

ESG, Operational Guidance, and Long-term Value Creation

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Abstract—Environmental, Social, and Governance (ESG) is not just a score for firms and investors to observe and determine whether to finance additional capital. ESG is also a tool that could help many firms and investors discover opportunities for growth in operations and, in turn, create long-term value. Many studies have already recognized a positive correlation between ESG and performance and have suggested steps firms take to boost their sustainability actions. However, this research paper aims to provide a new perspective firms can explore following series of case studies. The central research question of this paper is: How does ESG function as a superior mode of operational guidance for creating long-term value? With limited primary source findings and studies from secondary sources, results show that ESG can become a tool of operational guidance for firms. The improvement in environment, social, governance, performance, and risks, ESG can consistently provide firms with sustainability goals to improve and reach. Furthermore, with the introduction of the “balanced scorecard”, managers can utilize a template containing operational and financial measures to enhance the decision-making process for the firm, which will steer the firm into having long-term operation goals.

Keywords—environmental, social and governance, operation guidance, sustainability

I. INTRODUCTION

Environmental, Social, and Governance (ESG) is becoming more and more popular as firms are aiming towards zero emissions in future years. By itself, ESG allows both the firms and the investors to gauge the risks, sustainability, growth, and many other factors simultaneously. ESG scoring allows investors to examine how well a firm’s value aligns with their values, and how risky investing in that firm will be. On the other hand, ESG scoring also allows firms to understand what part of their operations they should improve or change, thereby benefiting the entire firm. Furthermore, ESG has also benefited companies on the performance and profit side. Firms integrating ESG into their operational metrics often had positive performance and financial growth, and the same firms could also have cost savings and achieve operational efficiency (Anderson, 2023). In addition, ESG investment and ESG funds, focused mainly on profiting from ESG integration, resulted in 456% growth between 2005 and 2020 and funds having lower volatility while keeping positive returns (Anderson, 2023). ESG by itself has become more relevant in recent years as both firms and investors lean towards making positive impacts, but ESG by itself is not the only perspective that can be shared. Separating ESG into each of its three components: Environmental, Social, and Governance, ESG then can expand itself into various directions that benefit even more aspects of business. Environmental has numerous factors that come into play but mainly revolve around climate change like greenhouse gas

emissions, waste (water, energy, toxic substances, product goods), pollution, carbon footprint, and consumptions (water, energy, product goods). Societal focuses on relations and social benefactors, factors like diversity among hires and current employees, equality between genders and ethnicity, inclusion of employees, healthcare available to employees, living wages, employee relationships such as employee satisfaction, community relationships such as community service, and supplier relationships. Lastly, Governance is all about the internal management of the firm. Composition of board of directors, corruption and fraud, tax avoidance, transparency with disclosures, and management of departments. These are just some of the many factors that are included in ESG. By separating ESG into its own categories, applications can be used to examine the relevance of ESG rather than listing the factors. On the social side, employees are often looking for a firm or a team within a firm that can align with their personal values. “76% of millennials considering a company’s social and environmental impact before accepting their offer” (Anderson, 2023). This fact allows firms to acknowledge what employees within an age group prioritize when looking for jobs, which in turn optimizes operations within the firm as well as attracting additional employees with similar values. In another instance which includes both the environmental and social side of ESG, is customer satisfaction. Customers on the one hand demand goods to be at a price below or equal to their willingness to pay, but on the other hand, customers are also looking for goods and services based on their ethical values and the goods and services’ environmental impact. This type of decision by customers incentivizes firms to seek changes in long-term operations that can optimize their firm values.

This research paper aims to provide support for the importance of ESG and the integration of ESG into firms to benefit them for long-term value and operations. The research question “How does ESG function as a superior mode of operational guidance for creating long-term value” will become the central guideline for the paper’s structure and result. The methodology will give directions for the research performed and done to support the question, which leads to discussion and results that will finalize the research and produce any insights for future research.

II. LITERATURE REVIEW

A. Professional Opinions, Academic Publications, and Reputable Websites

Many professional opinions, academic publications, and reputable websites on ESG and sustainability often arrive in a positive ending. Elizabeth Lewis, Blackstone’s head of ESG, noted that “integrating material ESG issues into the investment process reduces risk and creates value for

investors and companies” (Marushka, 2022). Additionally, Marushka had also pointed out himself that “Investors are identifying ESG as a necessary business strategy and are demanding more transparent ESG reporting from the companies they’re investing in.” In the case of statistics, 7 out of 10 sustainable equity funds finished in the top halves of their Morningstar Categories and 24 out of 26 ESG-tilted index funds outperformed their conventional index funds (Hale, 2020). Bioy (2020) found that through a 10-year period through 2019, 58.8% of surviving sustainable funds had beaten their peers across several equity categories. Additionally, sustainable funds held up better than their counterparts in the first quarter of the year during the COVID-19 crisis, suggesting that “being underweight in less ESG-friendly sector like old & gas and overweight in technology and healthcare,” alongside with higher quality and low-volatility would benefit those surviving and outperforming sustainable portfolios (Bioy, 2020). Moreover, Morgan Stanley’s published article performed statistical analysis in the first half of 2023 and observed a 3.1% increase in “median return by asset type” (Stanley, 2023) for sustainable funds when compared to traditional funds. The strongest difference was towards sustainable equity funds, having a 10.9% median return versus traditional equity fund’s 8% (Stanley, 2023). Dyck and Ren (2021) focused more on the climate and environmental effects of sustainability. They observed from a study of global public companies that generate at least 10% of revenues from climate solutions to have a stock outperformance of 7.6% between the end of 2019 to March 2020 and a 3% outperformance between February and March 2020. Furthermore, when it comes to risky measures and value creation, Janson *et al.* (2023) from PwC stated that from a survey, 80% of the respondents consider if ESG performance is “in line with the pursuit of returns,” with only 1% saying conflicting pursuit of returns. Furthermore, 70% of the respondents prioritized value creation as their top drivers for their ESG activities in 2023 compared to 66% in 2020 (Janson *et al.*, 2023).

B. Scholarly Sources and Articles

On a surface level, during the beginning of COVID lockdown, “24 of 26 ESG index funds outperformed their conventional index benchmarks across US, non-US developed markets, and emerging markets” (Clark and Lalit, 2020). In scholarly studies, ESG and financial performance based on corporate studies with the intention to focus on operational metrics like return on equity, return on asset, or stock price (Whelan *et al.*, 2021) had shown a 58% positive relationship with only 8% yielding a negative relationship. Furthermore, an analysis of meta-analyses studies covering the period from 1976–2018 (Atz *et al.*, 2022) that seek to explore the relationship between sustainability and Corporate Financial Performance (CFP) was able to observe a robust and positive association, with 12 of the 13 meta-analyses finding a positive result. Dunn *et al.* (2017) find in their study an association between strong ESG profiles and less variable earnings, better credit risk, and higher profitability. In addition, they were also able to discover a possibility of ESG score taking the role of risk estimation in a traditional risk model (Dunn *et al.*, 2017). Nonetheless, ESG’s 3 components

all have their share of importance and not just performance. The firm’s social side—relationship with employees, customers, communities—and environment are highly value-relevant (Edmans, 2023). However, Edmans and multiple others had also pointed out the importance of ESG not being overvalued. Despite all the performances and statistical analysis proving ESG to be a successful factor to consider when it comes to value creation and operational guidance, companies and investors that are overly committed to ESG have the possibility of prioritizing ESG itself rather than focusing on what ESG helps them achieve. In such cases, prioritizing ESG itself may, during operations, cost firms long-term value (Edmans, 2023) rather than improving it. The overvaluation of ESG can be expanded on with other studies. Fatemi *et al.* (2018) conducted studies on the relationship between ESG activities and ESG disclosures. They found evidence that despite “ESG strengths” increasing firm value and “ESG concerns” decreasing firm value, a high ESG disclosure (Fatemi *et al.*, 2018) ultimately weakens ESG strengths, which they suggested the reason to be the market interpretation of firm’s “overinvestment in ESG activities.” On the other hand, the study also concluded that disclosure weakens the negative evaluation of ESG concerns because disclosures were a way for firms to express their ESG operations and policies or because the firms successfully convinced investors of their commitment to ESG activities (Fatemi *et al.*, 2018). To further support the state of over-evaluation of ESG, Pekovic *et al.* (2018) summarized their study to explain the relationship between economic performance via net profit and environmental investment. The result of their study supported Edman’s statement regarding the overvaluation of ESG. The relationship was observed in an almost U-inverted curve (Pekovic *et al.*, 2018), which implied a maximum of how much environmental investment can be until profit maximized, at which point any extra investment would bring net profit to a decrease. Moreover, the point where both variables maximize becomes an important indicator for encouraging green investment but also an indicator for environmental regulations to take place (Pekovic *et al.*, 2018).

III. METHODOLOGY

Although ESG pertains to both firms and investors, this paper prioritizes firm value in relation to the research question and data gathered. This paper focuses on a collection of secondary data, which consists of scholarly sources like academic journals and meta-analyses, with a few perspectives coming from statistic reports, consultancy sources, and magazines. The data collection process involves prioritizing studies with relevance to the research question and then including any necessary statistical data from the source to aid with the analysis process. Other sources like consultancy and magazines yield additional information to aid the data analysis process and bring importance to the topic of ESG in the introduction. Furthermore, a limited primary data source involves the collection of net revenues and carbon emissions of top retail companies in 2023. This process will be followed with quantitative data analysis, but the conclusion may be restricted to only the retail companies collected and their competitors due to sample size and

information. The analysis process of the secondary data is composed of mainly case study analysis and statistical analysis. Data analysis and Case Studies within quantitative analysis will be separated into “Environmental,” “Social,” “Governance,” “Performance,” and “Risk” sections for better distinctions between statistics. The data analysis will also be using a cross-study comparison to identify any similarities between studies’ analyses or data. Lastly, a theoretical application involving the balanced scorecard will be introduced after case studies in order to provide additional support for the research question. Limitations of data persist with limitations on ESG data, scope of research, usage of data, and ambiguous findings.

A. Environment

One of the ESG dimensions is environment-related ESG (E-ESG), which focuses on a company’s measures to protect the environment and promote sustainable practices that can preserve the environment for future generations (Rahman & Alsayegh, 2021; Li *et al.*, 2022). E-ESG initiatives include policies to address climate change, energy efficiency, waste and pollution, and natural resource preservation (Ruan and Liu, 2021; Ting *et al.*, 2019).

Long-term sustainability is valuable to firms as they benefit from consistency and growth of company performance. Environment, the “E” from ESG, alone has a robust effect on creating long-term value for firms. Piao *et al.* (2022) conducted a study observing occupational stress’s impact on employee psychological well-being. The observations were collected from 40,000+ employees from corporations in Japan between 2017 and 2019. In addition, ESG data were collected from the MSCI ESG database between 2015 to 2017 (Piao *et al.*, 2022). “ β_1 ” is the parameter that captures the effect of corporate environmental activities. The result of this study showed that an improvement to the following “E” activities, those with a negative estimated parameter β_1 , which indicates a statistically significant result of the estimate, would improve employee’s psychological well-being: Environmental, Water Stress (including Management), Toxic Emissions & Waste (excluding Management), and Opportunities in Clear Tech (including Management) (Piao *et al.*, 2022). These activities provide support that an improvement to firms’ environmental activities, such as those above, can benefit employees’ well-being, which could improve operations and foster long-term sustainability. In a similar online survey study, a regression analysis (Lee *et al.*, 2023) was conducted to examine employees’ ESG perceptions of their intention to stay within the organization during COVID. The focus in this section is the “E-ESG” dimension, which is how companies measure their environmental and sustainability practices with the addition of policies to address several environmental issues (Lee *et al.*, 2023). The data within the study consists of 716 respondents divided into groups by generation: Gen Z (18 to 24), Gen Y (25 to 39), Gen X (40 to 55), and Baby Boomers (>55). Due to the limitation on respondent size, the result of the regression analysis was limited to only the 716 respondents (all data), Gen Z group, and Gen Y group. The study showed that from all data, E-ESG ($\beta = 0.249, p < 0.001$) had a significant and positive effect on the employee retention rate. Comparing Gen Z and Gen Y groups,

employee retention relating to environmental factors had a stronger impact on Gen Z ($\beta = 0.340, p < 0.001$) than on Gen Y ($\beta = 0.163, p < 0.001$) (Lee *et al.*, 2023). This survey study suggested environmental factors related to ESG had a positive effect on employee retention, with the result leaning toward Gen Z. The study also provided additional evidence for the usefulness of ESG in creating long-term value. With firms improving their take on the environment, whether it is having a good measure of environmental and sustainable practices or creating policies to address how firms deal with climate change, waste, and emissions, these changes can benefit employee retention, and thus benefiting operations. Lastly, primary data was collected to examine the relationship between companies’ net revenue and net sales to the carbon emissions reported by said companies. The sample of the data collection contains 14 retail companies, and the data contained each firm’s net revenue or net sales as well as their emission data between 2019 to 2022. Net revenues or net sales are in millions of dollars, and carbon emissions are in millions of metric tons (Mmt CO₂e). Additionally, the carbon emissions data contained only Scope 1 and Scope 2 (market-based) statistics. Scope 1 emissions, or direct Greenhouse Gas (GHG) emissions, come from emissions that are controlled by the firm (fuel combustion, vehicles, etc.). Scope 2 emissions, or indirect greenhouse gas emissions, are emissions created from the purchase or the usage of utilities and are a result of the organization’s energy use (EPA, 2023). Scope 3 emissions—emissions that are not controlled or produced by the firm and emissions outside of Scope 1 and 2 categories—are not considered within the data collection process due to inconsistency between each firm’s sustainability report. Finally, data marked as “-” indicates omitted data due to statistics not yet published or just unpublished by the firm. The result of the observations can be seen in Tables 1 and 2, with figures for individual firms showing the relationship between the two factors.

Table 1. Record of 14 Retail companies’ net revenue (\$ millions) from 2019 to 2022

Company Name	2022 Net Revenue	2021 Net Revenue	2020 Net Revenue	2019 Net Revenue
Ahold Delhaize	57,959.00	53,699.00	51,838.00	44,841.00
Albertsons Companies	71,887.00	69,690.40	62,455.10	60,534.50
Amazon.com	513,983.00	469,822.00	386,064.00	280,522.00
Apple Inc.	394,328.00	365,817.00	274,515.00	260,174.00
Best Buy Co., Inc.	46,298.00	51,761	47,262.00	43,638.00
Costco Wholesale	226,954.00	195,929.00	166,761.00	152,703.00
CVS Health Corporation	322,467.00	292,111.00	268,706.00	256,776.00
Lowe’s Companies	97,059.00	96,250.00	89,597.00	72,148.00
Publix	54,942.00	48,394.00	45,204.00	38,463.00
Target	109,120.00	106,005.00	93,561.00	78,112.00
The Home Depot	157,403.00	151,157.00	132,110.00	110,225.00
The Kroger Co.	148,258.00	137,888.00	132,498.00	122,286.00
Walgreens Boots Alliance	132,703.00	132,509.00	121,982.00	120,074.00
Walmart	611,289.00	572,754.00	559,151.00	523,964.00

Table 2. Record of 14 Retail companies' carbon emissions (Mmt CO2e) from 2019 to 2022

Company	2022 Carbon Emissions	2021 Carbon Emissions	2020 Carbon Emissions	2019 Carbon Emissions
Ahold Delhaize	-	2.827	3.149	3.730
Albertsons Companies	3.900	4.010	4.414	4.959
Amazon.com	16.290	16.180	14.890	11.260
Apple Inc.	0.058	0.058	0.047	0.053
Best Buy Co., Inc.	0.351	0.389	0.401	0.456
Costco Wholesale	-	-	1.700	-
CVS Health Corporation	1.036	1.070	1.143	1.194
Lowe's Companies	1.369	1.446	1.789	2.108
Publix	-	-	-	-
Target	1.671	1.747	2.192	2.298
The Home Depot	1.557	1.649	1.821	1.948
The Kroger Co.	4.895	5.251	5.276	5.968
Walgreens Boots Alliance	1.500	1.616	1.781	1.901
Walmart	-	13.990	15.930	17.200

With the exclusion of Costco Wholesale and Publix without GHG data, 11 out of the 14 retail companies had observed a positive relationship between the increase in yearly net revenue and a decrease in GHG between 2019 to 2020. 10 out of the 14 companies reported a positive relationship from 2019 through 2022, including omitted data—Ahold Delhaize reported a decreasing trend of GHG despite missing 2022 emission data.

Amazon.com (Fig. 1) observed an increase in GHG for the first 3 years alongside their increase in net revenue. This data can be explained by the decrease in Amazon.com's stated Carbon intensity (gCO2e/\$GMS)—grams of carbon dioxide equivalent per dollar of gross merchandise sales—in their 2022 sustainability report at 122.8 in 2019, 102.7 in 2020, 100.8 in 2021, and 93.7 in 2022. Apple Inc. (Fig. 2) experienced an increase in GHG emissions in 2021 and 2022. In 2021, Apple Inc. reported an increase in Scope 1 via Natural gas and fleet vehicles and Scope 2 emissions via steam, heating, and cooling. In the year 2022, Apple Inc. expanded its carbon footprint to include additional emissions from its scope 1 usage and covid caused emissions. Best Buy Co., Inc. (Fig. 3)'s decrease in net revenue between 2021 and 2022 can be explained by the decline in their largest drivers of sales on "computing, home theater, appliances and mobile phones," with partial offset by growth in the sale of "gaming and tablet categories" (Best Buy Co., Inc., 2023).

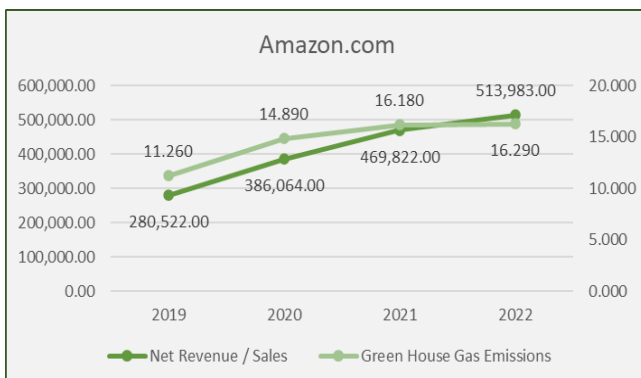


Fig. 1. Amazon.com's net revenue versus GHG emissions.

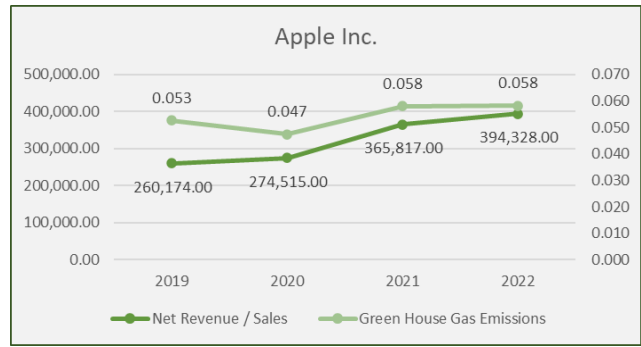


Fig. 2. Apple Inc.'s net revenue versus GHG emissions.

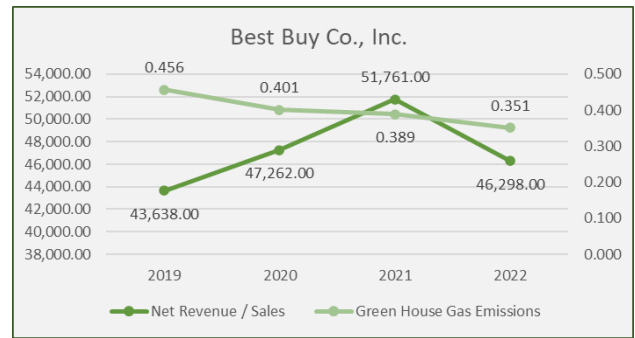


Fig. 3. Best Buy' net revenue versus GHG emissions.

Overall, positive effects were observed between the decline in GHG emissions and the increase in net revenue for retail firms. This observation leads insights into the potential of "E" in ESG becoming a useful tool to navigate firms into a positive leaning operation which can create long-term value for firms and furthermore improve their financial performance.

B. Social

The social aspect of ESG can also act as operational guidance for creating long-term value by utilizing the benefits of social behaviors to improve firms' long-term operations. Two theories that will help establish the base of this section are "social identity theory" and "job embeddedness theory" (Lee *et al.*, 2023). Social identity theory within ESG suggests the employee's sense of identification when it comes to being aware of ESG practices. Job embeddedness theory suggests the reasoning behind employee's willingness to stay in the firm when the firm's ESG values align with the employee's ESG values (Lee *et al.*, 2023). The findings of Lee *et al.* (2023) study that focuses on social aspect of ESG resulted in the "S-ESG," a dimension of measurement that assess firm's connection with "stakeholders, such as employees, supply chains, consumers, and the communities" (Lee *et al.*, 2023), having the most impact on employee retention ($\beta = 0.261$), which emphasizes the positive effect of social connections and how employees perceive that in ESG in response to their retention. As for the comparison between Gen Z and Gen Y, S-ESG shows a less significant positive result for Gen Z ($\beta = 0.173, p < 0.001$) than Gen Y ($\beta = 0.312, p < 0.001$), indicating that the prominence of ESG factors in Gen Z group does not have social factors in their top priority, but the social factors does have priority for Gen Y group. The result of the S-ESG dimension provides information on what age group tends to perceive more within ESG regarding their willingness to stay in a firm. The result also follows what social identity theory

and job embeddedness theory suggest. Employees, specifically Gen Y groups between the ages 25 to 39, could be prioritizing how firms treat employees and other members within the firm and if firm's values align with their own. This process leads to the group associating their identity with the firm, which benefits the firm's operation from a social standpoint, thus creating long-term value. To further expand on the importance of social factors and the two theories, Piao *et al.* (2022) found a significant and positive impact the social pillar score had on employees' occupational stress levels. More precisely, the social corporate activities: labor management (including management score) and health & safety (including management score) all had a negative coefficient and were statistically significant. The result of this section of their study aligns with the two theories in that firms adopting a strong social activity can benefit employees' job satisfaction (Piao *et al.*, 2022), which helps employees align their values to their firm and increase in productivity, which improves the firm's long-term value.

C. Governance

In the statistical presentation given by March (2021), firms with good corporate governance were observed to outperform firms—in terms of sales growth—with poor ESG rankings over different year spans. Over a 1-year period, the difference between good corporate behavior and poor corporate behavior was 7.41%. Over a 3-year period, the outperformance difference was 3.49%, between good and bad corporate governance, and a 10.65% difference between good and bad corporate governance over a 5-year period (March 2021). This statistical data demonstrates that good corporate behavior in the short run may not outperform poor corporate behavior by a significant amount, but in the long run, this difference becomes more relevant to the importance of governance within the operations of firms.

D. Performance

Combining the three dimensions of ESG, the overall result of ESG's impact on performance can be visualized with numerous studies. With reviewed over 1000 studies between 2015 to 2020, Whelan *et al.* (2021) found positive result between ESG and financial performance. With both corporate and investor relationship producing a positive result but focusing only on corporate, 58% of the studies found a positive result, 13% were neutral, 21% mixed, and only 8% negative (Fig. 4). These corporate studies focused on "operational metrics such as ROE, ROA, or stock price" (Whelan *et al.*, 2021). Moreover, the study found 59 climate change and related topics falling under the "E" aspect of ESG, 57% resulted in positive, 29% neutral, 9% mixed, and only 6% negative (Fig. 4). With an overwhelmingly positive over negative difference, the study demonstrated the positive results between ESG and corporate studies relating to operation metrics.

In a similar study with similar researchers, 238 studies were used as a sufficient sample size to generalize the population of 1141 studies after screening. Atz *et al.* (2022) found a positive association between sustainability and financial performance ($60\% \pm 7.5\%$, a significant result with over half being positive) with "twelve of thirteen recent meta-analyses" supporting the finding. They also found no difference in financial performance between ESG

investments and conventional investments, suggesting a possibility of many factors that fall into the positive relationship but with no superior investment returns (Atz *et al.*, 2022). Additionally, Friede *et al.* (2015) corroborated the above studies showing that around 90% of studies find a nonnegative ESG-CFP relation. Diving into details, Flammer and Bansal (2016)'s study focused on the long-term impact of incentives on firm-value and operation performance. The study resulted in, after $t+2$, or after subsequent years of shareholder vote, ROA (return on assets) increase by 0.9%, NPM (net profit margin) increase by 1.9%, and sales growth increase by 3.9% (Flammer and Bansal, 2016). The result suggests that in the long run, operational performance like ROA, NPM, and sales growth improved, but it was at the cost of short-term benefit as all three measures suffered a non-significant decrease in performance. Lastly, a relationship between sustainable companies and the disclosure of their sustainability practices (Papoutsis, 2020) was observed and the result suggests that public disclosure of sustainability practices does indicate sustainability performance, to which the study went a step further and suggested a possibility of sustainable companies were more likely to disclose their methods. With performance, many studies have shown the benefits of ESG in its relation to financial performance. These performance results can better describe the benefits ESG have for the firm's operation and the creation of long-term value as firms will be more likely to adopt such systems, even if sometimes a short-term loss has to be incurred. Performance is also one of the few check boxes firms can observe to see if any changes should be made to improve operations, and risks will be the other checkbox firms can examine to become more confident with their long-term plans.

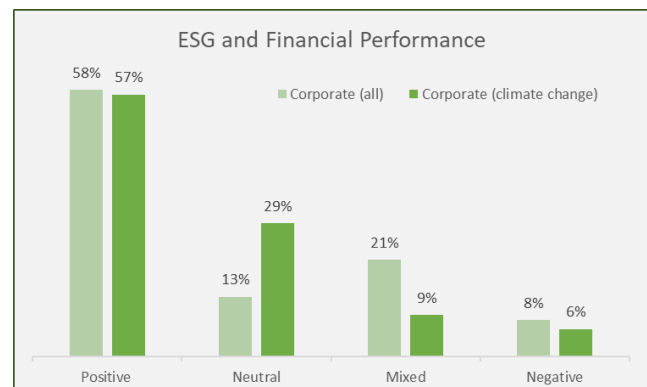


Fig. 4. Uncovering the relationship by aggregating evidence from 1,000 plus studies published between 2015–2020.

E. Risk

Risk and volatility are important for future operations. Dunn *et al.* (2017)'s study contained three risk metrics measures from the "GEM2L risk model": total risk, stock-specific risk, and beta versus the MSCI World index (Dunn *et al.*, 2017). The summary statistics from the study's exhibit 1 contained the "Industry-adjusted ESG score," rated from 0 as poor ESG to 10 for best ESG, risk metrics, performance, characteristics, and quality indicators. Based on the summary statistics, the result showed that poor ESG, with an industry-adjusted score of 1.5, had a 34.5% total risk compared to best ESG, with an industry-adjusted score of 8.4, which had 30.4% total risk. The stock-specific risk and MSCI

World beta were also different, with 24.9% to 21.4% bad to good ESG for stock-specific risk and 1.07 to 1.04 bad to good ESG for MSCI World beta (Dunn *et al.*, 2017). In addition, under quality indicators, poor ESG had a higher earnings variability than good ESG but had a lower profitability than good ESG. It should also be pointed out that poor ESG score had a higher performance of 6.52% compared to the 4.76% performance for best ESG score (Dunn *et al.*, 2017). All these data suggest that while poor ESG had a higher risk, it had higher variable earnings and annual return. On the other hand, while good ESG had lower variable earnings and lower annual returns, it was less risky and had higher profitability. In another study called “ESG factors and risk-adjusted performance: A new quantitative model” by Kumar *et al.* (2016), the result showed a similar but different view. They observed that within the industries studied, including but not limited to Materials, Energy, and Utilities, the average stock return volatility of ESG companies was 28.67% less than reference companies (Kumar *et al.*, 2016). However, the difference was shown when talking about returns. 8 out of 12 of the industries observed a higher return than reference companies, “ranging from 2.25% to 31.84% higher” (Kumar *et al.*, 2016). The two studies both resulted in ESG industries having significantly less risk and volatility compared to their peers, but the two studies differ on returns, with Dunn’s data claiming less return while Kumar’s data shows a positive return. However, despite the difference in return, both studies confirmed the lower volatility and risk for ESG firms, supporting the idea of ESG promoting operation and benefiting long-term firm values.

IV. THEORETICAL APPLICATIONS

With the findings giving evidence to the research question, a new perspective can be introduced that will provide insight into the additional resources firms could apply to improve their operations and long-term firm value creation. Kaplan and Norton (1992) introduced the concept of “Balance Scorecard.” To put it simply, the balance scorecard is “a set of measures that gives top managers a fast but comprehensive view of the business” (Kaplan and Norton, 1992). The scorecard (Fig. 5) allows for financial and operational measures to come into play, which will drive future financial performance (Kaplan and Norton, 1992). The scorecard is also separated into four questions: “How do customers see us? (customer perspective),” “What must we excel at? (internal perspective),” “Can we continue to improve and create value? (innovation and learning perspective),” and “How do we look to shareholders? (financial perspective)” (Kaplan and Norton, 1992). Customer perspective examines how the firm’s goods and services provide value to its customers; internal perspective derives from the measures managers take to ensure customer satisfaction by optimizing the business cycle related to producing the goods; innovation and learning perspective refers to the firm’s adaptability to the firm’s value via innovate, improve, or learn; financial perspective deals with company’s strategy, implementation of strategy, and execution of the strategy to bring improvement and profitability (Kaplan and Norton, 1992). There are many samples of balanced scorecards available, below are two examples of balanced scorecards, one presented by Kaplan and Norton and the other by Praxie (Fig. 6), an ai powered

digital software platform website.

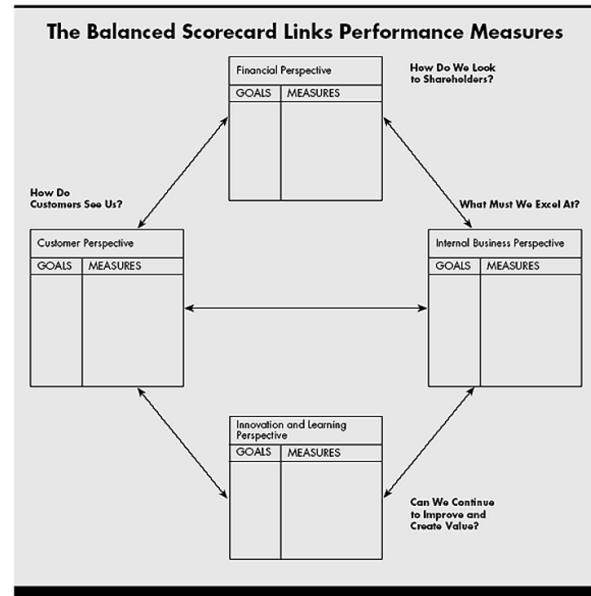


Fig. 5. The balanced scorecard—Measures that drive performance.

Balanced Scorecard		For each dimension of the balanced scorecard, list your strategic goals, the initiatives that support the goals, the metrics that will be used to measure the success of the initiatives, and the target metrics that you will ideally achieve.			
	Strategic Goals	Initiatives	Metrics	Targets	
Financial Sustainability	List strategic goals	List initiatives to support strategic goals	List metrics to measure initiatives	List target metrics to achieve	
Customer Experience	List strategic goals	List initiatives to support strategic goals	List metrics to measure initiatives	List target metrics to achieve	
Internal Processes & Structures	List strategic goals	List initiatives to support strategic goals	List metrics to measure initiatives	List target metrics to achieve	
Learning	List strategic goals	List initiatives to support strategic goals	List metrics to measure initiatives	List target metrics to achieve	

Fig. 6. Praxie.com.

Both templates shown share the same structure, although with different formatting. Both scorecards had incorporated the four questions and the perspectives corresponding to each question. These templates are another way for firms to improve their operations. By incorporating balanced scorecards, managers allow themselves to gain a view of the business, and thereby make better decisions and judgement that will steer operations towards the long-term goal. Additionally, with the specific measures involved in each perspective, no matter the formatting of the scorecard, managers are able to better strategize the goals and develop metrics and targets to reach that goal. As a result, balanced scorecards can be used for managers and firms to develop financial and operational measures, which will drive performance and long-term value.

V. DISCUSSION

ESG as a superior mode of operational guidance for creating long-term value can come from various directions. From the studies and data collection, the results show that all three aspects of ESG: Environment, Social, and Governance can all positively impact ESG as a mode of operational guidance. Piao *et al.* (2022) and Lee *et al.* (2023) have shown that environmental and social-related ESG activities can benefit employees’ occupational stress and retention within

the firm. This result demonstrated that operational guidance, in this case, relates to employee satisfaction and health in the workplace, and falls under ESG scope for creating long-term value regarding firm action on environmental protection and employee satisfaction. Furthermore, the relationship between the net revenue and carbon emissions of 14 retail companies demonstrated the existence of a relationship between environmental improvement and an improvement in operation, which in this case is directed to the firm's generic operations annually. The data provided a relationship result but not a cause and effect due to the lack of information on certain companies' disclosure of carbon emission data and the sample size taken to obtain the result. With governance, March (2021)'s statistics provided a satisfactory finding between good corporate behavior firms with their sales growth and firms with bad corporate behavior and the corresponding sales growth. This data provided support for the research question in that the improvement in corporate behaviors and sales growth was not significant in the short run, marking a low improvement in operation and the creation of long-term value, but the difference becomes more relevant in the long run as sales growth increases significantly, marking an improvement in operations. The performance sections find a significant positive result between ESG and financial performance. The operation here equates to the performance the firms had, and with studies producing the kind of result, ESG can be said to act as a mode of operational guidance for firms with the ability to create long-term values that will further bolster the performance of the firm. Lastly, low total risk and low volatility is a result of having a good ESG score. However, Dunn *et al.* (2017) and Kumar *et al.* (2016) disagreed on the stock returns, which indicates that although ESG can become a mode of operational guidance on the basis of low volatility and low total risks, and thereby boosting the long-term value of the firm, making the firm's stock becoming more trustworthy, the same thing cannot be said with returns due to the difference in findings.

VI. CONCLUSION

Both In conclusion, ESG has shown the capability to act as a superior mode of operational guidance for creating long-term value. Evidence has shown that sustainability equity funds outperform traditional equity funds (Morgan Stanley, 2023), and firms with improved carbon emissions were found to have a positive relationship with their net revenue. In addition, with the add-on of the balanced scorecard, implications can be made to firms that utilize the balanced scorecard with its ESG goals in that they could improve their operations with better management, decision-making, and clarity of goals. The results of this research paper share both the idea that ESG should be encouraged to be used by firms with evidence from many studies and data collections and that ESG can be further improved upon by the usage of the balanced scorecard. Moreover, this also shows that ESG is not just a score that shows how sustainable a company is to the investors, and has the investors decide if they should invest or not. ESG is also a tool that will help bring out the most of a business from both an operational and financial perspective. This research paper is limited to producing only a correlation result between ESG,

improvement in operations, and financial performance. The primary source collected was limited in sample size and in the range of retail companies collected, which was not enough to suggest an absolute positive relationship with all retail companies that shows an increase in net revenue with an improvement on carbon emissions. Firms that prioritize profits and expansion could tell a different story as they could be less likely to put emphasis on ESG and sustainability. Future research should bring evidence from firms outside the retail industry, which could perhaps increase the amount of evidence available to support ESG's importance on businesses, investors, and the creation of long-term value.

APPENDIX

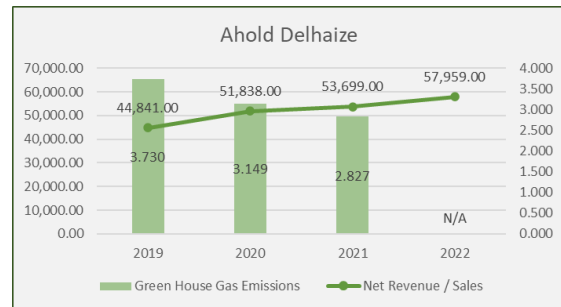


Fig. A1. Ahold Delhaize's net revenue versus GHG emissions. Year 2022 data was omitted due to missing in the firm's 2022 GHG statistics.

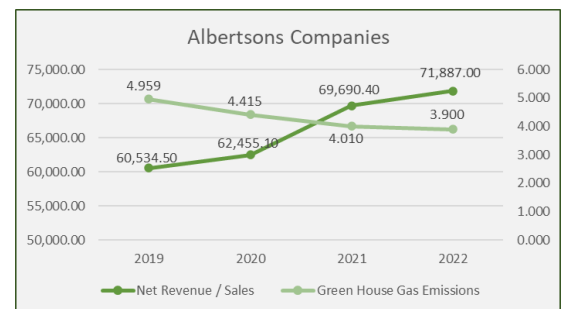


Fig. A2. Albertsons Companies' net revenue versus GHG emissions.



Fig. A3. Costco Wholesale's net revenue versus GHG emissions. The horizontal axis contains both year and GHG emissions; however, due to data not being published apart from the baseline emission (1.700 Mmt CO₂e) stated by Costco, other years' GHG had been omitted.

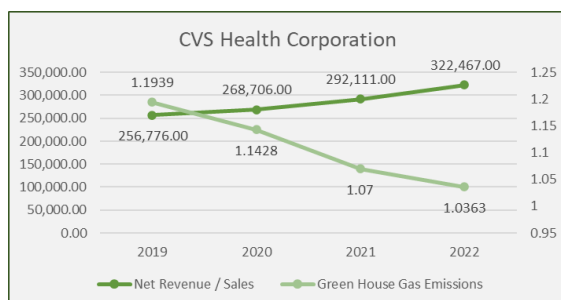


Fig. A4. CVS Health Corporation's net revenue versus GHG emissions.

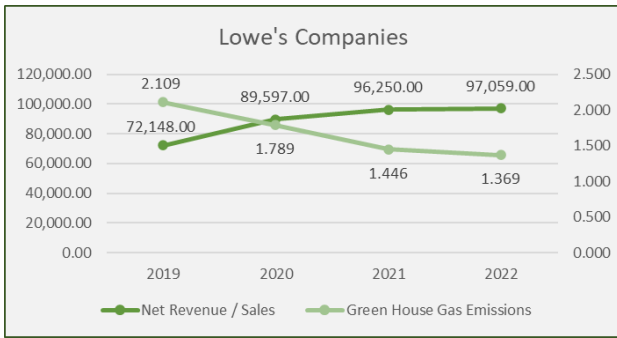


Fig. A5. Lowe's Companies' net revenue versus GHG emissions.

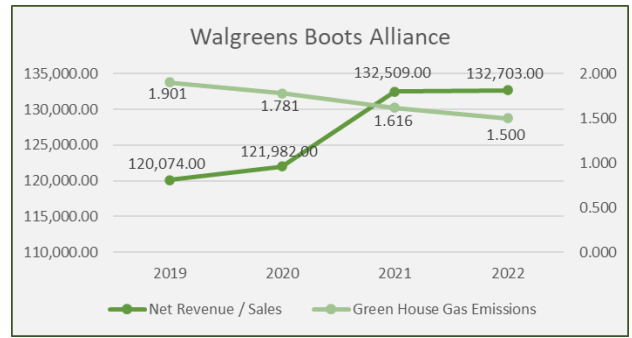


Fig. A10. Walgreens Boots Alliance's net revenue versus GHG emissions.

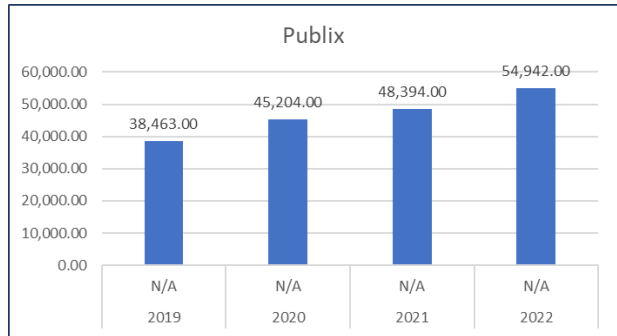


Fig. A6. Publix's net revenue versus GHG emissions. Publix's GHG emissions from the year 2019 to 2022 had been omitted due to unpublished information.

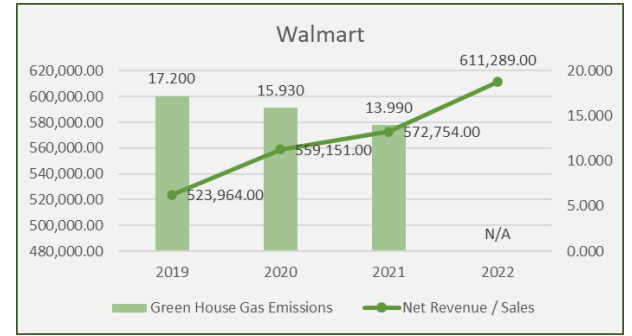


Fig. A11. Walmart's net revenue versus GHG emissions. Year 2022 GHG emission data has been omitted due to waiting on update of their full 2023 ESG report.

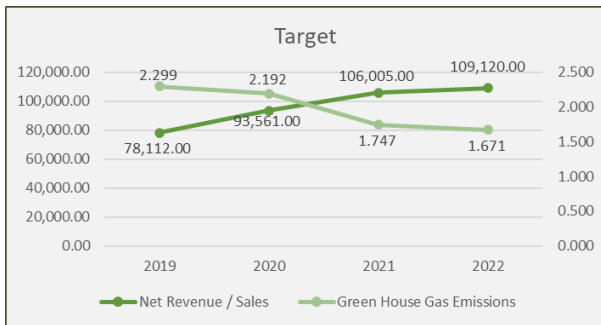


Fig. A7. Target's net revenue versus GHG emissions.

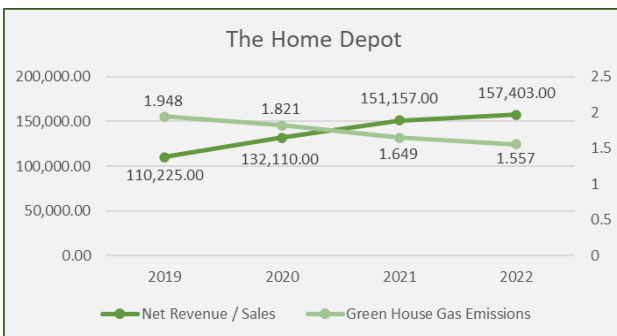


Fig. A8. The Home Depot's net revenue versus GHG emissions.

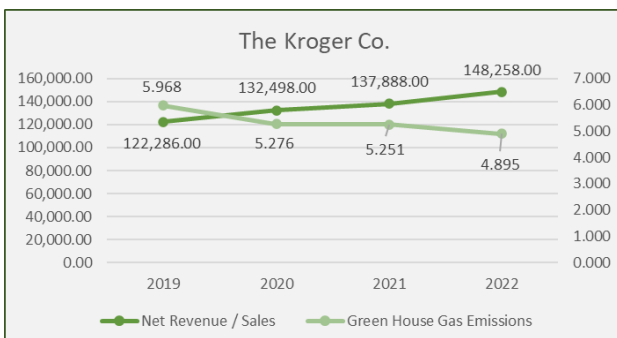


Fig. A9. The Kroger Co.'s net revenue versus GHG emissions.

CONFLICT OF INTEREST

The author declares no conflict of interest.

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