Walsh University

Do Corporate Environmental, Social and Governance Risks Affect Business Profitability?

Thesis by

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Abstract

There is unsettled debate between those who believe Environmental Social and Governance (ESG) activity positively affects firm performance and those who do not. General streams of research point towards the existence of a positive relationship between the two. Even the studies that link ESG and Financial Performance (FP) positively, conflict exists between each other regarding the nature of this relationship and how to measure it. Regardless, a slight majority favors the existence of a positive relationship. Interestingly, various studies focus on single industries, implying the existence of differing levels of ESG scoring by industry, which guides the first hypothesis. Secondly, management theories, such as Stakeholder Theory provide the framework necessary to hypothesize about the existence of a positive relationship between ESG and FP. This leads to the next hypothesis that tests if higher ESG risk (lower ESG activity) negatively affects financial performance.

Most studies in this field utilize third-party databases that score firms solely based on ESG activity. To improve upon previous studies, this study used a more enhanced measure of ESG activity; ESG risk scoring. ESG risk scoring grants firms an ESG risk score based on the total ESG risk exposure and total ESG activity. A higher score means greater risk and vice-versa. Risk scores were collected for five industries (Technology Hardware, Software and Services, Retailing, Real Estate, and Regional Banking) and compared using an Analysis of Variance. The results found that Regional Banking ESG risk scores are significantly different from the other groups tested. The results for the regression analyses were mixed. Some variables such as ROA demonstrated a significant relationship to ESG risk when all companies (n=150) were analyzed.

When the five groups of thirty firms were analyzed, only the firms in the Banking and Real Estate industry demonstrated a negative relationship between ESG risk score and FP. The results provided helpful insights about the nature of the relationship between ESG and FP as well as starting points for future research.

Introduction

Old and antiquated teachings would indicate that a business serving anyone, but shareholders is not the goal of management. However, the increasing concern for environmental, economic, and public health issues have given reasons for regular citizens, investors and managers to consider Environmental Social and Governance (ESG) activity when investing their money. Generally, studies have presented conflicting results regarding the relationship between ESG activity and financial performance (FP). The inherent challenge of reducing the complexity of ESG to scores and encapsuling FP in a few variables elevates the difficulty of understanding the relationship between the two. When looking at the overall literature, it primarily points to a positive association between ESG activity and FP. Unfortunately, lack of consensus lies even amongst the studies that find positive links between ESG activity and FP.

Introducing ESG disclosure and practices as a risk measurement is not as prevalent in the literature as oftentimes a measure of ESG practices or disclosure is used. The difference in the concept of ESG disclosure and ESG activity and ESG risk is that ESG risk measures the disparity between all the ESG issues a firm faces and the degree to which they are addressed. Nozawa, Yagi, Fujii and Managi (2018) find that there is a difference between merely publicly disclosing the ESG issues pertaining to the firm and acting upon these through management. Therefore, using an ESG risk scores bypass this gap because scores are obtained by considering ESG risk exposure and ESG risk management. Moreover, cross-industry analyses are scarce in the overall literature and a few that do, do not possess robust samples to account for differences in industries. There are many factors that can affect such an analysis, in particular those that pertain to differences among industries. As will be discussed, the link between ESG and FP

differs depending on the industry. Finding evidence to address and explain these gaps in the literature as well as contribute to a field lacking consensus are the main purposes of this study.

Research Statement

The rise and prevalence of Stakeholder Theory in both corporate firms and business literature has given way to the rise of concepts such as Corporate Social Responsibility (CSR) and thus, firm ESG activity and reporting. Such kinds of reporting provide investors and other stakeholders with a comprehensive picture of the stakeholders impacted and the outcomes of firm-stakeholder interactions. The existence of strong theoretical background ground the purpose of this study as perspectives such as Barney's (1991) Resource-Based View that established the invaluable nature of a firm's resources, Freeman's (1984) Stakeholder Theory that describes the importance of considering all stakeholders in firm activity, Dowling and Pfeffer's (1975) Legitimacy Theory which refers an organization's ability to align to their social environment in order to more effectively compete for resources, and finally Elkington's (1998) Environmental Social and Governance Theory which is a "sustainability framework that examines a company's social, environment, and economic impact." (Elkington, 2018)

While many benefits of ESG reporting have been long established, such as improved corporate image, greater employee satisfaction, among others (Freeman, 1984), the most challenging for researchers and firms alike, is driving forces behind the relationship between ESG and FP. The relative novelty of this concept, however, poses greater challenges for research within the field. As various authors state (Wheelan et al., 2020); (Cucari, 2019) (Hastalona & Sadalia, 2021) there is a lack of standardization in the area of ESG reporting. Therefore, even intra-industry comparisons may become challenging, creating a need for standardization.

Currently, ESG databases exist in a somewhat standardized form provided by third-party investor information websites such as Bloomberg (Xie et al., 2018), Thompson Reuters Eikon, (Abdi et al, 2019); (Ahmad, Mobarek, Roni & Tan, 2021), and Morningstar's "Sustainalytics" (Abate, Basile and Ferrari, 2019).

With the ability to obtain data related to a firm's ESG activity, statistical analyses can be conducted to determine if ESG activity has a significant relationship to variables that are used to describe FP. Various studies identify the gap regarding information that may help clarify the relationship between ESG and FP. Most studies focus on corporations listed in a specific index or sector; other studies focus on funds that are composed of securities selected at least in part through the ESG criteria (Friede, Busch & Bassen, 2015); (Wheelan ,2020); (Hastalona & Sadalia, 2021) . Few consider inter-industry comparisons given the predominance for studies within a single sector. (Abate et. al, 2019); (Wheelan et al., 2020); (Engle, Brogi, Cucari & Lagasio, 2021).

The purpose of this study was to look deeper into the relationship between ESG activity and financial performance by grouping firms by sub-industry to determine if ESG risk scores differed by sub-industry and secondly, to determine if the ratings have an impact on FP. This was done by determining if ESG risk exposure rating had a mean difference by industry and secondly, to determine if ESG risk exposure rating has a correlation to FP as measured through Tobin's Q, Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin (NPM) and Price-to-Earnings ratios.

Literature Review

The rising interest in the link between a firm's activity in the Environmental, Social, and Governance (ESG) realms and FP can be attributed to both investors, young consumers and firms becoming increasingly interested and influenced by the ESG facets of business. (Widyawati, 2020); (Dabija et al. 2019) This rising interest can be traced back to the 1980s. For example, the first definition of sustainable development by the World Commission in 1987 stated the importance of meeting present needs without compromising future generations' needs. (Wong, 2017) In fact, a need for ESG exists for investors in order to make relevant investment decisions. Given that ESG reporting began to gain popularity recently (1980s), various names have been used interchangeably. Oftentimes, Corporate Social Disclosure (CRD), Corporate Environmental Reporting (CER), Triple Bottom Line reporting (TBL), CSR and others have been used interchangeably. (Wong, 2017) That being, said, even though such studies use different terminology, such studies tend to follow similar methods and focus on the firm performance perspective.

There are various studies that outline the relationship between ESG and FP. The different definitions and understanding of such concepts present an inherent challenge as Durrent (2016) remarks that ESG is even viewed differently by U.S and European asset managers. It follows that given that ESG activity can be viewed through the lens of a firm, investor or consumer, studies related to ESG often approach the link between ESG and financial performance differently. For example, some studies focus on the consumer perspective and how ESG activity affects consumer behavior and preferences; others focus on the investor perspective by tracking the performance of portfolios holding assets acquired through an ESG framework. (Almeyda &

Darmansyah, 2022) Other studies determine the levels of ESG activity of specific firms through third parties or independently to determine any links to FP.

Studies on public corporations' ESG activity and its relation to FP primarily fall within these three main streams: investor, consumer and firm perspective; they relate Sustainable Investing , consumer preferences and ESG activity impact on firm's FP and overall performance respectively. Figure 1 depicts how studies from these three streams are rooted in Stakeholder Theory (Freeman, 1984) , Environmental Social and Governance Theory (Elkington, 1998) , and Legitimacy Theory (Dowling & Pfeffer, 1975) and Agency Theory (Jensen, & Meckling, 1976). Stakeholder theory defines the concept of stakeholder as any entity affected by a firm's actions. According to Stakeholder theory, firms must foster a positive relationship between them and their stakeholders to reap success. Legitimacy theory dictates that social contracts exist between corporation and society, which can result in lower demand and government regulation when broken. Agency Theory proposes that managers, who are considered agents, are more likely to emphasize ESG activity than shareholder because agents do not employ their own resources. ESG theory creates a framework that considers stakeholders and serves to categorize business actions and their impacts. (Tarmuji et al., 2016); (Wheelan et. al, 2019)

Amongst the biggest challenges that the literature faces fall to the lack of standardization for various concepts that relate to ESG activity. (Hastalonia & Sadalia, 2021); (Wong, 2017); (Wheelan et al, 2021) For example, various studies utilize various definitions for corporate sustainability and its links to FP. Progress has been made because studies have begun to use ESG risk ratings or ESG disclosure metrics that aid in achieving a comparison. However, there are various third-party data sources with different scoring methodologies. (Whelan et al., 2020) (Widyawati, 2020) (Li et al., 2018) The overall body of literature stemming from the three main perspectives, consumer, investor and firm, points to the following conclusions that will be further discussed:

Figure 1: Theoretical Roots of ESG Research

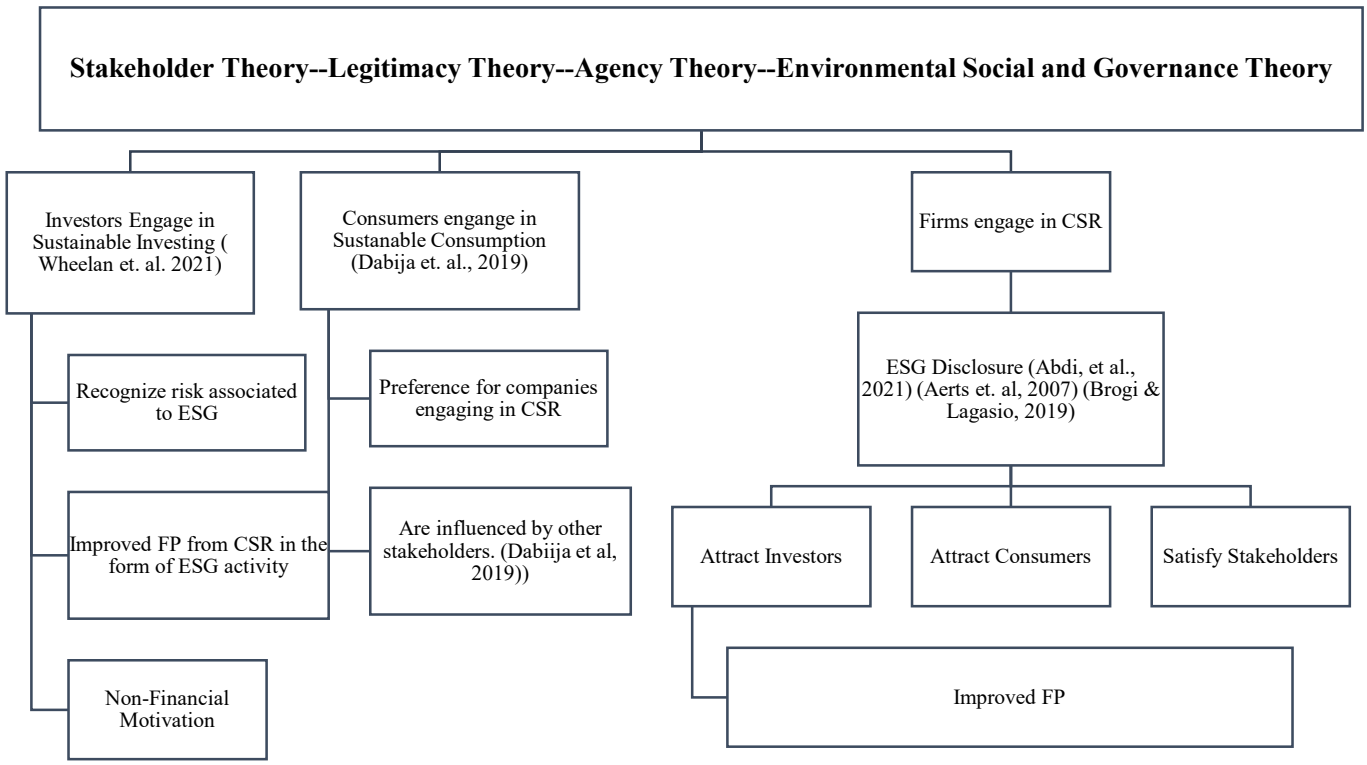

Figure 1. Source: Author

1. Firm practices and disclosure of ESG activity are positively associated with FP. ESG disclosure can elevate firm value through greater levels of transparency, accountability, and trust. (Li, et al., 2018)
2. ESG disclosure and activity result in firms and investors being better prepared in case of economic downturn. Managers are better equipped to navigate the economic and competitive environments in such conditions. According to the Sustainalytics (2020) database methodology, many material issues, addressed or not, become more evident in times of economic hardship.

Positive Association between ESG and FP

Individual firm studies as well as comprehensive meta-analysis have determined that the majority of studies, albeit slight, positively associate ESG practices and disclosure with FP. (Wheelan, et al., 2019) These studies will oftentimes employ third party data providers for ESG measures. Third party metrics such as these use a firm's disclosure on ESG practices as well as proprietary methodology to assign ratings. The difference between Li's (2018) usage of Bloomberg's ESG disclosure score and Sustainalytics is that the scores in the latter can be positively or negatively affected by the ESG practices that a firm engages in. For the purposes of Li et al., (2018) however, a score that solely reflects the degree of disclosure of ESG activities and risks was important to isolate the impact of only disclosure and not the gap between ESG risks and risk-mitigation practices. Abdi, et. al. (2021) as well as Yun and Chung (2018) are two examples of studies using third party sources for ESG data. Duuren et al. (2016) describes that the ESG data, in non-academic research, is often for risk management, stock valuation and stock monitoring. Interestingly, Yun and Chung (2018) exclusively use the concept of CSR in their

study while using the same data sources that other studies use to consider the ESG framework. While reaching the same conclusion, these studies show challenge around defining concepts surrounding the topic of CSR and ESG because they showcase the apparent interchangeability of such concepts in the literature.

In these studies, there is some consistency among the variables measured. Most studies will use metrics such as Return on Assets (ROA), Return on Equity (ROE), and stock price. The use of Sharpe Ratio is also mentioned as a variable of interest for research focused primarily on the investor perspective as the Sharpe Ratio measures how much of a portfolio's return deviates from the expected value. (Wheelan, et. al, 2019) Another common variable used to determine FP is Tobin's Q, a measure of a firm market value relative to its total asset base. Tobin's Q is widely used throughout the literature as Li (2018), Abdi (2019), Yoon and Chung (2018), Chen (2021), Mohammad and Wasiuzzaman (2021) are among the studies that utilize this variable and also find evidence to positively associate it with ESG practices or disclosure. Interestingly, Wheelan et. al, (2021) do not mention Tobin's Q, leading to surmise that perhaps it is not as common as other metrics. There is almost consensus of the usage of ROA and ROE as either dependent or control variables, however, studies such as Li et al., (2018) contest the usage of market prices as a dependent variable. The argument being that stock market returns are more closely linked to financial returns and shareholder valuations than stakeholder valuations.

Duuren, Plantinga and Scholtens (2016) as cited in Li et al., (2018) offer an explanation as to why ESG practices may have a positive relationship to FP, stating that socially responsible funds consider the ESG framework in investment decisions, particularly because ESG information is used as a risk assessment tool. Moreover, citing past research indicating the

relationship Hui and Matsunaga (2015) as cited in Li (2018) explain that disclosure quality reflects a firm's ability to understand the "underlying competitive environment and effectively anticipate future outcomes, higher disclosure quality could signal their ability to enhance firm value." In other words, a greater ability to disclose ESG information reflects a greater understanding of the Stakeholders relevant to the firm and the economic environment affecting all parties.

Protect Against Economic Downturn

Studies differ in the time it takes for ESG disclosure or activity to influence FP. This is especially true if a further distinction is made when a firm engages in ESG activity. For instance, Yoon and Chung (2018) remarked on the difference that ESG (the study used the broader term "CSR") activity directed at internal or external stakeholders had on short-term and long-term profitability. They had findings consistent to past studies that also found that ESG activity for internal stakeholders was effective in increasing short-term profitability because such activities allowed for greater operational efficiency through productivity increases, savings in recruitment and training. In addition, it resulted in improvement to the overall corporate culture thereby reducing turnover and in turn increasing profitability. Conversely, their findings were consistent with past literature that concluded that ESG activity for external stakeholders has a negative impact on short-term profitability given the expenditures associated with the initiatives. What was concluded however, captures a theme throughout the literature; Yoon and Chung (2018) did not find any association between ESG and future market value in non-recessionary conditions. This builds on the conclusion by Wheelan et. al (2021) as well as Brogi and Lagasio (2019) among others that state ESG disclosure and activity help protect firms in the case of

economic downturn, which became especially apparent with the onset of the COVID-19 pandemic in the first half of 2020. Chang, Dasgupta and Hilary (2010) as cited in Li et al. (2018) explain that ESG disclosure helps in case of economic downturn given that higher quality of disclosure reflects a greater understanding of the "underlying economic and competitive environment faced by the firm." Alternatively, Yoon & Chung (2018) found that ESG practices act also as a risk-mitigation strategy but through stronger stakeholder relationships.

There are challenges associated with ESG activity and disclosure identified in the literature that would prevent or hinder a firms' ability to engage in and disclose information related to ESG activity. Wong (2017) identifies the need for consolidated ESG and financial reports in order to help reduce agency costs that affect a firm's ability to disclose issues pertaining to ESG risks as well as the negative effect on profitability from said costs. Xie, Nozawa, Yagi, Fujii and Managi (2018) identified and studied an additional challenge; the difference between ESG activity and disclosure. While both disclosure and practices were found to have a positive relationship, the findings reinforced the idea of an existing relationship between ESG disclosure and corporate efficiency particularly in regard to the governance aspect of ESG. This improvement to corporate efficiency however is maximized at moderate levels of disclosure. Xie et. al, (2018) also concluded that ESG activities have a "non-negative" relationship to FP. By identifying varying types of corporate activity, the study was able to determine the relationship that various ESG related activities have on corporate FP.

Hypotheses

As explained in Stakeholder theory (Freeman, 1984) firms interact with a variety of stakeholders depending on the nature of their business. Thus, for varying industries, interactions with different groups of Stakeholders and therefore ESG practices may differ greatly. In addition studies such as Brogi & Lagasio (2019), Yoon & Chung, (2018) explore independent industries under the implication that the impact of ESG practices and disclosure varies by industry. Thus, we arrive at our initial hypothesis. Agency Theory also maintains that agency costs, which affect ESG disclosure and activity (Wong, 2017) varies due to regulatory, management and contractual factors, which are different by industry.

H1: There is a significant difference in the mean ESG risk exposure between firms in the industries.

The first hypothesis focuses on the differences that exists between industries when discussing ESG risk exposure. Brogi & Lagasio (2019) established that financial intermediaries specifically had a positive association when associating ESG activity and FP. Conversely, Abdi, et al. (2019) found a similar relationship, but in the airline industry. While both studies relate ESG to FP, the results suggest a difference in the relationship between ESG and FP by industry. Similarly, Pullman, Maloni & Carter (2009) found similar results in the food industry. What suggests the differences by industry is that Brogi & Lagasio (2019) found that financial intermediary's relationship to ESG is greatly focused on stakeholder trust whereas Abdi (2019) found that environmental and social activity were linked to FP for airlines. Pullman et al. (2019)

concluded that companies in the food industry are mainly affected by environmental and governance practices such as land management practices and human resource practices.

H2: There negative relationship between Environmental Social and Governance risk scores, and financial performance for every industry (Technology Hardware, Software Service, Banking, Retailing and Real Estate).

There are not many studies that utilize ESG risk scores to compare against financial metrics, rather ESG scores that qualify the level of a firm's ESG activity. ESG risk measurement is different because the score includes areas were the firm lacks in ESG activity. This addition should provide a greater coverage of a firm's ESG activity without materially deviating from other studies. Yoon & Chung (2018), Wheelan et al. (2019), Brogi & Lagasio (2019), Abdi et al., (2019) all establish a positive relationship between ESG and FP. Given that ESG risk scores lower if a firm displays higher levels of ESG activity it stands to say that the relationship between ESG risk score and FP is negative.

H3: There is a statistically significant negative relationship between Environmental Social and Governance risk scores and financial performance for the combined sample of one-hundred and fifty firms.

Some studies do not investigate industry differences and simply look at groups of firms within a country or exchange (Tarmuji, Maelah, & Tarmuji, 2016), (Jha & Rangarajan) (Sroufe & Remani, 2018) Interestingly however the studies that fail to make the industry distinction present conflicting results. As a result, a better theoretical basis is best established through examination of metanalyses such as Wheelan et al. (2019) or Widyawati (2020). These studies

are faced with greater challenges as to explaining the "why" of the relationship, unlike industry specific analyses. Nevertheless, the literature is useful in determining variables that are validated and that reflect ESG activity.

Methodology

In order to determine if a variation exists between sub-industries regarding ESG risk scores as assigned by MS, a sample from the Technology Hardware, Software and Services, Retailing, Real Estate, and Regional Banking sub-industries were obtained. (N =150) Each sample contained 30 companies from each sub industry (n=5) identified in the Sustainalytics database. This will provide the ESG score for the specific sub-industry the firm operates in, the industry ranking, and the universal ranking.

The statistical relationship between Tobin's Q, ROA, ROE, NPM and PE with ESG scores and rankings can help provide a determination on how strongly related ESG is to financial profitability. A linear regression model conducted for each separate sub-industry can help determine if a relationship between ESG score and the various variables that are being tested at the sub industry level. Financial data will be computed by obtaining financial statements from the online database known as Mergent Online, filings will be obtained, and calculations will be completed. Moreover, the same regression will be conducted using all five variables with all of the companies. This yielded a total of 30 regression analyses, five combined using all data points(N=150), and twenty-five at the sub industry level (n=30), one for each variable. In addition, to gain a greater understanding of how size affects ESG risk scores, a regression analysis using the combined group of 150 companies will be used and each compared to assets and market capitalization.

Independent Variable

Enhanced risk management is often cited as a benefit of ESG by various sources, and it is also considered a contributing factor to superior FP. (Whelan, Atz, Holt & Clark, 2020) Sustainalytics a subsidiary of the investor information Morningstar (MS) assigns scores based on a risk exposure measurement. Sustainalytics starts their scoring methodology by identifying various ESG issues at the sub-industry level. Of that total level of exposure, the managed and unmanaged risks are identified to determine the unmanaged risks and assign an ESG risk score. Managed risk pertains to all the activities that a company addresses in the ESG realms. For instance, a company`s activities towards responsible governance such as internal audits would contribute to greater risk management in facets of governance and therefore would lower the gap between managed and unmanaged risk, thereby lowering their risk score. Unmanaged risk can comprise manageable risk that has not yet been addressed or risk that is out of the firm's control. A focus on the technology industry's ESG scores relationship to FP can help provide preliminary information and further assertions regarding future consumer trends and preferences. With the technology industry rapidly growing over the past years, interest in investing in ESG issue driven companies has risen, thus studying subindustries' level of ESG exposure can help provide investors greater information.

The ESG scores assigned by MS are derived from corporate reports and filings, news and media publications, NGO reports, multi-sector informational sources, and company feedback. Twenty material ESG issues are derived for every sub-industry category identified by the company and ten company specific issues are determined. Examples of material issues are human capital, data privacy and security, corporate governance, and business ethics, these however vary by industry and, as will be discussed later significantly affect risk ratings. The

level of risk for each material issue is scored out of 20 and then weighted by the percentage of how much managed risk contributes to the overall score. Thus, ESG activities, such as internalized or externalized actions may increase or decrease the managed risk threshold which in turn would affect the ESG risk score. (Sustainalytics, 2020) In other words, greater levels of ESG activity would result in a lower ESG score. Unlike Xie et al., (2018), there is no need for further dividing ESG activity and disclosure as the scoring methodology considers both disclosure (ESG risk material issues) and ESG activity (managed ESG risk). Scores range from zero to forty, with every ten-point increase representing a higher risk category ranging from negligible to high.

Financial information was obtained for all one-hundred and fifty firms. The database used to compile the information was FTSE's MergentOnline. Figures for the latest full year (2020) were used. With the financial ratios, income statement and balance sheet all the data necessary for analysis was available. The values for the Price-to-Earnings ratios were directly obtained from the MergentOnline database. The prices collected were from July 2021. In order to determine if the average ESG exposure for every sub-industry was different, a t-test was conducted with the average ESG score posted by the different companies.

Dependent Variables

Tobin's Q

Tobin's Q is a financial ratio that is very often used as a measure of financial performance in many studies relating ESG and FP. Tobin's Q is a measure of a firm's market value relative to the total asset base. (Xie, 2018); (Yoon & Chung, 2018); (Abdi et al., 2021) (Ahmad et al., 2021); (Chen, Yuan, Cebula, Shuangjin and Foley, 2021). Tobin's Q is particularly useful as it "captures both valuation and performance from the value creation

perspective" (Jha & Rangarajan, 2020). The values were calculated using the latest available annual data (FY 2020) and the market cap obtained in October 2021. A later date was used for the market capitalization figure to minimize the impact the Covid-19 pandemic had on stock prices given that by Q3 of 2021 overall markets were almost recovered. Given the disparity between the two dates, and accounting for potential share issuance, share appreciation, and asset growth, it must be said the variable may be somewhat limited in describing FP with maximum accuracy. Abdi et al., (2021) determined that for airlines ESG initiatives have a positive relation to FP via Tobin's Q. Atan, Razali, Said and Zainun (2016) utilize Economic Value added as a measure for FP and Wheelan et al., (2019) identify the main variables used throughout the literature as stock price, Return on Assets (ROA), and Return on Equity (ROE) with slight variations in other variables used.

Return on Assets

Return on Assets (ROA) is an operating metric used to determine the ratio of net earnings with respect to a firm's total asset base. ROA indicates how well a firm is using its internal assets to produce income. Wheelan et al., (2019) finds that fifty-eight percent of studies found a positive association between ESG activity with ROA, ROE and/or Stock Price. Brogi and Lagasio (2019) study focuses on financial intermediaries solely employing ROA with the justification that as stated by Brooks and Oikonomou (2017) cited in Brogi and Lagasio (2019), "CSR has more beneficial effects on accounting performance measures than stock prices." Moreover, they argue ROA allows for greater comparison across industries unlike ROE. Li, Gong, Ye, & Koh (2018) found that when regarding ESG disclosure and practices with firm value, Tobin's Q and ROA had a positive relation with ESG disclosure.

Return on Equity

Return on Equity is another common operational accounting measure very similar to ROA given that it measures the net earnings relative to the amount of equity capital the firm has (Batae, Dragomir & Feleaga, 2022). Even though it is one of the most common performance metrics used in the study of ESG and FP, it varies by industry and the capital requirements that every industry possess. (Brogi & Lagasio, 2019) Moreover, Yoon and Chung (2018) found that there are conflicting results when using ROE and ROA.

Price-to-Earnings & Net Profit Margin

Price to earnings, unlike the past two variables, is more dependent on market factors as it is the price paid relative to a dollar of earnings. While Price-to-Earnings, alongside stock price, has been found to not have a statistically significant relationship to ESG, the figures from the analysis can be used at least as a control variable to check again other studies to verify the validity of the work. (Almeyda & Darmansyah, 2019)

The usage of Net Profit Margin is unique to this study as no other studies in the reviewed literature use NPM. Given that net earnings are already used in many of the variables it may have been excluded from studies. However, given that NPM is a basic and essential indicator of a firm's overall health, its link to ESG must be reviewed. Usage of this variable will help grant clarity on how exactly ESG affects FP given that it will help understand more of the relationship between ESG and FP.

Results and Discussion

Descriptive Statistics

ESG Risk Score

Even using basic measures of central tendency for the data can yield interesting results, many of which help when discussing the study's ultimate results. An initial point of interest resides in the markedly differing level of among between the subindustry groups. This was important to note given that for banking greater assets seemed to translate to higher risk unlike firms in other sub-industries. To begin with, ESG risk scores did not differ greatly among each other. Technology Hardware was shown to be the industry with the lowest median ESG risk score (15.68) followed by Real Estate (15.91) and Retailing (16.74). Interestingly, the ESG risk ratings for banking companies were significantly higher than the other industries (26.43). Potential insight and explanations for such a value will be discussed later, but it may be noted that the ESG risk score for banks places the industry into medium approaching-high portion of the risk score spectrum used by Sustainalytics. Charted values for all industries are available in the appendix. (Figure 2)

Assets

The requirements for assets in different industries lead to differing levels of assets. Once again, banks for example carry on average a much higher volume of assets ($43.74 billion) compared to most firms. While the difference of the means test was not conducted for this variable, it may be hypothesized that a mean difference exists in the population group because of the values seen below in Figure 4. This variable is important because higher volume of assets, would lower the Tobin's Q performance metric. However, considering that firm assets size grants firm a superior ability to perform up to or above investor expectations (Wheelan, et. al.

2019); (Yoon and Chung, 2018); (Xi, 2018). Given the nature of a bank's assets, it is of no surprise banks on average possess much higher levels of assets. This is an important note that may affect ESG risk score for banks given that higher assets mean greater risk exposure. In fact, given the differences among industries and outliers within them, median values were used to minimize the alteration of values due to outliers.

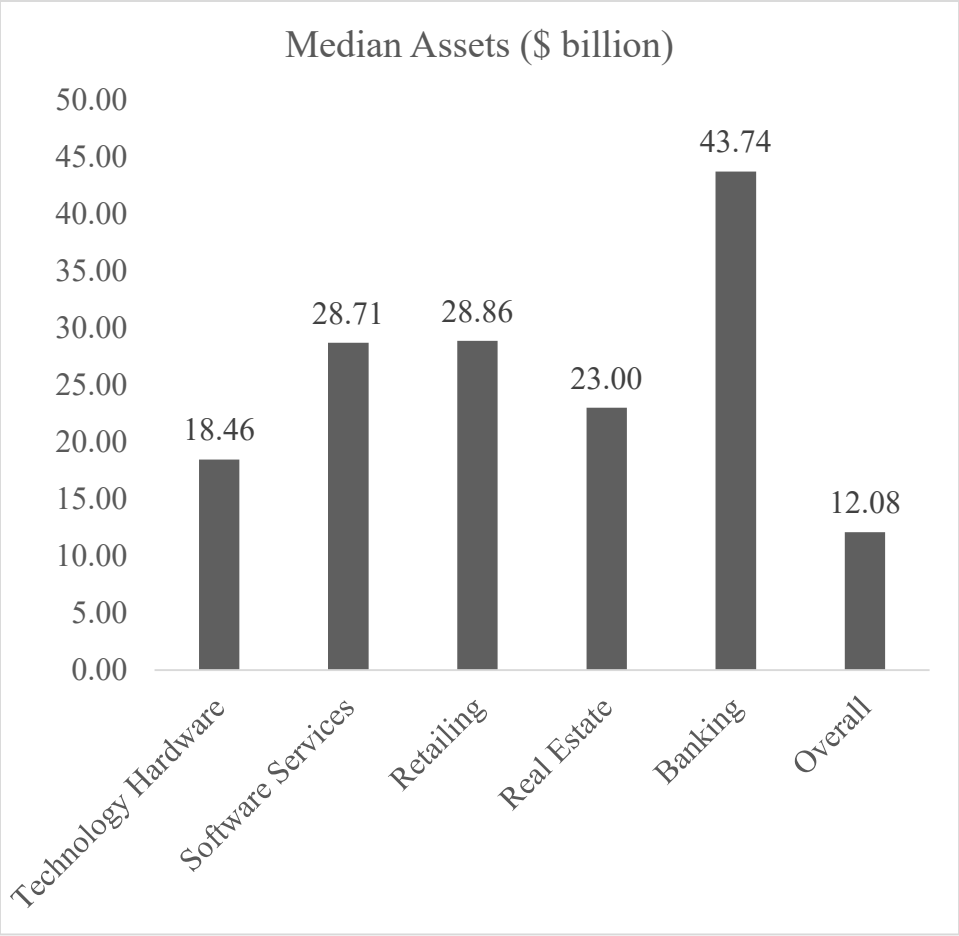

Figure 2. Source: Author

Market Capitalization

Market Capitalization, like assets, help grant a clearer idea of the scale at which the different firms operate in, at least from a market perspective. As popularity with high growth

technology stocks continue, it is not surprising to see Software Services firms posting a median market capitalization of $115.43 billion. In stark contrast to banking, software service firms demonstrate a much higher value in the numerator of the Tobin's Q ratio whereas Banks have significantly higher assets. Such variances will be discussed later in further detail, but this may affect how accurately Tobin's Q describes performance.

Tobin's Q

The median values for Tobin's were very much alike to the values for market capitalization. Software Services had the highest values with a median of 4.95 and banking posting the lowest value of 0.17 with retailing, technology hardware and real estate having 3.41, 2.57, and 1.65 respectively. A similar pattern to market capitalization appears once again when looking at the elevated Tobin's Q value for software services and low values for the banking industry. The gap between Software Services and Banking grows larger relative to the gap in market capitalization because of software service higher share prices and the banking industry high asset base.

Return on Assets

The range of median ROA values was much smaller when compared to some of the other variables studied. Technology Hardware, Software Services, and Retailing had median ROA of 3.84%, 3.78%, and 3.73% respectively followed by Real Estate (2.57%) and Banking (.85%). The median for the overall population (N=150) was 1.71%. Once again, the banking industry figures are affected by the number of assets banks carry, interestingly however the Technology Hardware industry has the highest ROA, but the lower relative assets. This would indicate that firms in the Software Services and Retailing industries are more efficient given that they can

produce similar ROAs with a higher number of assets. The literature overwhelmingly mentions ROA as a variable of interest and that is corroborated with some of the findings that will be discussed later.

Return on Equity

Return on Equity is contested in the literature as many researchers believe that ROE figures are only applicable to certain industries or at least not as relevant when comparing across industries. The descriptive statistic for ROE however is quite even throughout the groups studied, with most groups being close to the median ROE of 6.86%, except for Retailing that had a much higher ROE of 10.47% and Technology Hardware having a strikingly low median ROE. The mean ROE is closer to 0.27% but the range for the values for ROE within the Technology Hardware industry are so widespread that (including negative values) the average and median fall close to zero. This limitation will be discussed further but may be a result of the sampling method.

Net Profit Margin

Unlike ROE, Net Profit Margin differs greatly across the different groups studied. Retailing had the lowest median NPM (3.4%) and banking the greatest with a median NPM of (29.74%) and mean of (19.38%). Real Estate also had a median NPM (20.97%) above the overall median (6.34%). Intuitively, one may think there is a relationship between NPM and Tobin's Q, however the lack of any apparent pattern may lead one to think that NPM does not have a significant effect on Tobin's Q, even though NPM itself is a measure of profitability and thus performance.

Price to Earnings Ratio

Unlike the other dependent variables, Price-to-Earnings is a measure of the price investors pay for a dollar of earnings. This means that investor expectations and attitudes towards a specific stock may have an impact on the ultimate PE value, perhaps more so than the underlying earnings. The sample taken once again showed the market's preference for software stocks at the moment. Software Services posted a median PE of 38.17, much higher than the overall PE of 21.73 but not much higher than the median multiple for Real Estate firms (35.43).

Results

Analysis of Variance

The first test conducted was an analysis of variance to determine if a mean difference existed among the ESG risk scores presented by the different groups. The results of the analysis showed that there was a significant difference in at least one of the means. When considering the results of the ANOVA analysis and the descriptive statistics for ESG data, it can be surmised that the Banking industry (26.43) had the significantly higher risk rating compared to the Technology Hardware, Software Services, Retailing and Real Estate that have mean ESG risk scores of 15.68, 19.18.16.74 and 15.91 respectively. The results of this analysis were robust (p-value$<.05$) and may be explained with the markedly lower variance in the ESG risk scores amongst Banks in comparison to any of the other groups. Due to the potential that the large values in the banking industry may have affected the data, a second ANOVA was conducted without the data for banks (Appendix Table 8). The results were once again significant but with a higher p-value of .017. This is important because otherwise the difference of the means could be solely attributed to the

banking industry, but with the second analysis, it can be determined that a difference exists among the other four industries.

ANOVA: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Tech Hardware	30.0	470.3	15.7	26.7
Software Services	30.0	575.4	19.2	22.8
Retailing	30.0	502.1	16.7	30.0
Real Estate	30.0	477.3	15.9	8.0
Banking	30.0	793.0	26.4	7.6

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	2423.3	4.0	605.8	31.9	4.74E-19	2.4
Within Groups	2755.5	145.0	19.0			
Total	5178.8	149.0				

Table 1. Source: Author

Linear Regression

Significant Results. A total of thirty linear regressions were conducted using ESG risk scores as the independent variable and Tobin's Q, ROA, ROE, NPM and PE as the dependent variable for all five industries: Technology Hardware, Software Services, Retailing, Real Estate, and Banking. While most of the regression analyses yield nonsignificant results, the regression analysis with companies from all industries produced significant results of interest (See Tables 1-6 in the Appendix). This means that there is evidence that a higher ESG risk score has a negative impact on profitability. The results are the most robust when ESG and the variables were

regressed with the total population (N=150). ROA and Tobin's Q returned significant results with p-values of (0.006) and (0.026) respectively, albeit with weak relationships given coefficients of R Square of .051 and .033 and Multiple R of .22 and .18 respectively. Moreover, the beta coefficient for Tobin's Q was .41 whereas for ROA it was -0.39. Interestingly, unlike the hypothesis predicted, the analysis showed a positive relationship between ESG risk score and Tobin's Q unlike ROA, which was shown to have a negative relation to ESG risk scores. Both of these results are of great interest, and explanations as to potential contributing factors is given later.

Combined Regression	*Intercept*	*Coefficients*	*Significance F*	Multiple -R	R-Square	Adjusted R Square	*P-value*
ROA *n=150*	10.243	-0.3905	0.006	0.225	0.051	0.044	0.006*
ROE *n=150*	-0.001	-0.0005	0.194	0.107	0.011	0.005	0.194
NPM *n=150*	18.826	-0.2783	0.720	0.030	0.001	-0.006	-1.808
P/E *n=150*	18.838	-0.0011	0.815	0.019	0.000	-0.006	0.815
Tobin's Q *n=150*	-3.715	0.4150	*.026*	.181	.033	.026	.026*

*Table 2. Source: Author (*p-value < .05)*

When considering the other five variables and each industry independently, there were a few significant results as well. The retailing industry ROA was found to have a significant relationship to ESG risk rating scores (p-value ~.012). Once again however, this relationship was found to be quite weak; the model posted a multiple R value of 0.337 and R-square of 0.114 (Figure 2). Another finding was in the Real Estate space with ROE and ROA (Appendix Table 6)

and with Banking and Tobin's Q (Appendix Table 9) Although in all three instances the relationship was statistically significant, the relationship remains weak given that in both cases the multiple R does not surpass 0.4 and R square does not surpass .15. The coefficient for the ESG risk score and Tobin's Q for the Banking industry had a coefficient of 0.010. The coefficient for ESG risk score and ROA was -0.004. The coefficient for the ESG risk score and ROE -0.0005. There are various reasons that may lead to speculation regarding the nature of the relationships which will be discussed.

Discussion

The results may be explained in a number of ways. To begin with, past literature suggests that when discussing ESG and FP, financial firms may be different to other firms. For example, the significantly higher risk ratings that banks are assigned can be explained by a few reasons; banks, through their loans, are exposed to various industries and thus compound the risk associated to lending these industries weighted by the amount of loans in a specific sector. In addition, greater regulation, economic uncertainty coupled with lower interest rates and the fact the financials have a stronger relationship with ESG than industrials (Brogi and Lagasio, 2019) raise the ESG risk ratings. The Sustainalytics database states that the top material issues affecting ESG risk for the industry are related to corporate governance, business ethics, data privacy and product governance. The definitions for these material issues can be found in the final section of the appendix. It must be noted that ESG Integration is a category the database uses exclusively for financial firms. The issue is defined as follows:

> Includes all ESG integration activities, criteria and metrics by financial institutions that are either driven by financial downside risk considerations or by business opportunity considerations. This issue includes an institution's own current assets, including direct

> investments, corporate credits, or stakes in project financing, as well as assets managed for clients. (Sustainalytics, 2021)

In addition, a consideration of a firm's real estate and green investments made for ESG risk scores. This category was created to account for the differences in the ability for a financial firm to manage its risk in comparison to other firms in other spaces. However, with various firms providing online financial services without being banks, it is a material issue that can be relevant for non-banks. Firms who have this as primary issue means that the firm may lack policy commitment, initiatives, or measures of "performance and preparedness" for ESG when considering investments. While this rating methodology may be a factor in the ANOVA results, the database methodology for assigning risk scores uses the same methodology albeit with different material issues. Ultimately however, it is standardized in a forty-point scale. The database assigned a scores ranging from zero to five when considering unmanaged risk. Real Estate led significantly, followed by banking, which the database explains is due to ESG integration lacking. However, given that this is not a material issue for all the banks in the sample. The ESG scoring methodology divides the total ESG risk exposure into manageable and unmanageable risk. Ideally firms want to manage as much of the manageable risk as possible, but when that does not occur, it adds on to the unmanageable risk leading to higher risk scores. The argument being that banks that have ESG integration as a material issue, have a significantly

larger management gap than their peers. Figure 3: Rating Methodology Visualized depicts the general process by which an ESG risk score is obtained. In addition, given that the ANOVA

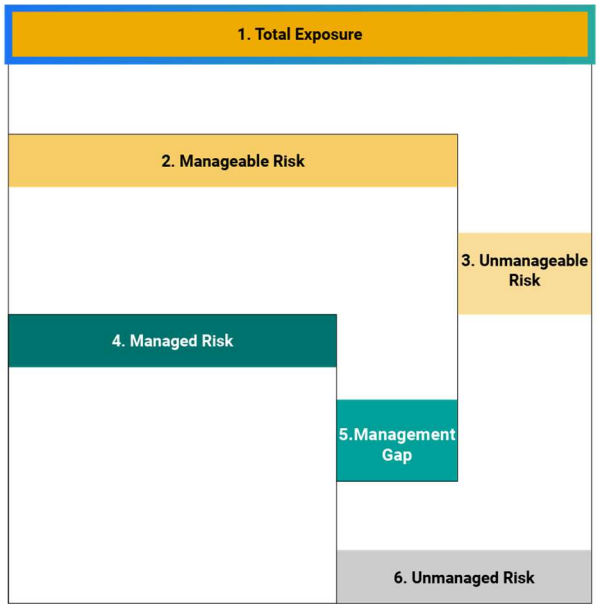

Figure 3: Rating Methodology Visualized Source: Morningstar

conducted without the banking industry also resulted in a significant difference, it can be argued that there is a difference between mean ESG risk score by industry and thus ESG risk exposure.

When considering the results of the various regression analyses conducted, there are many points of discussion to consider. For example, Sachin & Rajesh (2021) found no association between ESG and variables such as ROA and ROE, however even though they used five years of financial data, the analysis only comprises twenty-five firms and does not specify the industry group that the firms belong to. When looking at specific studies however, there are conflicting results, even amongst the studies that establish a positive relationship between ESG activity and FP. Perhaps one of the biggest challenges falls to determining the correct variable to measure in relation to ESG and FP. While some of the findings in the study are in support of a positive relationship, there is conflict with findings from Ahmad (2021), who found a positive relationship that was visible through earnings-per-share rather than ROA. That being said, the

importance of metanalysis such as the one produced by Wheelan et al., (2020) is made evident. In reviewing studies that utilized metrics such as ROA and ROE, (58% of 1,000 studies reviewed) the metanalysis found that 21% of studies present mixed results, 13% neutral and only 8% negative. Knowing this, the findings are more substantiated and more speculation to explain the nature of the relationship may be at hand.

When considering the results between the combined regression and ROA, there is the interesting implication that leverage is a factor in the lack of a relationship between ESG and ROE. If it were not, the same result should present itself when considering ESG risk scores and ROE. This has important implications that should be looked at given the possibility that leverage affects ROE such that the relationship to ESG is non-significant. Perhaps leverage helps pass onn risk to other parties such as banks? In addition, the beta coefficient for the ESG risk score and ROA was -0.39, as the hypothesis predicted, meaning that higher ESG risk scores are negatively related to ROA.

A significant but unexpected result arose from the beta coefficient for the relationship between ESG risk scores and Tobin's Q. The combined regression between the two yielded coefficient of 0.415, indicating the existence of a positive relationship. This variable, although significant had the opposite effect than was expected, why? Assets was shown to have a positive statistically significant relationship to ESG risk score, with a p-value of .028, beta coefficient of .005 and R Square value of 0.031. This is important to note as it may explain why Tobin's Q also presents a similar relationship given that Tobin's Q was calculated by dividing the market capitalization by the value of the Assets. This may lead one to speculate that while assets and ESG risk scores are positively related, the high values for market capitalization influence Tobin's

Q such that it becomes positively associated with ESG risk. Is this a reflection of firms undertaking greater risk for greater reward? More research must be dedicated to this question.

When considering the findings at the individual group level, a negative relationship between ESG risk scores for Real Estate and ROE as well as ROA was found. Unlike the results from the combined regression, leverage does not seem to have such an influential effect given the p-value and beta coefficient for ROE was 0.035 and -0.013; higher than the p-value of 0.12 and beta coefficient of -0.004 for ROA, but not enough to change the results. When considering the nature behind the link between ROE and ESG risk scores for the Real Estate industry it may be worthy to note that Richardson and Welker (2001) as cited in Remani and Sroufe (2018) noted that disclosure of ESG practices "could influence the cost of equity capital directly through investor preference effects if investors are willing to accept a lower expected return on investments that also fulfils social objectives". Regardless, greater information as to how this can affect accounting measurements such as ROE and ROA is needed. Pullman, Maloni & Carter (2016) point to the improved cost performance of ESG activity, however, remark that these changes depending on industries such as food products and manufacturing.

Moreover, Banking Tobin Q values were also shown to have a negative relationship to higher ESG risk. When looking at Tobin's Q, according to Abid, Li & Turull, (2021) there is a measurable relationship between activity in the environmental and governance aspects of ESG. The study, however, does divide the impact of the three ESG categories and makes the distinction between FP and firm value; finding that the governance category leads to an increase in firm value compared to environmental and social activity. The results of Abid et al., (2021) study can also be categorized using Yoon & Chung (2018) framework for considering internal or external firm ESG activity. This is especially true when considering that governance actions are

internalized activity compared to environmental and social actions that are more externalized activities. This does shed light on a limitation for the study however, given that no distinction was made for each individual ESG risk category, meaning that it is impossible to isolate the impact of a specific category on FP. Moreover, this also does not allow to make the distinction between internal and external ESG activity like Yoon & Chung (2018).

Limitations and Conclusions

The outcomes from the analyses perhaps are not as robust as initially desired, but they still provide interesting points of discussion. Given the impact of outliers on the mean values discussed previously, larger sample sizes would prove valuable in reducing the impact of outliers on the data. This may be especially true considering that the regression analysis conducted with the totality of the firms had results most consistent with the past literature. One root of this limitation was in the overall database. In comparison to other ESG databases like Reuters or Bloomberg, the relative novelty of Sustainalytics means that many companies are either missing an evaluation with the comprehensive ESG framework or lack an entry on the database altogether. Moreover, if companies that report in non-Generally Accepted Accounting Principles formatting are considered, calculations become significantly more cumbersome and prone to error.

In line with the potential issue with outliers, the introduction of a moderating factor such as firm size would have proved useful. This is because even within industry groups, some firms operate on significantly larger or smaller scales. The underlying asset base could be used to measure firm size and thus account this variance in scale. Finally, the values used were severely affected by the impact of the Covid-19 pandemic because of the impact it had on financial markets. With most companies releasing their annual data by March of the following year, 2021

data was not available, but it may be speculated that the overall performance for the totality of the firms would have been superior. The effect of the COVID-19 pandemic must also be considered on financials, given that markets as a whole were severely affected. In order to reduce bias that using a single year generates, historical data for multiple years should be used for computations. Alternatively, values could be compared from organizations in a pre and post-covid world.

Greater effort must be put into the field if meaningful action is to be taken within the coming years. Studies must focus on accepting a measure of financial profitability that accurately reflects the impact of ESG. Perhaps conventional accounting or market metrics do not suffice, particularly given that studies show that the impact of ESG activity is apparent over a long-time horizon. Moreover, standardization of ESG reporting with the rigor of GAAP reporting should be implemented to allow firms and investors the ability to gauge the true relationship between ESG and firm performance. This study as well as others produced mixed results but results that build on the idea that higher ESG risk scores are negatively related to FP and thus, ESG activity is positively related to FP.

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Appendices

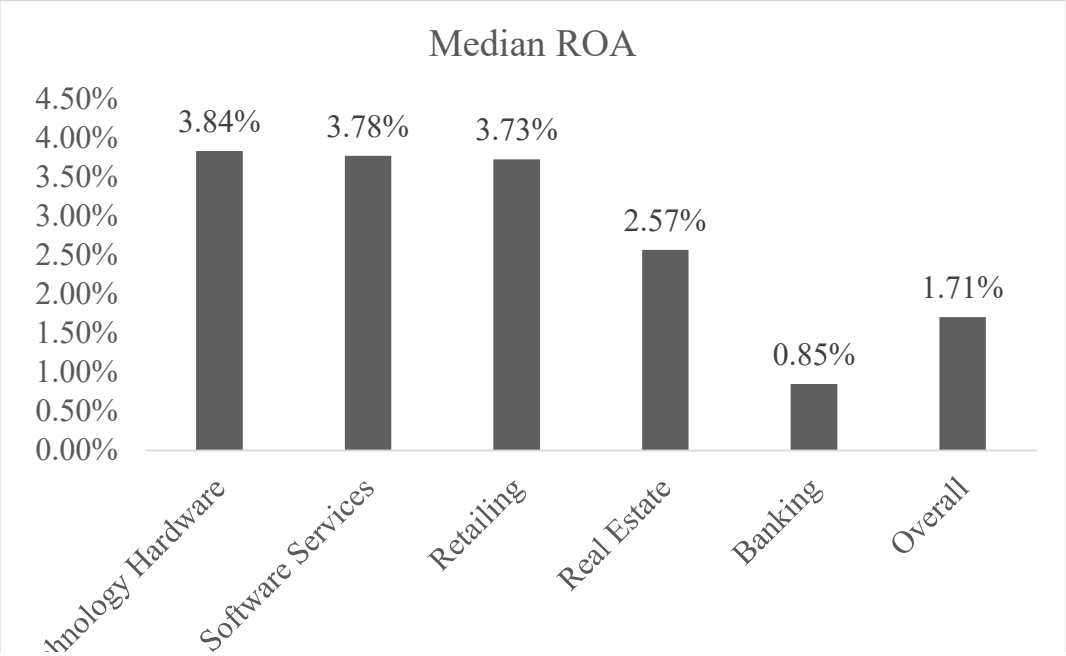
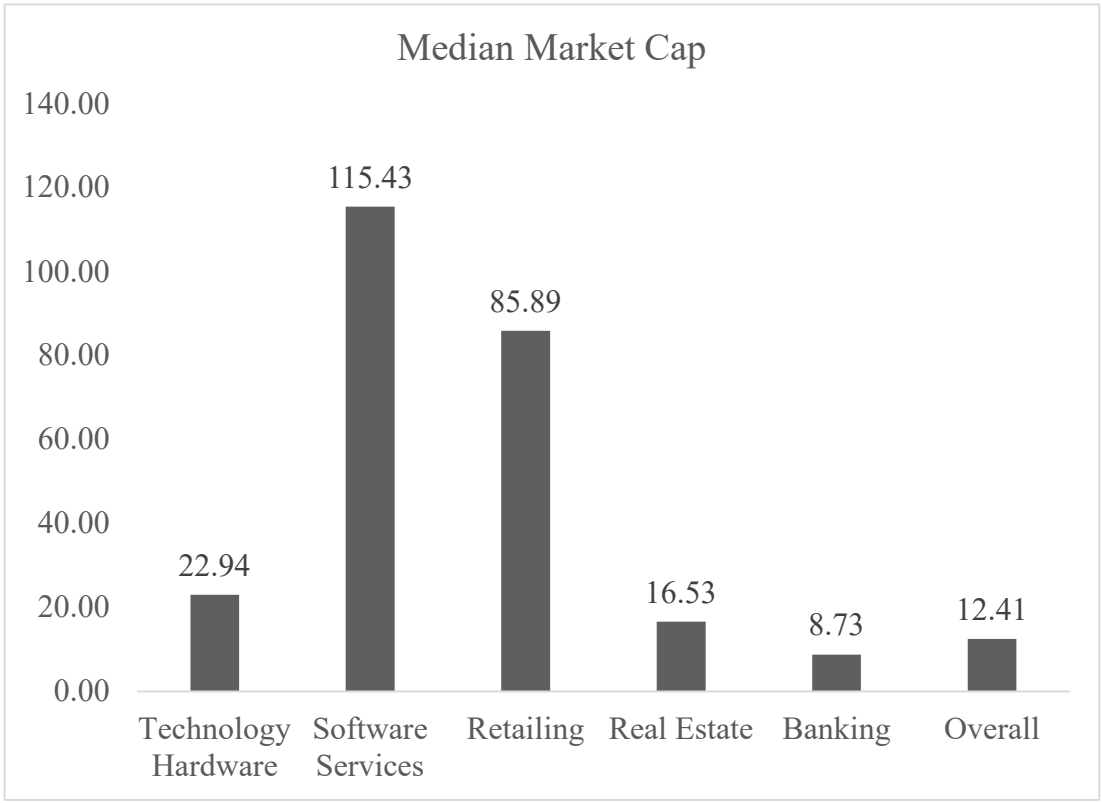


Figure 4. Source: Author



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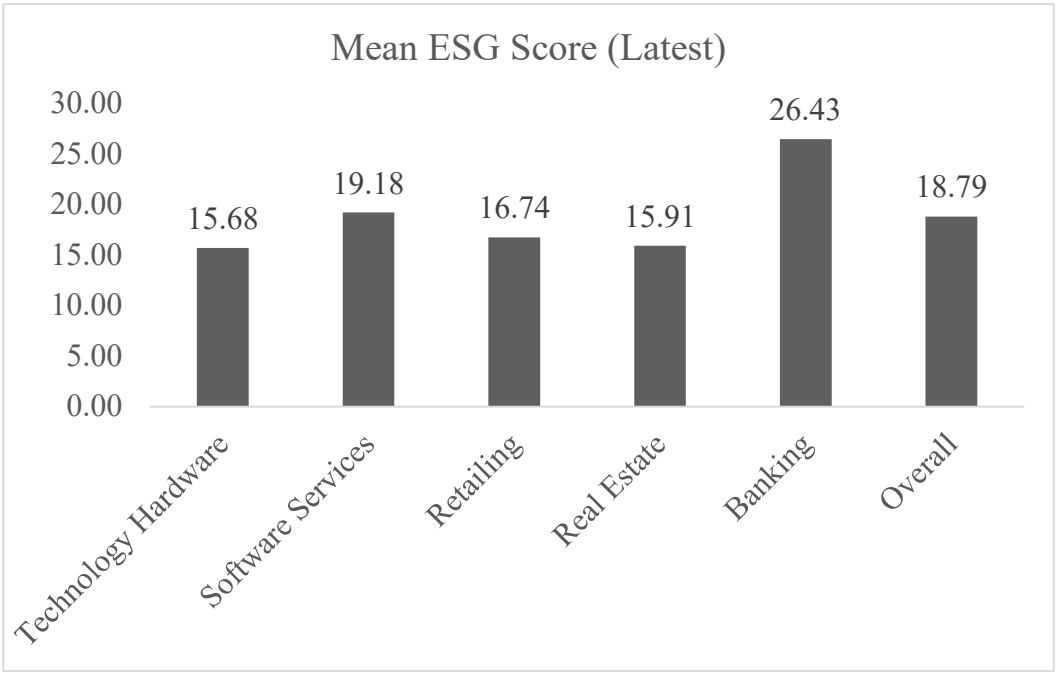

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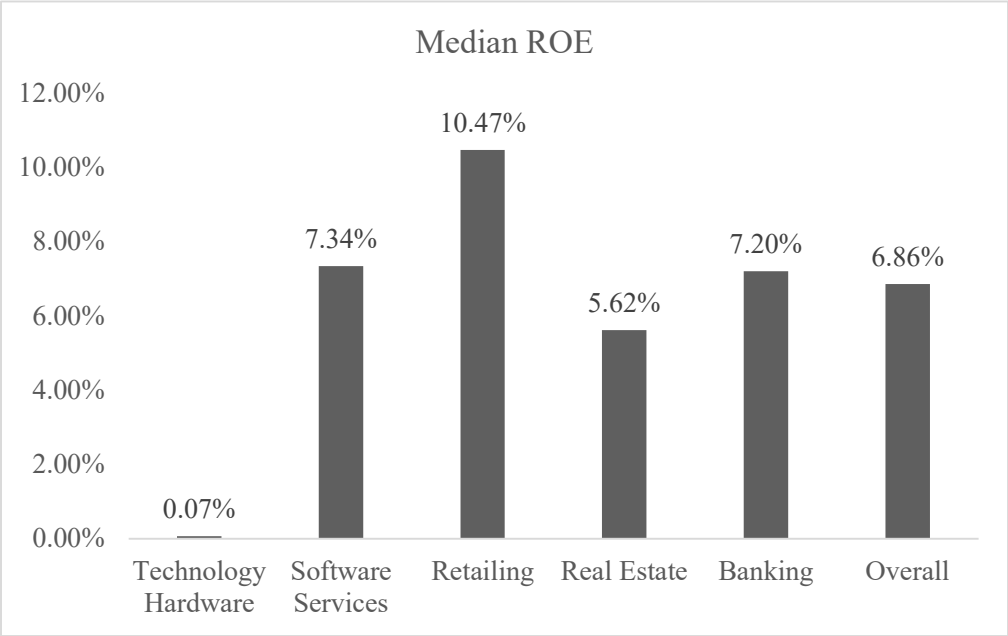

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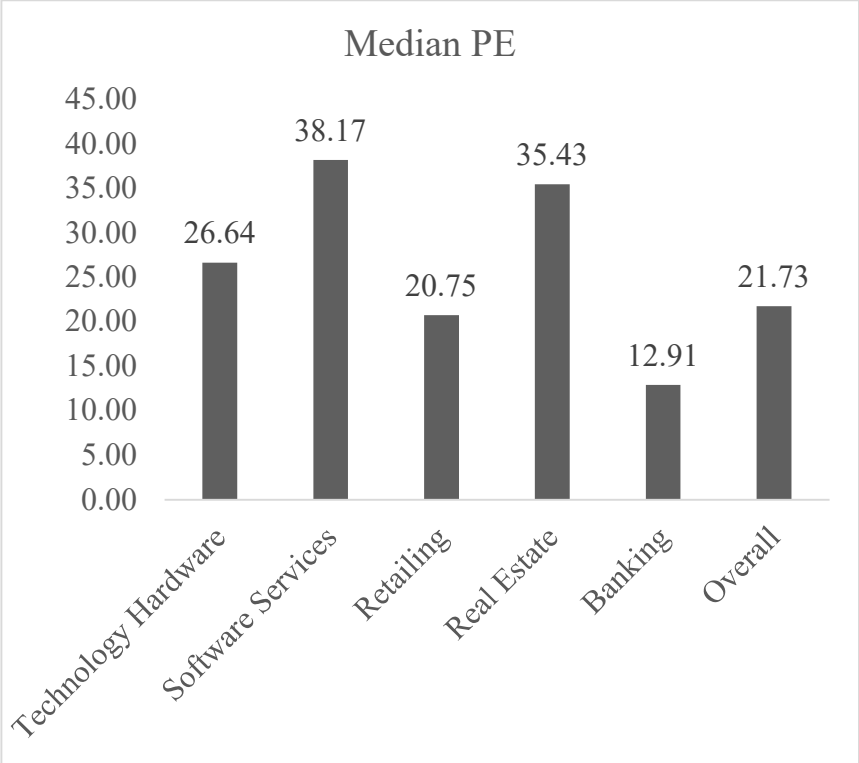

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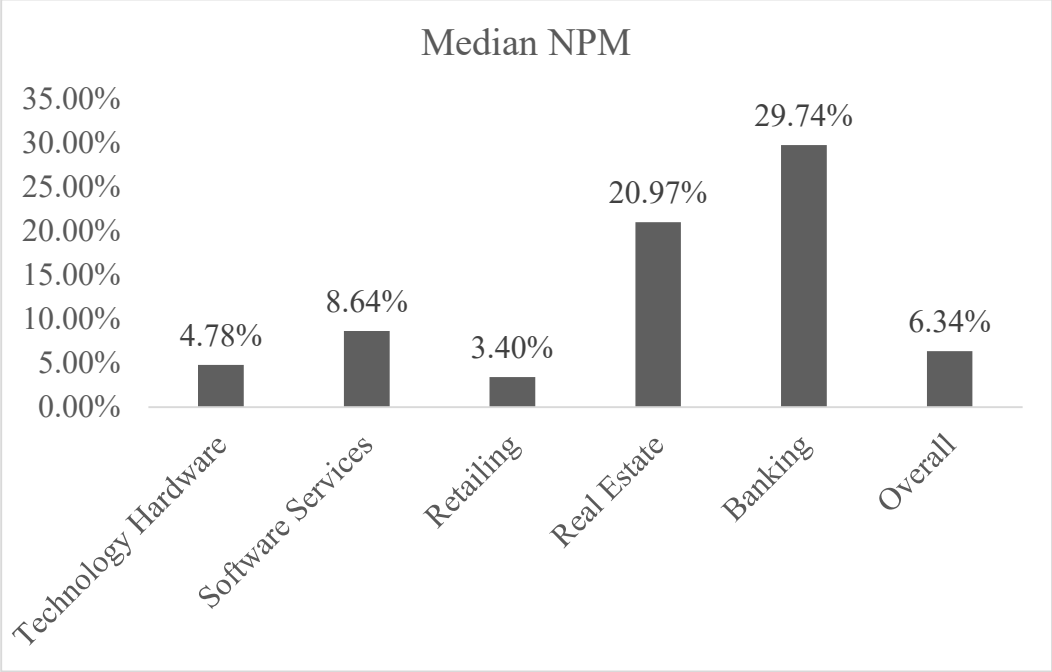

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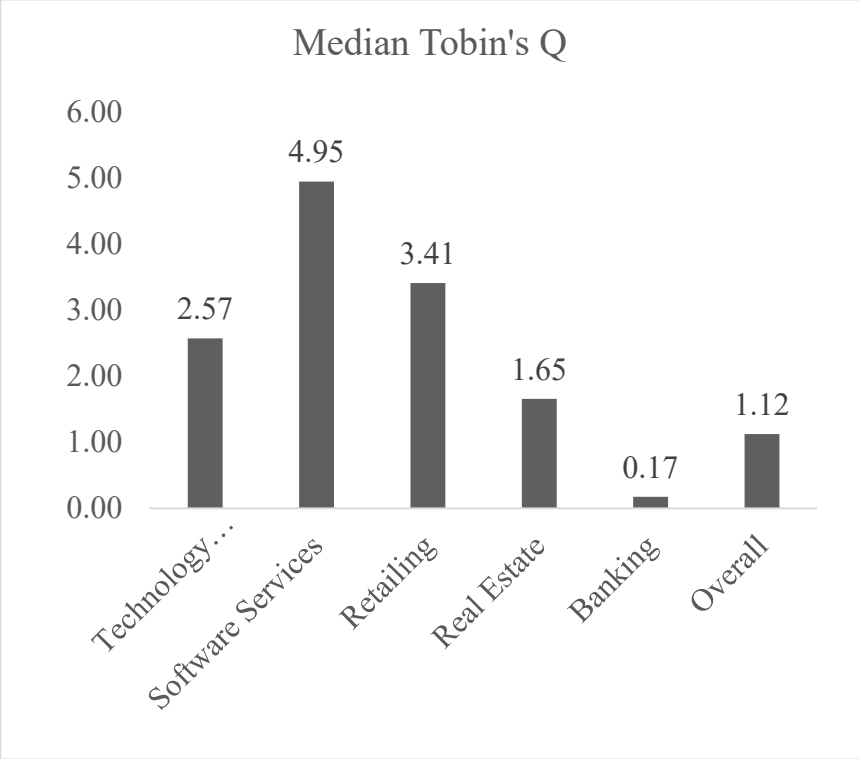

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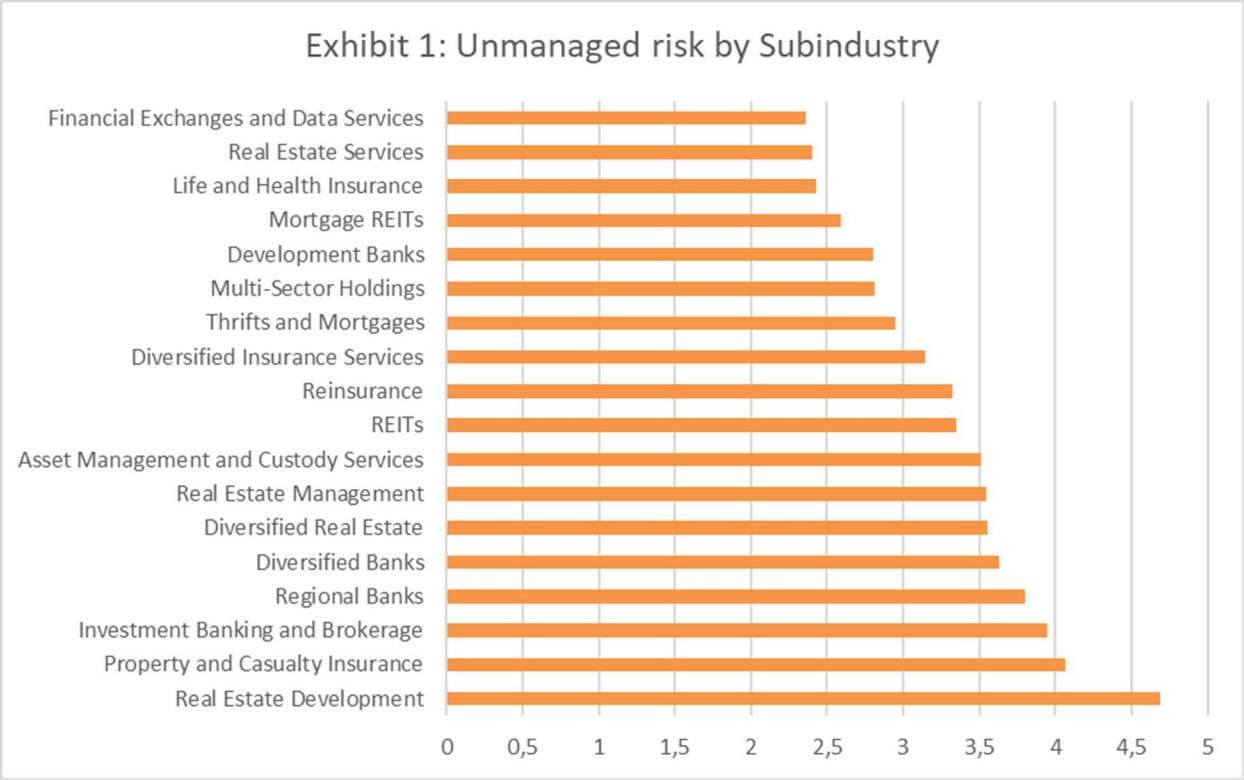

Figure 11. Source: Morningstar

ROA	*Intercept*	*Coefficients*	*Significance F*	Multiple R	R Square	Adjusted R Square	*P-value*
Technology Hardware *n=30*	10.140	-0.289	0.413	0.155	0.024	-0.011	0.088
Software Services *n=30*	0.153	*-0.007*	0.315	0.190	0.036	0.002	0.315
Retailing *n=30*	0.153	*-0.007*	0.380	0.166	0.028	-0.007	0.380
Real Estate *n=30*	0.092	-0.004	0.068	0.337	0.114	0.082	0.012
Banking *n=30*	-0.006	0.000	0.698	0.074	0.005	-0.030	0.698

Table 3. Source: Author

ROE	*Intercept*	*Coefficients*	*Significance F*	Multiple R	R Square	Adjusted R Square	*P-value*
Technology Hardware *n=30*	58.510	-1.999	0.415	0.155	0.024	-0.011	0.415
Software Services *n=30*	0.153	-0.007	0.315	0.190	0.036	0.002	0.315
Retailing *n=30*	0.473	-0.023	0.392	0.162	0.026	-0.008	0.392
Real Estate *n=30*	0.279	-0.013	0.035	0.386	0.149	0.119	0.035
Banking *n=30*	-0.006	0.000	0.698	0.074	0.005	-0.030	0.698

Table 4. Source: Author

NPM	*Intercept*	*Coefficients*	*Significance F*	Multiple R	R Square	Adjusted R Square	*P-value*
Technology Hardware *n=30*	0.162	-0.006	0.153	0.268	0.072	0.038	0.153
Software Services *n=30*	0.356	-0.016	0.211	0.235	0.055	0.021	0.211
Retailing *n=30*	0.080	-0.004	0.265	0.210	0.044	0.010	0.265
Real Estate *n=30*	0.476	-0.006	0.883	0.028	0.001	-0.035	0.883
Banking	1.064	-0.055	0.079	0.326	0.106	0.074	0.079

n=30	

Table5. Source: Author

P/E	*Intercept*	*Coefficients*	***Significance F***	**Multiple R**	**R Square**	**Adjusted R Square**	***P-value***
Technology Hardware	33.369	-0.247	0.747	0.061	0.004	-0.032	0.747
n=30							
Software Services	-25.731	6.367	0.380	0.166	0.028	-0.007	0.380
n=30							
Retailing	27.167	-0.267	0.702	0.073	0.005	-0.030	0.702
n=30							
Real Estate	95.119	-1.828	0.832	0.040	0.002	-0.034	0.832
n=30							
Banking	8.294	0.268	0.749	0.061	0.004	-0.032	0.749

Table 6. Source: Author

Tobin's Q	*Intercept*	*Coefficients*	***Significance F***	**Multiple R**	**R Square**	**Adjusted R Square**	***P-value***
Technology Hardware	1.335	0.079	0.620	0.094	0.009	-0.027	0.620
n=30							
Software Services	6.424	-0.077	0.640	0.089	0.008	-0.028	0.640
n=30							
Retailing	3.675	-0.016	0.910	0.022	0.000	-0.035	0.910
n=30							
Real Estate	2.440	-0.049	0.711	0.071	0.005	-0.031	0.711

Banking	*n=30* *n=30*	-0.080	0.010	0.035	0.387	0.150	0.119	0.035

Table 7. Source: Author

Anova: Single Factor (No Banks)

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Tech Hardware	30.0	470.3	15.7	26.7
Software Services	30.0	575.4	19.2	22.8
Retailing	30.0	502.1	16.7	30.0
Real Estate	30.0	477.3	15.9	8.0

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	231.1	3.0	77.0	3.5	0.017	2.7
Within Groups	2536.2	116.0	21.9			
Total	2767.3	119.0				

Table 8. Source Author

Material Issue Descriptions from Morningstar's Sustainalytics

- MEI.0 Corporate Governance
  - Corporate Governance comprises six pillars: Board/Management Quality & Integrity; Board Structure; Ownership & Shareholder Rights; Remuneration; Audit & Financial Reporting; and Stakeholder Governance. These six pillars represent foundational structures for the management of ESG risks.
- MEI.1 Access to Basic Services

    - Access to Basic Services focuses on the management of access to essential products or services such as health care services and products to disadvantaged communities or groups.
- MEI.3 Bribery and Corruption
    - Bribery and Corruption focuses on the management of risks related to alleged or actual illicit payments, such as kickbacks, bribes and facilitation payments to government officers, suppliers or other business partners, as well as the receipt of those payments from suppliers or business partners. If these are not material in their own right for a subindustry, these issues are handled within MEI.4 Business Ethics.
- MEI.4 Business Ethics
    - Business Ethics focuses on the management of general professional ethics, such as taxation and accounting, anticompetitive practices and intellectual property issues. Business Ethics may include Bribery and Corruption for subindustries that do not have Bribery and Corruption as a separate material ESG issue. Additional subindustry-specific topics – such as Medical Ethics and Ethics regarding the provision of Financial Services, etc. – may also be included in this issue. In additional, ethical considerations related to customer selection may also be included here for some subindustries if products or services may be used to violate Human Rights, for example.
- MEI.5 Community Relations
    - Community Relations focuses on how companies engage with local communities (including indigenous peoples) through community involvement, community development and/or measures to reduce negative impacts on local communities.
- MEI.6 Data Privacy and Security
    - Data Privacy and Security focuses on data governance practices, including how companies collect, use, manage and protect data. The emphasis is on measures taken to ensure safe and secure use and/or maintenance of customers' personally identifiable data.
- MEI.7 Emissions, Effluents and Waste
    - Emissions, Effluents and Waste focuses on the management of emissions and releases from a company's own operations to air, water and land, excluding GHG emissions. Depending on the subindustry, emphasis is put on one or several of these waste streams.
- MEI.8 Carbon – Own Operations Carbon –
    - Own Operations refers to a company's management of risks related to its own operational energy use and GHG emissions (scope 1 and 2). It also includes parts of Scope 3 emissions, such as transport and logistics. It does not include emissions in the supply chain or during the use phase/end-of-life cycle of a product.

- MEI.8.PS Carbon – Products and Services Carbon –
    - Products and Services refers to a company's management of the energy efficiency and/or GHG emissions of its services and products during the use phase. This does not include carbon risks related to financial services, which are considered within MEI.17 ESG Integration – Financials.
- MEI.9 E&S Impact of Products and Services
    - E&S Impact of Products and Services refers to the management of environmental or social impacts of products or services, including: inherent characteristics of input materials, both positive and negative, and impacts during use, disposal and recycling. E&S Impact of Products and Services may include carbon impacts if Carbon – Products and Services is not regarded as a material ESG issue for the subindustry.
- MEI.12 Human Rights
    - Human Rights focuses on how companies manage and respect fundamental human rights within their own operations. Emphasis is on measures taken to protect civil and political rights as well economic, social and cultural rights, including child and forced labour.
- MEI.12.SC Human Rights – Supply Chain Human Rights –
    - Supply Chain focuses on a company's management of fundamental human rights issues occurring in its supply chain. For subindustries that rely on conflict minerals, this also includes a company's handling of conflict minerals in its supply chain.
- MEI.13 Human Capital
    - Human Capital focuses on the management of human resources. It includes the management of risks related to scarcity of skilled labour through retention and recruitment programmes and includes career development measures such as training programmes. Additionally, it includes labour relations issues, such as the management of freedom of association and non-discrimination, as well as working hours and minimum wages.
- MEI.14 Land Use and Biodiversity
    - Land Use and Biodiversity focuses on how companies manage the impact of their operations on land, ecosystems and wildlife. Topics covered include land conversion, land rehabilitation and forest management, as well as the protection of biodiversity and ecosystems.
- MEI.14.SC Land Use and Biodiversity –
    - Supply Chain Land Use and Biodiversity – Supply Chain focuses on how companies manage the impact of their suppliers' operations on land, ecosystems and wildlife.
- MEI.16 Occupational Health and Safety

    - Occupational Health and Safety focuses on the management of workplace hazards affecting a company's own employees and on-site contractors. Where relevant, the issue may also include HIV/AIDS programmes.
- MEI.17 ESG Integration – Financials
    - ESG Integration – Financials includes all ESG integration activities by financial institutions that are either driven by financial downside risk considerations or by business opportunity considerations. This issue includes an institution's own current assets, including direct investments, corporate credits or stakes in project financing, as well as assets managed for clients. Product offerings can span a wide spectrum of product types, starting with ESG investment funds, microfinance products, etc. The issue also includes the consideration of ESG criteria in real estate investments, such as green building initiatives.
- MEI.18 Product Governance
    - Product Governance focuses on how companies manage their responsibilities vis-à-vis clients (quality and/or safety of their products and services). Emphasis is put on quality management systems, marketing practices, fair billing and postsales responsibility. For Media companies, this issue also includes the management of content-related standards, such as journalistic standards and the protection of sources (Media Ethics).
- MEI.19 Resilience
    - Resilience focuses on the financial stability and the management of related risks in the financial services industry, with emphasis on compliance with capital requirements. This issue applies to financial institutions that pose systemic risks and therefore potential external costs to society in case of bailouts by taxpayers.
- MEI.20 Resource Use
    - Resource Use focuses on how efficiently and effectively a company uses its raw material inputs (excluding energy and petroleum-based products) in production and how it manages related risks. Though water use is a main focus, the issue can also include the management of critical raw materials that are either scarce or difficult to access, through recycling programmes, the substitution of less scarce materials and/or eco-design.
- MEI.20.SC Resource Use – Supply Chain Resource Use –
    - Supply Chain focuses on how efficiently and effectively a company manages risks related to water scarcity and raw material inputs (excluding energy and petroleum-based products) within its supply chain.