Engaged Management ReView

Volume 5 | Issue 2 Article 1

2022

The Influence of Regulatory Oversight on Environmental, Social, and Governance Ratings

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Cover Page Footnote

This paper is based on the dissertation I successfully defended for my Doctorate in Business Administration from Franklin University (USA), on March 18, 2020.

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EDITORIAL NOTE

Torpey's analysis of ESG ratings (ratings for environmental stewardship, social responsibility, and corporate governance) and their systematic variation between highly regulated and less regulated industries opens up several fascinating unexplored aspects about the construction and use for ESG ratings to EMR readers. First, it shows that *regulation* matters—companies in highly regulated industries show systematically higher ESG ratings than those in less regulated industries. Ergo higher ratings are less of an outcome of intentional social responsibility effort by corporate management, but rather a response to stakeholder pressure (regulators), which, if not addressed, leads to poorer performance in the industry and lower shareholder value. In less regulated industries such effects are not that visible and higher ESG ratings show more the strategic intent of the leaders to at least signal, if not execute, business logic that caters to ESG requirements. A second interesting aspect raised by the analysis is, does the level of regulation match with the need for higher ESG concerns, and hence ESG measures the general expected impact of respective firms on ESG areas? Clearly, highly regulated industries—utilities and financial sectors—have reasons to be regulated, because of their infrastructural nature (both), environmental impact (utilities), and the threat of fraud and moral hazard (financial sector). But, aren't information technology (environmental impact, monopolistic behaviors, work environment effects in manufacturing) or consumer discretionary sector (environmental effects, work environments in manufacturing) equally gullible for demands for higher ESG ratings? This suggests that 'inherited' institutional environment and its pressure are more likely to affect ESG ratings than other factors (such as regulatory need). Probably, ESG is mostly a proxy of the level of institutional pressure towards that industry sector on selected ESG areas.

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ABSTRACT

Firm performance in the specific areas of environmental stewardship, social responsibility, and corporate governance (ESG) has become an important criterion that investors use in determining a firm's value. This empirical investigation, based on stakeholder theory examines the relationship between regulatory oversight and third-party ESG ratings. Our research methodology involved quantitative, observational, and retrospective analyses. The study population consisted of 471 firms from two heavily regulated industry sectors—the utility and financial sectors—and from two less regulated sectors—the information technology and consumer discretionary sectors. We compiled the ESG ratings for the firms from two independent rating services. The quantitative evaluation included multiple regression analysis and multiway frequency analysis. The findings show a statistically significant difference for firms in heavily regulated sectors compared to the ratings for firms in less regulated sectors for the environmental and governance component ratings. This study provides information to help stakeholders recognize the influence of regulation on ESG ratings and explains to investors and company leaders why ESG ratings vary among different industry sectors. This study was limited to four specific sectors but may provide insights applicable to other sectors based on regulatory intensity.

SYNOPSIS

Purpose

This study examines the relationship between regulatory oversight and third-party ratings for environmental stewardship, social responsibility, and corporate governance (ESG). Because ESG ratings serve to increase firm attractiveness, factors affecting ESG ratings should be considered when evaluating and comparing firms. The body of research linking ESG performance to various mediating factors continues to grow. As a mediating factor, regulatory oversight has not yet been deeply explored; our study thus adds another dimension to the ESG literature.

Problem of Practice

Firms in heavily regulated industry sectors are under pressure from both investors and other stakeholders to increase their ESG ratings. A firm's ESG rating may be affected by the level of regulatory oversight in its sector. Because ESG ratings serve to increase firm attractiveness for investors, they should consider mediating factors that affect ESG ratings when evaluating and comparing firm performance. Companies appear to recognize the benefits of having favorable ESG ratings; however, external factors might cause certain sectors to receive higher or lower ratings than others. Weaknesses in the ESG rating system are evident in circumstances like the bankruptcy filing by PG&E Corporation, the Volkswagen emissions scandal, and the BP Deepwater Horizon incident. All companies were highly rated by environmentally focused investors. The three incidents are high-profile examples of ESG rating failures and justify taking a closer look at whether there are systemic issues with ESG ratings.

Results

We analyzed ESG ratings in two heavily regulated industry sectors and two less regulated sectors: the utility and financial sectors for the former and information technology and consumer discretionary sectors for the latter. The study results indicate the absence of a statistically significant relationship between the level of regulation and the total ESG rating. However, our analysis of separate, individual components of the ESG rating shows that both the environmental rating and the governance rating exhibit a statistically significant relationship to the level of regulation. For the social responsibility rating, results were mixed. We found a statistically significant but negatively correlated relationship to the level of regulation using the data from one ESG rating service; however, we found that no statistically significant relationship was present with data from a second source.

Conclusions

This study examined the relationship between regulation and ESG performance ratings in four industry sectors. The purpose of the study was to determine whether being in a heavily regulated industry sector plays any role in the ESG ratings a firm receives. Investors increasingly are turning to ESG ratings to assess a firm's commitment to sustainability. High ESG ratings reduce the perception of firm risk related to environmental, social, and governance issues, leading to increased interest in factors that influence these ratings. The findings of this study indicate that regulation has a statistically significant positive relationship to environmental and governance ratings, a negative or neutral relationship to social ratings, and no relationship to total, or aggregated, ESG ratings. The results of this study may be beneficial in explaining to investors and company leaders why ESG ratings vary among different industry sectors.

Practical Relevance

Company executives in heavily regulated sectors, such as the utility and financial sectors, recognize that their firm must meet regulatory requirements and that compliance is expected; otherwise, they will fall behind their competitors and peers in the eyes of their stakeholders. The utility sector is transitioning to more sustainable ways to produce energy. The financial sector received increased scrutiny and a tainted reputation because of the sub-prime mortgage crisis, but now is experiencing stellar stock performance. That firms in these heavily regulated sectors receive higher environmental and governance ratings is not surprising; they are required to comply with demands placed on them by stakeholders and regulators. Nevertheless, stakeholders cannot expect regulated companies to be any more philanthropic, worker-oriented, or socially accountable than any other company; in fact, they may be less so. They *can* expect regulated companies to perform better where regulation requires such performance. Meanwhile, firms in unregulated sectors may want to study how firms in regulated sectors have overcome their tarnished images to emerge as better performers in relation to ESG ratings. Stakeholders should recognize that less-regulated companies with high ESG ratings are more socially responsible by choice, not because they are required to be by regulation.

METHODOLOGY

Research Question

What is the relationship between a firm's ESG rating and the level of regulation in the firm's industry sector? In addressing this question, we hypothesize the following:

> Firms in heavily regulated sectors have ESG ratings that are not statistically significantly different from firms in less regulated sectors.

We test this hypothesis using the total ESG rating and using each of the three components: environmental, social, and governance.

Method and Design

This research was quantitative, observational (non-experimental), and retrospective, using data from third-party sources. Two assessments were performed to account for differences in how ESG ratings are reported by the ESG rating firms: continuous assessment and categorical assessment. We conducted multiple regression analysis (MRA) using numeric (continuous) ESG ratings from Sustainalytics as the dependent variables, regulation as the independent variable, and institutional ownership, total three-year return on assets (ROA), and market capitalization as mediating variables (Figure 1). A multiway frequency analysis (MFA) was conducted using categorical ESG ratings from MSCI (Figure 2).

Data Collection, Sample, and Analysis

The study population consists of 471 publicly traded companies, each having a market capitalization of at least $3.9 billion. The 471 firms were from four industry sectors: 201 firms operate in heavily regulated sectors (financial and utilities), and 270 firms operate in less regulated sectors (information technology and consumer discretionary). Companies in the consumer discretionary sector sell non-essential goods and services such as vehicles and appliances.

Figure 1. Multiple Regression Model Using Sustainalytics ESG Data

SUSTAINALYTICS ESG RATING		REGULATION		INSTITUTIONAL OWNERSHIP		TOTAL RETURN		SIZE
Total ESG Rating	$= A + B1_T X$	Regulated – Utilities and Financial Sectors / Unregulated – Consumer Discretionary and IT	$+ B2_T X$	Percent of Shares Held by Institutional Investors	$+ B3_T X$	Annualized 3 Year Return on Assets	$+ B4_T X$	Market Capitalization
Environmental Rating	$= A + B1_E X$	Regulated – Utilities and Financial Sectors / Unregulated – Consumer Discretionary and IT	$+ B2_E X$	Percent of Shares Held by Institutional Investors	$+ B3_E X$	Annualized 3 Year Return on Assets	$+ B4_E X$	Market Capitalization
Social Rating	$= A + B1_S X$	Regulated – Utilities and Financial Sectors / Unregulated – Consumer Discretionary and IT	$+ B2_S X$	Percent of Shares Held by Institutional Investors	$+ B3_S X$	Annualized 3 Year Return on Assets	$+ B4_S X$	Market Capitalization
Governance Rating	$= A + B1_G X$	Regulated – Utilities and Financial Sectors / Unregulated – Consumer Discretionary and IT	$+ B2_G X$	Percent of Shares Held by Institutional Investors	$+ B3_G X$	Annualized 3 Year Return on Assets	$+ B4_G X$	Market Capitalization

Figure 2. Multiway Frequency Analysis Using MSCI Categorical ESG Ratings

REGULATION	FIRM SIZE	ESG RATING*		
		LAGGARD	AVERAGE	LEADER
Regulated – Utilities and Financial Sectors	Large	# of Firms	# of Firms	# of Firms
	Medium	# of Firms	# of Firms	# of Firms
Unregulated – Consumer Discretionary and IT	Large	# of Firms	# of Firms	# of Firms
	Medium	# of Firms	# of Firms	# of Firms

*Separate matrices for Total ESG, Environmental, Social, and Governance ratings.

PRACTICAL PROBLEM

ESG ratings serve to increase firm attractiveness. Thus, factors affecting ESG ratings should be considered when evaluating and comparing firms. The level of regulatory oversight is a factor that may affect a firm's ESG ratings. The literature reviewed for this study generally found that companies appear to recognize the benefits of having favorable ESG ratings; however, external factors potentially cause certain sectors to receive higher or lower ratings than others.

Regulation is not a panacea for better ESG performance, as evidenced in the bankruptcy filing by PG&E Corporation, the Volkswagen emissions scandal, and the BP Deepwater Horizon incident. Each of these companies was highly rated by environmentally focused investors and subject to varying degrees of environmental and governance regulation. The devastating Camp Fire in California has been tied to PG&E's transmission system maintenance issues. Volkswagen was ordered to pay a $2.8 billion criminal fine for rigging diesel-powered vehicles to cheat on government emissions tests, and the BP Deepwater Horizon incident in 2010 was like another BP incident in the Caspian Sea in 2008. Although leadership and cultural issues beyond the scope of the present analysis likely contributed to these corporate calamities, these three high-profile examples reveal that ESG ratings do not always align with ESG performance and potentially suggest systemic biases with ESG ratings.

Regarding the Volkswagen incident, even after the emissions scandal, VW continued to have ESG ratings higher than its peers. The American Council for Capital Formation commented how this example "shows a complete failure by the ratings agencies to accurately capture ESG risk, even after a blatant attempt at bypassing environmental regulations." The report was critical of rating agencies' ability to identify risks and mismanagement (El-Hage, 2021).

Firms in heavily regulated sectors are expected to satisfy environmental and governance standards imposed by regulators. Firms have few regulatory incentives to implement social initiatives. This study identifies whether a significant statistical difference arises in ESG component and aggregate ratings between firms in highly regulated sectors versus firms in less regulated sectors. A relationship between ESG ratings and regulation inform investor expectations regarding ESG ratings for firms they are evaluating.

LITERATURE REVIEW

This literature review examines theories of corporate social responsibility with particular emphasis on stakeholder theory. This is followed by a summary of the literature addressing regulatory oversight, ESG in regulated sectors, this studies' variables, and gaps in the literature.

Corporate Social Responsibility Theories and Categories

Underpinning ESG performance is corporate social responsibility (CSR). CSR has been the subject of numerous research papers using a variety of theoretical perspectives. These theories may be divided into two categories: theories of external drivers and theories of internal drivers. Theories of external drivers include views that are relational, political, or integrative and are concerned with the nature of a firm's relationships with the environment. This includes stakeholder theory, as well as institutional theory, legitimacy theory, and resource dependency theory, all of which are useful in examining external drivers and mediators of social responsibility (Frynas & Yamahaki, 2016). Internal drivers, such as resource-based view and agency theory, focus on evaluating internal organizational mechanisms to take on social and environmental concerns. Internal drivers apply when evaluating

firm management and the social values of individuals inside organizations. Of all the internal and external theories, stakeholder theory is the most widely used, followed by institutional theory and legitimacy theory (Frynas &Yamahaki, 2016).

Stakeholder theory has been used in researching how corporate social performance relates to financial performance. The trade-off in allocating resources to social initiatives may be lower profits or earnings, which is counter to profit maximization goals (Ting et al., 2020). Some stakeholder theory proponents suggest that firms should maximize value for all stakeholders, not just shareholders. Economist Milton Friedman famously disagreed and saw limited financial benefit accruing to CSR activity (Vural, 2020).

The Stakeholder Perspective

Stakeholder theory predicts that a firm's environmental and socially responsible activities will be value-enhancing for its stakeholders. In times of policy-related uncertainty, such as before a general election, firms increase their overall ESG activities to shield themselves from potential ESG-related disasters, such as a major product recall. These actions benefit all the stakeholders who want to see the company survive (Vural, 2020).

Identifying all ESG risks and recognizing the concerns of a broad range of stakeholders, including customers, suppliers, and the community, can help leaders to achieve a sustainable business. Boards must practice stakeholder governance to understand stakeholder concerns. They also must guard against allowing short-term issues (e.g., high gas prices) to drive company strategy (Diller, Betts, Corte, Silk, & Simpson, 2021).

To some extent, CSR initiatives pertain to the expectations of the various entities and actors in a firm's social systems. From this perspective, firm leaders must acknowledge that the firm exists not just in a world of shareholders, but within larger assemblages of financial, political, and social actors. These stakeholders each place demands on the firm. In this stakeholder perspective, the firm is a collection of intersecting and competing interests, each with some value. The firm becomes a place of facilitation, where the competing interests of different stakeholders in a broader society can interact (Maon et al., 2010).

Regulatory Oversight

Economic regulation sets various constraints on firm actions and decisions (Cambini et al., 2015). Regulations may incentivize investment and efficiency and may constrain management discretion. Regulatory bodies see the value offered by socially responsible firms. Socially responsible firms are less likely to be under SEC investigation because of violations in generally accepted accounting principles (GAAP); the implication is that these firms have greater transparency and integrity in their business practices than their less socially responsible peers (Lee et al., 2018).

Regulation functions as a constraint on firms' activities, which changes the incentives normally found in market-based mechanisms (Cambini et al., 2015). Financial institutions (e.g., banks and savings institutions) and utility companies are still considered heavily regulated, although they have both experienced some deregulation recently (Becher & Frye, 2011, p. 740). Earlier studies see similarities in governance mechanisms for these two industries, in addition to both industries facing a higher level of regulatory control (Becher & Frye, 2011). The utility model is a monopoly model, where utilities operate in exclusive franchise territories, unlike firms in other sectors (Starkweather, 2017). In many states in the U.S. the public utility sector operates in noncompetitive markets, strongly influenced by regulatory constraints on firm behavior and decisions. Regulators set utility rates during contested hearings, weighing input from utility stakeholders on the prudency of utility spending and capital investments.

ESG Ratings for Heavily Regulated Sectors

Firms in heavily regulated sectors are under pressure to increase their ESG ratings. Regulators may apply pressure on firms to use effective corporate governance structures. The mere presence of regulators has been found to affect governance practices in firms, even without specific mandates (Becher & Frye, 2011).

The relationship between ESG performance and banks' shareholder value creation is complex. Research has found a negative and significant correlation of banks' social performance with shareholder value creation, a positive and significant relationship of banks' environmental performance with shareholder value creation, and a positive and significant relationship of banks' corporate governance performance with shareholder value creation (Miralles-Quirós et al., 2019).

Meanwhile, electric utilities often take on socially responsible initiatives because they result in cost savings or other positive financial results, rather than simply for image building (Miras-Rodríguez et al., 2015). However, environmentally friendly behaviors in electrical companies also are driven by the need to improve their image and to reverse the companies' earlier negative environmental impact (Miras-Rodríguez et al., 2015). Energy companies increasingly are being forced to become more socially responsible, especially around environmental performance, because their historically high production of emissions have been associated with acid rain, poor air quality, and climate change (Kludacz-Alessandri, 2020).

A regulated environment does not necessarily drive higher ESG ratings than a less regulated, highly competitive environment. Highly competitive firms recognize the value of ESG activities. Meanwhile, firms in concentrated industries, such as utilities, may not have the same competition-driven discipline found in other sectors and therefore may not prioritize ESG activities (Vural, 2020).

Components of ESG Ratings

Aouadi and Marsat (2018) define the three components of ESG ratings:

- The environmental measure consists of three categories: emission reduction, product innovation, and resource reduction or energy conservation. Highly rated companies include Citigroup and Exelon. Lower rated companies include Atmos Energy and E*Trade Financial Corporation.
- The governance measure has five categories: board functions, board structure, compensation policy, shareholders policy, and vision and strategy. CenterPoint Energy, Inc. and Reinsurance Group of America, Inc. are highly rated for governance, whereas Goldman Sachs is lower rated.
- The social measure considers community, diversity, employment quality, health and safety, human rights, product responsibility, and training and development. NextEra and DTE Energy have high social ratings. Berkshire Hathaway and FNF Group have lower social ratings than their peers.

The total ESG score is an aggregation of the component scores.

Mediating Variables: Institutional Ownership, ROA, and Market Capitalization.

Institutional ownership is the percentage of shares held by institutional investors. Current research shows a positive and significant association between future corporate social performance and the holdings of long-term institutional owners. Executives generally prioritize the demands of their larger and more vocal stakeholders, and institutional investors generally have more power and a greater voice in the firm's strategic decisions (Erhemjamts & Huang, 2019). Larger companies tend to adopt CSR initiatives upon the insistence of stakeholders, and economies of scale can affect the cost of engaging in such CSR initiatives (Michelon, Boesso, & Kumar, 2013). Studies focusing on firm value and return on assets found that the positive relationship between firm value and CSR is due in part to the lower equity capital costs of higher valued firms (Lee et al., 2018).

Gaps in the Literature

Much of the CSR/corporate performance research has linked ESG ratings or CSR strategies to financial performance or firm financial valuation (Michelon et al., 2013). Although studies have linked ESG ratings to environmental performance (see, e.g., Miralles-Quirós et al., 2019), research that links a firm's ESG ratings to the level of regulatory oversight in the firm's sector is lacking.

The previous examples of ethical and compliance lapses also call into question corporate commitment to operating in a manner consistent with their ESG ratings. The current study does not assume that firms are purposely trying to mislead investors but looks to determine whether other structural reasons, such as heavy regulatory oversight, affect the ESG ratings that companies receive.

FINDINGS

This study used ESG rating data from two independent sources: Sustainalytics, reported on the website Yahoo Finance, and MSCI, reported on Fidelity.com. The data were collected in December 2019. We conducted two independent statistical analyses: multiple regression analysis (MRA) using the Sustainalytics data and multiway frequency analysis (MFA) using the data from MSCI. The two methodologies are appropriate considering the difference in how the ESG rating firms report the ESG ratings (the dependent variable). The data are from four industry sectors. Two are heavily regulated sectors (Financials and Utilities), and two are less regulated sectors (Information Technology and Consumer Discretionary). Familiar firms in the financial sector include Bank of America Corporation and MetLife, Inc. The utilities sector includes companies such as American Electric Power Company and NRG Energy, Inc. Firms in the information technology sector include Apple and Intuit Inc. The consumer discretionary sector includes companies such as Carnival Corporation and O'Reilly Automotive, Inc.

Study results indicate that the relationship between the level of regulation and the total ESG rating is not statistically significant. However, looking at each component of the ESG rating separately, we find a statistically significant relationship between the level of regulation and both the environmental rating of a firm and its governance rating. The environmental and governance ratings for firms in heavily regulated industry sectors are significantly higher than for firms in less regulated sectors. For the social responsibility rating, we found a statistically significant but negatively correlated relationship using the data from Sustainalytics, and we found no statistically significant relationship using the data from MSCI.

Excluding the social component of the ESG ratings, conclusions regarding the statistical relationship between ESG ratings and regulation are consistent for the MRA, which is based on the Sustainalytics ESG ratings, and the MFA, which uses the MSCI ratings. Descriptive statistics for the aggregate ESG rating and the three ESG component ratings show that the social rating has the second-highest mean rating using the Sustainalytics data but the lowest mean rating using the MSCI data. This difference likely stems from how the independent rating services score companies or how they weight the components making up the social performance rating. The discrepancy in the social rating measure between MSCI and Sustainalytics points out the need for company leaders to carefully consider how ESG rating services develop their scores, including their methodology and data collection practices.

In reviewing the findings related to the mediating variables, our study found a modest statistically significant relationship between institutional ownership and total

ESG, but no statistically significant relationship between institutional ownership and the components of the ESG ratings. Firm size (i.e., market capitalization) had a statistically significant relationship to total ESG and environmental ratings. However, we found no statistically significant relationship between size and governance, and only the MRA found a statistically significant relationship between size and social responsibility. Lastly, return on assets had a significant but slightly negative relationship for the environmental rating only.

LESSONS FOR PRACTICE

The study findings show that environmental and governance ratings for firms in heavily regulated industry sectors are significantly higher than for firms in less regulated sectors. This finding has implications for investors, company executives, other stakeholders, regulators, and legislators.

Investors rely on ESG ratings for a variety of reasons, from risk mitigation to determining whether a company is socially responsible. This study suggests that investors should consider moderating factors that can influence these ratings, such as whether firms are in a heavily regulated sector. Some ESG rating services (e.g., Sustainalytics) report how firms compare to their peers. This relative rating may be a more valuable metric than the absolute rating, given potential moderating factors.

Company executives in heavily regulated sectors should recognize that their investors and other critical stakeholders expect their firm to comply with regulatory requirements. If they do not, they may fall behind their competitors and peers in the eyes of these stakeholders. For example, large electric utilities, such as Duke, Dominion, Xcel Energy, and Southern Company have announced plans to hit "net-zero" carbon emissions by 2050. These industry leaders set the bar for the rest of the sector, pushing the transformation to more sustainable ways to produce energy and publicly promoting energy efficiency. In addition, the financial sector damaged its reputation and received increased scrutiny after the sub-prime mortgage crisis pushed the nation into a recession, although financials are now experiencing stellar stock performance. Firms in these heavily regulated sectors receive higher environmental and governance ratings because they are required to comply with demands of stakeholders and regulators in these specific areas. Executives of firms in less regulated sectors might study how firms in the regulated sectors polished their tarnished images and emerged with strong performance in their ESG ratings.

Company executives also may recognize that firms in heavily regulated sectors have lower social ratings than do firms in less regulated sectors. Stakeholder theory would suggest that firms focus on activities reflecting stakeholder priorities. In the heavily regulated sectors, this focus is on environmental and governance initiatives. All companies, highly regulated and less regulated, have stakeholders that include employees, customers, and the local and global communities in which they operate, pushing them to be socially responsible. In this regard, the heavily regulated companies are no different than less regulated companies. These findings correlate with other ESG studies, which have found that firms affected by policy uncertainty (e.g., firms in regulated industries) have higher total, environmental, and governance ratings but have a negative record in certain components of the social score – specifically, the community score (Vural, 2020). Firms in concentrated, or less competitive industries tend to reduce their risk-taking in decision making, and they might use ESG activities as a risk-reducing strategy. Firms in competitive sectors have scored lower on environmental and certain governance measures. However, the components of the social score have not exhibited differences based on the level of competition or industry concentration; instead, the community component was negatively affected by policy uncertainty (Vural, 2020).

Regulations generally are enacted by federal and state legislative bodies and enforced by regulatory commissions or agencies. This study suggests that regulations make a difference in how companies perform, specifically related to environmental initiatives. When new environmental regulations require utility investment, utility commissions are more likely to authorize cost recovery. When unregulated firms make these environmentally friendly investments, they must fund them from corporate profits, which may put them at a financial disadvantage relative to their peers.

Stakeholders cannot expect regulated companies to be any more philanthropic, worker-oriented, or socially accountable than any other company; in fact, they may be less so. However, stakeholders can expect regulated companies to perform better where regulation requires it. Likewise, when unregulated companies exceed their competitors' ESG ratings, they may be doing so out of a true sense of social responsibility.

CONTRIBUTIONS TO THEORY

Institutional investors are seeing a greater demand from their clients to consider ESG issues. This demand is commensurate with the demographic changes of the investor class, including the increased wealth of millennials, women, and previously marginalized groups (Diller et al., 2021). Stakeholder theory sees the link between an organization's success and the value it brings to its primary stakeholders. Stakeholder theory also establishes a link between an organization's credibility and the implicit approval of its activities from secondary stakeholders, including government and non-governmental organizations (Maon et al., 2010).

Little research has linked a firm's total ESG ratings to the regulatory oversight in the firm's industry sector. Some of the findings in this study support earlier studies in the literature. Michelon et al. (2013) recognized that each sector was subject

to pressure from different stakeholder groups. Specifically, they identified customer groups as having the most influence on consumer product companies, while utilities faced significant pressure from stakeholders who are concerned with the environmental effects of their operations. Similarly, Boesso et al. (2015) found that corporate performance improves in firms that invest in CSR initiatives that are most important to their stakeholder needs. They also determined that firms in environmentally sensitive industries showed greater improvement in the relationship between CSR and corporate performance than did firms in less environmentally sensitive industries.

The findings in this study support those of Becher and Frye (2011), who state that "governance is affected by the presence of regulators, even if they do not directly dictate monitoring levels" (p.738). However, our findings only partially support earlier studies that find a relationship between profitability, or company performance, and CSR (e.g., Lee et al., 2018).

The CSR literature identifies firm size as a mediating variable relating corporate performance and CSR ratings. The investment in CSR is a relatively small part of a large firm's budget. The implication is that large firms can accommodate stakeholders without negative financial consequences. A counter-argument states that large firms suffer from inertia, so implementing new programs is harder for them compared to smaller firms (Michelon et al., 2013).

Future researchers should consider adding regulatory intensity to the list of independent variables as they study corporate ESG ratings.

Keywords

Corporate Social Responsibility, CSR, Environmental, Social, Governance, ESG Ratings, Stakeholders, Regulation

APPENDIX ON METHOD

The methodology chosen for this research was quantitative, observational (non-experimental), and retrospective. We performed two independent, quantitative assessments: a multiple regression analysis (MRA) using data from the ESG rating firm Sustainalytics and a multiway frequency analysis (MFA) using data from MSCI. The two methodologies are based on a difference in how ESG ratings, the dependent variable, are reported by the ESG rating firms. The MRAs used the numeric (continuous) ESG ratings from Sustainalytics as the dependent variables (total ESG, environmental, social, governance ratings). The MFAs used the categorical total and component ESG ratings from MSCI.

The Study Population

The study population consists of 471 publicly traded companies in four industry sectors. Each company has a market capitalization of at least $3.9 billion and an MSCI ESG rating. A subset of these companies (N = 313) has ESG ratings by Sustainalytics. Among the companies with Sustainalytics ratings are 140 highly regulated companies: 33 in the utility sector and 107 in the financial sector. Among the other 173 companies in the less regulated sectors are 83 firms in the information technology sector and 90 firms in the consumer discretionary sector. Among the 471 MSCI-rated companies, 201 are highly regulated companies: 64 in the utility sector and 137 in the financial sector. The other 270 companies are in the less regulated sectors: 151 in information technology and 119 in consumer discretionary.

Independent Variable and Mediating Variables

The independent variable is the level of regulatory oversight. For the MRA, regulatory oversight is a binary value, with "0" for firms that are not highly regulated (IT and Consumer Discretionary) and "1" for firms that are more heavily regulated (Finance and Utilities). For the MFA, these values were either "highly regulated" or "not highly regulated" (recognizing that all publicly traded firms are subject to some level of regulation).

The mediating variable of institutional ownership is the percentage of each company's outstanding stock held by institutional firms. The mediating variable of market capitalization measures firm size in dollars. For the MFA, we calculated the median value of the 471 firms' market capitalization, and firms with a market capitalization higher than the median ($10 billion) were categorized as high market cap firms or large firms. Firms with $10 billion or less of market capitalization were moderate market cap firms. The last mediating variable, total return on assets, was calculated as net income before taxes divided by total assets, annualized over three years.

Dependent Variables

The dependent variables were the individual ESG component ratings (environmental, social, and governance) and the total ESG rating of each firm. To operationalize the variables, we used the ratings from the two ESG rating firms, Sustainalytics and MSCI. Sustainalytics (sustainalytics.com), an independent ESG rating company based in Amsterdam, uses a numeric rating (0 to 100) for total ESG, environmental, social and governance ratings. Meanwhile, MSCI Inc., an American finance company headquartered in New York City, uses three rating tiers: Leading, Average, and Laggard.

Statistical Tests

Multiple Regression Analysis. In the MRA, discrete variables were converted to dichotomous variables using dummy variable coding with 1s and 0s. Assumptions for linear regression include linear rela-

tionship, multivariate normality, no or little multi-collinearity, no autocorrelation, and homoscedasticity. If data violate these assumptions, the problem may be remedied using data transformations such as using the natural logarithm of the raw values.

The regression equation took the following form:

Yi = A + B1(REGi) + B2(INSTi) + B3(TOTRETi) + B4(SIZEi),

where Yi is one of the predicted Sustainalytics ESG rating components (environmental, social, or governance) or the total ESG composite rating.

REGi = 1 for highly regulated firms and 0 for firms that are not highly regulated.

INSTi = percent of shares held by institutional investors as reported by Fidelity.

TOTRETi = annualized three-year return as reported by Fidelity; and

SIZEi = market capitalization (or natural log of market capitalization).

To determine whether the sample size being tested provided adequate power, we conducted a power analysis using G*Power3 Version 3.1.9 software. The sample size for the study had a power value of 0.95.

Multiway Frequency Analysis. MFA, or an extension of it called log-linear analysis, is appropriate when determining the relationships among three or more discrete (categorical, qualitative) variables. MFA is an extension of the chi-square for goodness-of-fit technique; it produces a model of expected cell frequencies that best predicts the observed frequencies, using a conservative number of variables to do so. We use the SAS CATMOD procedure for this study. Table 1 presents a frequency table for the MFA for the Total ESG rating.

To determine whether the sample size being tested provides adequate power, we conducted a power analysis using G*Power3 Version 3.1.9 software. The sample size for the study had a power value of 0.80.

Table 1: Data for Four Industry Sectors vs. Overall MSCI Rating

		Overall MSCI Rating				
Regulation	**Size**	Laggard	Average	Leader	Total	
High	Large	14	69	17	100	
	Mid	27	70	4	101	
	Total	**41**	**139**	**21**	**201**	43%
Not High	Large	19	90	26	135	
	Mid	25	95	15	135	
	Total	**44**	**185**	**41**	**270**	57%
Grand Total		**85**	**324**	**62**	**471**	
		18%	69%	13%		

Data Description and Screening. For our initial selection of firms, we used the Fidelity.com Stock Screener tool, which allowed us to select firms from specific market sectors screened for firm size. Table 2 displays the number of firms by subsector that have Sustainalytics and MSCI ratings.

Table 2: Firms Rated by Sustainalytics and MSCI, by Sector and Sub-sector

UNREGULATED (*N* = 307)

Firms w/Sustainalytics* Rating: 173, w/MSCI** Rating: 270, w/o Ratings: 38

	No. of Firms Rated By: Sustainalytics	MSCI
Consumer Discretionary (*N* = 127)	**83**	**119**
Hotels, Restaurants & Leisure	18	28
Specialty Retail	16	24
Household Durables	10	12
Textiles, Apparel & Luxury Goods	10	15
Automobiles	7	5
Multiline Retail	6	7
Auto Components	6	6
Internet & Direct Marketing Retail	4	8
Leisure Products	3	5
Distributors	2	3
Diversified Consumer Services	1	6
Information Technologies (*N* = 180)	**90**	**151**
IT Services	26	37
Software	21	45
Semiconductors & Semiconductor Equip.	19	30
Electr. Equip., Instruments & Components	9	19
Tech Hardware, Storage & Peripherals	9	10
Communications Equipment	6	10

REGULATED (*N* = 223)

Firms w/Sustainalytics* Rating: 140, w/MSCI** Rating: 201, w/o Ratings: 21

	No. of Firms Rated By: Sustainalytics	MSCI
Utilities (*N* = 69)	**33**	**64**
Electric Utilities	16	25
Multi-Utilities	11	16
Gas Utilities	2	10
Ind. Power and Renewable Elec. Producers	2	7
Water Utilities	2	6
Financials (*N* = 154)	**107**	**137**
Insurance	36	45
Banks	31	48
Capital Markets	29	29
Consumer Finance	5	7
Diversified Financial Services	3	3
Thrifts & Mortgage Finance	3	5

*Sustainalytics ratings were found on Yahoo Finance

**MSCI ratings were found on Fidelity.com

For the MFA, the dependent variables were the MSCI ESG ratings, as summarized in Table 3. We calculated the means and the standard deviations by assigning numerical values to the ESG ratings: Laggard = 1, Average = 2, and Leader = 3. For the population, the lowest scores were fora the social category (MSCIsoc, M = 1.77), and the highest scores were for the governance category (MSCIgov, M = 2.26).

Table 3: Descriptive Statistics, Multiway Frequency Analysis

MSCI Variables (*n* = 471)				Categorized as:		
Variable	SAS Descriptor	*Mean*	*SD*	Laggard	Average	Leader
Total ESG Rating	TotMSCI	1.95	0.56	85	324	62
Environmental Rating	MSCIenv	2.00	0.67	105	263	103
Social Rating	MSCIsoc	1.77	0.51	90	364	17
Governance Rating	MSCIgov	2.26	0.50	9	360	102

		Mean	*SD*	Non Reg	Reg
Regulation	regnoreg	0.43	0.50	270	201
				Medium	Large
Market Capitalization	Size	1.50	0.50	236	235

Testing Assumptions and Descriptive Statistics – Multiple Regression Analysis. The variables were evaluated to determine whether there was any violation of the assumptions used in conducting a regression analysis, including assumptions of multi-collinearity, presence of outliers, normality, homoscedasticity, and independence of residuals. Where required, we transformed the variables and identified and eliminated outliers. The resulting descriptive statistics for the variables used in the regression analysis (N = 285) are presented in Table 4.

Table 4: Descriptive Statistics - Multiple Regression

Variable	SAS Descriptor	Mean	Median	SD	Kurtosis	Skewness	Min	Max
Total ESG Rating	SustTot	59.38	58.00	9.60	(0.59)	0.43	43.00	87.00
Environmental Rating	SustEnv	56.91	55.00	15.04	(0.66)	0.35	31.00	96.00
Social Rating	SustSoc	60.08	59.00	10.28	(0.38)	0.30	38.00	89.00
Governance Rating	SustGov	62.47	62.00	9.00	(0.65)	0.04	41.00	87.00
Total Annualized 3 Year Return	TotRet3yr	13.75	13.77	11.78	(0.17)	0.21	(12.22)	46.32
Institutional Ownership	InsOwnSR	4.20	4.12	1.54	(0.20)	0.27	0.32	8.02
Market Capitalization	LOGMKTCAP	1.32	1.27	0.40	(0.41)	0.48	0.60	2.40

In addition to the continuous variables, the categorical variable for regulation (M = .45) had 129 of the 285 firms coded as "1" (Regulated).

REFERENCES

Aouadi, A., & Marsat, S. 2018. Do ESG controversies matter for firm value? Evidence from international data. ***Journal of Business Ethics***, 151(4): 1027–1047.

Becher, D. A., & Frye, M. B. 2011. Does regulation substitute or complement governance? ***Journal of Banking & Finance***, 35(3): 736–751.

Boesso, G., Favotto, F., & Michelon, G. 2015. Stakeholder prioritization, strategic corporate social responsibility, and company performance: Further evidence. ***Corporate Social Responsibility and Environmental Management***, 22(6): 424–440.

Cambini, C., Rondi, L., & De Masi, S. 2015. Incentive compensation in energy firms: Does regulation matter? ***Corporate Governance: An International Review***, 23(4): 378–395.

Diller, M., Betts, S., Corte, L., Silk, D. & Simpson, S. 2021. Who makes ESG? Understanding stakeholders in the ESG debate. ***Fordham Journal of Corporate & Financial Law***, 26(2): 276–358.

El-Hage, J. 2021. Fixing ESG: Are mandatory ESG disclosures the solution to misleading ratings? ***Fordham Journal of Corporate & Financial Law***, 26(2): 359–390.

Erhemjamts, O., & Huang, K. 2019. Institutional ownership horizon, corporate social responsibility and shareholder value. ***Journal of Business Research***, 105: 61–79.

Frynas, J. G., & Yamahaki, C. 2016. Corporate social responsibility: Review and roadmap of theoretical perspectives. ***Business Ethics: A European Review***, 25(3): 258–285.

Kludacz-Alessandri, M., & Cygańska, M. 2021. Corporate social responsibility and financial performance among energy sector companies. ***Energies***, 14(19): 6068. doi.org/10.3390/en14196068

Lee, C., Palmon, D., & Yezegel, A. 2018. The corporate social responsibility information environment: Examining the value of financial analysts' recommendations. ***Journal of Business Ethics***, 150(1): 279–301.

Maon, F., Lindgreen, A., & Swaen, V. 2010. Organizational stages and cultural phases: A critical review and a consolidative model of corporate social responsibility development. ***International Journal of Management Reviews***, 20–38.

Michelon, G., Boesso, G., & Kumar, K. 2013. Examining the link between strategic corporate social responsibility and company performance: An analysis of the best corporate citizens. ***Corporate Social Responsibility and Environmental Management***, 20(2): 81–94.

Miras-Rodríguez, M. d. M., Carrasco-Gallego, A., & Escobar-Pérez, B. 2015. Has the CSR engagement of electrical companies had an effect on their performance? A closer look at the environment. ***Business Strategy and the Environment***, 24(8): 819–835.

Miralles-Quirós, M., Miralles-Quirós, J., & Redondo Hernández, J. 2019. ESG performance and shareholder value creation in the banking industry: International differences. ***Sustainability***, 11(5): 1404. https://10.3390/su11051404

Starkweather, R. 2017. Regulatory and legislative changes affecting Rate Case strategies. ***Natural Gas & Electricity***, 33: 9–14.

Ting, I. W. K., Azizan, N.A., Bhaskaran, R.K., & Sukumaran, S. K. 2020. Corporate social performance and firm performance: Comparative study among developed and emerging market firms. ***Sustainability***, 12(1): 26. doi.org/10.3390/su12010026

Vural, Y. Ç. 2020. Economic policy uncertainty, stakeholder engagement, and environmental, social, and governance practices: The moderating effect of competition. ***Corporate Social Responsibility & Environmental Management***. 28(1): 82–102. doi:10.1002/csr.2034

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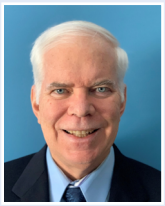

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