

Institutional Investors, Shareholder Activism, and ESG in the Energy Sector

By

Carolyn L. Xie

An Undergraduate Thesis submitted in partial fulfillment of the requirements for the

WHARTON RESEARCH SCHOLARS

Faculty Advisor:

Christopher C. Geczy

Adjunct Professor of Finance

Academic Director, Wharton Wealth Management Initiative Academic Director, Jacobs Levy
Equity Management Center for Quantitative Financial Research, Finance

THE WHARTON SCHOOL, UNIVERSITY OF PENNSYLVANIA

MAY 2020

I. Abstract

The search for relationships between shareholder activism and environmental, social, and governance (ESG) performance has been a research area that has garnered increased interest in recent years. Specifically, climate change and environmental concerns have been evaluated by private and public sectors around the world, and progress has been made with actions such as the Paris Agreement. Scholars conducted various studies to analyze the relationship between shareholder activism and corporate financial performance (CFP). In addition, scholars have also conducted various studies to analyze the relationship between ESG performance and CFP as well as ESG performance and risk. Given the emergence of ESG in recent years, the adoption of standardized ESG criteria and performance measures across industries and markets is still relatively undeveloped compared to criteria such as SEC reporting criteria for US publicly-traded companies. Therefore, the insights on shareholder activism and ESG adoption and performance remain inconclusive. This study aims to raise awareness and increase studies focusing on how investors can utilize resources such as activism to affect ESG adoption and performance. This paper also continues to raise awareness regarding current discrepancies in ESG ratings by company, industry, as well the discrepancies that are observed between different ESG rating agencies. This study specifically tracks the changes resulting from the formation of the Climate Action 100+ at the One Planet Summit in 2017 by evaluating the Sustainalytics Environmental Score of select energy and power utility companies from the initiative. Given the data, a paired t-test was implemented to gain more knowledge on how Sustainalytics Environmental Scores moved after major ESG-related announcements. In addition, this paper reviews current news and market developments in ESG and shareholder activism as well as academic and scholarly literature researching shareholder activism, ESG, and CFP. The results from this study show

minuscule to no benefit to a company's Sustainability Environmental Score given the current Sustainability dataset and publicly-available ESG information for students. This paper further reviews how discrepancies between ESG rating data and actual firm ESG performance presents potential challenges for institutional investors, retail investors, and firms. This paper also discusses future research areas and topics that could increase clarity regarding the relationship between shareholder activism and ESG adoption and performance.

II. Introduction

In the past few years, trends support the emerging popularity and importance of environmental, social, and governance (ESG) issues. The global emergence of ESG issues at the corporate level has prompted interventions that include regulatory and legislative reform, as well as increased ESG-focused shareholder activism. Major policy changes can also be observed through examples such as China's Air Pollution Action Plan and the European Union's (EU) Renewable Energy Directive. In terms of shareholder activism, there have been numerous newsworthy activist campaigns that have increased focus on renewable energy resources in the energy sector. In the United States, case studies such as ValueAct Capital's Hawaiian Electric campaign provide crucial insight into the specific mechanical components of shareholder activism in the energy industry. In addition, there are numerous noticeable shifts in momentum within the ESG shareholder activism space. A Cerulli Associates report ("Hedge Fund ESG Activism Helps Managers Drive Change," 2020, January.) published in January showed that nearly three-quarters of surveyed asset managers reported that they "exercise active ownership as part of their decision-making process to minimize risks and maximize returns," which is up 54% from 2017 polls. It is important to note that ESG-focused hedge fund activists are still a niche within the hedge fund industry, and only make up a total of \$3.2 trillion of the entire industry.

While hedge fund activists are still relatively small and growing, increased shareholder activism from traditionally passive, large active managers poses serious questions to companies and industries that are not considered environmentally friendly.

Forecasts from the Cerulli report also estimate that the three-largest index investors could vote as much as 40% of shares in S&P 500 companies. In addition, research from Cerulli supports forecasts that project around 46% of asset managers are utilizing their stock ownership in publicly traded companies to promote change through shareholder activism and engagement.

This study aims to measure the effectiveness and impact of specific shareholder activist awareness campaigns on companies in the energy and power utility sector. Since the energy sector includes companies that can have fundamentally different core competencies and capacity, this study will focus on the energy and power companies that are included in the Climate Action 100+ list and are publicly-traded in the United States. The companies included in this study feature some of the largest, influential companies in their respective sector. Furthermore, shareholder activism has evolved in recent years with an increasing number of “non-financial” activists such as state pension funds that are trying to change corporate ESG behavior. To account for this, this study utilizes the companies selected from the Climate Action 100+ initiative since there is a diverse group of institutional investors that are not solely financial activists.

Environmental, social, and governance (ESG) issues present critical challenges that globally affect every sector and community. Researchers have analyzed the effects of shareholder activism on corporate changes as well as the performance of ESG-related projects on the corporate level. Despite various literature on general shareholder activism and ESG

performance, there has yet to be a paper that focuses on the effects of shareholder activism on ESG performance in the energy sector. This paper will connect and fill the gap in research.

Shareholder activism has grown over the years due to the growth of pension assets. Crutchley et al. (1998) found evidence that supported visible and aggressive activism leads to significant increases in shareholder value, relative to quieter activism. Pension asset managers such as CalPERS have set a significant precedent for large institutional shareholder activism. BlackRock CEO Larry Fink has stated the importance of ESG on numerous occasions, and he has reiterated how his firm will evaluate corporations based on corporate social responsibility (CSR). This development leads the way for interesting discussions regarding how shareholder activism from firms like BlackRock will affect corporate ESG adoption.

This paper focuses on the energy sector because of the considerable environmental impact that is associated with this sector. Additionally, the environmental component in ESG has been relatively easier to quantify the improvement in comparison to comparable social and governance goals. In an ESG survey conducted by the Callan Institute, 47% of shareholder advocacy was focused on changing actions surrounding the “E” component, which yielded the largest response relative to other ESG related issues. Additionally, 1/5th of respondents that incorporate ESG standards in their portfolios are implementing partial portfolio decarbonization. While the energy industry as a whole in recent years has expanded its renewable energy portfolio, there remains significant tension regarding the use of fossil fuels and carbon emissions. Evaluating the efficacy of specific types of shareholder activism will be crucial to understanding the relationship between shareholder activism and corporate ESG adoption in the energy sector.

III. Literature Review

Adoption of environmental, social, and governance (ESG) issues has grown in corporations, investors, and more broadly across global financial markets in recent years. Numerous factors have contributed to global ESG growth, including regulation and public policy reform, increased stakeholder interest in ESG, and technological advancements. However, there is still relatively low passing approval for ESG-focused proxy contests. Researchers have explored the various effects shareholder activism has on corporate ESG adoption and growth. This literature review will evaluate ESG shareholder activism in corporations as well as analyze corporate ESG more broadly in terms of financial performance and risk management. There have been relatively few studies and publications directly testing the effects of shareholder activism on corporate ESG adoption.

Gillan and Starks (2000) studied shareholder proposals and measured the success of shareholder activism by examining voting outcomes and short-term market reactions based on proposal type and sponsor identity. The voting outcome was observed through voting analysis documents that evaluated characteristics such as sponsor identity, issue type, prior performance, and time period. Gillan and Starks (2000) measured shareholder reaction through votes and changes in stock price. In this study, proxy proposals were evaluated from the late 1980s to 1994. During the 1980s, there was a dramatic increase in equity ownership in entities such as investment advisers, investment companies, insurance companies, bank trust departments, foundations, and pension funds. The authors reference a Sias and Starks (1998) unpublished working paper which found large equity institutional ownership to have increased by 24.2% in 1980 to just below 50% by the end of 1994. The drastic increases were largely explained by the growth of pension assets. Crutchley, Hudson, and Jensen (1998) analyzed the shareholder wealth

effects of the California Public Employees' Retirement System's (CalPERS) activism. CalPERS manages the pension and health benefits of California employees, retirees, and families.

Crutchley et al. (1998) found evidence that supported visible and aggressive activism leads to significant increases in shareholder value, relative to quieter activism.

In recent years, the integration of corporate ESG has been at the forefront of conversation regarding the impact on firm financial performance and risk management. In the investment community, ESG-related investments must be screened and rated against certain criteria and are subject to ESG specific rating agencies. Olmedo, Torres, and Fernandez-Izquierdo (2010) evaluated socially responsible investing (SRI) funds and the screening process by analyzing various sustainability-focused indices and ESG rating agencies. ESG funds can either include or exclude certain investments based on the ESG selection criteria. Olmedo et al. (2010) found that current methods being utilized by various ESG agencies and sustainability indices are diverse and lack standardization. This study raises valid questions surrounding the accuracy of conducting cross-industry ESG analysis or ESG analysis ranging across different geographies.

The adoption of ESG at the corporate level depends on a variety of factors, however, for public companies, financial performance is key for creating shareholder value. Xie, Nozawa, Yagi, and Fujii (2018) tested the relationship between specific ESG activities and corporate financial performance, which included financial metrics such as corporate efficiency, return on assets (ROA), and market value. Xie et al. (2018) estimated corporate efficiency by applying DEA, a multivariable estimation method that is commonly used to evaluate corporate efficiency, specifically in utilities. Additionally, Xie et al. (2018) assessed corporate financial performance (CFP) through accounting metrics such as ROA and return on equity (ROE) (Ferrell et al., 2016; Lee et al., 2016). Xie et al. (2018) found that a large number of ESG activities show a non-

negative relationship with a company's financial performance. Zhao, Guo, Yuan, Wu, Li, Zhou, and Kang (2018) evaluated how ESG affects financial performance in China's listed power groups in the energy power market. Zhao et al. used return on capital employed (ROCE), to measure panel regression models and CFP. They found results that good ESG performance can lead to positive financial performance.

While some researchers have tried to quantify corporate efficiency, others have tried to quantify ESG effects for publicly traded companies by analyzing stock market reactions. Capelle-Blancard and Petit (2017) take a different approach in trying to quantify the impact of ESG on firm value. The authors constructed a study which consisted of empirical analysis based on 33,000 positive and negative ESG news. The study targeted around one hundred listed companies from 2002-2010. Capelle-Blancard and Petit (2017) found that companies facing negative ESG news experienced a 0.1% drop in market value, while companies that observed positive news observed no change in market value.

Verheyden, Eccles, and Feiner (2016) tested the impact of ESG screening on three main factors: return, risk, and diversification. They conducted the study by bifurcating "two different universes" that had different stocks based on whether they were listed in an emerging market country or developed country. They then utilized data from various sustainability databases and computed "best-in-class ESG scores" for each company in the two groups. Additionally, Verheyden et al. (2016) rated companies based on their compliance with the United Nations Global Compact ("Global Compact") as well as their "ESG momentum" rating. ESG momentum was defined as the significance of a company's efforts to improve its ESG performance. Evidence from the study showed an "unequivocally positive" contribution in both developed and emerging market countries when looking at risk-adjusted returns using a "10% best-in-class ESG

screening approach.” In addition, the screening method produced results that showed higher portfolio returns and lower tail risk in both markets.

Evaluating corporate shareholder activism regarding CSR-related issues has been difficult to measure due to a large number of companies failing to actively manage CSR strategies. Oh, Park and Ghauri (2013) conducted a study that rated a firm’s sustainability via the Dow Jones Sustainability World Index. Results from their study found that a large portion of “leading financial institutions do not employ proactive practices regarding socially responsible investment and shareholder activism.” Rojas, M’Zali, Turcotte, and Merrigan (2009) also noted results that showed how pension funds and mutual funds were able to exert high amounts of pressure on firms relative to other filers. Rojas et al. (2009) also observed that some ESG related issues generated more influence on management which included topics such as board diversity, energy and the environment, and internal labor and human rights. Chen, Dong, and Lin (2019) utilized quasi-natural experiments to quantify the effect of institutional shareholders and CSR. Chen et al. (2019) observed an exogenous increase in institutional holding caused by Russell Index reconstitution, which improves a firm’s CSR performance. They found that firms that had lower CSR ratings tended to be more distracted due to exogenous shocks. In addition, the effect of institutional ownership is strong in CSR categories that are more financially material. This study was able to show considerable efficacy of institutional shareholders on creating social impact, most of which were generated by institutional shareholders initiating CSR-specific proposals.

A. 2.1 Theoretical Discussion

Given that institutional ESG-focused shareholder activism is a relatively newer, rapidly-developing space, there were inherent challenges in compiling enough data to accurately test the

relationship between institutional shareholder activism and the effects on ESG in the energy sector. First, ESG rating data and information are not as efficient and robust in comparison to other metrics such as stock price both in terms of abundance of data and the relevance of data. While there could be numerous ways to proxy and measure environmental performance such as tracking carbon emission reductions/increases, most sustainability reporting occurs on an annual or quarterly basis. Furthermore, there have been disputes and tension regarding investors or other shareholders/stakeholders pressuring companies to increase transparency over ESG reporting. In terms of the amount of publicly-available ESG data for students, I found that Sustainalytics had the largest amount of ESG and specifically environmentally-focused data available on the Wharton Data Research Data Services (WRDS) portal.

Sustainalytics Weighted Total Scores offer individual Environmental, Social, and Governance scores. In addition, they offer a composite Total ESG Score. A comprehensive overview of Sustainalytics' rating methodology can be found on the Sustainalytics website, and a brief overview can be found in the Appendix under Exhibit 1. This specific section of the Sustainalytics database offers monthly score updates and covers around 11,000 companies. However, the maximum time frame for this portion of data has a range from August 2009 to October of 2018, and most data is recorded from the years 2014 to 2018. It is important to note that Sustainalytics does not cover some of the largest and most influential energy and power utility companies. Furthermore, for the companies they do cover, there have been numerous occasions of missing data.

Initially, shareholder activism was proxied by evaluating the shareholder activist campaigns and proxy contests reported by Lazard's 2017 and 2018 Shareholder Activism Report. The data from Lazard's report was then checked for reliability through databases such as

Bloomberg and FactSet. To measure ESG performance, data was sourced from Sustainalytics, which is an independent global provider of ESG and corporate governance research and ratings. A comprehensive description of Sustainalytics' rating methodology can be found on their website (<https://www.sustainalytics.com/>), and an overview can be found in the Appendix under Exhibit 1. In addition, prior data collection and methodology proxied shareholder activism by using the ten largest shareholder activist firms based on assets under management (AUM). Lazard's 2017 and 2018 Shareholder Activism Report was utilized to evaluate the more relevant and recent shareholder activist campaigns. Additionally, potential conflicts regarding the "E" and "S" components raised considerations of how to measure oil and power companies included in social mutual funds and ETFs. More recently, a Wall Street Journal article ("ESG Funds Enjoy Record Inflows," 2019) reported that "eight out of the 10 biggest U.S. sustainable funds are invested in oil-and-gas companies." Given the complexity and lack of recognized global ESG criteria, using a composite ESG rating for companies in the energy sector might be unrepresentative and misleading for individuals who view environmental performance as positively correlated with social performance. Therefore, only the individual Environmental Score from Sustainalytics was examined during the study.

As previously mentioned, there are numerous ways to proxy shareholder activism and ESG performance. However, currently, the amount of publicly-available ESG data and information to students and researchers is still limited. ESG adoption and performance were proxied for by evaluating the Environmental Score from Sustainalytics for the sample. Shareholder activism in this study was proxied by looking at the Climate Action 100+ initiative formed by some of the most influential global institutional investors. The Climate Action 100+ initiative was formed after the conclusion of the 2017 One Planet Summit. The summit was

organized by the United Nations and brought global leaders together from public and private sectors to combat climate change. Investors included in the Climate Action 100+ initiative range from investors such as BlackRock and Wellington to Employees' Retirement System of the State of Hawaii. Companies included in the Climate Action 100+ initiative range from companies such as ConocoPhillips to Korea Electric Power Corp. The decision to include power utility companies considers recent emphasis and focus on raising environmental awareness for utility companies such as Duke Energy and Dominion Energy, both of whom were included in the Climate Action 100+ 2020 Proxy Season report.

IV. Data and Methods

Companies were screened and selected from the “Companies” tab on the Climate Action 100+ website (<http://www.climateaction100.org/>). The inclusion criteria for the sample consisted of the following factors: the company had core business competencies in the energy and/or power utility sector, the company was publicly-traded on the NYSE or NASDAQ. Within this sample, exclusion criteria eliminated any companies that had missing data or duplicate Capital IQ identifiers in Sustainalytics. The resulting sample included the following companies: American Electric Power, Inc. (AEP), Canadian Natural Resources Limited (CNQ), Chevron Corporation (CVX), Duke Energy Corporation (DUK), Exelon, Corporation (EXC), ExxonMobil Corporation (XOM), Phillips 66 (PSX), The Southern Company (SO), Valero Energy Corporation (VLO). A paired t-test was implemented in Excel using the “t.test” function for the companies listed above. The formula used can be found in the Appendix under Exhibit 2, and the full results can be found under Exhibit 3. The “BEFORE ‘E’ Score” was a company’s last reported Sustainalytics Environmental Score before the 2017 One Planet Summit. Using WRDS’ access to Sustainalytics, the last reported Environmental Score date before the 2017 One Planet

Summit was December 6, 2017. The “AFTER ‘E’ Score” was obtained by retrieving the first reported Sustainalytics Environmental Score after the 2017 One Planet Summit. Using WRDS’ access to Sustainalytics, the first reported Environmental Score date after the 2017 One Planet Summit was January 9, 2018.

V. Results

A paired t-test using the t.test function in Excel found an estimated 0.24 p-value for the given sample. Among the sample, six companies (AEP, CNQ, DUK, PSX, SO, VLO) had no change in their Sustainalytics Environmental Score and three companies had minuscule improvements in their Sustainalytics Environmental Score (CVS, EXC, XOM). Given Sustainalytics data and the monthly incremental periods of reporting, there isn’t conclusive evidence that further clarifies the effect of the formation of the Climate Action 100+ on ESG adoption and performance on the sample.

After the initial results, I went back into the Sustainalytics database to see how companies in other sectors performed. First, I created a line chart of the selected sample that was analyzed in the previous section. The study’s sample line chart can be found in the Appendix under Exhibit 4. I then repeated this same process for Vanguard’s Energy ETF (VDE) and Vanguard’s Information Technology ETF (VGT). Visually, the three different line charts display similarities of how each company’s Environment Score evolves overtime. The most visually apparent similarity appears to be how the company scores remain relatively flat and parallel with the x-axis. In addition, more extreme changes do not occur gradually but in relatively shorter increments of time. First, when comparing Exhibit 4, 5, and 6 in the Appendix, it is unclear why environmentally progressive companies such as Microsoft and Apple have more elevated risk ratings than nonrenewable energy companies in the energy sector. While Sustainalytics does

sector thematic reports, increased transparency and information on how they rate companies within each sector as well as more clarity on how each sector is compared to one another would improve the dataset as a proxy for corporate ESG performance.

If you look at the study's sample line chart in the Appendix under Exhibit 4, one would expect to see Exxon Mobil and Chevron as bottom performers. As you can see in the Appendix under Exhibit 7, Chevron and Exxon respectively rank second and fourth among the companies who have contributed most to environmental pollution since 1965. In addition, Chevron's risk score continued to elevate during the years where the company agreed with the goals set up by the Paris Agreement. Suggestions for improvement could include quick footnotes marking significant changes in ratings as well as greater clarity regarding what specific events trigger significant risk increases. For example, ConocoPhillips has almost a 20 point risk ratings increase from January to March of 2016 yet there is no major news report on any event that could have triggered such a significant spike in risk. This highlights the need for more information methodology transparency in regards to the movement of ESG ratings and highlights a more glaring efficiency challenge for the ESG industry as a whole. As more retail investors look toward ESG investments, the accessibility and efficiency of corporate ESG ratings must improve in terms of accurately reflecting corporate ESG performance. Similar to how major press releases can be tracked to sudden surges in stock price, the frequency of reporting and rating updates must be sufficient to accurately capture a company's ESG performance.

Furthermore, there are a few trends from the VGT graph that don't align with general ESG performance consensus from the markets. Since the Sustainalytics rating system measures risk from a zero to one hundred scale with zero being the least severe and one hundred being the most severe, it appears Visa and Mastercard are the best information technology performers

among its peers. However, the EPA's Green Power Partnership National Top 100 report in 2019, companies such as Microsoft, Apple, and Intel are included on this list. Both Visa and Mastercard are not included on the list. The Green Power Partnership National Top 100 list includes the largest green power users within the Green Power Partnership. In addition, the combined green power usage of these Top 100 Partners amounts to more than 52.7 billion kilowatt-hours annually. The Top 100 companies represent approximately 87% of the green power commitments made by all EPA Green Power Partners.

Given current ESG-focused databases in WRDS, there are considerable challenges to test for statistical significance with currently available data. Specifically, there are numerous challenges in data collection from Sustainalytics and testing. First, given the limited data from 2014 to 2018, there are a substantial number of companies that this study wanted to test but could not find in the Sustainalytics database. In addition, some companies that were searched had considerable amounts of missing data which made them unsuitable for comparison tests. The most difficult part was understanding the sudden changes in risk ratings without any publicly-available news or reported events that could have contributed to random, sudden spikes. Corporate sustainability reports typically are published annually with the exception of occasional quarterly and monthly publications. While from 2014 to 2018 Sustainalytics typically reported on a monthly basis, the current threshold of reporting isn't close enough to understand the relationship between key ESG events and ESG risk exposure or performance.

The challenges experienced in this study and more broad challenges for the ESG industry as a whole have been thoroughly described by a 2019 publication from the MIT Sloan School of Management. Tracy Mayors' "Why ESG ratings vary so widely (and what you can do about it)," describes current issues involving discrepancies between ESG ratings and actual corporate ESG

performance as well current ESG rating discrepancies between different rating agencies. Her article leverages research and data from Berg, Koelbel, and Rigobon's (2019) working paper, "Aggregate Confusion: The Divergence of ESG Ratings" from the MIT Sloan School of Management. The article mentions key trends such as "80% of CEOs believe demonstrating a commitment to society is important and look to sustainability ratings for guidance and benchmarking." In addition, the article references forecasts that estimate around \$30 trillion of assets that are invested worldwide rely on some form of ESG information, which has grown 34% since 2016. Similarly to the literature and experiments referenced in prior sections, Mayor notes that ESG reporting standards are still considerably underdeveloped. Researchers from MIT Sloan's Sustainability Initiative found that the "correlation among the major agencies' ESG ratings was on average 0.61; by comparison, credit ratings from Moody's and Standard & Poor's are correlated at 0.99." The current correlation among the top ESG rating firms raises questions regarding the need for regulatory intervention to provide guidelines that will reduce current discrepancies and standardize rating methodologies. As you can see from this study's sample ESG scores and the various sector ESG scores, the ratings that are given to certain companies clearly diverge with information that can be found through other sources such as the EPA.

Mayor lists several potential contributing factors to the apparent diversion of ESG ratings and actual ESG performance. First, she argues that since there are no standardized criteria or methodologies for rating ESG performance, various agencies might utilize different criteria when rating ESG performance which leads to discrepancies. For this study, since the "S" portion of ESG is often the most widely-debated component among individuals, this study aimed to focus on the "E" component to mitigate any potential glaring discrepancies between rating agencies. For example, different ESG rating agencies might have substantially different views on what

should be considered important for social matters. Second, Mayor notes that the discrepancies in the weights assigned to certain ESG factors can lead to differences that may not be representative of ESG performance. In this study, this was especially apparent when comparing the environmental performance of companies in the energy sector and the information technology sector. One potential explanation for why the energy sector had lower risk exposure scores from Sustainalytics might be attributed to potential lower weights for certain environmental standards such as pollution given the nature of their industry. Nevertheless, given that there isn't a clear explanation of how they precisely assign weights to unique events, there is no currently available test to check the validity of why certain sectors perform better than others using current Sustainalytics data.

VI. Conclusion

Currently, there are still numerous considerations and challenges for those trying to quantitatively measure the relationship between shareholder activism and corporate ESG adoption and performance. There are numerous ways to proxy shareholder activism and ESG adoption/performance. However, the accuracy and consistency of current ESG ratings may not be suitable as a proxy for corporate ESG performance. In this study, shareholder activism was proxied for by evaluating the effects of increased shareholder awareness and oversight from institutional investors in the Climate Action 100+ initiative. The initiative includes some of the most influential companies ranging across various industries that have operations around the world. In addition, the institutional investors included in the initiative are diverse and include investors from BlackRock to Christian Super. Potential additional methods to evaluate more active investor activism could involve studying documented ESG-focused proxy campaigns. Evaluating what types of investors have the most impact on corporate ESG adoption and

performance is also important to understand how future investor interventions impact companies, industries, and broader markets. With increasing political and regulatory focus on reducing carbon emissions and addressing climate concerns, energy, and power utility companies will continue to be evaluated by shareholders and stakeholders.

Furthermore, there are still outstanding questions regarding how to measure the short-term and long-term impacts of shareholder activism on corporate ESG adoption and performance. One of the common themes and challenges regarding shareholder activism and ESG involves transparency and frequency of reporting. First, there are still a number of companies in the energy sector that do not want to disclose their energy efficiency and there are currently no standardized ESG regulation or legislation that holds companies accountable across different industries. In addition, ESG ratings from third-party ESG rating agencies have noticeable discrepancies that result in inconsistent ratings.

Optimally, databases with more frequent ESG reporting would be helpful in increasing the accuracy and relevance of testing future relationships. In addition, implementing a more transparent, standardized ESG rating criteria and methodology will reduce discrepancies within and between ESG rating firms. As previously described, more major credit rating agencies such as S&P Global and Moody's are engaging more with ESG. As the efficiency of ESG data improves, researchers and investors can have a more definitive, accurate understanding of the relationship between shareholder activism and ESG adoption as well as corporate ESG performance in general. Whether it be evaluating trends and performance through regression models or abnormal changes using event studies, having more relevant ESG data will be critical in assessing and accurately identifying relationships that affect ESG performance. For future research, rating agencies such as Sustainalytics need to disclose and increase transparency in

their rating methodology and criteria. After analyzing this study's sample and comparing industry leaders in both the technology and energy sectors, there are still questions regarding the objectivity of how rating agencies such as Sustainalytics rate companies. First, all tested companies have sudden changes without major publicly-available news or information to support such extreme changes. In addition, the short-term extreme changes often are greater than the changes at the end of the data set. Based on the selected companies from the energy sector and information technology sector, Sustainalytics data shows that on average, the information technology sector has more elevated environmental risk exposure than the energy sector. The lack of education and transparency on their rating methodology also has implications for how retail investors can use databases such as Sustainalytics. Lastly, there is the consideration that ESG rating agencies use different indicators to measure similar performance areas such as human rights.

As current trends support more investment moving into ESG-focused investments, the need for accurate, efficient ESG data and ratings is clearly apparent. As Mayor highlights in the paper, the consequences of ESG rating and performance diversions can be costly. This divergence can blur the leaders from laggards which makes screening companies for investors increasingly difficult. In addition, as Mayor describes, companies may be less motivated and inclined to improve their ESG performance if they feel their score isn't being accurately rated. The concerns Mayor describes in her paper are directly applicable to companies and institutional investors. It is also important to note and raise awareness on how the lack of consistent ESG ratings impacts retail investors.

While this study focused on the impact of shareholder activism from the perspective of institutional investors, future studies should also research the potential impact of retail investor

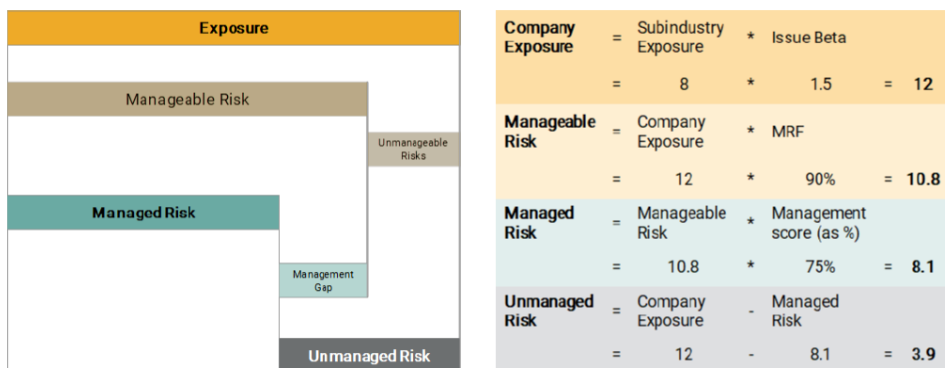
shareholder activism. A Wall Street Journal article published in 2019 showed that interest in ESG investments from Generation X members has contributed to significant growth in ESG portfolio reviews in recent years. Currently, Generation X members still have greater wealth in comparison to Millennials, which could be a key factor in increasing the mainstream appeal of ESG in future years to come. In 2019, according to the Forum for Sustainable and Responsible Investment, ESG investing accounted for at least 26% of professionally managed assets in the U.S., which is up from 18% from 2016. In addition, BlackRock forecasts project that ESG ETFs will go up to around \$400 billion by 2028. According to a survey conducted by Bank of America, in 2018, 63% of high-net-worth Gen X investors with \$3 million or more assets reviewed their portfolios for ESG investments which is up from 36% in 2013.

Given the increased interest in ESG investments among numerous generations, having reliable, accessible, publicly-available ESG information will be crucial for retail investors who may not have the net worth to afford a wealth management advisor or a professional portfolio manager. As recent surveys have depicted, increased overall interest, awareness, and investment across numerous generations will be key in making ESG more mainstream. Currently, there aren't standardized ESG regulatory or reporting criteria across different sectors. In addition, it is still common practice for companies to self-report sustainability reports with third-party verification. As ESG investments become more standard practice, the demand and need for accurate, consistent, accessible, and comprehensive ESG-focused databases will be crucial for up-and-coming ESG retail investors. ESG reporting and ratings from reputable agencies will be fundamental for institutional investors as well. In addition, as more investments go into ESG funds, there will be an increasing number of portfolio managers who rely on ESG ratings to screen their investments.

Furthermore, future research could focus on testing the effects of ESG-focused regulatory policy on corporate ESG adoption and performance. Agreements such as The Paris Agreement have been important in increasing environmental corporate awareness and accountability on a global scale. Future research could focus on what types of policies are most effective in curbing environmental pollution such as carbon emission reductions. Following BlackRock's divestment of thermal coal, future research can also focus on the effectiveness of more aggressive forms of shareholder activism such as divestment. Furthermore, as the private sector begins to implement more stringent ESG standards, monitoring domestic and global regulatory ESG standards will be important across all industries.

Appendix

Exhibit 1



Source: Sustainalytics



ESG ratings are categorized across five risk levels: negligible, low, medium, high and severe. Ratings scale is from 0-100, with 100 being the most severe.

Exhibit 2

Paired t-test

Null Hypothesis: No difference between the two groups

$$H_0: (\mu_{\text{After Activist}} = \mu_{\text{Before Activist}})$$

Alternative Hypothesis: There is statistically significant change in Environmental (“E”) Scores with after Climate Action 100+ launch in comparison to “E” Scores prior to Climate Action 100+ launch

$$H_a: (\mu_{\text{After Activist}} \neq \mu_{\text{Before Activist}})$$

Exhibit 3

COMPANY TICKER	BEFORE "E" Score	AFTER "E" Score
AEP	56.62	56.62
CNQ	49.84	49.84
CVX	50.61	50.18
DUK	49.15	49.15
EXC	70.48	70.41
PSX	39.37	39.37
SO	55.62	55.62
VLO	49.82	49.82
XOM	56.18	56.14
	p-value	0.24

Exhibit 4 (Sample Companies)

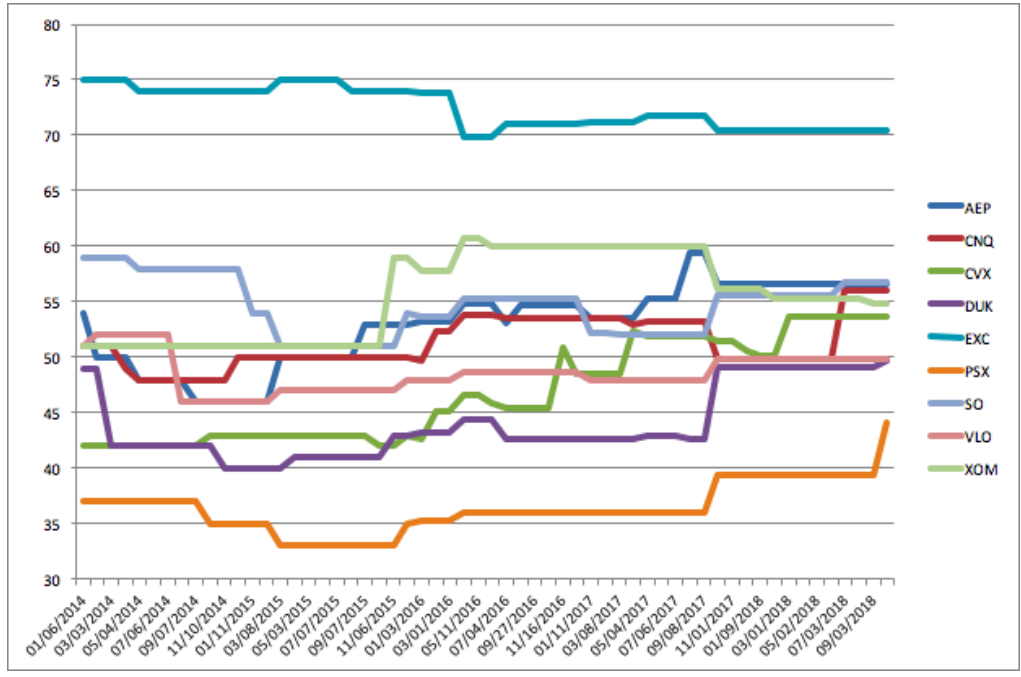


Exhibit 5 (Vanguard Energy ETF-VDE)

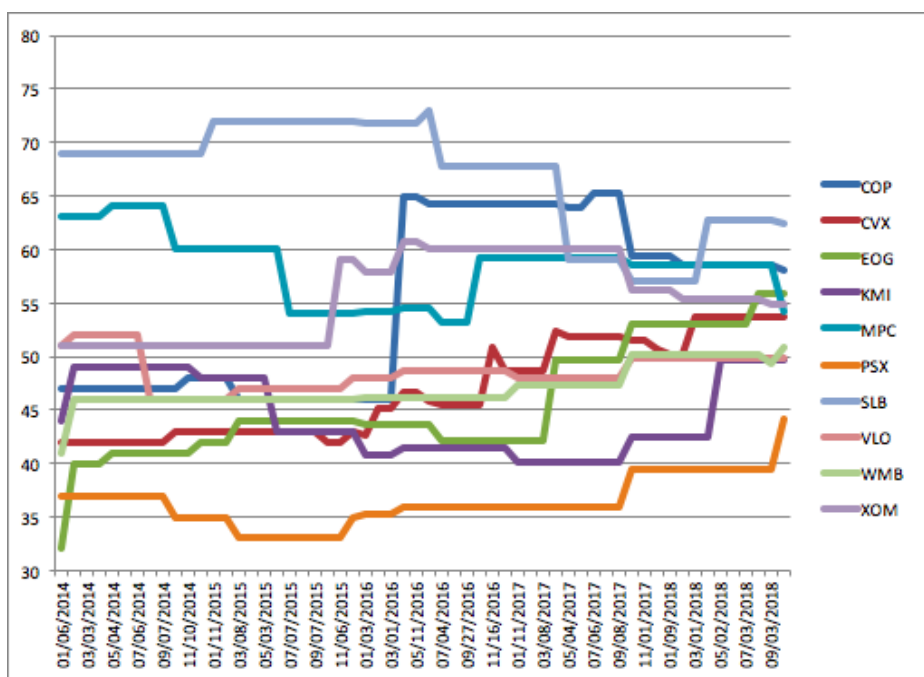


Exhibit 6 (Vanguard Information Technology ETF-VGT)

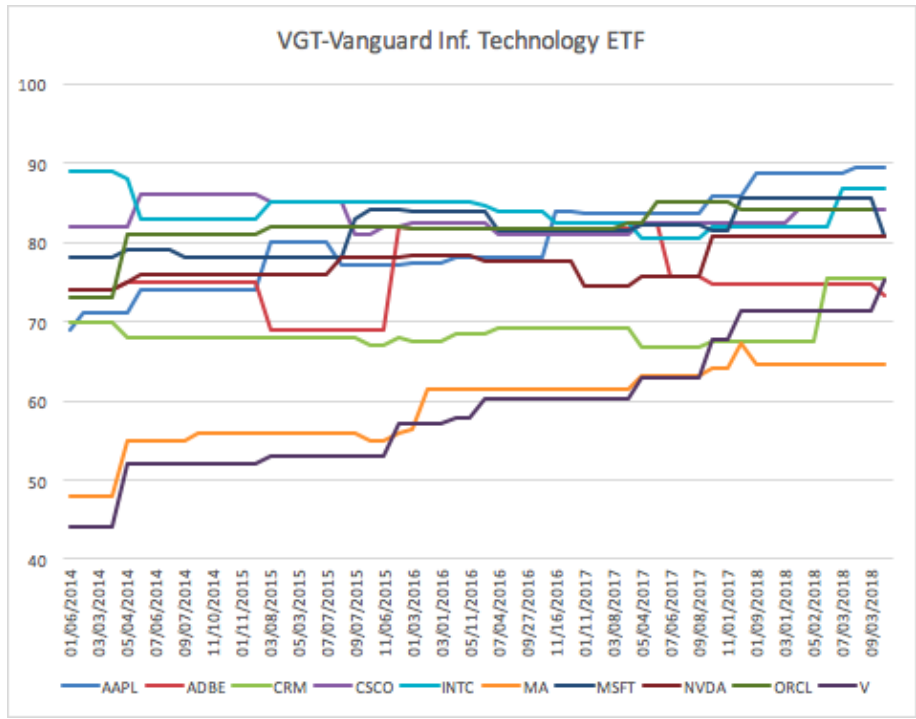
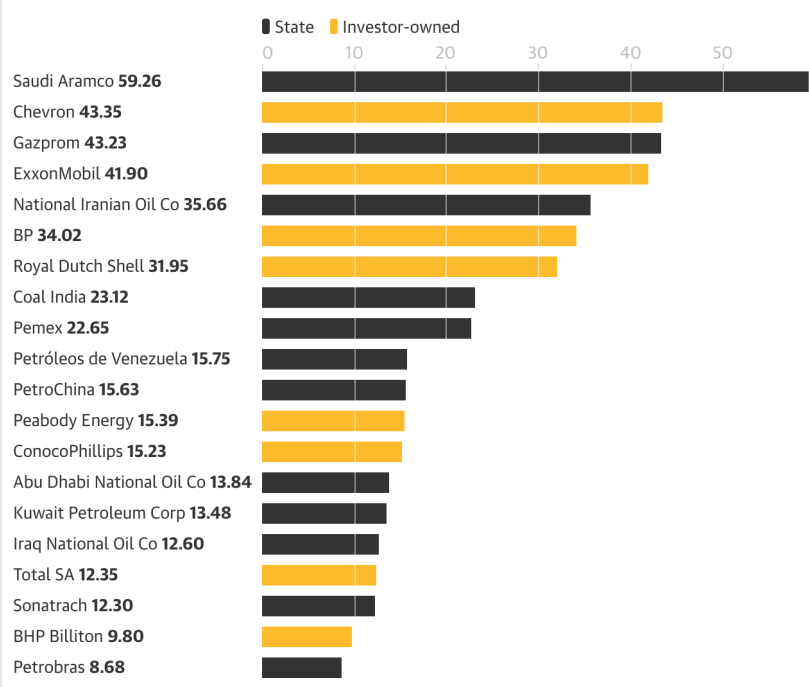


Exhibit 7

The top 20 companies have contributed to 480bn tonnes of carbon dioxide equivalent since 1965

Billion tonnes of carbon dioxide equivalent



Guardian graphic | Source: Richard Heede, Climate Accountability Institute. Note: table includes emissions for the period 1965 to 2017 only

References

- Berg, Koelbel, Rigobon. (2019). Aggregate Confusion: The Divergence of ESG Ratings MIT Sloan Research Paper No. 5822-19. MIT Sloan School of Management.
- Capelle-Blancard, G., and A. Petit. 2017. Every Little Helps? ESG News and Stock Market Reaction. *Journal of Business*. (157): 543-565
- Chen, T., H. Dong, and C. Lin. 2018. Institutional shareholders and corporate social responsibility. *Journal of Financial Economics*.
- Crutchley, C.E., C.D. Hudson, M.R.H. Jensen. 1998. Shareholder Wealth Effects of CalPERS' Activism. *Financial Services Review*. 7(1): 1-10
- Escrig-Olmedo, E., M.J. Munoz-Torres, and M.A. Fernandez-Izquierdo. 2010. Social responsible investing: sustainability indices, ESG rating and information provider agencies. *International Journal of Sustainable Economy*. Ferrell A., H. Liang, and L. Renneboog. 2016. Socially responsible firms. *Journal of Financial Economics* (122): 585–606. DOI: 10.1016/j.jfineco.2015.12.003
- Esg Risk Ratings – the scoring structure. (n.d.). photograph.
- Gillan, S., and L. Starks. 2000. Corporate governance proposals and shareholder activism: the role of institutional investors. *Journal of Financial Economics*. (57): 275-305
- Green Power Partnership National Top 100. (2019). Retrieved from <https://www.epa.gov/greenpower/green-power-partnership-national-top-100-0>
- Grewal, J., Serafeim, G., and Yoon, A. (2016). Shareholder Activism on Sustainability Issues (July 6, 2016). Available at SSRN: <https://ssrn.com/abstract=2805512> or <http://dx.doi.org/10.2139/ssrn.2805512>
- Hedge Fund ESG Activism Helps Managers Drive Change. (2020). Retrieved from <https://www.cerulli.com/about-us/press/2020-january-us-asset-and-wea>
- Generation Is Leading the Way in ESG Investing? You'll Be Surprised.” *Wall Street Journal*. Retrieved from <https://www.wsj.com/articles/what-generation-is-leading-the-way-in-esg-investing-youll-be-surprised-11568167440>
- Lee K-H, B.C. Cin, and E.V. Lee. 2016. Environmental Responsibility and Firm Performance: The Application of an Environmental, Social and Governance Model. *Business Strategy and the Environment* (25): 40–53. DOI: 10.1002/bse.1855
- Mayor, T. (2016). “Why ESG ratings vary so widely (and what you can do about it).”
- Oh, C.H., J-H. Park, and P.N. Ghauri. 2013. Doing right, investing right: Socially responsible investing and shareholder activism in the financial sector. *Business Horizons*. (56): 703-714
- Otani, Akane. “ESG Funds Enjoy Record Inflows, Still Back Big Oil and Gas.” *Wall Street Journal*. Nov. 11, 2019. Retrieved from <https://www.wsj.com/articles/top-esg-funds-are-all-still-invested-in-oil-and-gas-companies-11573468200>

Rojas, M., M-F. Turcotte, and P. Merrigan. 2009. Bringing About Changes to Corporate Social Policy through Shareholder Activism: Filers, Issues, Targets, and Success. *Business and Society Review*.

Sias, R., L. Starks. 1998. Institutional investors in equity markets, Unpublished working paper, Washington State University.

The top 20 companies have contributed to 480bn tonnes of carbon dioxide equivalent since 1965. (n.d.). photograph.

Verheyden, T., R.G. Eccles, and A. Feiner. 2016. ESG for All? The Impact of ESG Screening on Return, Risk, and Diversification. *Journal of Applied Corporate Finance*. (28): 47-53

Xie, J., W. Nozawa, M. Yagi, H. Fujii, and S. Managi. 2017. Do environmental, social, and governance activities improve corporate financial performance? *Business Strategy and the Environment*. DOI: 10.1002/bse.2224

Zhao, C., Guo, Y., Yuan, J., Wu, M., Li, D., Zhou, Y., Kang, J. 2018. ESG and Corporate Financial Performance: Empirical Evidence from China's Listed Power Generation Companies. 10(8):2607. DOI: 10.3390/su10082607