): 569-592.

Sheffi, Y. (2015). The Power of Reslience: How the Best Companies Manage the Unexpected, MIT Press.

Shiller, R. J. (2017). "Narrative Economics." The American Economic Review **107**(April 2017): 967-1004.

Simonite, T. (2020) Behind the Paper That Led to a Google Researcher's Firing. Business

Spicer, B. H. (1978). "Investors, Corporate Social Performance, and Information Disclosure: An Empirical Study." The Accounting Review **53**(Jan 1978): 94-111.

Sreenivasan, H. and K. Conger (2018) Amid Pressure from Employees, Google drops Pentagon's Project Maven Account. PBS NewsHour

Suchman, M. C. (1995). "Managing Legitimacy: Strategic and Institutional Approaches." Academy of Management Review **20**: 571-610.

Thierer, A. (2011) Tech Titans and Creative Destruction. Opinions

Ullmann, A. A. (1985). "Data In Search of a Theory: A Critical Examination of the Relationships among Social Performance, Social Disclosure, and Economic Performance of U. S. Firms." The Academy of Management Review **10**(3): 540-557.

van Berkel, A., et al. (2020). The Energy Transition of the IT Sector: Market Forecast and Opportunities. Executive Summary, Lux Research.

Van Dijck, J. (2020). "Seeing the forest for the trees: Visualizing platformization and its governance." New Media & Society.

Vartiak, L. (2016). "CSR Reporting of Companies on a Global Scale." Procedia Economics and Finance **39**: 176-183.

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

Wakabayashi, D. and S. Shane (2018) Google Will Not Renew Pentagon Contract That Upset Employees.

Walch, K. (2019) The Growth of AI Adoption in Law Enforcement. Cognitive World

West, J. (2018). Getting Better Value Out of Global Value Chains. Asian Century… on a Knife-edge**:** 91-123.

Xu, J. and F. Liu (2021). "Nexus Between Intellectual Capital and Financial Performance: An Investigation of Chinese Manufacturing Industry." Journal of Business Economics and Management **22**: 217-235.

Yamaguchi, S. and C. G. Bouyssou (2020). OECD Workshop on International Trade and Circular Economy. Joint Working Party on Trade and Environment. Paris, OECD.

Yu, S.-H. (2013). "Social capital, absorptive capability, and firm innovation." Technological Forecasting and Social Change **80**(7): 1261-1270.

Akerlof, G. A. (1980). "A Theory of Social Custom, of Which Unemployment May be One Consequence." The Quarterly Journal of Economics **94**(Jun 1980): 749-775.

Alsop, R. J. (2004). "Corporate Reputation: Anything but superficial - the deep but fragile nature of corporate reputation." Journal of Business Strategy **25**: 21-29.

Amatulli, C., et al. (2018). "Consumers' perceptions of luxury brands' CSR initiatives: An investigation of the role of status and conspicuous consumption." Journal of Cleaner Production **194**: 277-287.

Aouadi, A. and S. Marsat (2016). "Do ESG Controversies Matter for Firm Value? Evidence from International Data." Journal of Business Ethics **151**(4): 1027-1047.

Barnett, P. (2015). "If What Gets Measured Gets Changed, Measuring the Wrong Thing Matters." Corporate Finance Review(January/February 2015).

Berg, F., et al. (2019). Aggregate Confusion: The Divergence of ESG Ratings MIT Sloan School Working Paper, MIT Management Sloan School.

Borrett, A. (2021) AI is tackling the lack of transparency in ESG investing. AI

Borrett, A. (2021) 'ESG tech' is helping companies achieve data-driven sustainability reporting.

Brammer, S., et al. (2014). "Corporate Social Responsibility, Employee Organizational Identification, and Creative Effort." Group & Organization Management **40**(3): 323-352.

Capriotti, P. and A. Moreno (2007). "Communicating corporate responsibility through corporate web sites in Spain." Corporate Communications: An International Journal **12**(3): 221-237.

Castilla, E. J. (2015). "Accounting for the Gap: A Firm Study Manipulating Organizational Accountability and Transparency in Pay Decisions." Organization Science **26**(2): 311-333.

Cheng, B., et al. (2014). "Corporate social responsibility and access to finance." Strategic Management Journal **35**(1): 1-23.

Choi, B. and S. La (2013). "The impact of corporate social responsibility (CSR) and customer trust on the restoration of loyalty after service failure and recovery." Journal of Services Marketing **27**(3): 223-233.

Courtis, J. K. (2004). "Corporate report obfuscation: artefact or phenomenon?" The British Accounting Review **36**(3): 291-312.

Crilly, D., et al. (2016). "Do-no-harm versus do-good social responsibility: Attributional thinking and the liability of foreignness." Strategic Management Journal **37**(7): 1316-1329.

Curley, D. (2008). "Interoperability and Other Issues at the IP-Anti-trust Interface: The EU Microsoft Case." The Journal of World Intellectual Property **11**: 296-320.

Dash, A. K. (2012). "Media impact on corporate governance in India: a research agenda." Corporate Governance: The International Journal of Business in Society **12**(1): 89-100.

de Jong, M. D. T. and M. van der Meer (2015). "How Does It Fit? Exploring the Congruence Between Organizations and Their Corporate Social Responsibility (CSR) Activities." Journal of Business Ethics **143**(1): 71-83.

Dell (2000). Dell Environmental Progress Report 1999-2000. Directly Connected. USA, Dell Computer Corporation.

Derevianko, O. (2019). "Reputation stability vs anti-crisis sustainability: under what circumstances will innovations, media activities and CSR be in higher demand?" Oeconomia Copernicana **10**(3): 511-536.

DiMaggio, P. J. and W. W. Powell (1983). "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." American Sociological Review **48**(Apr 1983): 147-160.

Doorley, J. and H. F. Garcia (2015). Reputation Management. The Key to Successful Public Relations and Corporate Communication. New York and London, Routledge.

Doyle, T. M. (2018). Ratings That Don't Rate: The Subjective World of ESG Rating Agencies, American Council for Capital Formation. **July 2018**.

Duchin, R., et al. (2010). "Costly external finance, corporate investment, and the subprime mortgage credit crisis." Journal of Financial Economics **97**(3): 418-435.

EC. "Social Enterprise." Retrieved 01-08-2021, from https://ec.europa.eu/growth/sectors/social-economy/enterprises_en.

Escrig-Olmedo, E., et al. (2013). "Lights and shadows on sustainability rating scoring." Review of Managerial Science **8**(4): 559-574.

Etter, M., et al. (2016). "Measuring Organizational Legitimacy in Social Media: Assessing Citizens' Judgments With Sentiment Analysis." Business & Society **57**(1): 60-

97.

Fieseler, C., et al. (2010). "Corporate Social Responsibility in the Blogosphere." Journal of Business Ethics **91**(Feb 2010): 599-614.

Friedman, M. (1970). The Social Responsibility of Business is to Increase its Profits. The New York Times Magazine. New York, New York Times Magazine.

Fuentes-George, K. (2016). Between Preservation and Exploitation.

Garcia-Feijóo, L. and J. R. Wingender Jr (2007). "Y2K: Myth or Reality?" Quarterly Journal of Business and Economics **46**(3): 27-44.

Gazizova, I., et al. (2019). Corporate Social Responsibility and Financial Reporting Quality: Evidence from CSR-Disasters**:** 70.

Ghaffary, S. and J. Del Rey (2020) The Big Tech Antitrust report has one big conclusion: Amazon, Apple, Facebook, and Google are anti-competitive.

Goldfarb, A. and C. Tucker (2019). "Digital Economics." Journal of Economic Literature **57**(1): 3-43.

Gomez, L. M. and R. Chalmeta (2011). "Corporate responsibility in U.S. corporate websites: A pilot study." Public Relations Review **37**(1): 93-95.

Gray, B. (2001). "Competitor complaints in anti-trust enforcement: of Microsoft and mergers." IEA Economic Affairs(Sept 1990): 38-43.

GRI. "Sector Program." Retrieved 02-08-2021, from

https://www.globalreporting.org/standards/sector-program/.

GRI (2021). Analysis of the Goals and Targets. Business Reporting on the SDGs, GRI & UNGC.

Groening, C. and V. K. Kanuri (2013). "Investor reaction to positive and negative corporate social events." Journal of Business Research 66(10): 1852-1860.

Guay, T., et al. (2004). "Non-Governmental Organizations, Shareholder Activism, and Socially Responsible Investments: Ethical, Strategic, and Governance Implications." Journal of Business Ethics 52(Special Issue on Ethical Investment and Corporate Social Responsibility (Jun 2004)): 125-139.

Gupta, J. and L. Lebel (2020). "Access and allocation in earth system governance: lessons learnt in the context of the Sustainable Development Goals." International Environmental Agreements: Politics, Law and Economics 20(2): 393-410.

Han, J. C. Y. and S.-W. Wang (1998). "Political Costs and Earnings Management of Oil Companies during the 1990 Persian Gulf Crisis." The Accounting Review 73(Jan 1998): 103-117.

Heflin, F. and D. Wallace (2017). "The BP Oil Spill: Shareholder Wealth Effects and Environmental Disclosures." Journal of Business Finance & Accounting 44(3-4): 337-374.

Helm, S. and J. Tolsdorf (2013). "How Does Corporate Reputation Affect Customer Loyalty in a Corporate Crisis?" Journal of Contingencies and Crisis Management 21(3): 144-152.

Hong, H. and M. Kacperczyk (2009). "The price of sin: The effects of social norms on markets." Journal of Financial Economics **93**(1): 15-36.

Husted, B. W. and J. d. J. Salazar (2006). "Taking Friedman Seriously: Maximizing Profits and Social Performance." Journal of Management Studies **43**(January 2006): 75-91.

Intel (2001). Global Citizenship Report 2001: Vision & Values. USA, Intel.

Kiambi, D. M. and A. Shafer (2015). "Corporate Crisis Communication: Examining the Interplay of Reputation and Crisis Response Strategies." Mass Communication and Society **19**(2): 127-148.

Kim, S.-Y. and H. Park (2011). "Corporate Social Responsibility as an Organizational Attractiveness for Prospective Public Relations Practitioners." Journal of Business Ethics **103**(November 2011): 639-653.

Kim, Y. (2014). "Strategic communication of corporate social responsibility (CSR): Effects of stated motives and corporate reputation on stakeholder responses." Public Relations Review **40**(5): 838-840.

KPMG (2020). The ESG Imperative for Technology Companies, KPMG: 1 - 4.

Laufer, W. S. and S. P. Sethi (2006). "Illusions of compliance and governance." Corporate Governance: The International Journal of Business in Society **6**(3): 239-249.

Lemon, A. J. and S. F. Cahan (1997). "Environmental Legislation and Environmental Disclosures: Some Evidence from New Zealand." Asian Review of Accounting **5**: 78-105.

Lev, B., et al. (2009). "Is doing good good for you? how corporate charitable contributions enhance revenue growth." Strategic Management Journal: n/a-n/a.

Lin, C.-H., et al. (2009). "The impact of corporate social responsibility on financial performance: Evidence from business in Taiwan." Technology in Society **31**(1): 56-63.

Lin, C.-P., et al. (2011). "Understanding Purchase Intention During Product-Harm Crises: Moderating Effects of Perceived Corporate Ability and Corporate Social Responsibility." Journal of Business Ethics **102**(September 2011): 455-471.

Lin-Hi, N. and I. Blumberg (2016). "The Link Between (Not) Practicing CSR and Corporate Reputation: Psychological Foundations and Managerial Implications." Journal of Business Ethics **150**(1): 185-198.

Lins, K. V., et al. (2017). "Social Capital, Trust, and Firm Performance: The Value of Corporate Social Responsibility during the Financial Crisis." The Journal of Finance **72**(4): 1785-1824.

Mahoney, L. S., et al. (2013). "A research note on standalone corporate social responsibility reports: Signaling or greenwashing?" Critical Perspectives on Accounting **24**(4-5): 350-359.

Maignan, I. and O. C. Ferrell (2001). "Corporate citizenship as a marketing instrument - Concepts, evidence and research directions." European Journal of Marketing **35**(3/4): 457-484.

Margolis, J. D., et al. (2009). "Does it Pay to Be Good...And Does it Matter? A Meta-Analysis of the Relationship between Corporate Social and Financial Performance."

SSRN Electronic Journal.

Marlin, J. T. and A. Marlin (2003). "A Brief History of Social Reporting." Business Respect **51**.

Matos, P. (2020). ESG and Responsible Institutional Investing Around the World: A Critical Review, CFA Institute Research Foundation.

Mintzberg, H. (1987). "The Strategy Concept I: Five Ps for Strategy." California Management Review **30**: 11-24.

Mitsuzuka, K., et al. (2017). Analysis of CSR activities Affecting Corporate Value Using Machine Learning. Proceedings of the 9th International Conference on Machine Learning and Computing**:** 11-14.

Muller, A. (2018). "When Does Corporate Social Performance Pay for International Firms?" Business & Society **59**(8): 1554-1588.

Muller, A. and R. Kräussl (2011). "Doing Good Deeds in Times of Need: A Strategic Perspective on Corporate Disaster Donations." Strategic Management Journal **32**(September 2011): 911-929.

Nazari, J. A., et al. (2017). "Assessing social and environmental performance through narrative complexity in CSR reports." Journal of Contemporary Accounting & Economics **13**(2): 166-178.

Newman, R., et al. (2016). "Web 2.0—The past and the future." International Journal of Information Management **36**(4): 591-598.

Nothias, T. (2020). "Access Granted: Facebook's Free Basics in Africa." Media, Culture & Society **42**(Special Issue: Social Media and Democracy in Africa): 329-348.

O'Reilly, T. (2005). "What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software." Retrieved 07-01-2022, from https://www.oreilly.com/pub/a//web2/archive/what-is-web-20.html.

Paredes-Gazquez, J. D., et al. (2016). "Measuring corporate social responsibility using composite indices: Mission impossible? The case of the electricity utility industry." Revista de Contabilidad **19**(1): 142-153.

Paruolo, P., et al. (2013). "Ratings and Rankings: Voodoo or Science?" Journal of the Royal Statistical Society **Series A**(118): 265-286.

Patten, D. M. (1992). "Intra-Industry Environmental Disclosures in Response to the Alaskan Oil Spill: A Note on Legitimacy Theory." Accounting, Organizations and Society **17**: 471-475.

Pink, D. H. (2011). Drive: The Surprising Truth About What Motivates Us. Edinburgh, Canongate Books.

Romer, D. (1984). "The Theory of Social Custom: A Modification and Some Extensions." The Quarterly Journal of Economics **99**(Nov 1984): 717-727.

Romm, J. (2002). "The internet and the new energy economy." Resources Conservation & Recycling **36**: 197-210.

Rudkin, B., et al. (2019). "Hide-and-seek in corporate disclosure: evidence from negative corporate incidents." Corporate Governance: The International Journal of

Business in Society **19**(1): 158-175.

Salvati, L. and M. Zitti (2009). "Substitutability and Weighting of Ecological and Economic Indicators: Exploring the importance of various components of a synthetic index." Ecological Economics(68): 1093-1099.

Schmitt-Grohé, S. and M. Uribe (1999). "Y2K*." Review of Economic Dynamics **2**(4): 850-856.

Seele, P. and I. Lock (2014). "Instrumental and/or Deliberative? A Typology of CSR Communication Tools." Journal of Business Ethics **131**(2): 401-414.

Servaes, H. and A. N. E. Tamayo (2013). "The Impact of Corporate Social Responsibility on Firm Value: The Role of Customer Awareness." Management Science **59**: 1045-1061.

Shiu, Y.-M. and S.-L. Yang (2017). "Does engagement in corporate social responsibility provide strategic insurance-like effects?" Strategic Management Journal **38**(2): 455-470.

Suchman, M. C. (1995). "Managing Legitimacy: Strategic and Institutional Approaches." Academy of Management Review **20**: 571-610.

Tett, G. (2020) Big Four Accounting Firms Unveil ESG Reporting Standards. ESG Investing

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

Weber, M. (1968). Economy and Society: An Outline of Interpretive Sociology. New York, Bedminster Press.

Yusoff, H., et al. (2013). "The Influence of CSR Disclosure Structure on Corporate Financial Performance: Evidence from Stakeholders' Perspectives." Procedia Economics and Finance **7**: 213-220.

Zahller, K. A., et al. (2015). "Using CSR Disclosure Quality to Develop Social Resilience to Exogenous Shocks: A Test of Investor Perceptions." Behavioral Research in Accounting **27**(2): 155-177.

Zygliodopoulos, S. C. (2003). "The Issue Life-Cycle: Implicaitons for Reputation for Social Performance and Organizational Legitimacy." Corporate Reputation Review **6**: 70-81.

Bibliography

1in1000, and 2investinginitiative. 2022. "Do we speak the same language? A markey survey on the future of ESG ratings." In, edited by What should ESG ratings measure in theory and what do they measure in practice? : 2investinginitiative.

Abbott, Walter F, and Joseph R Monsen. 1979. 'On the Measurement of Corporate Social Responsibility: Self-Reported Disclosures as a Method of Measuring Corporate Social Involvement', *Academy of Management Journal*, 22: 501-15.

Abrams, Frank W. 1951. 'Management's Responsibilities in a Complex World', *Harvard Business Review*, XXIX: 29-34.

Achabou, Mohamed Akli. 2020. 'The effect of perceived CSR effort on consumer brand preference in the clothing and footwear sector', *European Business Review*, 32: 317-47.

Adams, Carol A. 2002. 'Internal organisational factors
influencing corporate social
and ethical reporting', *Accounting, Auditing & Accountability Journal*, 15: 223-50.

Adascalitei, Simona. 2015. 'Measuring and Modeling Volatility Using High Frequency Data – Does Corporate Social Responsibility Make Any Difference?', *Procedia Economics and Finance*, 20: 1-7.

Adeyeye, Adefolake O. 2012. *Corporate Social Responsibility of Multinational Corporations in Developing Countries: Perspectives on Anti-Corruption* (Cambridge University Press).

Admati, Anat R. 2017. 'A Skeptical View of Financialized Corporate Governance', *Journal of Economic Perspectives*, 31: 131-50.

Aggarwal, Rajesh. 2003. 'Executive Compensation and Corporate Controversy', *Vermont Law Review*, 27: 849-70.
Ahmed, Rafiuddin, and Rafiqul Bhuyan. 2020. 'Capital Structure and Firm Performance in Australian Service Sector Firms: A Panel Data Analysis', *Journal of Risk and Financial Management*, 13.
Akben Selcuk, Elif, and Halil Kiymaz. 2017. 'Corporate Social Responsibility and Firm Performance: Evidence from an Emerging Market', *Accounting and Finance Research*, 6.
Akerlof, George A. 1980. 'A Theory of Social Custom, of Which Unemployment May be One Consequence', *The Quarterly Journal of Economics*, 94: 749-75.
Akerlof, George A., and Rachel E. Kranton. 2005. 'Identity and the Economics of Organizations', *The Journal of Economic Perspectives*, 19: 9 - 32.
Akhtaruzzaman, M., S. Boubaker, and Z. Umar. 2022. 'COVID-19 media coverage and ESG leader indices', *Financ Res Lett*, 45: 102170.
Al-Tuwaijri, Sulaiman A., Theodore E. Christensen, and K.E. Hughes II. 2004. 'The relations among environmental disclosure, environmental performance, and economic performance: a simultaneous equations approach', *Accounting, Organizations and Society*, 29: 447-71.
Alareeni, Bahaaeddin Ahmed, and Allam Hamdan. 2020. 'ESG impact on performance of US S&P 500-listed firms', *Corporate Governance: The International Journal of Business in Society*, 20: 1409-28.
Alchian, Armen A, and Harold Demsetz. 1972. 'Production, Information Costs, and Economic Organization', *The American Economic Review*, 62: 777-95.
Aldag, Ramon J, and Kathryn M Bartol. 1978. 'Empirical Studies of Corporate Social Performance and Policy: A Survey of Problems and Results', *Research in Corporate Social Performance and Policy*, 1: 164-99.
Alegria, Sharla N. 2020. 'What do we mean by broadening participation? Race, inequality, and diversity in tech work', *Sociology Compass*, 14.
Alexander, Gordon J, and Rogene A Buchholz. 1978. 'Corporate Social Responsibility and Stock Market Performance', *The Academy of Management Journal*, 21: 479 - 86.
Allouche, José, and Patrice Laroche. 2006. 'The Relationship Between Corporate Social Responsibility and Corporate Financial Performance: A Survey'.
Alsop, Ronald J. 2004. 'Corporate Reputation: Anything but superficial - the deep but fragile nature of corporate reputation', *Journal of Business Strategy*, 25: 21-29.
Amatulli, Cesare, Matteo De Angelis, Daniel Korschun, and Simona Romani. 2018. 'Consumers' perceptions of luxury brands' CSR initiatives: An investigation of the role of status and conspicuous consumption', *Journal of Cleaner Production*, 194: 277-87.
Amel-Zadeh, Amir, and George Serafeim. 2018. 'Why and How Investors Use ESG Information: Evidence from a Global Survey', *Financial Analysts Journal*, 74: 87-103.
Angwin, Julia, Jeff Larson, Surya Mattu, and Lauren Kirchner. 2016. ProPublica.
Aouadi, Amal, and Sylvain Marsat. 2016. 'Do ESG Controversies Matter for Firm Value? Evidence from International Data', *Journal of Business Ethics*, 151: 1027-47.
APNews. 1987. "New Doll Thinks and Talks, Company Says." In.: Associated Press News.
Armstrong, Christopher S., Jennifer L. Blouin, Alan D. Jagolinzer, and David F. Larcker. 2015. 'Corporate governance, incentives, and tax avoidance', *Journal of Accounting and Economics*, 60: 1-17.
Arogyaswamy, Bernard. 2020. 'Big tech and societal sustainability: an ethical framework', *AI &*

Society, 35: 829-40.
Assaf, A. George, Alexander Josiassen, Jin Sun Ahn, and Anna S. Mattila. 2017. 'Advertising spending, firm performance, and the moderating impact of CSR', *Tourism Economics*, 23: 1484-95.
Atal, Maha Rafi. 2020. 'The Janus faces of Silicon Valley', *Review of International Political Economy*: 1-15.
Aupperle, Kenneth E, Archie B. Carroll, and John D Hatfield. 1985. 'An Empirical Examination of the Relationship between Corporate Social Responsibility and Profitability', *The Academy of Management Journal*, 28: 446-63.
Badulescu, Alina, Daniel Badulescu, Tomina Saveanu, and Roxana Hatos. 2018. 'The Relationship between Firm Size and Age, and Its Social Responsibility Actions—Focus on a Developing Country (Romania)', *Sustainability*, 10.
Barauskaite, Gerda, and Dalia Streimikiene. 2020. 'Corporate social responsibility and financial performance of companies: The puzzle of concepts, definitions and assessment methods', *Corporate Social Responsibility and Environmental Management*, 28: 278-87.
Barkway, Will. 2021. 'Without a strong company culture, your ESG strategy is set up to fail', PwC, Accessed 28/04/2021. https://www.pwc.co.uk/services/human-resource-services/insights/without-strong-company-culture-esg-strategy-fails.html.
Barnett, Michael L, and Robert M Salomon. 2012. 'Does it pay to be 'really' good? Addressing the shape of the relationship between social and financial performance', *Strategic Management Journal*, 33: 1304-20.
Barnett, Paul. 2015. 'If What Gets Measured Gets Changed, Measuring the Wrong Thing Matters', *Corporate Finance Review*.
Bartlett, Christopher A, and Paul W Beamish. 2018. *Transnational Management: Text and cases in cross-border management* (Cambridge University Press: Cambridge, United Kingdom).
Bebbington, Jan, Carlos Larrinaga, and Jose M. Moneva. 2008. 'Corporate social reporting and reputation risk management', *Accounting, Auditing & Accountability Journal*, 21: 337-61.
Becker-Olsen, Karen L., B. Andrew Cudmore, and Ronald Paul Hill. 2006. 'The impact of perceived corporate social responsibility on consumer behavior', *Journal of Business Research*, 59: 46-53.
Benassi, David. 2010. 'Father of the Welfare State? Beveridge and the emergence of the welfare state', *Sociologica*, 3.
Benjamin, Ruha. 2019. *Race After Technology: Abolitionist tools for the new Jim code* (Polity: Oxford, England).
Bennedsen, Morten, and Mark Stabile. 2021. "The Implications of the EU vs Apple Case." In *Knowledge*. Insead.
Berg, Florian, Kornelia Fabisik, and Zacharias Sautner. 2021. "Is History Repeating Itself? The (Un)Predictable Past of ESG Ratings." In.: European Corporate Governance Institute.
Berg, Florian, Julian F Koelbel, and Roberto Rigobon. 2019. "Aggregate Confusion: The Divergence of ESG Ratings " In *MIT Sloan School Working Paper*. MIT Management Sloan School.
Berg, Scott W. 2018. "The human cost of an iPhone." In.: The Washington Post.
Berghoff, Hartmut. 2017. '"Organised irresponsibility"? The Siemens corruption scandal of the 1990s and 2000s', *Business History*, 60: 423-45.

Bitanga, Joan, and Larry Bridwell. 2010. 'Corporate Social Responsibility and the United Nations Global Compact', *Competition Forum*, 8.
Blodget, Henry. 2011. "Well, There's No Longer Any Mystery Why HP Fired Mark Hurd." In. online: Business Insider.
Bloomfield, Robert J. 2002. 'The "Incomplete Revelation Hypothesis" and Financial Reporting', *American Accounting Association*, 16: 233 - 43.
Board, Defense Innovation. 2019. "AI Principles: Recommendations on the Ethical Use of Artificial Intelligence by the Department of Defense." In.
Bond, Shannon. 2020. "Apple Is The 1st American Company To Hit $2 Trillion Milestone." In *Business*. NPR.
Borrett, Amy. 2021a. "AI is tackling the lack of transparency in ESG investing." In *AI*. TechMonitor.
———. 2021b. "'ESG tech' is helping companies achieve data-driven sustainability reporting." In.: Tech Monitor.
Boukattaya, Sonia, Zyed Achour, and Zeineb Hlioui. 2021. 'Corporate Social Responsibility and Corporate Financial Performance: An Empirical Literature Review', *International Journal of Innovative Research and Publications*: 1-32.
Bouquet, Cyril, and Yuval Deutsch. 2008. 'The Impact of Corporate Social Performance on a Firm's Multinationality', *Journal of Business Ethics*, 80: 755-69.
Bowen, Howard R. 1953. 'Introduction.' in University of Iowa Press (ed.), *Social Responsibilities of the Businessman* (Iowa).
Bowman, Edward H. 1978. 'Strategy, Annual Reports, and Alchemy', *California Management Review*, 20: 64-71.
Bowman, Edward H., and Mason Haire. 1975. 'A Strategic Posture toward Corporate Social Responsibility', *California Management Review*, 18: 49 - 58.
———. 1976. 'Social Impact Disclosure and Corporate Annual Reports', *Accounting, Organizations and Society*, 1: 11-21.
Bragdon Jr, Joseph H, and John A T Marlin. 1972. 'Is Pollution Profitable? Environmental Virtue and Reward: Must Stiffer Pollution Controls Hurt Profits?', *Risk Management*.
Brammer, Stephen, Hongwei He, and Kamel Mellahi. 2014. 'Corporate Social Responsibility, Employee Organizational Identification, and Creative Effort', *Group & Organization Management*, 40: 323-52.
Bresnahan, Timothy. 2004. "Creative destruction in the PC industry." In *Conference on IT Innovation*, 105-40. Tokyo.
Broadstock, D. C., K. Chan, L. T. W. Cheng, and X. Wang. 2021. 'The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China', *Financ Res Lett*, 38: 101716.
Brogi, Marina, and Valentina Lagasio. 2018. 'Environmental, social, and governance and company profitability: Are financial intermediaries different?', *Corporate Social Responsibility and Environmental Management*, 26: 576-87.
Brown, Noel, and Craig Deegan. 1998. 'The public disclosure of environmental performance information—a dual test of media agenda setting theory and legitimacy theory', *Accounting and Business Research*, 29: 21-41.
Buallay, Amina. 2019. 'Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector', *Management of Environmental Quality: An International Journal*, 30: 98-115.
Buehler, Vernon M, and Y K Shetty. 1976. 'Managerial Response to Social Responsibility

Challenge', *The Academy of Management Journal*, 19: 66-78.
Buolamwini, Joy, and Timnit Gebru. 2018. "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification." In *Conference on Fairness, Accountability, and Transparency*, edited by Sorelle A Fredler and Christo Wilson, 1-15. Proceedings of Machine Learning Research.
Burbano, Vanessa C. 2016. 'Social Responsibility Messages and Worker Wage Requirements: Field Experimental Evidence from Online Labor Marketplaces', *Organization Science*, 27: 1010-28.
Burgelman, Robert A., Webb McKinney, and Philip E. Meza. 2017. *Becoming Hewlett Packard*.
Caglio, Ariela, Gaia Melloni, and Paolo Perego. 2019. 'Informational Content and Assurance of Textual Disclosures: Evidence on Integrated Reporting', *European Accounting Review*, 29: 55-83.
Cai, Ye, Hoje Jo, and Carrie Pan. 2011. 'Doing Well While Doing Bad? CSR in Controversial Industry Sectors', *Journal of Business Ethics*, 108: 467-80.
Camfferman, Kees, and Stephen A Zeff. 2007. 'Origins of International Accounting Harmonization.' in, *Financial Reporting and Global Capital Markets: A History of the International Accounting Standards Committee, 1973-2000* (Oxford Scholarship).
Campbell, Joanna Tochman, Lorraine Eden, and Stewart R. Miller. 2012. 'Multinationals and corporate social responsibility in host countries: Does distance matter?', *Journal of International Business Studies*, 43: 84-106.
Capital, JUST. 2021. '2021 Overall Rankings', JUST Capital, Accessed 20-08-2021. https://justcapital.com/rankings/.
Capriotti, Paul, and Angeles Moreno. 2007. 'Communicating corporate responsibility through corporate web sites in Spain', *Corporate Communications: An International Journal*, 12: 221-37.
Carnini Pulino, Silvia, Mirella Ciaburri, Barbara Sveva Magnanelli, and Luigi Nasta. 2022. 'Does ESG Disclosure Influence Firm Performance?', *Sustainability*, 14.
Carroll, Archie B. 1991. 'The Pyramid of Corporate Social Responsibility: Toward the Moral Management of Organizational Stakeholders', *Business Horizons*.
———. 2008. *A History of Corporate Social Responsibility: Concepts and Practices* (Oxford Handbooks Online).
Cassar, Lea, and Stephan Meier. 2021. 'Intentions for Doing Good Matter for Doing Well: The Negative Effects of Prosocial Incentives', *The Economic Journal*, 131: 1988-2017.
Castilla, Emilio J. 2015. 'Accounting for the Gap: A Firm Study Manipulating Organizational Accountability and Transparency in Pay Decisions', *Organization Science*, 26: 311-33.
Center, Business & Human Rights Resource. 'Modern Slavery Statements', Business & Human Rights Resource Center, Accessed 27 June 2022. https://www.business-humanrights.org/en/from-us/modern-slavery-statements/.
CFI. 'What is Socially Responsible Investment (SRI)?', Corporate Finance Institute, Accessed 26-07-2021. https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/socially-responsible-investment-sri/.
———. 2022a. 'Return on Assets - ROA Formula, Calculation, and Examples', Corporate Finance Institute, Accessed 06 June 2021. https://corporatefinanceinstitute.com/resources/knowledge/finance/return-on-assets-roa-formula/.
———. 2022b. 'ROIC', Corporate Finance Institute, Accessed 05/06/2021. https://corporatefinanceinstitute.com/resources/knowledge/finance/what-is-roic/.

Cheffins, Brian R. 2020. "Stop Blaming Milton Friedman!" In, edited by ECGI Working Paper Series in Law, 46. European Corporate Governance Institute.
Chen, Tsung-chun, Dong-Qiang Guo, Hsiao-Min Chen, and Tzu-ti Wei. 2019. 'Effects of R&D intensity on firm performance in Taiwan's semiconductor industry', *Economic Research-Ekonomska Istraživanja*, 32: 2377-92.
Cheng, Beiting, Ioannis Ioannou, and George Serafeim. 2014. 'Corporate social responsibility and access to finance', *Strategic Management Journal*, 35: 1-23.
Choi, Beomjoon, and Suna La. 2013. 'The impact of corporate social responsibility (CSR) and customer trust on the restoration of loyalty after service failure and recovery', *Journal of Services Marketing*, 27: 223-33.
Chong, Kelsey. 2017. "Millenials and the Rising Demand for Corporate Social Responsibility." In.: California Management Review.
Chouaibi, Yamina, Matteo Rossi, and Ghazi Zouari. 2021. 'The Effect of Corporate Social Responsibility and the Executive Compensation on Implicit Cost of Equity: Evidence from French ESG Data', *Sustainability*, 13.
Christensen, Clayton M, Heiner Baumann, Rudy Ruggles, and Thomas M Sadtler. 2006. "Disruptive Innovation for Social Change." In, 94-101. Harvard Business Review.
Christmann, Petra. 2000. 'Effects of 'Best Practices' of Environmental Management on Cost Advantage: The Role of Complementary Assets', *The Academy of Management Journal*, 43: 663-80.
Cimpanu, Catalin. 2020. "IBM, Microsoft staff rally to remove racially insensitive language from products." In.: ZDNet.
Clancy, Heather. 2018. "HP links $700 million in revenue to sustainability strategy." In.: GreenBiz.
Clark, Cathy, Jed Emerson, and Ben Thornley. 2014. *Collaborative Capitalism and the Rise of Impact Investing* (John Wiley & Sons, Incorporated).
Cochran, Philip L, and Robert A Wood. 1984. 'Corporate Social Responsibility and Financial Performance', *The Academy of Management Journal*, 27: 42-56.
Commission, European. 'Capital Markets Union 2020 Action Plan: A capital markets union for people and businesses', Accessed 04/05/2021.
Compact, UN Global. 2005. "Who Cares Wins: Connecting Financial Markets to a Changing World." In.: United Nations and the Swiss Federal Department of Foreign Affairs.
Conca, James. 2021. 'Big Tech Companies Look to Clean Energy to Slake Their Enormous Thirst', *Forbes,* 24-05-2021.
Consolandi, Costanza, Robert G. Eccles, and Giampaolo Gabbi. 2020. 'How material is a material issue? Stock returns and the financial relevance and financial intensity of ESG materiality', *Journal of Sustainable Finance & Investment*: 1-24.
Cottrill, Melville T. 1990. 'Corporate Social Responsibility and the Marketplace', *Journal of Business Ethics*, 9: 723-29.
Courtis, John K. 1997. 'Annual Report Readability Variability: Tests of the Obfuscation Hypothesis', *Accounting, Auditing & Accountability Journal*, 11: 459 - 71.
———. 2004. 'Corporate report obfuscation: artefact or phenomenon?', *The British Accounting Review*, 36: 291-312.
Cowling, Marc, Weixi Liu, and Ning Zhang. 2021. 'In the post-crisis world, did debt and equity markets respond differently to high-tech industries and innovative firms?', *International Small Business Journal: Researching Entrepreneurship*, 39: 247-88.
Cremers, Martijn, Ankur Pareek, and Zacharias Sautner. 2021. 'Short-Term Institutions, Analyst

Recommendations, and Mispricing: The Role of Higher Order Beliefs', *Journal of Accounting Research*, 59: 911-58.
Crilly, Donal, Na Ni, and Yuwei Jiang. 2016. 'Do-no-harm versus do-good social responsibility: Attributional thinking and the liability of foreignness', *Strategic Management Journal*, 37: 1316-29.
Crofts, Penny, and Honni van Rijswijk. 2020. 'Negotiating 'Evil': Google, Project Maven and the Corporate Form', *Law, Technology and Humans*, 2: 75-90.
CSRHub, and RepRisk. 2015. "Does Corporate Social Responsibility Performance Affect Reputational Risk?" In.: CSRHub.
Curley, Duncan. 2008. 'Interoperability and Other Issues at the IP-Anti-trust Interface: The EU Microsoft Case', *The Journal of World Intellectual Property*, 11: 296-320.
Cwikel, Julie, Lynn Behar, and June Rabson-Hare. 2000. 'A Comparison of a Vote Count and a Meta-Analysis Review of Intervention Research with Adult Cancer Patients', *Research on Social Work Practice*, 10: 139-58.
Danko, T.P., A.S. Vyazovikova, V.M. Kiselev, Ona Rauskiene, O.I. Klimenko, G.N. Semenova, and V.D. Sekerin. 2019. 'Impact of Intangible Assest on Competitve Positions of the Apple Company', *Journal of Advanced Research in Law and Economics*, X: 1850-60.
Dash, Amarendra Kumar. 2012. 'Media impact on corporate governance in India: a research agenda', *Corporate Governance: The International Journal of Business in Society*, 12: 89-100.
Davis, Keith. 1960. 'Can Business Afford to Ignore Social Responsibilities?', *California Management Review*, 2: 70 - 76.
———. 1971. "The Case for and Against Business Assumption of Social Responsibilities." In *Conference on Contemporary Challenges to American Business-Society Relationships*, edited by William G. Scott. Los Angeles, California.
Dawkins, Cedric E. 2002. 'Corporate Welfare, Corporate Citizenship, and the Question of Accountability', *Business & Society*, 41: 269-91.
De Franco, Gus, Ole-Kristian Hope, Dushyantkumar Vyas, and Yibin Zhou. 2015. 'Analyst Report Readability', *Contemporary Accounting Research*, 32: 76-104.
de Graaf, Frank Jan, and J. W. Stoelhorst. 2009. 'The Role of Governance in Corporate Social Responsibility', *Business & Society*, 52: 282-317.
de Jong, Menno D. T., and Mark van der Meer. 2015. 'How Does It Fit? Exploring the Congruence Between Organizations and Their Corporate Social Responsibility (CSR) Activities', *Journal of Business Ethics*, 143: 71-83.
De Lucia, Caterina, Pasquale Pazienza, and Mark Bartlett. 2020. 'Does Good ESG Lead to Better Financial Performances by Firms? Machine Learning and Logistic Regression Models of Public Enterprises in Europe', *Sustainability*, 12.
Deegan, Craig. 2002. 'Introduction: The Legitimising Effect of Social and Environmental Disclosures - A Theoretical Foundation', *Accounting, Auditing & Accountability Journal*, 15: 282-311.
Dell. 2000. "Dell Environmental Progress Report 1999-2000." In *Directly Connected*. USA: Dell Computer Corporation.
Demers, E., J. Hendrikse, P. Joos, and B. Lev. 2021. 'ESG did not immunize stocks during the COVID-19 crisis, but investments in intangible assets did', *J Bus Finance Account*, 48: 433-62.
Derevianko, Olena. 2019. 'Reputation stability vs anti-crisis sustainability: under what circumstances will innovations, media activities and CSR be in higher demand?',

Oeconomia Copernicana, 10: 511-36.
Dickey, Megan Rose. 2021. "Google to pay $2.59 million to settle allegations of discrimination." In.: TechCrunch.
Dicuonzo, Grazia, Francesca Donofrio, Simona Ranaldo, and Vittorio Dell'Atti. 2022. 'The effect of innovation on environmental, social and governance (ESG) practices', *Meditari Accountancy Research*, 30: 1191-209.
DiMaggio, Paul J, and Walter W Powell. 1983a. 'The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields', *American Sociological Review*, 48: 147-60.
———. 1983b. 'The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields', *American Sociological Review*, 48: 147-60.
Doh, Jonathan P., Benjamin Littell, and Narda R. Quigley. 2015. 'CSR and sustainability in emerging markets: Societal, institutional, and organizational influences', *Organizational Dynamics*, 44: 112-20.
DOL, US. 2021. "Google LLC, US Department of Labor Settlement Resolves Alleged Pay, Hiring Discrimination at California, Washington State Locations." In.: US Department of Labor.
Dolan, Cristina, and Diana Barrero Zalles. 2022. "Transparency in ESG and the Circular Economy." In *Capturing Opportunities Through Data*. New York, NY: Business Expert Press, LLC.
Doorley, John, and Helio Fred Garcia. 2015. "Reputation Management." In *The Key to Successful Public Relations and Corporate Communication*. New York and London: Routledge.
Doyle, Timothy M. 2018. "Ratings That Don't Rate: The Subjective World of ESG Rating Agencies." In.: American Council for Capital Formation.
Duchin, Ran, Oguzhan Ozbas, and Berk A. Sensoy. 2010. 'Costly external finance, corporate investment, and the subprime mortgage credit crisis', *Journal of Financial Economics*, 97: 418-35.
Duque-Grisales, Eduardo, and Javier Aguilera-Caracuel. 2019. 'Environmental, Social and Governance (ESG) Scores and Financial Performance of Multilatinas: Moderating Effects of Geographic International Diversification and Financial Slack', *Journal of Business Ethics*, 168: 315-34.
EC. 'Social Enterprise', European Commission, Accessed 01-08-2021. https://ec.europa.eu/growth/sectors/social-economy/enterprises_en.
Eccles, Robert G. 2022. "Grift Capitalism: The GOP's Brilliant Strategy For Ripping Off Ordinary Americans." In *Sustainability*. Forbes.
Eccles, Robert G., Linda-Eling Lee, and Judith C. Stroehle. 2020. 'The Social Origins of ESG: An Analysis of Innovest and KLD', *Organization & Environment*, 33: 575-96.
Eells, Richard Sedric Fox. 1956. *Corporate Giving in a Free Society* (Harper).
Egelston, Anne E. 2013. "Sustainable Development: A History." In.: Springer.
Eikon, Thomson Reuters. "Thomson Reuters ESG Scores." In.: Thomson Reuters.
Eisinger, Jesse. 2017. *The Chickenshit Club: Why the Justice Department Fails to Prosecute Executives* (Simon & Schuster).
Elkington, John. 1998. *Cannibals With Forks: The Triple Bottom Line of 21st Century Business* (New Society Publishers BC, Canada).
Epstein, Marc J., Eric Flamholtz, and John J McDonough. 1976. 'Corporate Social Accounting in the United States of America: State of the Art and Future Prospects', *Accounting, Organizations and Society*, 1: 23-42.

Escrig-Olmedo, Elena, María Jesús Muñoz-Torres, María Ángeles Fernández-Izquierdo, and Juana María Rivera-Lirio. 2013. 'Lights and shadows on sustainability rating scoring', *Review of Managerial Science*, 8: 559-74.

Etter, Michael, Elanor Colleoni, Laura Illia, Katia Meggiorin, and Antonino D'Eugenio. 2016. 'Measuring Organizational Legitimacy in Social Media: Assessing Citizens' Judgments With Sentiment Analysis', *Business & Society*, 57: 60-97.

Fancy, Tariq. 2021. 'The Secret Diary of a 'Sustainable Investory' - Part 1', Tariq Fancy, Accessed 26-08-2021. https://medium.com/@sosofancy/the-secret-diary-of-a-sustainable-investor-part-1-70b6987fa139.

Fatemi, Ali, Martin Glaum, and Stefanie Kaiser. 2018. 'ESG performance and firm value: The moderating role of disclosure', *Global Finance Journal*, 38: 45-64.

Fawcett, Stanley E, and Matthew A Waller. 2014. 'Supply Chain Game Changers—Mega, Nano, and Virtual Trends—And Forces That Impede Supply Chain Design (i.e., Building a Winning Team)', *Journal of Business Logistics*, 35: 157-64.

Fieseler, Christian, Matthes Fleck, and Miriam Meckel. 2010. 'Corporate Social Responsibility in the Blogosphere', *Journal of Business Ethics*, 91: 599-614.

Fifka, Matthias S. 2013. 'Corporate Responsibility Reporting and its Determinants in Comparative Perspective - a Review of the Empirical Literature and a Meta-analysis', *Business Strategy and the Environment*, 22: 1-35.

Fink, Larry. 2022. 'The Power of Capitalism', Blackrock, Accessed 3 June 2022. https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter.

Fischer, Justus. 2021. 'Provider comparison ESG ratings: Where should the journey go?', Cometis, Accessed 24 July 2022. https://www.cometis.de/en/provider-comparison-esg-ratings-where-should-the-journey-go/.

Flammer, Caroline, Bryan Hong, and Dylan Minor. 2019. 'Corporate governance and the rise of integrating corporate social responsibility criteria in executive compensation: Effectiveness and implications for firm outcomes', *Strategic Management Journal*, 40: 1097-122.

Fogler, H Russell, and Fred Nutt. 1975. 'A Note on Social Responsibility and Stock Valuation', *The Academy of Management Journal*, 18: 155-60.

Font, Xavier, Andreas Walmsley, Sara Cogotti, Lucy McCombes, and Nicole Häusler. 2012. 'Corporate social responsibility: The disclosure-performance gap', *Tourism Management*, 33: 1544-53.

Forti, Vanessa, Cornelis Peter Baldé, Ruediger Kuehr, and Garam Bel. 2020. "The Global E-Waste Monitor 2020: Quantities, flows and the circular economy potential." In. Bonn/Geneva/Rotterdam: United Nations University (UNU)/United Nations Institute for Training and Research (UNITAR) – co-hosted SCYCLE Programme, International Telecommunication Union (ITU) & International Solid Waste Association (ISWA).

Frederick, William C. 2006. *Corporation, Be Good! The Story of Corporate Social Responsibility* (Dog Ear Publishing).

Freedman, Martin, and Bikki Jaggi. 1982. 'Pollution Disclosures, Pollution Performance and Economic Performance', *The International Journal of Management Science*, 10: 167-76.

Freeman, R. Edward. 1983. 'Managing the Strategic Challenge of Telecommunications', *Columbia Journal of World Business*: 8-18.

Freeman, R. Edward, and John McVea. 2001. 'A Stakeholder Approach to Strategic Management', *SSRN Electronic Journal*.

French, John D, and Kristin Wintersteen. 2009. 'Crafting an International Legal Regime for

Worker Rights: Assessing the Literature since the 1999 Seattle WTO Protests', *International Labor and Working-Class History*, 75: 145-68.
Friede, Gunnar, Timo Busch, and Alexander Bassen. 2015. 'ESG and financial performance: aggregated evidence from more than 2000 empirical studies', *Journal of Sustainable Finance & Investment*, 5: 210-33.
Friedman, Milton. 1970. 'The Social Responsibility of Business is to Increase its Profits', *The New York Times Magazine,* 13-09-1970.
Fritz, Susanne, and Christina Lammle. 2003. 'The International Harmonisation Process of Accounting Standards'.
Fu, L., D. Boehe, and M. Orlitzky. 2020. 'Are R&D-Intensive firms also corporate social responsibility specialists? A multicountry study', *Res Policy*, 49: 104082.
Fuentes-George, Kemi. 2016. *Between Preservation and Exploitation*.
Fukukawa, Kyoko, and Yoshiya Teramoto. 2009. 'Understanding Japanese CSR: The Reflections of Managers in the Field of Global Operations', *Journal of Business Ethics*, 85: 133-46.
Fukuyama, Francis. 1995. 'Social Capital and the Global Economy', *Foreign Affairs*, 74: 89-103.
Galant, Adriana, and Simon Cadez. 2017. 'Corporate social responsibility and financial performance relationship: a review of measurement approaches', *Economic Research-Ekonomska Istraživanja*, 30: 676-93.
Galbraith, John Kenneth, and Richard D Bartel. 1983. 'The Anatomy of Power', *Challenge*, 26: 26-33.
Galbreath, Jeremy, and Gael McDonald. 2010. 'How does corporate social responsibility benefit firms? Evidence from Australia', *European Business Review*, 22: 411-31.
Garcia, Alexandre Sanches, Wesley Mendes-Da-Silva, and Renato J. Orsato. 2017. 'Sensitive industries produce better ESG performance: Evidence from emerging markets', *Journal of Cleaner Production*, 150: 135-47.
Garcia-Feijóo, Luis, and John R Wingender Jr. 2007. 'Y2K: Myth or Reality?', *Quarterly Journal of Business and Economics*, 46: 27-44.
Gazizova, Irina, Juan Manuel Garcia Lara, and Beatriz Garcia Osma. 2019. "Corporate Social Responsibility and Financial Reporting Quality: Evidence from CSR-Disasters." In, 70.
Gentry, Richard J, and Wei Shen. 2010. 'The Relationship Between Accounting and Market Measures of Firm Financial Performance: How Strong Is It?', *Journal of Managerial Issues*, 22: 514-30.
Ghaffary, Shirin, and Jason Del Rey. 2020. "The Big Tech Antitrust report has one big conclusion: Amazon, Apple, Facebook, and Google are anti-competitive." In.: Vox.
Gill, Gurvinder, and Imran Rahman-Jones. 2020. "Me Too founder Tarana Burke: Movement is not over." In.: BBC News.
Gillespie, Tarleton. 2010. 'The politics of 'platforms'', *New Media & Society*, 12: 347-64.
Goldfarb, Avi, and Catherine Tucker. 2019. 'Digital Economics', *Journal of Economic Literature*, 57: 3-43.
Golob, Urša, Urša Golob, Klement Podnar, Wim J. Elving, Anne Ellerup Nielsen, Christa Thomsen, and Friederike Schultz. 2013. 'CSR communication:quo vadis?', *Corporate Communications: An International Journal*, 18: 176-92.
Gomez, Lina M., and Ricardo Chalmeta. 2011. 'Corporate responsibility in U.S. corporate websites: A pilot study', *Public Relations Review*, 37: 93-95.
Gompers, Paul, Joy Ishii, and Andrew Metrick. 2003. 'Corporate Governance and Equity Prices', *The Quarterly Journal of Economics*, 118: 107-55.
Gray, Boyden. 2001. 'Competitor complaints in anti-trust enforcement: of Microsoft and

mergers', *IEA Economic Affairs*: 38-43.
GRI. 'Our Mission and History', GRI Accessed 17-05-21. https://www.globalreporting.org/about-gri/mission-history/#:~:text=GRI%20was%20founded%20in%20Boston,of%20the%20UN%20Environment%20Programme).
———. 'Sector Program', Accessed 02-08-2021. https://www.globalreporting.org/standards/sector-program/.
———. 2021. "Analysis of the Goals and Targets." In *Business Reporting on the SDGs*. GRI & UNGC.
———. 2022. "ESG Standards, Frameworks, and Everything in Between." In *The GRI Perspective*, 1-4. GRI.
Groening, Christopher, and Vamsi Krishna Kanuri. 2013. 'Investor reaction to positive and negative corporate social events', *Journal of Business Research*, 66: 1852-60.
Group, Tata Sustainability. "CSR." In.: Tata Sustainability Group.
Gu, Wenjun, Dilip Chhajed, Nicholas C. Petruzzi, and Baris Yalabik. 2015. 'Quality design and environmental implications of green consumerism in remanufacturing', *International Journal of Production Economics*, 162: 55-69.
Guay, Terrence, Jonathan Doh, and Graham Sinclair. 2004. 'Non-Governmental Organizations, Shareholder Activism, and Socially Responsible Investments: Ethical, Strategic, and Governance Implications', *Journal of Business Ethics*, 52: 125-39.
Guerrero-Villegas, Jaime, Laura Sierra-García, and Beatriz Palacios-Florencio. 2018. 'The role of sustainable development and innovation on firm performance', *Corporate Social Responsibility and Environmental Management*, 25: 1350-62.
Guiso, Luigi, Paola Sapienza, and Luigi Zingales. 2004. 'The Role of Social Capital in Financial Development', *The American Economic Review*, 94: 526-56.
Gupta, Atul, Kartik Raman, and Chenguang Shang. 2018. 'Social capital and the cost of equity', *Journal of Banking & Finance*, 87: 102-17.
Gupta, Joyeeta, and Louis Lebel. 2020. 'Access and allocation in earth system governance: lessons learnt in the context of the Sustainable Development Goals', *International Environmental Agreements: Politics, Law and Economics*, 20: 393-410.
Hahn, Rüdiger, and Michael Kühnen. 2013. 'Determinants of sustainability reporting: a review of results, trends, theory, and opportunities in an expanding field of research', *Journal of Cleaner Production*, 59: 5-21.
Halbritter, Gerhard, and Gregor Dorfleitner. 2015. 'The wages of social responsibility - where are they? A critical review of ESG Investing', *Review of Financial Economics*, 26: 25-35.
Halton, Clay. 2019. "Internet Bubble." In.: Investopedia.
Han, Jerry C Y , and Shiing-Wu Wang. 1998. 'Political Costs and Earnings Management of Oil Companies during the 1990 Persian Gulf Crisis', *The Accounting Review*, 73: 103-17.
Haufler, Virginia. 2009. 'The Kimberley Process Certification Scheme- An Innovation in Global Governance and Conflict Prevention', *Journal of Business Ethics*, 89: 403-16.
Heald, Morrell. 1957. 'Management's Responsibility to Society', *Business History Review*, 31: 375-84.
Hearn, Denise. 2022. "Proxy Wars on Corporate 'Wokeness' Are Actually About Something Else…." In.
Heflin, Frank, and Dana Wallace. 2017. 'The BP Oil Spill: Shareholder Wealth Effects and Environmental Disclosures', *Journal of Business Finance & Accounting*, 44: 337-74.
Helm, Sabrina, and Julia Tolsdorf. 2013. 'How Does Corporate Reputation Affect Customer

Loyalty in a Corporate Crisis?', *Journal of Contingencies and Crisis Management*, 21: 144-52.
Hernández-Murillo, Rubén, and Christopher j Martinek. 2009. "CSR Can Be Profitable." In.: The Regional Economist.
Hernbroth, Megan. 2019. "The Life and Rise of Mark Hurd, Oracle's CEO Who Died at Age 62." In.: Business Insider.
Hoffman, Andrew J. 2001. *From Heresy to Dogma: An Institutional History of Corporate Environmentalism* (Stanford University Press: Stanford, California).
Holmstedt-Pell, Alice. 2021. "Big Four could face legal risks if failing to consider climate in audits, warns ClientEarth." In *Daily ESG Briefing*.
Hong, Harrison, and Marcin Kacperczyk. 2009. 'The price of sin: The effects of social norms on markets', *Journal of Financial Economics*, 93: 15-36.
Hopkins, Michael. 2007. *Corporate Social Responsibility and International Development* (Earthscan: UK).
Hosseini, Hamid. 2006. 'Insufficient Social Capital and Economic Underdevelopment.' in, *Handbook of Contemporary Behavioral Economics: Foundations and Development* (Taylor & Francis Group).
Hough, D. 2013. 'The Rise and Rise of the Global Anti-Corruption Movement.' in, *Corruption, Anti-Corruption and Governance*.
HP. 2017. "2017 Sustainable Impact Report." In, 1-137. HP.
Hull, Clyde Eiríkur, and Sandra Rothenberg. 2008. 'The Interactions of Corporate Social Performance with Innovation and Industry Differentiation', *Strategic Management Journal*, 29: 781-89.
Humpherys, Sean L., Kevin C. Moffitt, Mary B. Burns, Judee K. Burgoon, and William F. Felix. 2011. 'Identification of fraudulent financial statements using linguistic credibility analysis', *Decision Support Systems*, 50: 585-94.
Husted, Bryan W., and José de Jesus Salazar. 2006. 'Taking Friedman Seriously: Maximizing Profits and Social Performance', *Journal of Management Studies*, 43: 75-91.
Hwang, Byoung-Hyoun, and Hugh Hoikwang Kim. 2017. 'It pays to write well', *Journal of Financial Economics*, 124: 373-94.
IBM. 2019. "IBM and Good Tech: Modeling responsible stewardship in the digital age." In *IBM Corporate Responsibility Report*. IBM.
———. 2020. "Meet the 2020 consumers driving change: Why brands must deliver on omnipresence, agility, and sustainability." In *Research Insights*. IBM Institute for Business Value and the National Retail Federation.
IEEE. 2021. 'IEEE Standard Model Process for Addressing Ethical Concerns during System Design', IEEE, Accessed 21 March 2022. https://standards.ieee.org/ieee/7000/6781/.
ILO. 'History of the ILO', International Labour Organization (ILO), Accessed 12/05/2021. https://www.ilo.org/global/about-the-ilo/history/lang--en/index.htm.
'The Industrial Welfare Movement'. 1923. *Journal of the Textile Institute Proceedings*, 14: 278-81.
Initiative, SSE. 2020. "10 Years of Impact and Progress: Sustainable Stock Exchages 2009-2019." In.: Sustainable Stock Exchanges Initiative.
Institute, CFA. 2017. "Environmental, Social, and Governance (ESG) Survey." In, 1-79. CFA Institute.
Intel. 2001. "Global Citizenship Report 2001: Vision & Values." In. USA: Intel.
International, Transparency. 'Our Story', Transparency International, Accessed 02 Aug 2022.

https://www.transparency.org/en/our-story.
Jamali, D. 2010. 'The CSR of MNC Subsidiaries in Developing Countries: Global, Local, Substantive or Diluted?', *Journal of Business Ethics*, 93: 181-200.
Janney, Jay J., and Steve Gove. 2011. 'Reputation and Corporate Social Responsibility Aberrations, Trends, and Hypocrisy: Reactions to Firm Choices in the Stock Option Backdating Scandal', *Journal of Management Studies*, 48: 1562-85.
Jebe, Ruth. 2019. 'The Convergence of Financial and ESG Materiality: Taking Sustainability Mainstream', *American Business Law Journal*, 56: 645-702.
Jenkins, Garry W. 2011. "Who's Afraid of Philanthrocapitalism?" In, edited by Working Paper Series No 149, 70. The Ohio State University Moritz College of Law.
Jensen, Michael C, and William H Meckling. 1979. 'Rights and Production Functions: An Application to Labor-Managed Firms and Codetermination', *The Journal of Business*, 52: 469-506.
Jeppesen, Tim, John A. List, and Henk Folmer. 2002. 'Environmental Regulations and New Plant Location Decisions: Evidence from a Meta-Analysis', *Journal of Regional Science*, 42: 19-49.
Jones, Charles I, and John C Williams. 1998. 'Measuring the Social Return to R&D', *The Quarterly Journal of Economics*: 1119-35.
Julander, A., L. Lundgren, L. Skare, M. Grander, B. Palm, M. Vahter, and C. Liden. 2014. 'Formal recycling of e-waste leads to increased exposure to toxic metals: an occupational exposure study from Sweden', *Environ Int*, 73: 243-51.
Julian, Scott D, and Joseph C Ofori-Dankwa. 2013. 'Financial Resource Availability and Corporate Social Responsibility Expenditures in a Sub-Saharan Economy: The Institutional Difference Hypothesis', *Strategic Management Journal*, 34: 1314-30.
Kell, Georg. 2018. "The Remarkable Rise of ESG." In.: Forbes.
Kellenberg, Derek K. 2009. 'An empirical investigation of the pollution haven effect with strategic environment and trade policy', *Journal of International Economics*, 78: 242-55.
Kelman, Steven. 1981. 'Cost-Benefit Analysis: An Ethical Critique', *Regulation*, 5.
Kenney, Martin, and John Zysman. 2016. 'The Rise of the Platform Economy', *Issues in Science and Technology*, Spring 2016: 61-69.
Kiambi, Dane M., and Autumn Shafer. 2015. 'Corporate Crisis Communication: Examining the Interplay of Reputation and Crisis Response Strategies', *Mass Communication and Society*, 19: 127-48.
Kim, Soo-Yeon, and Hyojung Park. 2011. 'Corporate Social Responsibility as an Organizational Attractiveness for Prospective Public Relations Practitioners', *Journal of Business Ethics*, 103: 639-53.
Kim, Soohun, and Aaron S Yoon. 2020. 'Analyzing Active Fund Managers' Commitment to ESG: Evidence from the United Nations Principles for Responsible Investment', *SSRN Electronic Journal*.
Kim, Yeonsoo. 2014. 'Strategic communication of corporate social responsibility (CSR): Effects of stated motives and corporate reputation on stakeholder responses', *Public Relations Review*, 40: 838-40.
King, Brayden G, and Mary-Hunter McDonnell. 2012. 'Good Firms, Good Targets: The Relationship between Corporate Social Responsibility, Reputation, and Activist Targeting.' in, *Corporate Social Responsibility in a Globalizing World* (Cambridge University).

Klare, George R. 1975. 'Assessing Readability', *Reasing Research Quarterly*, 10: 62-102.
Klaus, J. Philipp, Hirofumi Nishi, S. Drew Peabody, and Carolyn Reichert. 2022. 'CSR activity in response to the Paris Agreement exit', *European Financial Management*.
Knack, Stephen, and Philip Keefer. 1997. 'Does Social Capital Have an Economic Payoff? A Cross-Country Investigation', *The Quarterly Journal of Economics*, 112: 1251-88.
Knickle, Kim, Elisa Molero, and Sam Renshaw. 2022. 'ESG and Sustainability Consulting: Market Size and Forecast 2021-2027', Verdantix.
Korschun, Daniel, Rajesh Aggarwal, and Hoori Rafieian. 2016. "Taking a Stand: Consumer Responses to Corporate Political Activism." In, 33.
Kostova, Tatiana, and Srilata Zaheer. 1999. 'Organizational Legitimacy Under Conditions of Complexity: The Case of the Multinational Enterprise', *The Academy of Management Review*, Jan 1999: 64-81.
KPMG. 2017. "The Road Ahead: The KPMG Survey of Corporate Responsibility Reporting 2017." In.: KPMG.
———. 2020. "The ESG Imperative for Technology Companies." In, 1 - 4. KPMG.
KPMG, T. 2008. "KPMG Survey of Corporate Responsibility Reporting 2008." In. Amsterdan, The Netherlands: KPMG.
Krajewski, Markus, Kristel Tonstad, and Franziska Wohltmann. 2021. 'Mandatory Human Rights Due Diligence in Germany and Norway: Stepping, or Striding, in the Same Direction?', *Business and Human Rights Journal*, 6: 550-58.
Kumar, Vijay, and Rangaraja P. Sundarraj. 2016. 'Schumpeterian innovation patterns and firm-performance of global technology companies', *European Journal of Innovation Management*, 19: 276-96.
Lampert, Martijn, Sander Metaal, Sheng Liu, and Laura Gambarin. 2019. "Global Rise in Environmental Concern." In *Trend Report*. Glocalities.
Lantos, Geoffrey P. 2001. 'The Boundaries of Strategic Corporate Social Responsibility', *Journal of Consumer Marketing*, 18: 595-630.
Laufer, William S., and S. Prakash Sethi. 2006. 'Illusions of compliance and governance', *Corporate Governance: The International Journal of Business in Society*, 6: 239-49.
Lay-Flurrie, Jenny. 2020. 'Looking Back at 10 Years of Learning at the Annual Ability Summit', Microsoft, Accessed 27-07-2021. https://blogs.microsoft.com/accessibility/ability-summit-2020/.
Lee, Sun Young, and Craig E. Carroll. 2011. 'The Emergence, Variation, and Evolution of Corporate Social Responsibility in the Public Sphere, 1980-2004- The Exposure of Firms to Public Debate', *Journal of Business Ethics*, 104: 115-31.
Lemon, Andrew J, and Steven F Cahan. 1997. 'Environmental Legislation and Environmental Disclosures: Some Evidence from New Zealand', *Asian Review of Accounting*, 5: 78-105.
Lev, Baruch, Christine Petrovits, and Suresh Radhakrishnan. 2009. 'Is doing good good for you? how corporate charitable contributions enhance revenue growth', *Strategic Management Journal*: n/a-n/a.
Levitt, Theodore. 1958. 'The Dangers of Social Responsibility', *Harvard Business Review*, 36: 41 - 50.
Li, Changhong, Jialong Li, Mingzhi Liu, Yuan Wang, and Zhenyu Wu. 2017. 'Anti-misconduct policies, corporate governance and capital market responses: International evidence', *Journal of International Financial Markets, Institutions and Money*, 48: 47-60.
Liberti, José María, and Mitchell A Petersen. 2018. "Information: Hard and Soft." In.: National

Bureau of Economic Research.
Lim, Alwyn. 2019. 'Social Movements and Corporate Social Responsibility.' in Abagail McWilliams, Deborah E. Rupp, Donald S. Siegel, Günter K. Stahl and David A. Waldman (eds.), *The Oxford Handbook of Corporate Social Responsibility*.
Lin, Chieh-Peng, Shwu-Chuan Chen, Chou-Kang Chiu, and Wan-Yu Lee. 2011. 'Understanding Purchase Intention During Product-Harm Crises: Moderating Effects of Perceived Corporate Ability and Corporate Social Responsibility', *Journal of Business Ethics*, 102: 455-71.
Lin, Chin-Huang, Ho-Li Yang, and Dian-Yan Liou. 2009. 'The impact of corporate social responsibility on financial performance: Evidence from business in Taiwan', *Technology in Society*, 31: 56-63.
Lin, Woon Leong, Siong Hook Law, Jo Ann Ho, and Murali Sambasivan. 2019. 'The causality direction of the corporate social responsibility – Corporate financial performance Nexus: Application of Panel Vector Autoregression approach', *The North American Journal of Economics and Finance*, 48: 401-18.
Lin-Hi, Nick, and Igor Blumberg. 2016. 'The Link Between (Not) Practicing CSR and Corporate Reputation: Psychological Foundations and Managerial Implications', *Journal of Business Ethics*, 150: 185-98.
Lins, Karl V., Henri Servaes, and A. N. E. Tamayo. 2017. 'Social Capital, Trust, and Firm Performance: The Value of Corporate Social Responsibility during the Financial Crisis', *The Journal of Finance*, 72: 1785-824.
Ljungqvist, Alexander, and William J Wilhelm Jr. 2003. 'IPO Pricing in the Dot-Com Bubble', *The Journal of Finance*, LVIII: 30.
Lock, Irina, and Peter Seele. 2015. 'Analyzing Sector-Specific CSR Reporting: Social and Environmental Disclosure to Investors in the Chemicals and Banking and Insurance Industry', *Corporate Social Responsibility and Environmental Management*, 22: 113-28.
Lorenzo Sacconi, Giacomo Degli Antoni. 'Social Capital, Corporate Social Responsibility, Economic Behaviour and Performance INDEX'.
Lowry, Rosemary, and Martin Peterson. 2011. 'Cost-Benefit Analysis and Non-Utilitarian Ethics', *Politics, Philosophy, & Economics*, 11: 258-79.
Maas, Karen, Stefan Schaltegger, and Nathalie Crutzen. 2016. 'Integrating corporate sustainability assessment, management accounting, control, and reporting', *Journal of Cleaner Production*, 136: 237-48.
Madakam, Somayya, R. Ramaswamy, and Siddharth Tripathi. 2015. 'Internet of Things (IoT): A Literature Review', *Journal of Computer and Communications*, 03: 164-73.
Mahoney, Lois S., Linda Thorne, Lianna Cecil, and William LaGore. 2013. 'A research note on standalone corporate social responsibility reports: Signaling or greenwashing?', *Critical Perspectives on Accounting*, 24: 350-59.
Maignan, Isabelle, and O. C. Ferrell. 2001. 'Corporate citizenship as a marketing instrument - Concepts, evidence and research directions', *European Journal of Marketing*, 35: 457-84.
Marano, Valentina, Jean-Luc Arregle, Michael A. Hitt, Ettore Spadafora, and Marc van Essen. 2016. 'Home Country Institutions and the Internationalization-Performance Relationship', *Journal of Management*, 42: 1075-110.
Margolis, Joshua D., Hillary Anger Elfenbein, and James P. Walsh. 2009. 'Does it Pay to Be Good...And Does it Matter? A Meta-Analysis of the Relationship between Corporate Social and Financial Performance', *SSRN Electronic Journal*.

Margolis, Joshua Daniel, and James Patrick Walsh. 2001. *People and Profits? The Search for a Link Between a Company's Social and Financial Performance* (Psychology Press).
Marlin, John Tepper, and Alice Marlin. 2003. 'A Brief History of Social Reporting', *Business Respect*, 51.
Marti, Carmen Pilar, M. Rosa Rovira-Val, and Lisa G. J. Drescher. 2015. 'Are Firms that Contribute to Sustainable Development Better Financially?', *Corporate Social Responsibility and Environmental Management*, 22: 305-19.
Martínez-Ferrero, Jennifer, and José Valeriano Frías-Aceituno. 2015. 'Relationship Between Sustainable Development and Financial Performance: International Empirical Research', *Business Strategy and the Environment*, 24: 20-39.
Martínez-Ferrero, Jennifer, and José Valeriano Frías-Aceituno. 2015. 'Relationship Between Sustainable Development and Financial Performance: International Empirical Research', *Business Strategy and the Environment*, 24: 20-39.
Matos, Pedro. 2020. *ESG and Responsible Institutional Investing Around the World: A Critical Review* (CFA Institute Research Foundation).
Mazutis, Daina D, and Natalie Slawinski. 2015. 'Reconnecting Business and Society: Perceptions of Authenticity in Corporate Social Responsibility', *Journal of Business Ethics*, 131: 137-50.
McDonnell, Mary-Hunter, Brayden G. King, and Sarah A. Soule. 2015. 'A Dynamic Process Model of Private Politics', *American Sociological Review*, 80: 654-78.
McDonnell, Mary-Hunter, Kate Odziemkowska, and Elizabeth Pontikes. 2021. 'Bad Company: Shifts in Social Activists' Tactics and Resources After Industry Crises', *Organization Science*, 32: 1033-55.
McDonnell, Mary-Hunter, and Timothy Werner. 2016. 'Blacklisted Businesses: Social Activists' Challenges and the Disruption of Corporate Political Activity', *Administrative Science Quarterly*, 61: 584-620.
McGuire, Jean, Alison Sundgren, and Thomas Schneeweis. 1988. 'Corporate Social Responsibility and Firm Financial Performance', *The Academy of Management Journal*, 31: 854-72.
McPherson, Susan. 2018. "8 Corporate Social Responsibility (CSR) Trends to Look for in 2018." In.: Forbes.
McWilliams, Abagail, and Donald Siegel. 2000. 'CSR and Financial Performance: Correlation or Misspecification', *Strategic Management Journal*, 21: 603-09.
McWilliams, Abagail, and Claus Wendt. 2014. *Economics of Corporate Social Responsibility* (Edward Elgar Publishing Limited: Cheltenham, UK).
Meadows, Donella H, Dennis L Meadows, Jørgen Randers, and William W Behrens III. 1972. "The Limits to Growth." In.: Club of Rome.
Medina, Eden Miller. 2004. 'Beyond the Ballot Box: Computer Science Education and Social Responsibility', *The SIGCSE Bulletin*, 36: 7-10.
Mendoza-Fong, José, Jorge García-Alcaraz, Emilio Jiménez Macías, Nancy Ibarra Hernández, José Díaz-Reza, and Julio Blanco Fernández. 2018. 'Role of Information and Communication Technology in Green Supply Chain Implementation and Companies' Performance', *Sustainability*, 10.
Meyerson-Knox, Sonya. 2020. "Microsoft Drops AnyVision." In.: Jewish Voice for Peace.
Miccoli, Giorgia. 2022. "The EU Due Diligence Law Proposal is Out." In.: CSR Europe.
Miller, Chris. 2022. *Chip War: The Fight For the World's Most Critical Technology* (Simon & Schuster UK Ltd: Great Britain).

Mintzberg, Henry. 1987. 'The Strategy Concept I: Five Ps for Strategy', *California Management Review*, 30: 11-24.
Miroshnychenko, Ivan, Roberto Barontini, and Francesco Testa. 2017. 'Green practices and financial performance: A global outlook', *Journal of Cleaner Production*, 147: 340-51.
Mitsuzuka, Kanau, Feng Ling, and Hayato Ohwada. 2017. "Analysis of CSR activities Affecting Corporate Value Using Machine Learning." In *Proceedings of the 9th International Conference on Machine Learning and Computing*, 11-14.
Mooney, Attracta. 2021. 'Cevian calls n boards to end 'ESG box checking' and set pay targets', *The Financial Times,* 2-3-21.
Morris, John J., and Pervaiz Alam. 2012. 'Value relevance and the dot-com bubble of the 1990s', *The Quarterly Review of Economics and Finance*, 52: 243-55.
Moskowitz, Milton R. 1972. 'Choosing Socially Responsible Stocks', *Business & Society*, 10: 71-75.
Muller, Alan. 2018. 'When Does Corporate Social Performance Pay for International Firms?', *Business & Society*, 59: 1554-88.
Muller, Alan, and Roman Kräussl. 2011. 'Doing Good Deeds in Times of Need: A Strategic Perspective on Corporate Disaster Donations', *Strategic Management Journal*, 32: 911-29.
Murphy, Patrick E. 1978. 'Corporate Social Responsiveness: An Evolution', *University of Michigan Business Review*, 30: 19-25.
Narver, John C. 1971. 'Rational Management Responses to External Effects', *Academy of Management Journal*.
Nauman, Billy. 2021. "'Green Bubble' Warning Grow as Money Pours into Renewable Stocks." In *Climate Capital*. Financial Times.
Naumer, Hans-Jörg, and Burcin Yurtoglu. 2020. 'It is not only what you say, but how you say it: ESG, corporate news, and the impact on CDS spreads', *Global Finance Journal*.
Naylor, R. T. . 2011. *Crass Struggle: Greed, Glitz, and Gluttony in a Wanna-Have World* (McGill-Queen University Press: Canada).
Nayyar, Sarita. 2022. "8 Leaders at Davos 2022 explain how business can deliver on ESG promises." In. WEForum: World Economic Forum.
Nazari, Jamal A., Karel Hrazdil, and Fereshteh Mahmoudian. 2017. 'Assessing social and environmental performance through narrative complexity in CSR reports', *Journal of Contemporary Accounting & Economics*, 13: 166-78.
Nelling, Edward, and Elizabeth Webb. 2008. 'Corporate social responsibility and financial performance: the "virtuous circle" revisited', *Review of Quantitative Finance and Accounting*, 32: 197-209.
Newman, Russell, Victor Chang, Robert John Walters, and Gary Brian Wills. 2016. 'Web 2.0—The past and the future', *International Journal of Information Management*, 36: 591-98.
News, BBC. 2021. "Tesla must pay $137m to racially harassed former worker." In *Business*. BBC News.
Nicas, Jack, Raymond Zhong, and Daisuke Wakabayashi. 2021. "Censorship, Surveillance, and Profits: A Hard Bargain for Apple in China." In.: New York Times.
Niesten, Eva, Albert Jolink, Ana Beatriz Lopes de Sousa Jabbour, Maryse Chappin, and Rodrigo Lozano. 2017. 'Sustainable collaboration: The impact of governance and institutions on sustainable performance', *Journal of Cleaner Production*, 155: 1-6.
Nilipour, Azadeh (azi), Tracy-Anne De Silva, and Xuedong Li. 2020. 'The Readability of

Sustainability Reporting in New Zealand over time', *Australasian Accounting, Business, and Finance Journal*, 14: 86-107.
Nollet, Joscha, George Filis, and Evangelos Mitrokostas. 2016. 'Corporate social responsibility and financial performance: A non-linear and disaggregated approach', *Economic Modelling*, 52: 400-07.
Nothias, Toussaint. 2020. 'Access Granted: Facebook's Free Basics in Africa', *Media, Culture & Society*, 42: 329-48.
O'Connor, Phillippa, Lawrence Harris, and Tom Gosling. 2021. "Linking executive pay to ESG goals." In *Strategy + Business*, 8. London: PwC.
O'Dwyer, Michael, and Andrew Edgecliffe-Johnson. 2021. "Accounting scandals put the Big Four on the spot." In *Opinion*. Financial Times.
O'Mahony, Mary, and Michela Vecchi. 2005. 'Quantifying the Impact of ICT Capital on Output Growth: A Heterogeneous Dynamic Panel Approach', *Economica*, 72: 615-33.
O'Reilly, Tim. 2005. 'What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software', Accessed 07-01-2022. https://www.oreilly.com/pub/a//web2/archive/what-is-web-20.html.
O'Riordan, Linda, and Jenny Fairbrass. 2008. "CSR Models & Theories in Stakeholder Dialogue." In.
Odziemkowska, Kate. 2021. 'Frenemies: Overcoming Audiences' Ideological Opposition to Firm–Activist Collaborations', *Administrative Science Quarterly*, 67: 469-514.
OECD. 'Global Value Chains (GVCs)', Accessed 20-09-2021. https://www.oecd.org/sti/ind/global-value-chains.htm.
———. 2001. "The Well-Being of Nations: The Role of Human and Social Capital." In *Education and Skills*. Centre for Educational Research and Innovation: OECD.
Oh, Seungwoo, Ahreum Hong, and Junseok Hwang. 2017. 'An Analysis of CSR on Firm Financial Performance in Stakeholder Perspectives', *Sustainability*, 9.
Ohmann, Oliver A. 1955. 'Skyhooks: With Special Implications for Monday Through Friday', *Harvard Business Review*: 10.
Ojo, Marianne. 2016. *Analyzing the Relationship Between Corporate Social Responsibility and Foreign Direct Investment* (IGI Global).
Oremus, Will. 2014. "R.I.P. HP: What Silicon Valley can learn from he rise and fall of its original tech startup." In *Technology*. Slate.
Orlitzky, M. 2007. "Doing Well by Doing Good: Objective Findings, Subjective Assumptions, or Selective Amplifications?" In.: Paper presented at the Academy of Management Conference, Philadelphia.
Orlitzky, Marc, and John D. Benjamin. 2001. 'Corporate Social Performance and Firm Risk: A Meta-Analytic Review', *Business & Society*, 40: 369-96.
Orlitzky, Marc, Frank L. Schmidt, and Sara L. Rynes. 2003. 'Corporate Social and Financial Performance: A Meta-Analysis', *Organization Studies*, 24: 403-41.
Osburg, Thomas. 2016. 'Branding Raw Material to Improve Human Rights: Intel's Ban on Conflict Minerals', *GfK Marketing Intelligence Review*, 8.
Padgett, Robert C., and Jose I. Galan. 2009. 'The Effect of R&D Intensity on Corporate Social Responsibility', *Journal of Business Ethics*, 93: 407-18.
Pant, Anirvan, and J. Ramachandran. 2012. 'Legitimacy beyond borders: Indian software services firms in the United States, 1984 to 2004', *Global Strategy Journal*, 2: 224-43.
Paredes-Gazquez, Juan Diego, José Miguel Rodriguez-Fernandez, and Marta de la Cuesta-Gonzalez. 2016. 'Measuring corporate social responsibility using composite indices:

Mission impossible? The case of the electricity utility industry', *Revista de Contabilidad*, 19: 142-53.
Parket, Robert I., and Henry Eilbirt. 1975. 'Social Responsibility: The Underlying Factors', *The Practice of Business*.
Paruolo, Paolo, Michaela Saisana, and Andrea Saltelli. 2013. 'Ratings and Rankings: Voodoo or Science?', *Journal of the Royal Statistical Society*, Series A: 265-86.
Patten, Dennis M. 1992. 'Intra-Industry Environmental Disclosures in Response to the Alaskan Oil Spill: A Note on Legitimacy Theory', *Accounting, Organizations and Society*, 17: 471-75.
Pavlova, Ivelina, and Maria E. de Boyrie. 2022. 'ESG ETFs and the COVID-19 stock market crash of 2020: Did clean funds fare better?', *Finance Research Letters*, 44.
Peloza, John. 2009. 'The Challenge of Measuring Financial Impacts From Investments in Corporate Social Performance', *Journal of Management*, 35: 1518-41.
Perez, Caroline Criado. 2019. *Invisible Women: Exposing Data Bias in a World Designed for Men* (Chatto & Windus: London).
Perrault, Elise, and Michael A. Quinn. 2016. 'What Have Firms Been Doing? Exploring What KLD Data Report About Firms' Corporate Social Performance in the Period 2000-2010', *Business & Society*, 57: 890-928.
PhysOrg. 2007. "Shareholders Want a Greener Apple." In *Technology*. Phys Org.
Pillay, Reginee. 2015. *The Changing Nature of Corporate Social Responsibility: CSR and Development in Context - The Case of Mauritius* (Routledge: London).
Pink, David H. 2011. *Drive: The Surprising Truth About What Motivates Us* (Canongate Books: Edinburgh).
Platonova, Elena, Mehmet Asutay, Rob Dixon, and Sabri Mohammad. 2016. 'The Impact of Corporate Social Responsibility Disclosure on Financial Performance: Evidence from the GCC Islamic Banking Sector', *Journal of Business Ethics*, 151: 451-71.
Poell, Thomas, David Nieborg, and José van Dijck. 2019. 'Platformisation', *Internet Policy Review*, 8.
Porter, Michael E, and Mark R Kramer. 2002. "The Competitive Advantage of Corporate Philanthropy." In *Harvard Business Review*.
———. 2011. 'Creating Shared Value', *Harvard Business Review*, 89: 62-77.
Porter, Michael E, and Class van der Linde. 1995. 'Toward a New Conception of the Environment-Competitiveness Relationship', *Journal of Economic Perspectives*, 9: 97-118.
Porter, Michael E, George Serafeim, and Mark R Kramer. 2019. "Where ESG Fails." In *Opinion*. Institutional Investor.
Porter, Michael E., and Mark R. Kramer. 2006. 'Strategy & Society: The Link Between Competitive Advantage and Corporate Social Responsibility', *Harvard Business Review*, 84: 78-92.
Post, Corinne, and Kris Byron. 2015. 'Women on Boards and Firm Financial Performance: A Meta-Analysis', *Academy of Management Journal*, 58: 1546-71.
Postman, Neil. 1985. *Amusing Ourselves to Death* (Viking Penguin: MethuenUK).
Prahalad, C. K., and Gary Hamel. 1994. 'Strategy as a Field of Study: Why Search for a New Paradigm?', *Strategic Management Journal*, 15: 5 - 16.
Preston, Lee E, and James E Post. 1981. 'Private Management and Public Policy', *California Management Review*, 23: 56-62.
Prior, Diego, Jordi Surroca, and Josep A. Tribó. 2008. 'Are Socially Responsible Managers

Really Ethical? Exploring the Relationship Between Earnings Management and Corporate Social Responsibility', *Corporate Governance: An International Review*, 16: 160-77.
Pucheta-Martínez, María Consuelo, Inmaculada Bel-Oms, and Gustau Olcina-Sempere. 2018. 'The association between board gender diversity and financial reporting quality, corporate performance and corporate social responsibility disclosure', *Academia Revista Latinoamericana de Administración*, 31: 177-94.
Putnam, Robert D., Robert Leonardi, and Raffaella Y. Nanetti. 1994. *Making democracy work: civic traditions in modern Italy* (Princeton University Press: Princeton, NJ).
Qian, Jun "Qj", and Julie Lei Zhu. 2018. 'Return to Invested Capital and the Performance of Mergers and Acquisitions', *Management Science*, 64: 4818-34.
Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer, Robert W Vishny. 1997. 'Trust in Large Organizations', *The American Economic Review*, 87: 333-38.
Rajesh, R. 2020. 'Exploring the sustainability performances of firms using environmental, social, and governance scores', *Journal of Cleaner Production*, 247.
Ramanna, Karthik. 2015. 'Goodwill Hunting.' in, *Political Standards: Corporate Interest, Ideology, and Leadership int he Shaping of Accounting Rules for the Market Economy*.
———. 2020. 'Friedman at 50: Is It Still the Social Responsibility of Business to Increase Profits?', *California Management Review*, 62: 28-41.
———. 2021. "ESG Accounting needs to cut through the greenwash." In *Opinion, ESG investing*. Financial Times.
Raworth, Kate. 2017. *Donut Economics: Seven ways to think like a 21-st century economist* (Random House: London).
Reiff, Janice L. 2000. 'Rethinking Pullman: Urban Space and Working-Class Activism', *Social Science History*, 24: 7-32.
Reuters. 2021a. "ESG Book aims to 'disrupt' sustainability sector with free data." In *ESG*. WEForum: World Economic Forum.
———. 2021b. 'Technology Overview', Reuters, Accessed 07-07-2021. https://www.reuters.com/assets/curtainMainContentLoader?view=RSM-US-Curtain-MainContent-Sector-Technology.
Reuters, Thomson. 2016. "ROIC: Tax and Accounting New Hot Topic." In. Checkpoint Learning: Thomson Reuters.
———. 2022. "Special Report: ESG Under Strain." In, 29. Thomson Reuters Institute.
Richardson, Heidi. 2015. "Relatively Low Leverage Gives Tech Companies Leverage." In *Market Realist*. Yahoo!Finance.
Robinson, Julian. 2021. "Big Tech and the Return of Company Towns." In *Business & Technology*. The Bull & Bear, McGill's Student-Run Magazine.
Rodrigo, Pablo, Ignacio J. Duran, and Daniel Arenas. 2016. 'Does it really pay to be good, everywhere? A first step to understand the corporate social and financial performance link in Latin American controversial industries', *Business Ethics: A European Review*, 25: 286-309.
Romer, David. 1984. 'The Theory of Social Custom: A Modification and Some Extensions', *The Quarterly Journal of Economics*, 99: 717-27.
Romm, Joseph. 2002. 'The internet and the new energy economy', *Resources Conservation & Recycling*, 36: 197-210.
Rose, Adam 2017. 'Defining and Measuring Economic Resilience from a Societal, Environmental and Security Perspective', *Integrated Disaster Risk Management*.

Ross, Jenna. 2021. 'The Biggest Companies in the World in 2021', Visual Capitalist, Accessed 27-07-2021. https://www.visualcapitalist.com/the-biggest-companies-in-the-world-in-2021/.
Rudkin, Bradley, Danson Kimani, Subhan Ullah, Rizwan Ahmed, and Syed Umar Farooq. 2019. 'Hide-and-seek in corporate disclosure: evidence from negative corporate incidents', *Corporate Governance: The International Journal of Business in Society*, 19: 158-75.
Ruf, Bernadette M, Krishnamurty Muralidhar, Robert M Brown, Jay J Janney, and Karen Paul. 2001. 'An Empirical Investigation of the Relationship between Change in Corporate Social Performance and FInancial Performance: A Stakeholder Theory Perspective', *Journal of Business Ethics*, 32: 143-56.
Russo, Angeloantonio, and Francesco Perrini. 2010. 'Investigating Stakeholder Theory and Social Capital: CSR in Large Firms and SMEs', *Journal of Business Ethics*, 91: 207-21.
Salvati, Luca, and Marco Zitti. 2009. 'Substitutability and Weighting of Ecological and Economic Indicators: Exploring the importance of various components of a synthetic index', *Ecological Economics*: 1093-99.
Sánchez-Ballesta, Juan P, and Emma García-Meca. 2007. 'A Meta-Analytic Vision of the Effect of Ownership Structure on Firm Performance', *Corporate Governance*, 15: 879-93.
Sandberg, Sheryl. 2012. "Lean In: Women, Work, and the Will to Lead." In.: WH Allen.
SASB. 2022. "SASB Standards and the new International Sustainability Standards Board." In.: Value Reporting Foundation and SASB Standards.
Scamardella, Francesca. 2014. 'Law, globalisation,governance: emerging alternative legal techniques', *The Journal of Legal Pluralism and Unofficial Law*, 47: 76-95.
Schendler, Auden. 2009. *Getting Green Done: Hard Truths from the Front Lines of the Sustainability Revolution* (Public Affairs).
Schiller, Reuel. 2020. 'The Curious Origins of Airline Deregulation: Economic Deregulation and the American Left', *Business History Review*, 93: 729-53.
Schmitt-Grohé, Stephanie, and Martín Uribe. 1999. 'Y2K*', *Review of Economic Dynamics*, 2: 850-56.
Scholtens, Bert. 2008. 'A note on the interaction between corporate social responsibility and financial performance', *Ecological Economics*, 68: 46-55.
Scholtens, Bert, and Feng-Ching Kang. 2013. 'Corporate Social Responsibility and Earnings Management: Evidence from Asian Economies', *Corporate Social Responsibility and Environmental Management*, 20: 95-112.
Schroeder, Paul. 2000. 'A Brief History of Microsoft and Accessibility', American Association for the Blind, Accessed 27-07-2021. https://www.afb.org/aw/1/4/16165.
Schuman, Michael. 2017. "History of child labor in the United States - Part 2: The reform movement." In *Monthly Labor Review*. US Bureau of Labor Statistics.
Schumpeter, Joseph. 1976. *Capitalism, Socialism, and Democracy* (Routledge: London).
Schwab, Klaus. 2019. 'Davos Manifesto 2020: The Universal Pupose of a Company in the Fourth Industrial Revolution', World Economic Forum (WEF), Accessed 27 July 2022. https://www.weforum.org/agenda/2019/12/davos-manifesto-2020-the-universal-purpose-of-a-company-in-the-fourth-industrial-revolution/.
Schwartz, Mark S., and Archie B. Carroll. 2003. 'CSR - A Three-Domain Approach', *Business Ethics Quarterly*, 13: 503 - 30.
Scoville, James G. 2002. 'Segmentation in the Market for Child Labor: The Economics of Child Labor Revisited', *American Journal of Economics and Sociology*, 61: 713-23.
SEC. 2021. 'Reconciliation of Non-GAAP Financial Measures - Return on Invested Capital', US

Securities and Exchange Commission, Accessed 13-09-2021.
Seele, Peter, and Irina Lock. 2014. 'Instrumental and/or Deliberative? A Typology of CSR Communication Tools', *Journal of Business Ethics*, 131: 401-14.
Selekman, Benjamin Morris. 1959. *A Moral Philosophy for Management* (McGraw-Hill).
Selyukh, Alina. 2018. "Apple Becomes World's 1st Private-Sector Company Worth $1 Trillion." In *All Things Considered*. NPR.
Servaes, Henri, and A. N. E. Tamayo. 2013. 'The Impact of Corporate Social Responsibility on Firm Value: The Role of Customer Awareness', *Management Science*, 59: 1045-61.
Sethi, Deepak, and William Judge. 2009. 'Reappraising liabilities of foreignness within an integrated perspective of the costs and benefits of doing business abroad', *International Business Review*, 18: 404-16.
Sethi, S Prakash. 1975. 'Dimensions of Corporate Social Performance: An Analytical Framework', *California Management Review*, 17: 58-64.
Shah, Shashank. 2014. 'Corporate Social Responsibility: A Way of Life at the Tata Group', *Journal of Human Values*, 20: 59-74.
Sharfman, Mark P., and Chitru S. Fernando. 2008. 'Environmental risk management and the cost of capital', *Strategic Management Journal*, 29: 569-92.
Sheffi, Yossi. 2015. *The Power of Reslience: How the Best Companies Manage the Unexpected* (MIT Press).
Sherwood, Matthew W, and Julia L Pollard. 2018. *Responsible Investing: An Introduction to Environmental, Social, and Governance Investments* (Routledge: London).
Shiller, Robert J. 2017. 'Narrative Economics', *The American Economic Review*, 107: 967-1004.
Shiu, Yung-Ming, and Shou-Lin Yang. 2017. 'Does engagement in corporate social responsibility provide strategic insurance-like effects?', *Strategic Management Journal*, 38: 455-70.
Shocker, Allan D., and S. Prakash Sethi. 1973. 'An Approach to Incorporating Societal Preferences in Developing Corporate Action Strategies', *California Management Review*, 15: 97-105.
Silvia, Ta̋bușca̋ 2012. "The Evolution of Human Rights Protection within the EU Legal System." In *European Integration: Realities and Perspectives*.
Simonite, Tim. 2020. "Behind the Paper That Led to a Google Researcher's Firing." In *Business*. Wired.
Simonite, Tom. 2019. "A Tech Group Suggests Limits for the Pentagon's Use of AI." In.: Wired.
Smith III, J. Andy. 1993. 'The CERES Principles: A Voluntary Code fo Corporate Environmental Responsiblity', *Yale Journal of Internal Law*, 18: 307 - 17.
Smith, Stephen C. 1988. 'On the Incidence of Profit and Equity Sharing', *Journal of Economic Behavior & Organization*, 9: 45-58.
Sorkun, Murat Cihan, and Taner Toraman. 2017. 'Fraud Detection on Financial Statements Using Data Mining Techniques', *International Journal of Intelligent Systems and Applications in Engineering*, 3: 132-34.
Spar, Debora L. 2001. *Ruling the Waves: Cycles of Discovery, Chaos, and Wealth from the Compass to the Internet* (Harcourt, Inc.: Florida, USA).
Sreenivasan, Hari, and Kate Conger. 2018. "Amid Pressure from Employees, Google drops Pentagon's Project Maven Account." In *PBS NewsHour*. PBS.
Srnicek, Nick. 2016. *Platform Capitalism* (Polity Press).
Statt, Nick. 2018. "Google reportedly leaving Project Maven military AI program after 2019." In.: The Verge.

Steffen, Tom. 2021. "ESG Scores: An Outdated Concept." In.: Responsible Investor.
Steinberg, Marc. 2019. *The Platform Economy*.
Stern, NYU. 2019. "Sustainability Materiality Matrices Explained." In.: NYU Sterm Center for Sustainable Business.
Stiglitz, Joseph. 2008. 'The fruit of hypocrisy', *The Guardian,* 16 Sept 2008.
Suchman, Mark C. 1995. 'Managing Legitimacy: Strategic and Institutional Approaches', *Academy of Management Review*, 20: 571-610.
Swuste, Paul, Coen van Gulijk, Jop Groeneweg, Walter Zwaard, Saul Lemkowitz, and Frank Guldenmund. 2020. 'From clapham junction to macondo, deepwater horizon: Risk and safety management in high-tech-high-hazard sectors', *Safety Science*, 121: 249-82.
Tang, Dragon Yongjun, Jiali Yan, and Chelsea Yaqiong Yao. 2022. "The Determinants of ESG Ratings: Rater Ownership Matters." In.
Tech, Women Who. 2020. 'The State of Women in Tech and Startups', Women Who Tech. https://womenwhotech.org/data-and-resources/state-women-tech-and-startups.
Testa, Francesco, Ivan Miroshnychenko, Roberto Barontini, and Marco Frey. 2018. 'Does it pay to be a greenwasher or a brownwasher?', *Business Strategy and the Environment*, 27: 1104-16.
Tett, Gillian. 2020. "Big Four Accounting Firms Unveil ESG Reporting Standards." In *ESG Investing*. Financial Times.
———. 2022. "ESG exposed in a world of changing priorities." In *Sustainability*. Financial Times.
Thierer, Adam. 2011. "Tech Titans and Creative Destruction." In *Opinions*. Forbes.
Torres, Cristina A Cedillo, Mercedes Garcia-French, Rosemarie Hordijk, Kim Nguyen, and Lana Olup. 2012. 'Four Case Studies on Corporate Social Responsibility: Do Conflicts Affect a Company's Corporate Social Responsibility Policy?', *Utrecht Law Review*, 8.
Tremblay, Monica Chiarini, Carlos M Parra, and Arturo Castellanos. 2015. "Corporate Social Responsibility Reports: Understanding Topics via Text Mining." In *Twenty-First Americas Conference on Information Systems* Puerto Rico.
Tsai, Ming-Feng, and Chuan-Ju Wang. 2017. 'On the risk prediction and analysis of soft information in finance reports', *European Journal of Operational Research*, 257: 243-50.
Ullmann, Arieh A. 1985. 'Data In Search of a Theory: A Critical Examination of the Relationships among Social Performance, Social Disclosure, and Economic Performance of U. S. Firms', *The Academy of Management Review*, 10: 540-57.
UNEP. 'TCFD – Task Force on Climate-related Financial Disclosures', United Nations Environment Programme, Accessed 15 March 2022. https://www.unepfi.org/climate-change/tcfd/#:~:text=The%20Task%20Force%20on%20Climate,in%20providing%20information%20to%20stakeholders.
UNPRI. 2020. "UNPRI Assets Under Management, 2006 - 2020." In.: UN PRI.
van Berkel, Arij , Jessica Hernandez, and Yuan-Sheng Yu. 2020. "The Energy Transition of the IT Sector: Market Forecast and Opportunities." In *Executive Summary*. Lux Research.
van Beurden, Pieter, and Tobias Gössling. 2008. 'The Worth of Values – A Literature Review on the Relation Between Corporate Social and Financial Performance', *Journal of Business Ethics*, 82: 407-24.
van de Wijs, Peter Paul, and Cornis van der Lugt. 2020. "Carrots & Sticks." In.: GRI and the University of Stellenbosch Business School.
Van Dijck, José. 2020. 'Seeing the forest for the trees: Visualizing platformization and its

governance', *New Media & Society*.
Van Fleet, David D, and Daniel A Wren. 2005. 'Teaching History in Business Schools: 1982-2003', *Academy of Management Learning & Education*, 4: 44-56.
Vance, Stanley C. 1975. 'Are Socially Responsible Corporations Good Investment Risks?', *Management Review*, 64.
Varadarajan, P Rajan, and Anil Menon. 1988. 'Cause Related Marketing: A Coalignment of Marketing Strategy and Corporate Philanthropy', *Journal of Marketing*, 52: 58-74.
Vartiak, Lukas. 2016. 'CSR Reporting of Companies on a Global Scale', *Procedia Economics and Finance*, 39: 176-83.
Vayre, Émilie. 2022. "Digitalization of Work." In *New Spaces and New Working Times*, edited by Émilie Vayre.
Velte, Patrick. 2021. 'Meta-analyses on Corporate Social Responsibility (CSR): a literature review', *Management Review Quarterly*.
Venard, Bertrand. 2018. "Lessons from the massive Siemens corruption scandal one decade later." In.: The Conversation.
View, The FT. 2017. "Accounting scandals put the Big Four on the spot." In *Opinion*.
Visser, Wayne, and Nick Tolhurt. 2010. *The World Guide to CSR: A Country-by-Country Analysis of Corporate Sustainability and Responsibility* (Greenleaf Publishing).
Vlachos, Pavlos A., Nikolaos G. Panagopoulos, and Adam A. Rapp. 2013. 'Feeling Good by Doing Good: Employee CSR-Induced Attributions, Job Satisfaction, and the Role of Charismatic Leadership', *Journal of Business Ethics*, 118: 577-88.
Votaw, Dow. 1972. 'Genius Becomes Rare: A Comment on the Doctrine of Social Responsibility Pt 1', *California Management Review*, XV: 25-31.
Waddock, Sandra A, and Samuel B Graves. 1997. 'The Corporate Social Performance - Financial Performance Link', *Strategic Management Journal*, 18: 303-19.
Wakabayashi, Daisuke, and Scott Shane. 2018. "Google Will Not Renew Pentagon Contract That Upset Employees." In.: The New York Times.
Walch, Kathleen. 2019. "The Growth of AI Adoption in Law Enforcement." In *Cognitive World*. Forbes.
Walton, Clarence C. 1967. *Corporate Social Responsibilities* (Wadsworth Publishing Co: Belmont, California).
Waterhouse, Bejamin C. 2017. 'The Personal, The Political, and the Profitable: Business and Protest Culture, 1960s - 1980s', *Financial History*.
Watson, Bruce. 2016. 'The Troubling Evolution of Corporate Greenwashing', *The Guardian,* 20 Aug 2016.
Weber, Max. 1968. *Economy and Society: An Outline of Interpretive Sociology* (Bedminster Press: New York).
WEF. 2022. "Stakeholder Capitalism: Over 70 global companies implement ESG reporting metrics." In. WEForum: WEF.
WEF, and IBC. 2020. "Measuring Stakeholder Capitalism: Toward Common Metrics and Consistent Reporting of Sustainable Value Creation." In *White Paper*, edited by World Economic Forum.
Weir, Ken. 2016. 'Crisis Narratives and the Abandonment of CSR during the Financial Crisis: Notes from Systems Integrated', *Social and Environmental Accountability Journal*, 36: 188-202.
Weiser, Mark. 1991. 'The Computer for the 21st Century', *Scientific American*: 94-104.
Werther Jr, William B, and David Chandler. 2005. 'Strategic Corporate Social Responsibility as

Global Brand Insurance', *Business Horizons*, 48: 317-24.
West, John. 2018. 'Getting Better Value Out of Global Value Chains.' in, *Asian Century... on a Knife-edge*.
Westermeier, Carola. 2020. 'Money is data – the platformization of financial transactions', *Information, Communication & Society*, 23: 2047-63.
Whelan, Tensie, Ulrich Atz, Tracy Van Holt, and Casey Clark. 2021. "ESG and Financial Performance: Uncovering the Relationship by Aggregating Evidence from 1,000 Plus Studies Published between 205 - 2020." In.: NYU Stern Center for Sustainable Business and Rockefeller Asset Management.
Williams, Cynthia A., and Ruth V. Aguilera. 2009. *Corporate Social Responsibility in a Comparative Perspective* (Oxford Handbooks Online).
Willness, Chelsea R. 2019. 'When CSR Backfires.' in Abagail McWilliams, Deborah E. Rupp, Donald S. Siegel, Günter K. Stahl and David A. Waldman (eds.), *The Oxford Handbook of Corporate Social Responsibility*.
Wolozin, Harold. 1971. 'Environmental Control at the Crossroads', *Journal of Economic Issues*, 5.
Wood, Donna J. 1991. 'Corporate Social Performance Revisited', *Academy of Management Review*, 16: 691-718.
Wood, Donna J., Jeanne M. Logsdon, Patsy G. Lewellyn, and Kimberly S. Daveport. 2006. *Global Business Citizenship: a Transformative Framework for Ethics and Sustainable Capitalism* (Taylor & Francis Group).
Woollacott, Angela. 1994. 'Maternalism, professionalism and industrial welfare supervisors in World War I Britain', *Women's History Review*, 3: 29-56.
Wren, Daniel A. 2005. *The History of Management Thought* (Wiley).
Xu, Jian, and Feng Liu. 2021. 'Nexus Between Intellectual Capital and Financial Performance: An Investigation of Chinese Manufacturing Industry', *Journal of Business Economics and Management*, 22: 217-35.
Xu, Jian, Feng Liu, and Yue Shang. 2020. 'R&D investment, ESG performance and green innovation performance: evidence from China', *Kybernetes*, 50: 737-56.
Yamaguchi, Shunta, and Clara Garcia Bouyssou. 2020. "OECD Workshop on International Trade and Circular Economy." In *Joint Working Party on Trade and Environment*. Paris: OECD.
Yan, Xuemin (Sterling), and Zhe Zhang. 2009. 'Institutional Investors and Equity Returns: Are Short-Term Institutions Better Informed?', *The Review of Financial Studies*, 22: 893-924.
Yu, Sui-Hua. 2013. 'Social capital, absorptive capability, and firm innovation', *Technological Forecasting and Social Change*, 80: 1261-70.
Yunus, Muhammad, Bertrand Moingeon, and Laurence Lehmann-Ortega. 2010. 'Building Social Business Models: Lessons from the Grameen Bank Experience', *Long Range Planning*, 43: 308-25.
Yusoff, Haslinda, Siti Salwa Mohamad, and Faizah Darus. 2013. 'The Influence of CSR Disclosure Structure on Corporate Financial Performance: Evidence from Stakeholders' Perspectives', *Procedia Economics and Finance*, 7: 213-20.
Zahller, Kimberly A., Vicky Arnold, and Robin W. Roberts. 2015. 'Using CSR Disclosure Quality to Develop Social Resilience to Exogenous Shocks: A Test of Investor Perceptions', *Behavioral Research in Accounting*, 27: 155-77.
Zerk, Jennifer A. 2006. *Multinationals and Corporate Social Responsibility*.

Zhu, Qinghua, and Kee-hung Lai. 2019. 'Enhancing supply chain operations with extended corporate social responsibility practices by multinational enterprises: Social capital perspective from Chinese suppliers', *International Journal of Production Economics*, 213: 1-12.

Zuboff, Shoshana. 2019. *Surveillance Capitalism* (Profile Books).

Zygliodopoulos, Stelios C. 2003. 'The Issue Life-Cycle: Implicaitons for Reputation for Social Performance and Organizational Legitimacy', *Corporate Reputation Review*, 6: 70-81.