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THE IMPACT OF ACTIVE AND PASSIVE OWNERSHIP ON TOTAL
SHAREHOLDER RETURN AND ENVIRONMENTAL, SOCIAL, AND
GOVERNANCE PERFORMANCE OF COMPANIES

by

Abigail J. Bennett

A Thesis Submitted in Partial Fulfillment
of the Requirements for a Degree with Honors
(Financial Economics)

The Honors College

University of Maine

May 2018

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ABSTRACT

The purpose of this study was to test the impact of passive and active ownership on total shareholder return (TSR) and environmental, social, and governance (ESG) score of firms. The motivation behind the study is the rise in passive investing over the last few decades and the concern that passive owners are not able to engage sufficiently with management of the companies they are invested in.

This study hypothesized that firms that are actively controlled have high TSR and higher ESG scores than firms that are passively controlled. The hypothesis was supported by the reasoning that passive owners lack the incentives and resources to monitor their holdings, and that they cannot use the threat of exit to provoke corporate management to act in their best interest.

This study finds empirical evidence that passive controlling ownership has a positive impact on companies' one-year total shareholder return. Being passively controlled was found to increase a firm's one-year TSR by 6.94 percent compared to not being controlled. No significant relationships between controlling ownership and ESG score were found.

This thesis is dedicated to Robert A.G. Monks.

Thank you for the insights that inspired my research and your leadership in the field of
corporate governance.

TABLE OF CONTENTS

INTRODUCTION	1
Background	1
Motivation	2
Purpose of study	4
Hypotheses	4
Hypothesis One	4
Hypothesis Two	5
Hypothesis Three	5
Hypothesis Four	5
Organization of Paper	6
LITERATURE REVIEW	7
Overview of Existing Literature	7
Impact of Passive and Active Ownership	8
The Relationship Between ESG and Firm Performance	9
Factors that drive stock price	11
Contributions to Literature	13
CONCEPTUAL FRAMEWORK AND DATA	14
Model and Expected Results	14
Data and Variables	15
Dependent Variables	16
Independent Variables	20
ANALYSIS AND RESULTS	30
Hypothesis One	31
Hypothesis Two	32
Hypotheses Three and Four	34
Interpretation	34
Limitations of the models	34
CONCLUSION	37
Summary of Paper	37
Discussion and Further Research	37

BIBLIOGRAPHY	39
APPENDIX A.....	42
AUTHOR’S BIOGRAPHY	43

LIST OF FIGURES

Table 1. A descriptive table of variables used in the analysis.....	16
Figure 1. A histogram of total shareholder return percentages.....	17
Figure 2. A histogram of total shareholder return without outlier of 5,309.080 percent.....	18
Figure 3. A histogram of ESG score.....	19
Figure 4: The number of companies within each type of controlling ownership.....	21
Figure 5: The number of actively and passively controlled companies by sector.....	22
Figure 6: Distribution of raw market cap variable.....	23
Figure 7: Distribution of log transformation of market cap variable.....	23
Figure 8: Average one-year TSR by sector.....	25
Figure 9: Average ESG score by sector.....	26
Figure 10: Average market capitalization by sector.....	26
Figure 11: Distribution of Governance Score variable.....	28
Figure 12: Distribution of Controversy Score variable.....	29
Figure 13: ESG score contributing to TSR where red is actively controlled and blue is passively controlled.....	31
Table 2: Regression table of model one (One-Year TSR)	32
Table 3: Regression table of model two (ESG Score)	33

INTRODUCTION

Background

In 1976, a concept that revolutionized the financial markets was created by John Bogle, founder of The Vanguard Group. The concept was named the “index fund,”¹ a low cost, passively managed fund that tracks the market and allows investors to profit from its inevitable long-term success. The index fund emerged from investors’ sentiments of disappointment in actively managed funds, which were characterized by buying and selling companies based on their predicted performance. Investors were frustrated, believing that actively managed funds failed to produce sufficient returns despite their high fees (Culloton 2011).

Bogle’s first passive fund, the index fund VFINX, was created to follow the U.S. large cap S&P 500 Index. Today, the Vanguard Group is one of the largest index investors in the world. Over 5,000 passive funds make up over a third of assets held in the U.S. financial market, while assets bought and sold by active investment managers still hold the remaining two thirds (Hunnicut 2017). The passive funds currently available track a wide range of investments, including countries, sectors, industries, small cap stocks, and benchmarks. More funds are created constantly, such as BlackRock’s recently announced exchange traded funds that exclude gun manufacturing and selling companies (Kerber 2018). In the last decade, passive funds have seen growth of about 60% as investors flock to them for low fee, low maintenance investing. Moody’s Investors Service Inc. predicts that passive fund assets will surpass actively managed

¹ Because most passively managed funds track indices, the term “index funds” in this study will be used interchangeably with “passive funds.”

assets by 2024 (Marriage & Pooley 2017). There is no question that passive index funds have allowed more people to benefit from equity markets, but we must consider the potential risks to their growing success.

Motivation

With its recent and projected growth as a percentage of assets held in the U.S., it is necessary to consider the implications of the rise of the passive fund on financial markets. One of the primary concerns with passive investing, and the one this study will address, is whether passive funds are able to adequately engage their ownership responsibilities with corporate management² of the companies they are invested in. Index fund owners such as Fidelity, Vanguard, BlackRock, and State Street Global Advisors cannot buy or sell index investments based on events that could trigger stock price changes. These giant index owners do not have the financial leverage that active owners do. They cannot sell a company's stock if, for example, its practices become unethical, board composition puts it at risk, or an unfavorable merger deal is agreed upon. As Rakhi Kumar, head of stewardship for State Street Global Advisors, writes, "Index investing is like a marriage where divorce is not an option" (Kapadia 2017). Corporate management knows that passive owners cannot exit the holding, and this could lead them to make riskier decisions.

The counter-argument is that passive investors are more inclined to take an active ownership strategy in the companies they hold because they cannot disinvest, and are

² "Management" refers to the executive corporate leadership, such as the chief executive officer or chief operating officer. Active or passive managers, or investors, are institutions that invest and manage money on behalf of clients, such as BlackRock. "Owners" refers to the individuals or institutions who own the money that active or passive managers invest. See Appendix A.

concerned for the long-term performance of their investments. In BlackRock's annual letter to CEOs, Larry Fink asks that the companies held by BlackRock's clients create a long-term strategy and show how they make "a positive contribution to society" (Fink 2018). Regarding the concern that passive investors are less engaged in the companies they hold, Fink writes:

In managing our index funds, however, BlackRock cannot express its disapproval by selling the company's securities as long as that company remains in the relevant index. As a result, our responsibility to engage and vote is more important than ever. In this sense, index investors are the ultimate long-term investors – providing patient capital for companies to grow and prosper.

Fink, CEO of the largest asset manager in the world, realizes the challenges passive investors face, and he asserts that BlackRock engages actively. However, there has been backlash; active investor Dick Weil published an op-ed in early March of 2018 titled *Passive Investors, Don't Vote*, arguing that BlackRock lacks incentive to "cast informed votes." This piece, which was published in the Wall Street Journal, went on to explain that passive investors only engage with the companies they hold to appease the SEC. Michelle Edkins, head of stewardship BlackRock, responded a few weeks later with an op-ed titled, *All Share Owners Should Vote Their Stocks*. She stressed Fink's point that BlackRock is a leader in engagement, and that all investors should be active owners.

There are additional concerns that because passive investors hold hundreds of companies, it is unlikely they have the resources or incentive to monitor them. The lack of incentive argument stems from the idea that passive investors are only concerned with

the performance of the larger index, not the individual companies within it. Passive investors' lack of financial leverage over the companies they own, and lack of resources and incentives to monitor corporate management, could become problematic – particularly when they are a controlling owner in a company (Appel, Gormley, and Keim 2015).

Purpose of study

The purpose of this study is to attempt to answer the question of whether passive owners engage enough with the companies they hold to ensure proper decision making in the best interest of shareholders. It tests whether passively controlled companies underperform or outperform actively controlled companies in total shareholder return (TSR) and environmental, social, and governance (ESG) score. By considering both shareholder return and ESG score, my analysis measures shareholder value by weighing both financial and ESG performance.³

Hypotheses

This paper seeks to empirically test how passive or active controlling ownership may affect total shareholder return and ESG score of firms by constructing the following hypotheses:

Hypothesis One

- *Alternative Hypothesis:* Active controlling ownership increases the total shareholder return of companies.

³ These are often related. Greater ESG performance has been found to increase financial performance of companies (Friede, Busch, and Bassen 2015).

- *Null Hypothesis*: Active ownership does not increase the total shareholder return of companies.

Hypothesis Two

- *Alternative Hypothesis*: Active controlling ownership increases the ESG score of companies.
- *Null Hypothesis*: Active ownership does not increase the ESG score of companies.

Hypothesis Three

- *Alternative Hypothesis*: Passive controlling ownership decreases the total shareholder return of companies.
- *Null Hypothesis*: Passive controlling ownership does not decrease the total shareholder return of companies.

Hypothesis Four

- *Alternative Hypothesis*: Passive controlling ownership decreases the ESG score of companies.
- *Null Hypothesis*: Passive controlling ownership does not decrease the ESG score of companies.

The hypotheses derive from the observation that passive managers, compared to active managers, have less financial leverage, less resources, and potentially less incentive to monitor their companies (Appel, Gormley, and Keim 2015). Therefore, their shareholder voice may be limited, and they may not be able to encourage management to act in the best interest of shareholders as effectively as active owners can.

Organization of Paper

The study will move from the introduction and background section to a literature review of research done on the topic of passive and active ownership and ESG factors' relationship with company performance. It will discuss how this paper contributes to existing literature, and then move to an explanation of the model, dataset, and variables. Next, it will discuss the analysis, results, and interpretation of findings. Finally, the conclusion will summarize the paper and discuss the implications of the findings, as well as discuss drawbacks and opportunities for future improvements.

LITERATURE REVIEW

Overview of Existing Literature

Although many heated, emotionally driven op-eds have been published on the effect of passive investing, there has been little academic research done comparing active and passive ownership impact on total shareholder return or ESG performance of companies. However, there is literature to support the reasoning behind my hypotheses. There are many studies on the link between ESG and financial performance, and a paper by Friede, Busch, and Bassen (2015) aggregates the results of 2,000 studies. Additional research that will be discussed in the literature review includes investor use of the threat of exit as a method of engagement, whether institutional investors prefer choosing short-term returns or long-term strategies, the success of short-term versus long-term strategies, and what factors drive stock prices.

The first study to address the relationship between passive ownership and corporate governance, which is a component of ESG, was titled *Passive Investors, Not Passive Owners*. Authors Appel, Gormley, and Keim (2015) acknowledged the extensive research done on the institutional investor impact on corporate governance, but recognize the lack of studies on specifically passive institutions. They state that their study contributes to the research “by focusing on passive institutions—a previously ignored, but increasingly important, set of institutional investors” (Appel, Gormley, and Keim 2015).

Impact of Passive and Active Ownership

In their paper *Passive Investors, Not Passive Owners*, Appel, Gormley, and Keim (2015) write that there is “surprisingly little analysis of passive institutions like Vanguard, State Street, and DFA,” which they say represent an increasingly large part of the U.S. stock market. They assume that the reason for the lack of study is the general presumption that passive firms do not have the motive or resources to invest in improving the governance of the hundreds of companies that they hold.

The purpose of the research done by Appel, Gormley, and Keim (2015) was to identify if passive investors purposefully engage with firm governance to improve performance. The study began with the suspicion that, “the growth of passive investors weakens the governance of firms.” This hypothesis was built on the reasoning that: 1) the incentive for passive investors to influence management is small because, unlike active investors, they simply follow a benchmark’s performance; 2) passive investors lack the lever of power over management that active investors have – the ability to sell their position in the company if management does act in their best interest; and 3) because they are invested in so many companies, passive investors likely lack the resources to influence the governance of individual companies.

The analysis found that the growth of passive funds seems to, “on average, have a positive impact on long-term firm-level performance and value.” The authors came to this conclusion through finding that passive ownership is associated with key indicators of a governance-healthy company: more independent directors, more removals of tactics to prevent hostile takeovers (called “poison pills,”), more shareholder freedom to call meetings, and less instances of dual class share structures.

Appel, Gormley, and Keim (2015) hypothesized that, contrary to their initial suspicions, passive investors have the incentive to be involved in the governance of the companies they hold because they cannot sell their positions. This is the same argument provided by BlackRock CEO, Larry Fink, in his 2018 letter to CEOs.

This study differs from my analysis because it examines specific governance issues, and does not address the relationship between passive ownership and overall ESG performance or shareholder return.

The Relationship Between ESG and Firm Performance

Friede, Busch, and Bassen (2015) suggest that interest in the relationship between financial performance and ESG began in the 1970s, and that more than 2000 studies on the issue have been published since then. Roughly 90 percent of studies find a positive relationship between ESG and financial performance. This study is the most complete collection of academic research on ESG and financial performance, and therefore “allows for generalizable statements” (Friede, Busch, and Bassen 2015).

Although total shareholder return is not the same as the performance of a company, it is often positively correlated with performance. Like the results reported by Friede, Busch, and Bassen (2015), I expect to find in my analysis that ESG score is positively related to TSR.

The Threat of Exit

Research by Bharath, Jayaraman, and Nagar (2013) examines the effect of the threat of exit, which is a tool investors use to leverage their desired change in the firm, on stock price. The effects of threat of exit is difficult to measure, as it is not as quantifiable.

Bharath, Jayaraman, and Nagar (2013) work around this by using the principle that the threat of exit is weaker when stock liquidity is lower and stronger when it is higher. They shocked liquidity using natural financial crises, and found that firms with large shareholders (referred to as “blockholders” in the study) suffered greater declines in value during crisis periods.

Because of this evidence that firms with large shareholders are more sensitive to the threat of exit, Bharath, Jayaraman, and Nagar’s (2013) study informs my research on controlling shareholders. My hypothesis states that controlling passive shareholders create less firm value than large active shareholders in part due to the threat of exit. Bharath, Jayaraman, and Nagar (2013) do not differentiate between passive and active owners, but it is active owners that support their conclusion that firms with large shareholders are more sensitive to the threat of exit.

Passive investors cannot use the threat of exit as a form of engagement. Therefore, passive controlling shareholders’ inability to use this form of voice prevents them from having access to the full engagement toolbox that active investors do.

Short-Term Earnings Over Long-Run Value?

Advocates for good corporate governance and ESG impact often complain that investors favor short-term gain, which they believe sacrifices attention to issues like board composition and environmental impact. A study by Brian Bushee (2010) seeks to answer the question of whether institutional investors prefer short-term earnings over long-run value. Bushee’s work found that institutions with short investment horizon overweight short-term earnings expectations. With short-term focused investors

pressuring firms to perform in the short-run, it may become difficult for companies to adopt a long-term view.

Barton, et al. (2017) examined the impact of companies adopting a long-term view on performance. The researchers found that companies focused on the long-term had significantly stronger financial performance and fundamentals, as well as social returns that “were equally impressive,” according to Bower and Paine (2017).

Active owners may be either short-term or long-term investors, but by their very nature, all passive investors are long-term investors because they cannot disinvest. If passive owners do engage with the companies they invest in, they likely advocate for best long-term practices to align with their time horizon. Long-term strategies are found to increase financial and social performance, which could indicate that – if they are engaging – passive ownership could be associated with greater TSR and ESG score. However, because my analysis uses one-year TSR, it could be picking up on short-term only performance.

Factors that drive stock price

Total shareholder return (TSR) measures the return on an equity investment from changes in stock price plus dividends. TSR is used, along with ESG, in my study as a measure of a publicly held company’s performance. In addition to ownership type, there are many forces that influence stock price and therefore TSR. Not all factors were captured in my study.

The stock price of a company changes when investors buy or sell it. It reflects investor sentiment. It is often difficult to determine what factors are influencing investor sentiment, at a given point in time, which is why speculative traders frequently lose

money in the stock market. Economic factors, investor sentiment, industry performance, and company performance can all affect stock price, but the level at which they do so varies over time, across countries, and between companies.

A study by Sharif, Purohit, and Pillai (2015) found that firm specific factors such as return on equity, book value per share, earnings per share, dividend per share, dividend yield, price earnings, and debt to assets drive stock price in the Bahrain Stock market. However, there are external forces that also contribute to prices. Peiró (2016) found that throughout recent decades, industrial production and long-term interest rates have caused over half of stock price movement in France, Germany and the United Kingdom, but the weight of influence has changed from interest rates to production.

Qin and Singal's (2015) study, *Indexing and Stock Price Efficiency*, directly examines the relationship between passive investing and stock price efficiency. Using a large sample of U.S. stocks, they found that companies that were more indexed had less stock price efficiency. This study also found evidence that indexing creates the negative externality of stock price inefficiency. The researchers make this conclusion through finding that stock prices vary more after earnings announcements and increasingly deviate from the random walk. They hypothesize that the reason for price inefficiency is greater opportunity for arbitrage; increased indexing makes informed and reactive trading on the market more lucrative.

DeLisle, French, and Schutte (2017) further find a negative relation between passive ownership and the ability to predict earnings, which they use as a proxy for investor knowledge. Index investing does not react to earnings or market changes, and its rise provides greater opportunity for active traders to profit as their market influence

increases relatively. Stock price inefficiency reduces total shareholder return; therefore, Qin and Singal (2015) provide evidence for my hypothesis that passive investing creates lower total shareholder return.

Contributions to Literature

My analysis will contribute to research conducted on the impact of passive ownership by addressing, for the first time, the effect of passive ownership on TSR and ESG performance. The analysis of Appel, Gormley, and Keim (2015), *Passive Investors, Not Passive Owners*, focused on governance specific issues, and it provided useful background for the reasoning of my hypotheses. My study provides a broader examination of the effects of passive ownership than Appel, Gormley, and Keim's (2015) by adding environmental and social considerations, and examining its effect on total shareholder return.

CONCEPTUAL FRAMEWORK AND DATA

Model and Expected Results

The purpose of the analysis is to examine the effect of ownership type on total shareholder return (TSR) and the environmental, social, and governance (ESG) score of publicly-traded companies. The ownership types considered are active controlled, passive controlled, and not controlled. Because every company is categorized into one of these ownership classes, the regression analysis requires that one of the categories is omitted from the model. The omitted category is “not controlled.” When interpreting the results, the estimated coefficients corresponding to the variables of active and passive controlled are, therefore, interpreted relative to the omitted category “not controlled.”

We expect to find that actively controlled companies have higher TSR and ESG score relative to companies that are not controlled. Therefore, we expected that the Active Controlled variable would have a positive and statistically significant effect in both models. We also expected to find that being passively controlled has a negative effect on TSR and ESG score relative to the omitted category, “not controlled.” Two linear regressions were run, one with One Year TSR as the dependent variable and the other with ESG Score as the dependent variable.

One Year TSR

$$\begin{aligned} &= \beta_0 + \beta_1 \text{Active Controlled} + \beta_2 \text{Passive Controlled} + \beta_3 \text{ESG Score} \\ &+ \beta_4 \text{Log Market Cap} + \beta_5 \text{Consumer Discretionary} + \beta_6 \text{Financials} \\ &+ \beta_7 \text{Information Technology} + \beta_8 \text{Utilities} + \beta_9 \text{Industrials} \\ &+ \beta_{10} \text{Health Care} + \beta_{11} \text{Real Estate} + \beta_{12} \text{Materials} + \beta_{13} \text{Energy} \\ &+ \beta_{14} \text{Telecommunications} + \beta_{15} \text{Multiple Share Classes} \\ &+ \beta_{16} \text{Governance Score} + \beta_{17} \text{Controversy Score} + u_i \end{aligned}$$

$$\begin{aligned}
ESG\ Score = & \alpha_0 + \alpha_1 Active\ Controlled + \alpha_2 Passive\ Controlled \\
& + \alpha_3 One\ Year\ TSR + \alpha_4 Log\ Market\ Cap \\
& + \alpha_5 Consumer\ Discretionary + \alpha_6 Financials \\
& + \alpha_7 Information\ Technology + \alpha_8 Utilities + \alpha_9 Industrials \\
& + \alpha_{10} Health\ Care + \alpha_{11} Real\ Estate + \alpha_{12} Materials + \alpha_{13} Energy \\
& + \alpha_{14} Telecommunications + \alpha_{15} Multiple\ Share\ Classes \\
& + \alpha_{16} Governance\ Score + \alpha_{17} Controversy\ Score + u_i
\end{aligned}$$

Data and Variables

The dataset used in the analysis was obtained from MSCI ESG Research, a wholly owned subsidiary of MSCI, Inc. MSCI is a global investment research firm that provides indices and research, including governance and risk data, primarily to institutional investors. The data set contains information on 2,189 companies across the eleven Global Industry Classification Standard (GICS) sectors. The GICS system was developed in 1999 by MSCI and S&P Global. The dataset contains ESG, governance, and controversy score variables created by MSCI's research teams. All data was gathered or updated in 2017.

The data was cleaned and organized in Microsoft Excel. Much of the data was converted from text to numerical values so that it could be analyzed. For example, sectors were listed as text under one column. I separated each sector into individual columns and set them as dummy variables. ESG scores were converted from letters A through E to numbers 0 through 5. Additionally, outliers and missing values were identified and removed. Regressions were run using Stata, a statistical software used primarily by economists.

The following table contains the description, number of observations, mean, standard deviation, and range of all variables used in the two models:

Table 1: Variables					
Variable Name	Description	Observations	Mean	Standard Deviation	Range
Dependent Variables					
One-Year TSR	Total shareholder return over 2017.	2,318	18.209	45.079	-87.5 - 437.7
ESG Score	Environmental, social, and governance score of company, given by MSCI.	2,317	1.633	0.931	0 - 5
Independent Variables					
Ownership Type					
Active Controlled	If company is owned over 30% by an active manager.	2,318	0.045	0.208	0 - 1
Passive Controlled	If company is owned over 30% by an passive manager.	2,318	0.135	0.342	0 - 1
Not Controlled*	If company is not held 30% or more by one shareholder.	2,318	0.818	0.386	0 - 1
Sectors					
Consumer Discretionary	Firms that produce non-essential consumer goods and services.	2,318	0.147	0.354	0 - 1
Financials	Firms that provide financial services to commercial and retail customers.	2,318	0.167	0.373	0 - 1
Information Technology	Firms that create applications, operating systems and computer components.	2,318	0.149	0.356	0 - 1
Utilities	Firms such as electric, gas and water firms, and integrated providers.	2,318	0.031	0.175	0 - 1
Industrials	Firms that manufacture machinery, hand-held tools and industrial products.	2,318	0.140	0.347	0 - 1
Health Care	Firms that provide medical services, manufacture equipment or drugs, or provide medical insurance.	2,318	0.138	0.345	0 - 1
Real Estate	Typically REITs of residential, commercial, and industrial real estate.	2,318	0.074	0.261	0 - 1
Materials	Firms that discover, develop, and process raw materials.	2,318	0.050	0.218	0 - 1
Energy	Firms involved in producing or supplying energy.	2,318	0.050	0.218	0 - 1
Telecommunications	Global communication firms, including internet providers.	2,318	0.011	0.103	0 - 1
Consumer Staples*	Firms that produce essential consumer goods and services.	2,318	0.042	0.201	0 - 1
Other					
Multiple Share Classes	If a firm issues multiple classes of voting shares.	2,318	0.109	0.312	0 - 1
Governance Score	Governance score of company on a 1-10 scale, given by MSCI	2,317	5.032	1.430	0 - 8.9
Controversy Score	Controversy score of company on a 1-10 scale, given by MSCI	2,318	8.038	2.791	0 - 10
Log Market Cap	The logarithmic transformation of market capitalization of company.	2,317	9.485	0.631	7.802 - 11.904

Table 1: A descriptive table of variables used in the analysis. *Starred variables were omitted from the regressions.

Dependent Variables

Total Shareholder Return (TSR). One-year TSR is the other dependent variable in this study. The dataset contains TSR variables for returns over one-year, three-year, and five-year returns. TSR is expressed as a percentage, “measures the gain in a company’s

share price over time, plus any dividends paid, and assuming that those dividends were reinvested” (MSCI ESG Research 2017). It reflects the market’s valuation of the company’s performance. It is usually used as a “long term indicator of the comparative success the company has achieved by creating value for its shareholders in the competitive market” (Shah and Sengupta n.d.).

In the analysis, one-year TSR variable was used due to excessive missing values in the three and four-year variables. The 47 companies with missing one-year TSR values were removed from the dataset. There were four values that held one-year TSR equal to 0, and these were left in the dataset.

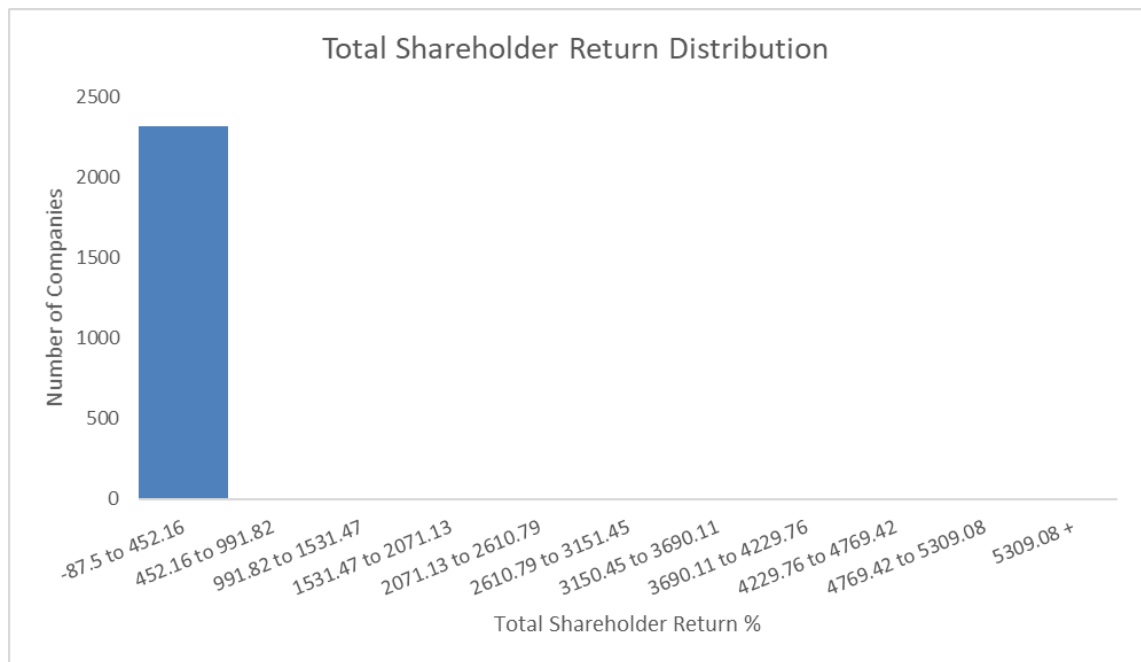


Figure 1: A histogram of total shareholder return percentages.

Figure 1 shows the distribution of one-year TSR vales for 2,189 companies. The histogram shows that the one-year TSR values are skewed to the right, and the skew statistic is 38.286. 99.957 percent of the observations are in the first bin. The spread is from -87.500 percent to 5,309.080 percent, and the center is 20.491 percent. To identify

companies that are outliers in terms of one-year TSR, I looked for values that are more than three times the magnitude of the interquartile range (i.e. the difference between the third and first quartile) above the third quartile. The maximum value of 5,309 percent is 44.544 standard deviations above the mean, and this observation was removed from the dataset due to suspicion that it was miscoded. Although another 104 companies were found to be outliers above the upper bound and 25 companies were outliers below the lower bound, these values were left in the data because they appear to be correctly measured data points.

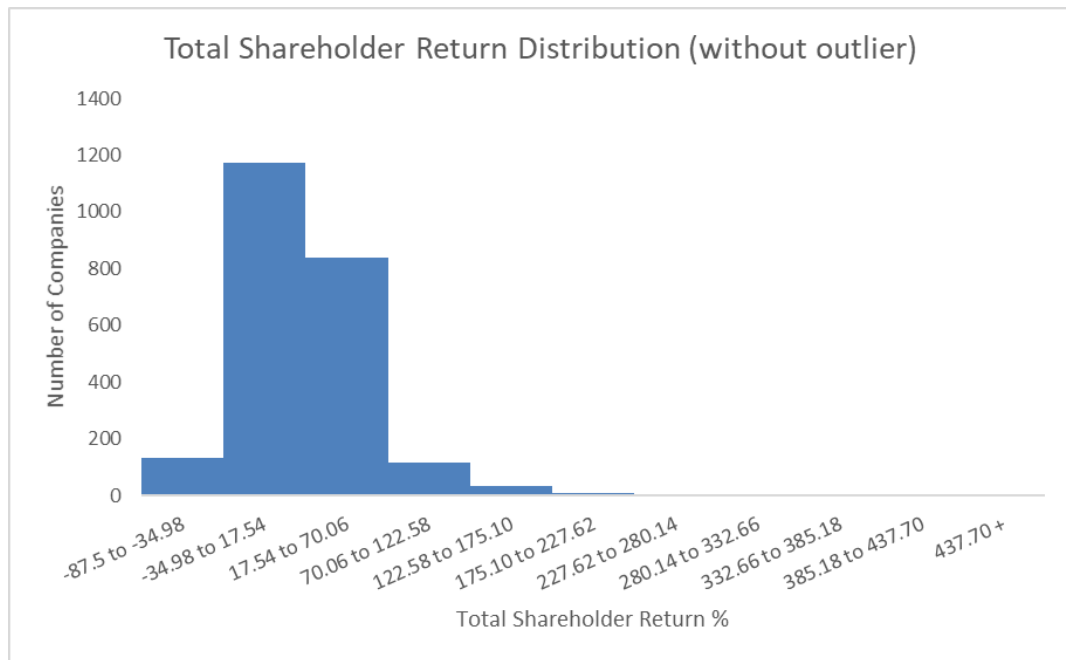


Figure 2: A histogram of total shareholder return without outlier of 5,309.080 percent.

Figure 2 shows the distribution of one-year TSR after the outlier with a value of 5,309.080 percent, is removed. The distribution is still skewed to the right, but the skew statistic is 2.901, which is substantially lower than the original value. The spread is from -87.500 percent to 437.700 percent, and the center is 18.210 percent.

Environmental, Social, and Governance (ESG) Score. The ESG score, another product of MSCI, is one of the two dependent variables used in this study. The variable is measured on a scale of 0-5, with the scores falling on integers. ESG stands for environmental, social, and governance, and is a popular term to describe how well a company is performing in these areas. Environmental concerns include carbon emissions or waste disposal, social issues include worker pay and diversity, and governance is the system by which companies are directed by the board. Governance reflects the relationship between management and owners, with a good governance system reflecting the rights and wishes of owners and holding management accountable.

To create the score, MSCI ESG Research collects public data such as government and NGO datasets and company disclosure documents, and the ESG corporate communications team engages with companies to verify data. MSCI then weights certain ESG issues – called the Weighted Average Key Issue Score – relative to industry peers to create the final rating (MSCI ESG Research n.d.).

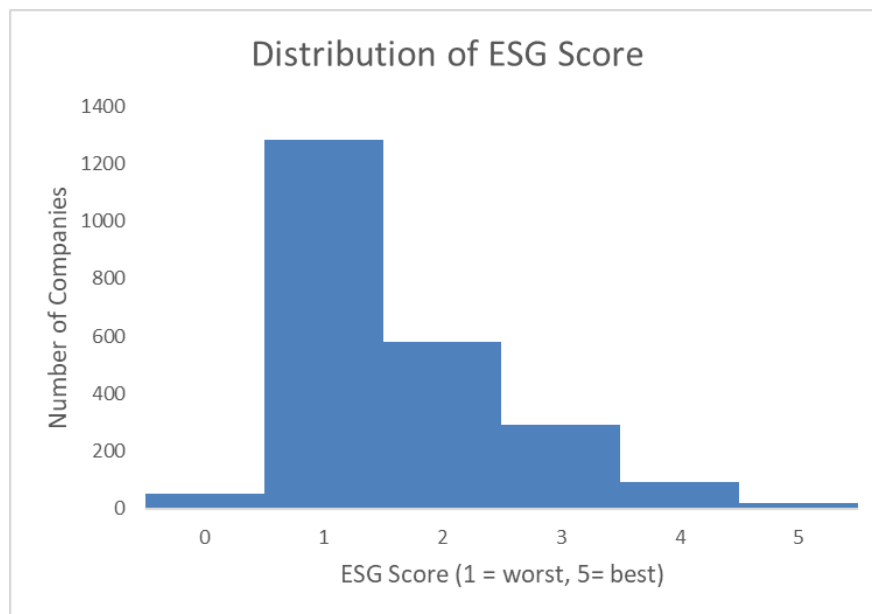


Figure 3: A histogram of the ESG score variable.

Figure 3 shows the distribution of ESG scores in the data. The data is most heavily concentrated on a 2 ESG score, with 1,282 companies falling into this score. The distribution skews to the right with a skew statistic of 1.156.

Independent Variables

Ownership type. The three independent variables of primary interest are Active Controlled, Passive Controlled, and Not Controlled. They are each dummy variables, with a value of 1 if true and 0 if not true. Actively controlled companies are defined as those whose largest shareholder owns 30 percent or more of the firm and are founder or family owned, or not owned by BlackRock, Fidelity, Vanguard, or State Street. Passively controlled companies are defined as those whose largest shareholder owns 30 percent or more of the firm, and that shareholder is either BlackRock, Fidelity, Vanguard, or State Street. This classification was determined by the reality that, “Vanguard, BlackRock, and State Street together control three-quarters of all the money in passive funds” (Kapadia 2017). It is not a precisely accurate classification, but it is close enough for the purposes of this analysis.

“Not controlled” companies are defined as not being held at 30 percent or more by a single shareholder. The majority of companies, 1,896, are not controlled, 104 are passively controlled, and 315 are actively controlled.

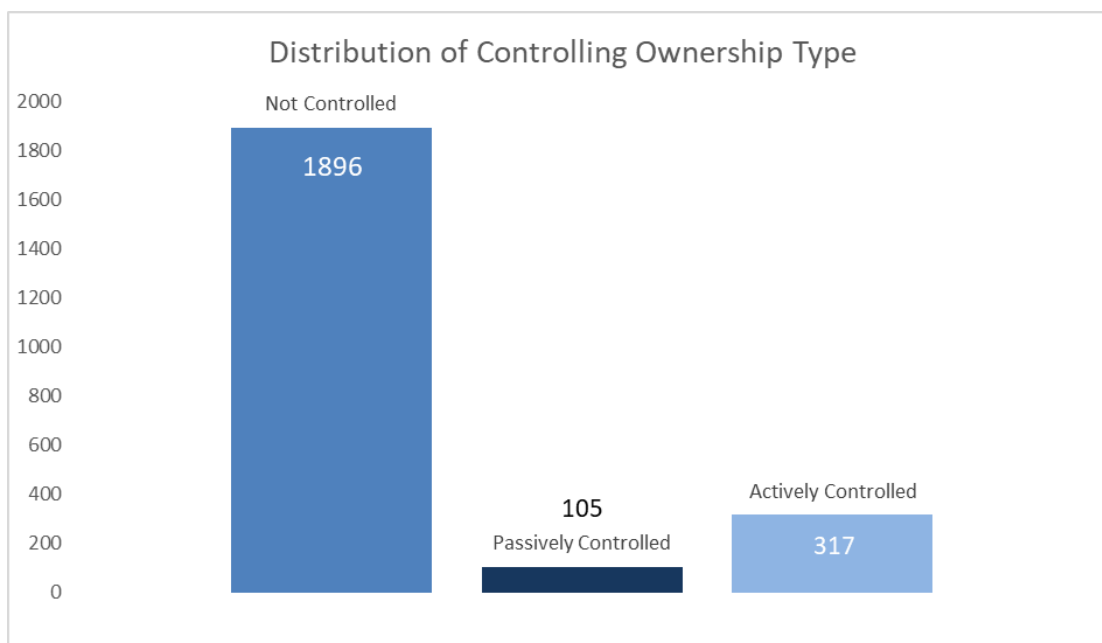


Figure 4: The number of companies within each type of controlling ownership.

Out of the 104 passively controlled companies, 44 percent are in the Real Estate sector. A study by Sebastian Mercado (2015), Chief Strategist at Deutsche Bank, also found that real estate was the largest passively owned sector in 2014. A concern is that real estate investment trusts (REITs), a large part of the Real Estate sector, are unique in their legal requirements for ownership structure. It is required by law that, “five or fewer individuals cannot own more than 50 percent of the value of the REIT's stock during the last half of its taxable year” (Nareit n.d.). Therefore, it is a concern that a large proportion of the 46 passively controlled Real Estate companies are REITs.

Among the 315 actively controlled companies, 26 percent are in the Consumer Discretionary sector. Figure 5 shows the number of passively and actively controlled companies across all sectors:

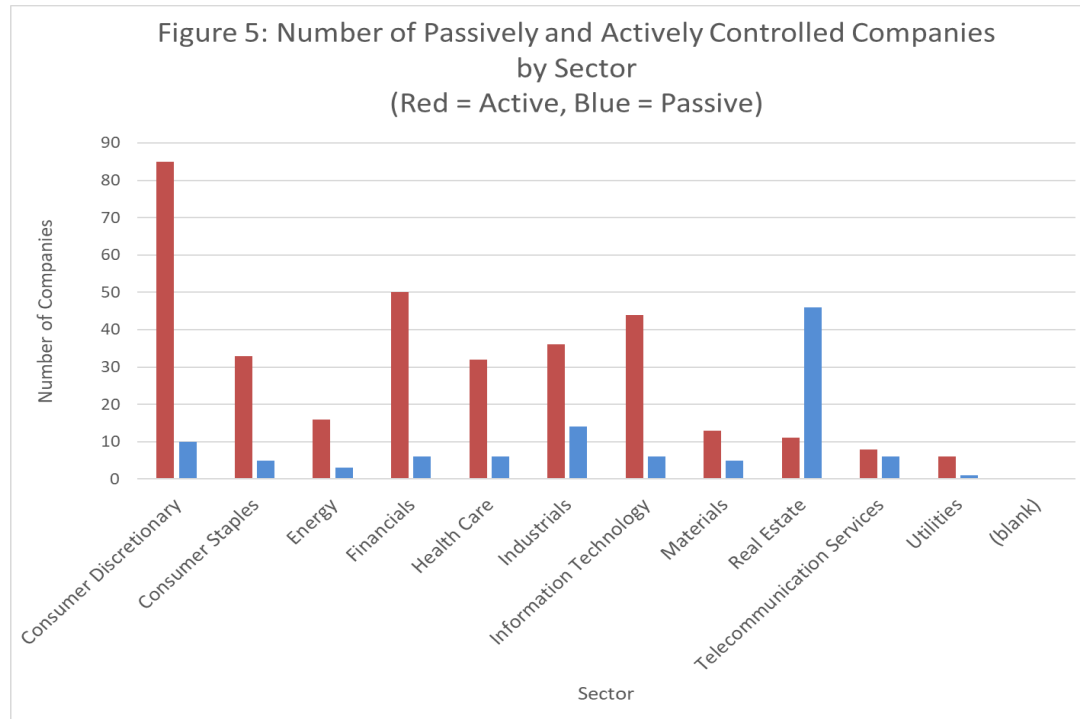


Figure 5: The number of actively and passively controlled companies by sector.

Log of Market Capitalization. Market capitalization is the total dollar value of a company's shares outstanding. Companies with small market capitalizations usually have a more volatile stock price than companies with large market capitalizations. They may see much higher or lower one-year TSR. Additionally, governance practices have been found to be worse on average at small-capitalization firms (Rutherford & Martin 2013). This may be reflected in the model that includes market capitalization's impact on ESG score.

Because there were a few high outliers that skewed the data, the log of market capitalization was generated and used in place of the raw values. It is a common transformation of the market capitalization variable, and this approach was taken by Appel, Gormley, and Keim (2015).

Figure 6 shows the distribution of the raw market capitalization of all companies:

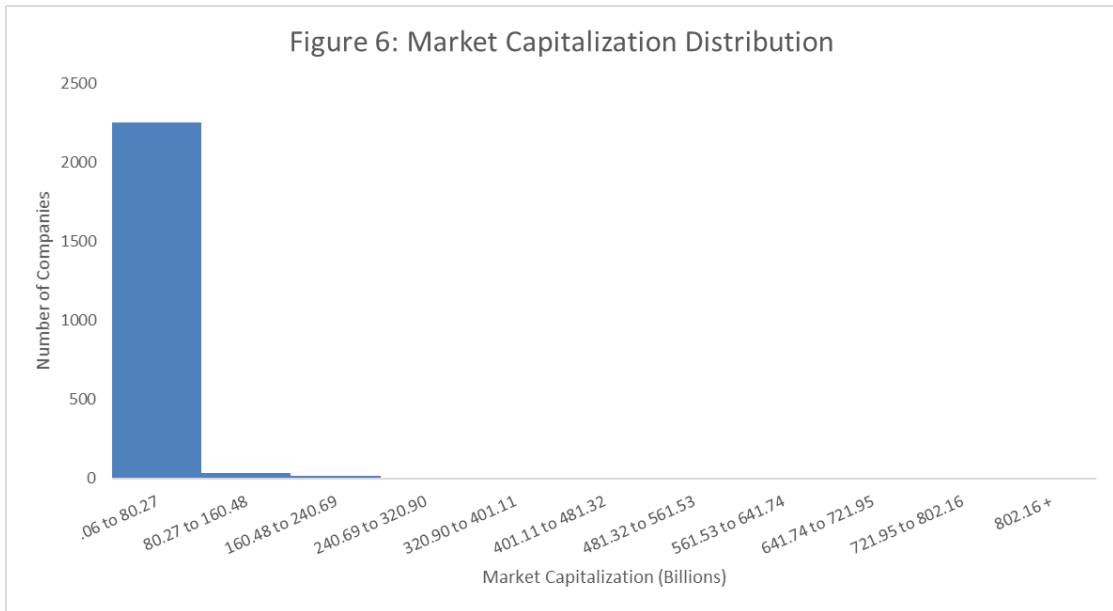


Figure 6: Distribution of raw market cap variable.

The shape of the raw market capitalization histogram is skewed heavily right, with a skew statistic of 10.200. 97.280 percent of the data is in the first bin. The spread is from \$.634 billion to \$802.160 billion, and the center is \$11.886 billion.

The following figure is a distribution of market capitalization of the companies after the log transformation:

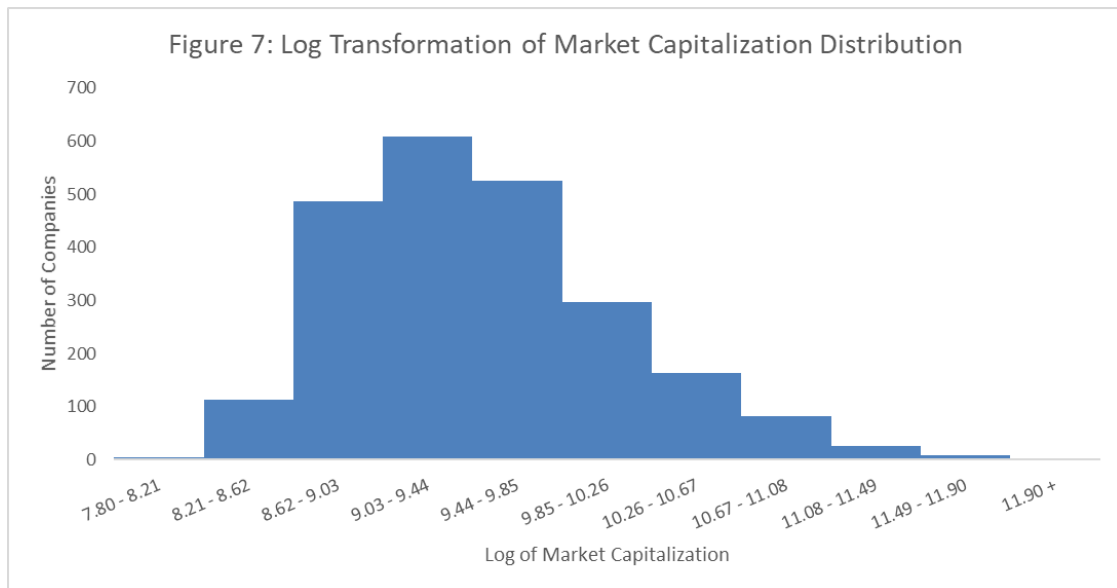


Figure 7: Distribution of log transformation of market cap variable.

The shape of the log-transformed market cap distribution is normal with a slight skew to the right. The skew statistic is .672, the spread is from 7.802 to 11.904, and the center is 9.485.

GICS Sectors. The eleven Global Industry Classification Standard (GICS) sectors - Consumer Discretionary, Consumer Staples, Energy, Financials, Health Care, Industrials, Information Technology, Materials, Real Estate, Telecommunication Services, and Utilities - were each dummy variables. Sectors were included as variables to attempt to identify sector trends in one-year TSR and ESG performance. The excluded sector was consumer staples, which accounts for 4.38 percent of the sample, making it one of the smaller sectors considered.

The Consumer Discretionary sector contains firms that produce non-essential consumer goods and services; the Financials sector includes commercial and retail customer financial services; the Information Technology sector contains companies that create applications, operating systems, and other computer related mechanisms; the Utilities sector includes gas and power utilities; the Industrials sector includes machinery and industrial tool manufacturing firms; the Health Care sector contains firms that provide medical goods and services; the Real Estate sector typically contain REITs of residential, commercial, and industrial real estate; the Materials sector discovers, develops, and processes raw materials; Energy sector companies produce or supply energy; firms in the Telecommunications sector provide global communication; the Consumer Staples sector produces essential consumer goods and services (Fidelity Investments n.d.).

There are a few unique features to note about the Real Estate sector. It was recently added to the GICS in 2016. It is largely comprised of real estate investment trusts (REITs), which do not behave like typical equities. Their earnings are usually tied to long-term contracts, they have to pay at least 90 percent of their income in dividends, and they are legally prevented from having five or fewer individuals own more than 50 percent of the REIT.

The Health Care sector had the highest average one-year TSR, and the Energy sector had the lowest.

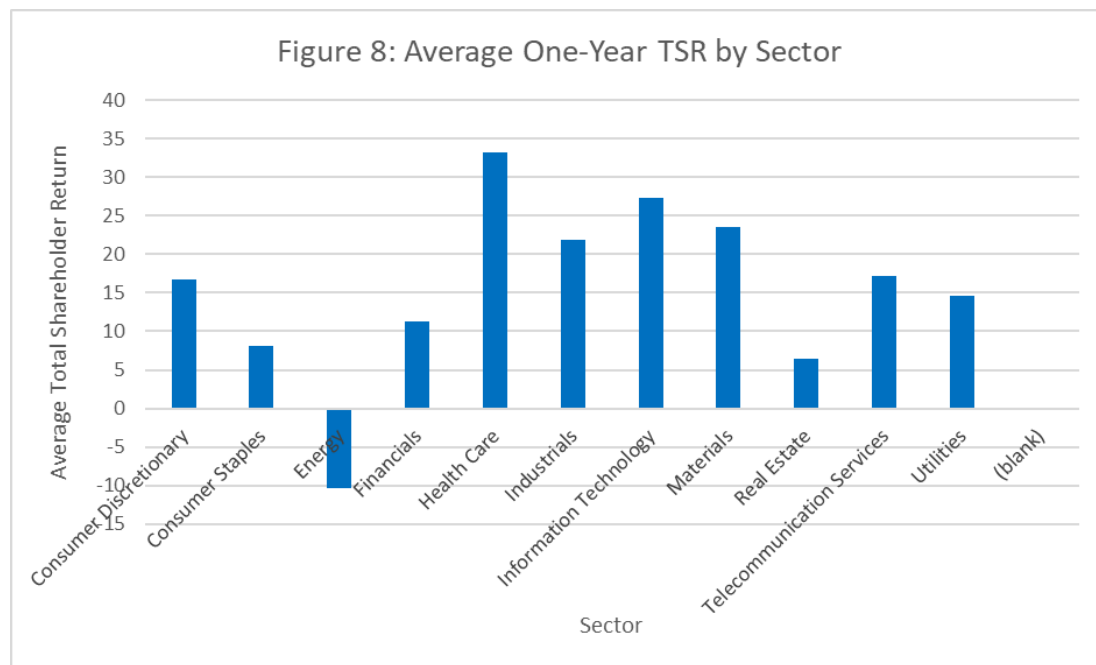


Figure 8: Average one-year TSR by sector.

The sector average ESG scores were similar, but Real Estate and Health Care had the highest average scores and Telecommunications Services had the lowest:

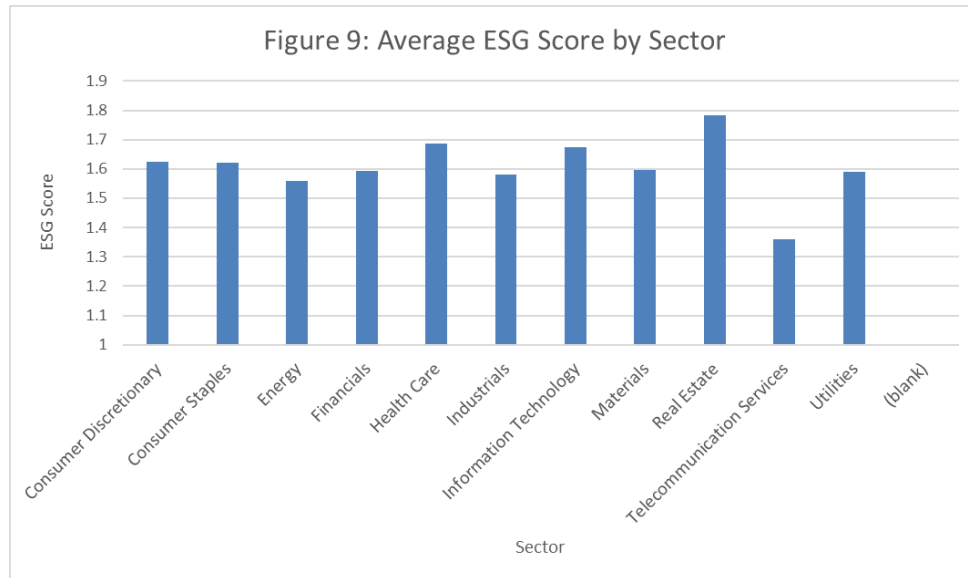


Figure 9: Average ESG score by sector.

Sectors varied widely in market capitalization. The three sectors with the largest average market capitalization are Telecommunication Services, Consumer Staples, and Information Technology with market capitalizations between \$17 and \$23 billion. The sectors with the lowest average market cap are Real Estate and Materials, with market capitalizations around \$6 billion.

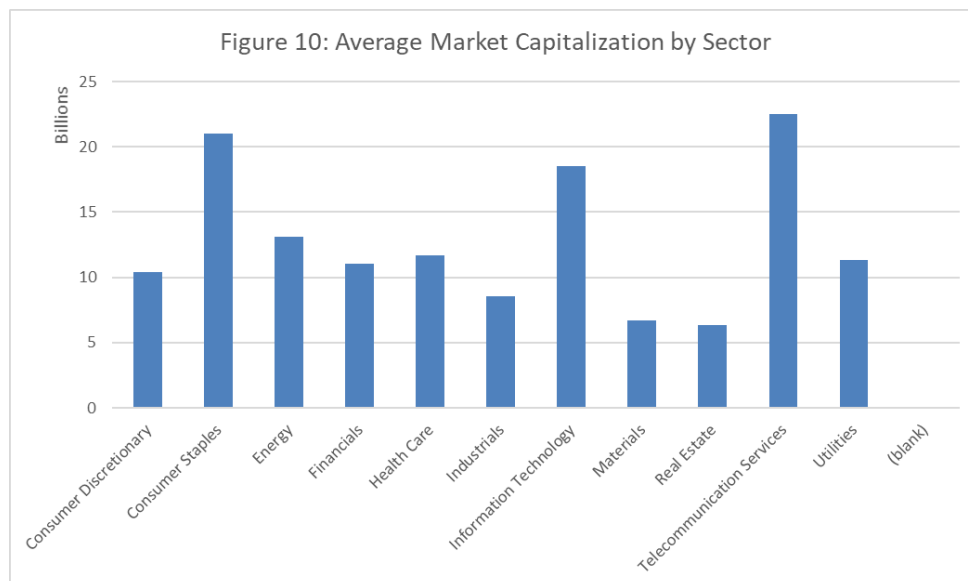


Figure 10: Average market capitalization by sector.

Multiple Classes of Voting Stock. Companies with multiple classes of voting stock have long been a concern among investors. Dual-class shares made their first appearances in the 1980s, and today are worth more than \$5 trillion in the capital markets. This system contains two or more types of shares, one with full voting rights and usually held by insiders, and the other(s) with limited voting rights typically owned by public shareholders. The dual-class system has been adopted in situations in which management wants to retain ownership control, and SEC commissioner Robert J. Jackson, Jr. writes, “you have a structure that undermines accountability: management can outvote ordinary investors on virtually anything” (Jackson 2018).

There are 244 companies with multiple classes of shares and 1,945 without.

Governance Score. Governance score is an MSCI ESG Research rating on a scale between 0-10, with the score increasing as governance quality increases. Governance represents the “G” in ESG, and therefore we expected to find correlation between the ESG Score and the Governance Score. The correlation was .133, and the variance inflation factor (VIF) was 1.018. Therefore, we determined there was not multicollinearity between the two variables. The standard rule is that a VIF of greater than 4 or greater should be investigated, and a VIF exceeding 10 indicates multicollinearity (The Pennsylvania State University n.d.).

Governance score is calculated by combining eleven measures, and incorporates factors such as executive compensation, board composition, number of independent directors, board diversity, and voting rights.

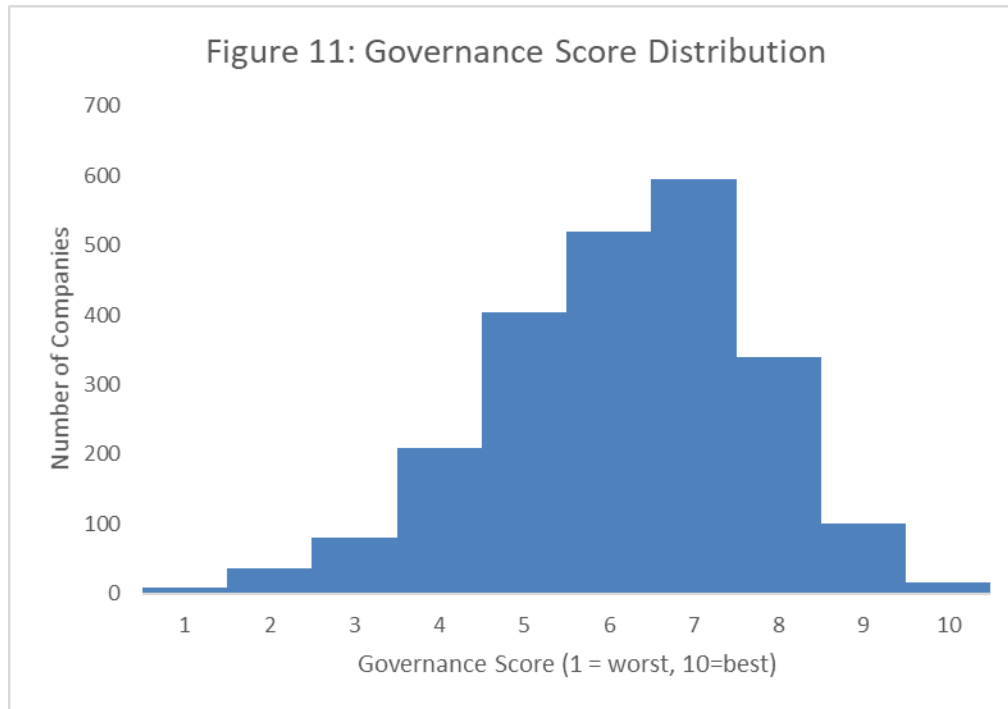


Figure 11: Distribution of Governance Score variable.

Figure 11 shows the distribution of governance scores. Scores are most highly concentrated between 5.340 and 6.230, and the distribution is slightly skewed to the left with a skew statistic of -0.489.

Controversy Score. The MSCI ESG controversy score provides a company rating, on a scale of 0-10 with 0 being the most severe controversy, of controversies concerning the “negative environmental, social, and/or governance impact of company operations, products and services.” This framework is consistent with international standards created by the UN Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, and the UN Global Compact (MSCI ESG Research 2017).

The controversy score was included because it was considered to be a factor that influences ESG score and TSR. It considers issues that affect stakeholders such as the

environment, customers, and the community. Controversies in these areas are can affect stock price and/or ESG performance.

We expected that there was correlation between the ESG Score and the Controversy Score. We found that the correlation was negative, and the variance inflation factor (VIF) was 1.005. Therefore, we determined there was not multicollinearity between the two variables.

Figure 12 shows the distribution of controversy score of companies, with the data most heavily concentrated on 10, the least severe controversy score. The skew is -1.166, and only 95 companies labeled as having the most severe controversy(ies).

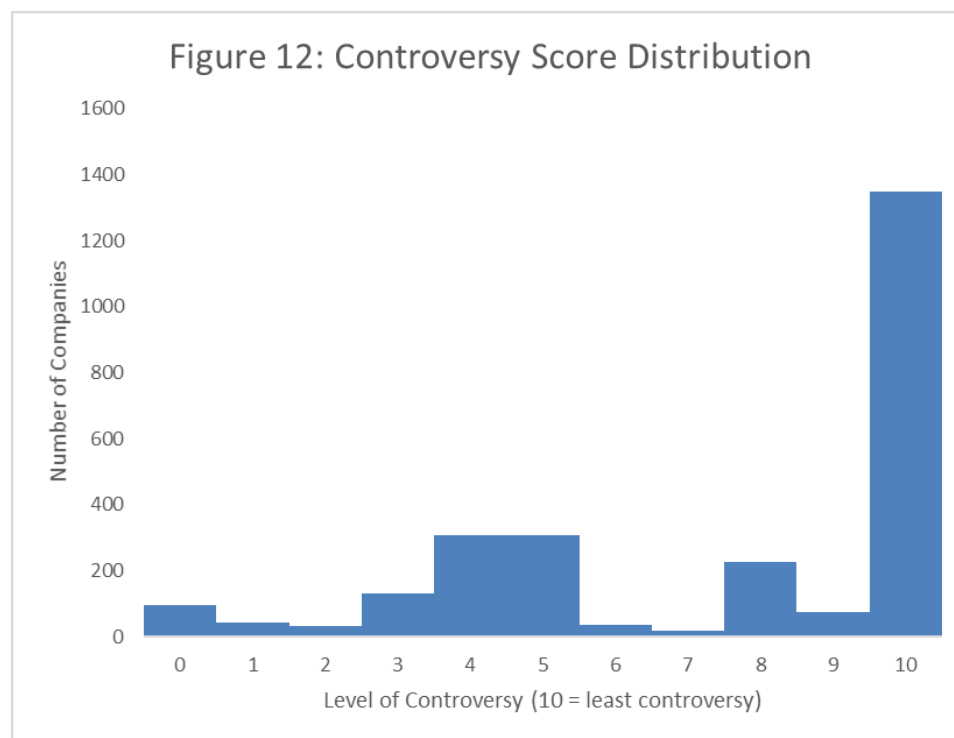


Figure 12: Distribution of Controversy Score variable.

ANALYSIS AND RESULTS

Empirical Results and Key Findings

Before running regressions, a scatterplot was created to attempt to identify standout relationships between one-year TSR and ESG score by ownership type. The scatterplot shows a positive relationship of .04 between one-year TSR and ESG score among passively controlled companies.

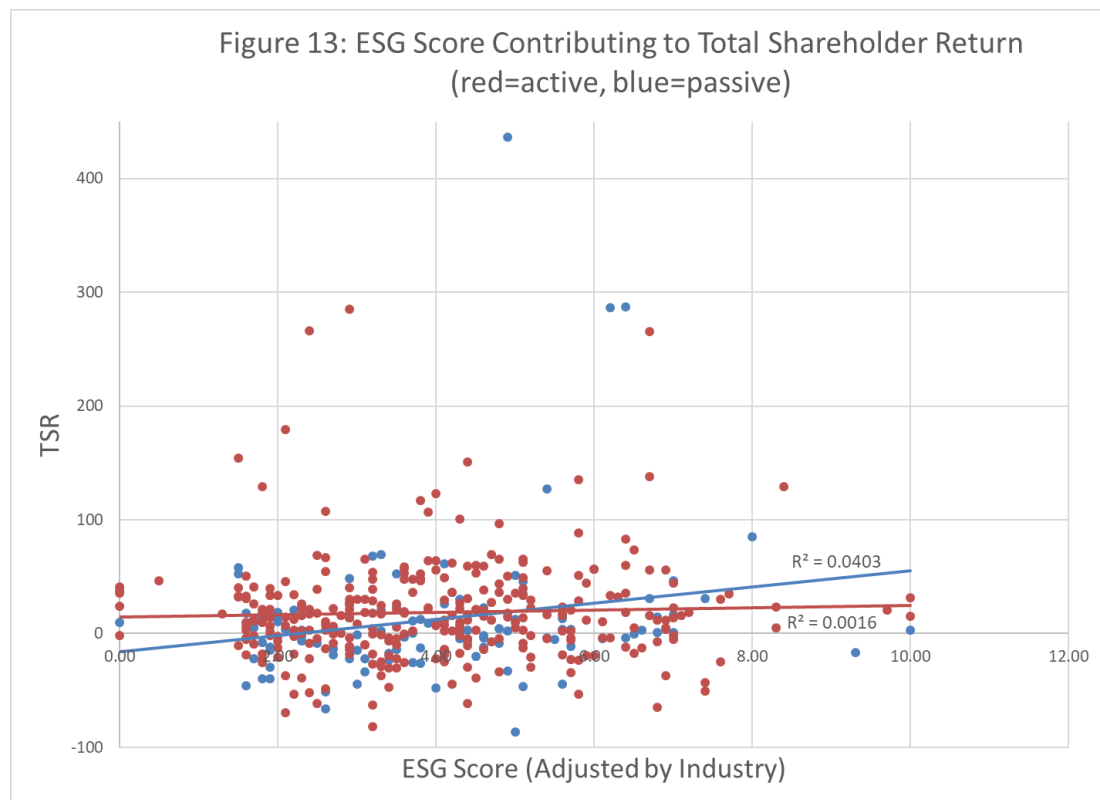


Figure 13: ESG score contributing to TSR where red is actively controlled and blue is passively controlled.

In the first model, the regressions found that passive controlling ownership was statistically significant and positively influences one-year TSR. However, active controlling ownership was not statistically significant. Therefore, we fail to reject the null Hypothesis One that active controlling ownership does not have a positive impact on one-year TSR. Additionally, we cannot reject the null Hypothesis Three that passive

ownership has a non-negative impact on one-year TSR. We fail to reject it because the Passive Controlled variable was significant and found to positively impact One Year TSR.

In the second model with dependent variable ESG Score, neither active or passive controlling ownership were statistically significant. Therefore, we fail to reject the null Hypothesis Two that active controlling ownership does not have a positive impact on ESG score. We also cannot reject the null Hypothesis Four that passive controlling ownership has a non-negative impact on ESG score.

Hypothesis One

Hypothesis One set out to test whether active controlling ownership increases a firm's total shareholder return. Using a significance level of .05, the statistically significant variables were Passive Controlled, ESG Score, Governance Score, Log Market Cap, Consumer Discretionary, Utilities, Industrials, Health Care, Materials, and Energy because their p-values were less than .05.

Passive Controlled had a coefficient of 6.939, which indicates that for every one-unit increase in active ownership, a 6.939 percent increase is predicted in one-year TSR, holding all other variables constant. A one-unit increase in ESG Score is predicted to increase one-year TSR by 1.924 percent, while a unit increase in Governance Score is predicted to decrease one-year TSR by 1.305 percent. A unit increase in Log Market Cap is predicted to increase One Year TSR by 14.255 percent.

Companies in the energy sector have, on average, a negative relationship with one-year TSR. However, companies in the consumer discretionary, industrials, utilities,

materials, and health care sectors on average correspond with a predicted increase in One Year TSR.

With a raw R-squared value of .099, the variance in the independent variables predicts 9.9 percent of the variation in the dependent. This is an overall measure of the model's fit.

Table 2: Regression Analysis 1					
Source	SS	df	MS	Number of obs	2,316.000
				F(17, 2298)	14.870
Model	466,535.298	17.000	27,443.253	Prob > F	-
Residual	4,241,502.570	2,298.000	1,845.737	R-squared	0.099
				Adj R-squared	0.092
Total	4,708,037.870	2,315.000	2,033.710	Root MSE	42.962

One-Year TSR	Coefficient	Standard Error	t	P > t	[95% Confidence Interval]	
Active Controlled	-7.054	4.561	-1.550	0.122	-15.998	1.891
Passive Controlled	6.939	3.076	2.260	0.024	0.907	12.971
ESG Score	1.924	0.974	1.980	0.048	0.014	3.833
Governance Score	-1.305	0.633	-2.060	0.039	-2.547	-0.063
Controversy Score	0.371	0.323	1.150	0.251	-0.262	1.004
Multiple Share Classes	-0.581	3.348	-0.170	0.862	-7.147	5.985
Log Market Cap	14.255	1.441	9.890	0.000	11.429	17.080
Consumer Discretionary	13.010	4.954	2.630	0.009	3.295	22.725
Financials	8.204	4.917	1.670	0.095	-1.439	17.847
Utilities	22.179	4.964	4.470	0.000	12.445	31.914
Information Technology	7.040	6.689	1.050	0.293	-6.077	20.156
Industrials	18.423	5.008	3.680	0.000	8.601	28.244
Health Care	30.896	5.037	6.130	0.000	21.019	40.773
Real Estate	3.877	5.578	0.700	0.487	-7.061	14.815
Materials	20.170	5.948	3.390	0.001	8.506	31.834
Energy	-13.991	5.960	-2.350	0.019	-25.680	-2.303
Telecommunications	14.730	9.665	1.520	0.128	-4.223	33.682
Constant	-131.535	15.446	-8.520	0.000	-161.825	-101.246

Table 2: Regression table of model one (One-Year TSR).

Hypothesis Two

Hypothesis Two set out to test whether active controlling ownership increases a firm's ESG Score. Using a significance level of .05, the statistically significant variables were Governance Score, Controversy Score, Materials, and Telecommunications.

A unit increase in governance score is predicted to increase ESG score by .095 units, and a unit increase in controversy score is predicted to decrease ESG Score by .023. Both Materials and Telecommunications are negatively related to the dependent variable, with a unit increase in Materials predicting a .277 score decrease in ESG Score and a unit increase in Telecommunications predicting a .415 score decrease in ESG Score.

The raw R-squared value is .032, indicating that the variance in the independent variables predicts 3.2 percent of the variance in the dependent variable. The model has not done well to identify variables that impact ESG Score.

Table 3: Regression Analysis 2					
Source	SS	df	MS	Number of obs	2,316.000
				F(17, 2298)	4.500
Model	64.752	17.000	3.809	Prob > F	-
Residual	1,943.288	2,298.000	0.846	R-squared	0.032
				Adj R-squared	0.025
Total	2,008.040	2,315.000	0.867	Root MSE	0.920

ESG Score	Coefficient	Standard Error	t	P > t	[95% Confidence Interval]	
Active Controlled	-0.049	0.098	-0.500	0.619	-0.240	0.143
Passive Controlled	-0.027	0.066	-0.420	0.678	-0.157	0.102
One-Year TSR	0.001	0.000	1.980	0.048	0.000	0.002
Governance Score	0.095	0.013	7.080	0.000	0.069	0.121
Controversy Score	-0.023	0.007	-3.400	0.001	-0.037	-0.010
Multiple Share Classes	0.024	0.072	0.330	0.743	-0.117	0.164
Log Market Cap	-0.038	0.031	-1.210	0.227	-0.100	0.024
Consumer Discretionary	-0.065	0.106	-0.610	0.539	-0.274	0.143
Financials	-0.151	0.105	-1.430	0.151	-0.357	0.055
Utilities	-0.039	0.107	-0.360	0.717	-0.248	0.171
Information Technology	0.009	0.143	0.070	0.948	-0.271	0.290
Industrials	-0.076	0.108	-0.710	0.480	-0.287	0.135
Health Care	-0.138	0.109	-1.270	0.203	-0.352	0.075
Real Estate	-0.047	0.119	-0.390	0.695	-0.281	0.187
Materials	-0.277	0.127	-2.180	0.030	-0.527	-0.027
Energy	-0.199	0.128	-1.560	0.118	-0.450	0.051
Telecommunications	-0.415	0.207	-2.010	0.045	-0.821	-0.010
Constant	1.793	0.334	5.370	0.000	1.139	2.448

Table 3: Regression table of model two (ESG Score).

Hypotheses Three and Four

Hypotheses Three and Four were created to test the impact of passive ownership on one-year TSR and ESG Score. Null Hypothesis Three was that passive ownership does not negatively impact on One-Year TSR, and null Hypothesis Four was that passive ownership does not negatively impact ESG Score. We failed to reject the null Hypothesis Three because we found empirical evidence that passive ownership positively impacts One Year TSR, and we failed to reject the null Hypothesis Four because the results were not statistically significant.

Interpretation

The first hypothesis predicted that active ownership increases total shareholder return of firms, but the results showed that, contrarily, being passively controlled increases one-year TSR on average. No definitive conclusion could be made about active ownership because the results were not significant.

The second hypothesis predicted that active controlling ownership increases firm ESG Score. The analysis did not find significant evidence that either type of ownership influences a firm's ESG performance.

Limitations of the Models

The biggest limitation in this study was using one-year total shareholder return instead of a longer-term measurement, such as five-year TSR. This was done due to the quantity of missing values in five-year and three-year TSR data.⁴ Two possible reasons

⁴ 516 data points were missing in five-year TSR. However, these missing data appeared to be missing at random. A regression was run to test the impact of active or passive ownership on five-year TSR. The active and passive ownership variables were not found to be significant.

for missing data are that the company had an initial public offering less than three years prior to the date the data was collected, or that is new in its trading form due to merger and acquisition action.

A disadvantage of using one-year TSR is that it is sensitive to market conditions over the year it was measured. 2017 saw the continuation of an unusual bull market that began soon after the financial crisis of 2008, and has been the second-longest bull market to ever run (Moreano 2016). This will not allow for an analysis of the impact of ownership type on TSR that considers all conditions of the market. Additionally, using a one-year TSR measure conflicts with the long-term nature of index investors; their engagement goals are long-term and thus will likely not be reflected with a one-year TSR measure. This problem may have been alleviated by comparing two one-year TSR measures from two points in time, one during a bull market and one during a bear market, such as 2007.

An additional limitation was not including more factors that influence company performance, and therefore stock price, in the model as variables. These variables include ratios such as return on assets, sales to equity, net income, and others that reflect performance and impact value (Peiró 2016).

In the second model, a concern was that Governance Score and Controversy Score would explain much of the variance in the dependent variable and drown out the effects of other variables. However, a regression was run without these two independent variables, and similar results were found in both the R-squared value and the significance of other variables in the model.

Finally, ESG Score was used as an independent variable in the first model, and One Year TSR was used as an independent variable in the second model. This may have caused correlation in error terms.

CONCLUSION

Summary of Paper

My analysis sought to determine whether companies with passive controlling ownership underperform or outperform firms with active controlling ownership in shareholder value. Based on three reasons, I hypothesized that firms with passive controlling ownership had lower total shareholder return and worse ESG score. The three reasons were that passive owners have less incentive to monitor their holdings, that they do not have the resources to do so, and that they cannot use the threat of exit to provoke management to act in the best interest of shareholders.

This thesis finds empirical evidence that passive investing has a positive impact on companies' one-year total shareholder return. No significant relationships between controlling ownership and ESG score were found.

Being passively controlled was found to increase a firm's One Year TSR by 6.94 percent compared to not being controlled. This relationship may be a result of engagement, as hypothesized, but perhaps more likely it is a result of inflows of investor funds into passively managed holdings over actively managed holdings in 2017, as "passive funds were heavily favored over active" (Vlastelica 2017). TSR reflects stock price, and prices rises when investor money flows into the company.

Discussion and Further Research

Although this study found empirical evidence that passive controlling ownership positively influenced one-year TSR, there were many limitations in this analysis that could be amended in further studies. One limitation was using only a one-year TSR

measure, which fails to provide a long-term performance measure of companies held by passive, or long-term, investors. This could be improved by using one-year TSR measures from two different years over a period of time to account for different market conditions as well as long-term ownership effects. Another limitation is using only controlling owners to determine ownership type. Ideally, we would have used data on all owners of the firms to aggregate ownership type and provide a more nuanced measure of whether they are passively or actively owned. This would have given us a much larger number of passively and actively held companies.

Further research should be done on the implications of rising passive ownership of stocks, and whether engagement by passive owners is adequate to hold corporate management accountable to shareholders.

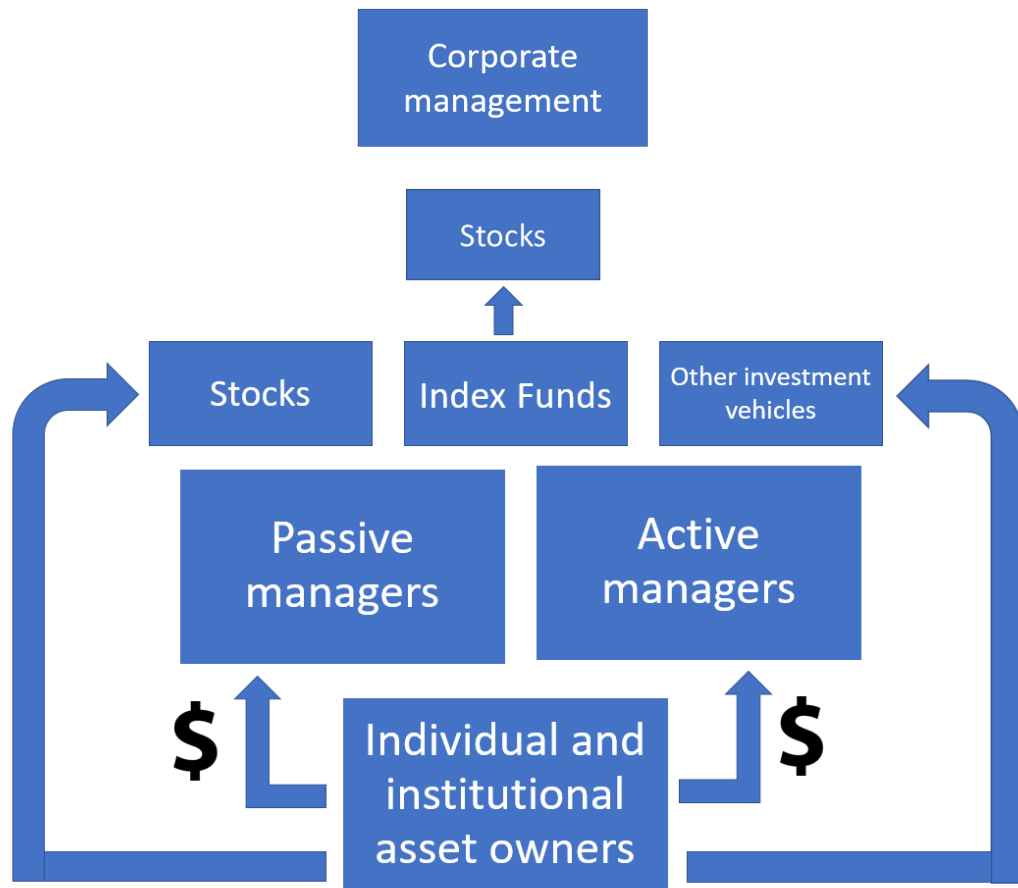
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APPENDIX A: A chart of investment constituents.



AUTHOR'S BIOGRAPHY

Abigail Bennett grew up in Oxford, Maine with her parents, brother, and pets of all shapes and sizes. She will graduate from the University of Maine in 2018 as a Financial Economics major.

She has worked for over a year as Executive Assistant at ValueEdge Advisors, a firm that convenes dialogue between institutional owners and corporations, and develops remedies to repair corporate governance of companies in the settlement of securities litigation.

She is politically involved as the Secretary of the College Republican National Committee, has interned for Senator Collins and Governor LePage, and has volunteered on many campaigns.

On campus, she is Co-President of the Student Portfolio Investment Fund, a \$3 million fund managed and invested by students, a member of the All Maine Women honor society, an Ambassador of the School of Economics, and Historian of the Class of 2018.

After graduation, Abigail hopes to start her career in corporate governance.