Intersect, Vol 15, No 2 (2022)

Methodology of Metrics: Analyzing the Environmental, Social and Governance Criteria

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Abstract

The Environmental, Social and Governance criteria (ESG) is now a well-known concept to almost half the world. It is also described as an alternate asset class and that is self-explanatory of the large size of the asset pool. ESG is a set of metrics that measures an organization's behavior towards the environment and how it fares on the social and governance side. Examples of metrics include carbon emissions, waste disposal techniques, employee relations, management quality and at least forty others. Financial services organization Bloomberg has stated that ESG assets may hit fifty-three trillion dollars by 2025, roughly one-third of the Global assets under management. Conscious investors use this metric to invest in organizations considered to be sustainable and growth-oriented. However, this criterion, despite being a significant breakthrough in investors' behavior and argued to be having a positive impact on an organization's value, is still nebulous and vaguely defined. Based on the research done on ESG metrics and their impact, it has been pointed out numerous times that the metrics still suffer from not being standardized and the reports not being readily available, leading to misinterpretation of data. This paper argues that ESG prove to be inconsistent and there is a need to go beyond the qualitative elements and towards its quantifiable aspects.

Introduction

The practice of ESG investing began in the 1960s. ESG investing evolved from socially responsible investing (SRI), which excluded stocks or entire industries from investments related to business operations such as tobacco, guns, or goods from conflicted regions. The term ESG was coined in 2004 by former UN Secretary-General Kofi Annan and resulted in 2005 with the first study, "Who cares Wins," developed jointly with the world's largest institutional investors and banks (Why is ESG important for companies and investors? 2021).

This study aims to investigate the metrics used to define the ESG criteria and understand how the inconsistencies with the qualitative metrics and their methodologies affect the ESG criteria, arguing that it is important for the criteria to consist of more quantifiable metrics.

However, the question remains whether the qualitative metrics, which constitute a significant part of the criteria, are subjective and misinterpreted. How do they affect the ESG criteria, for better or for worse? The methodology is based on building upon the existing research of previous researchers in trying to understand the historical significance and impact of the metrics. Understanding the methods used by other researchers to examine the criteria proves to be useful while understanding the inconsistencies with the metrics and the criteria. The methodology is also based on empirical research in which the metrics, along with various rating agencies and organizations will be examined. Studying and observing the criteria and its application in the real world is meant to give a good idea aboutthe existing circumstances and the applications of the ESG criteria.

ESG metrics can be widely characterized into the following:

Environmental Factors	**Social Factors**	**Governance Factors**
Environmental Pillar Score	Social Pillar Score	Governance Pillar Score
Physical Risk Climate Var %	Controversial Weapons %	Board Independence
Brown Sector Exposure %	Tobacco Involvement %	Board Diversity
Carbon Intensity and Reported Emissions %	Social Violations	Management Remuneration
Estimated Emissions %	Lack of Due Diligence Policy	Accounting Transparency
Fossil Fuel Reserves %	Gender Pay Gap	Data Breaches
High Climate Impact Sector %	Female : Male Board Diversity Ratio	Managerial Quality
Green Revenue	Recordable Injury and Fatality Rates	Privacy Issues
Green Bonds %	Bribery and Corruption Controversies	Employee Turnover

Source: Sustainalytics

Researchers have highlighted this issue with these metrics a couple of times. It seems important to highlight the methods and the metrics used to evaluate companies, especially something which does

have a significant impact like the ESG criteria. This idea of investing has exponentially grown in the past few years and is expected to grow immensely, and it almost becomes a responsibility for everyone associated with it, to do things and carry out processes in the most logical way.

Quantifiable and Qualitative Metrics

Kotsantonis and colleagues (2019) note the following:

> The primary goal of ESG metrics is to capture as accurately as possible a firm'sperformance on a given ESG issue. Only when this goal is achieved will investors be ableto use the data to hold companies accountable for their ESG performance as part of their engagement efforts, or to integrate the data into their business analysis and valuationtools. The question then becomes whether ESG data accurately capture a firm's performance.

Researchers have often highlighted the issues with ESG standards and metrics and their applicability (Cort. Todd and Esty Daniel, 2020). One thing that is not mentioned often, is the unquantifiable or qualitative nature of a lot of the ESG metrics. Looking at the ESG metrics defined by multiple rating organizations, it is evident that a lot of these metrics might prove to be vague and are difficult to be quantified to a large extent. This observation can be made due to the following reasons:

- Metrics like the green revenue, board independence, accounting records, gender pay gap and management remuneration are highly dependent on the reporting by the organizations due to the internal nature of the metrics. This type of data is often unverified and an extension of the company records.
- Metrics such as the bribery and corruption controversies, and other social factors, might not be verifiable due to the sensitive nature of information and affects the ESG data to a large extent, especially if the controversies are out in the public domain despite being proven true.
- Certain metrics such as data breaches, injury and fatality rates, and even issues related to the environment are dependent on the type of organizations and their operations. For example, a manufacturing unit having a labor-intensive approach is bound to have higher injury rates than a technological services company. Similarly, a technological based organization is naturally prone to data breaches. All these metrics are used in a general sense and are often not personalized according to the given situation and type of organization (Agrawal, Anirudh and Kai Hockerts, 2018).

Quantifiability is the one area where reports get a bit dicey, and a lot of these metrics prove to be complicated to define in absolute or quantifiable terms. A metric like 'board independence' is near

impossible to put in numbers, and if any data tends to be misinterpreted, it changes the ESG results and the findings to a great extent, depending on the weight assigned to the metric. Todd and Daniel's (2020) aptly note:

> These are recommendations within voluntary reporting standards and not regulatory requirements, and thus reporting varies considerably from company to company. Thereare, moreover, inherent challenges that make applying accounting controls to ESG data difficult. ESG data are typically more focused on intangible and qualitative values, making accounting control procedures difficult to apply.

Inconsistencies with the metrics and ESG reporting

One thing about the ESG standards or how they impact the investors is, that there is abundant data and frameworks available. That is exactly why the whole concept about ESG reporting and the metrics seems to be complicated to a great extent. Finding the measures and metrics that are pertinent, is a task in itself, and it gives rise to numerous inconsistencies.

Kotsantonis and colleagues (2019) highlight the various points about ESG data in their research:

1. Data inconsistency is worse than you think it is.
2. ESG data imputation can be a problem (or not all models are created equal).
3. ESG data providers disagree a lot (and even more, surprisingly, when there is publicly available information).

Different organizations have different metrics and different data available to them. This issue has been highlighted in Cort Todd and Esty Daniel's (2020) work on "radical transparency" in which they state that, as a result of having greater number of sources to collect data from and to publish, investors may be limited to nebulous information with little consistency and clarity. Then, these different organizations with different frameworks come up with different ratings for the same organization. Further, it is worth noting the impact that a single metric can have on the overall score. A company with a bad environmental reputation will be considered an inferior organization even on the other front. Similarly, a company with good social elements might make people forget the company's actions in relation to the other aspects.

Considering the difference in ratings of different agencies goes, the ESG ratings of TeslaInc. is one of the examples of how the ratings different and is displayed as follows:

Tesla Inc. ESG Ratings

Standard and Poor's (S&P) Global Ratings	MSCI

The ESG score increased from 2018 to 2019	The ESG score decreased by a significant margin
Every single aspect is ranked below the industry mean, denoting a bad performance.	No key metrics are ranked in the 'Average' range. Only leader and laggard aspects.
A score of 15/100 where the overall industrymean ranges between 30-40/100.	Ranked A (AAA, AA, A, BBB, BB, B, CCC), AAA being the highest and CCC being thelowest.

Source: MSCI (2021), Standard and Poor's Global Ratings (2021)

A significant aspect of ESG metrics is the kind of impact they have as far as making a change is considered. When investors look at the ESG ratings of a company, by no means does ESG directly apply to business operations. There is another case that is mentioned by Sakis Kotsantonis, KKS Advisors, and George Serafeim (2019) of a business having multiple businesses. They state that currently, there is no such standard method of analyzing diversified businesses or any business with multiple operations that does not come under the primary operations. This is another case of why the data might prove to be inconsistent.

Another area in which reporting standards might be inconsistent are the key performance indicators or KPIs. KPI is a quantifiable measure of activity and whether things have improved or not. Reporting organizations may struggle with the aspect of KPIs due to the difficulty of defining the metrics themselves. For example, if a company reduces its carbon emissions, what qualifies as a good number or an acceptable percentage of decline? How are the reporting organizations informed about the managerial quality, and how could they possibly verify it? Unless and until the key indicators and standardized key metrics are defined, the ESG reports and standards could affect the organization in either way. Analyzing the indicators is also important as to the impact the metrics have on theorganization. A World Business Council for Sustainable Development (WBCSD) survey of member company reports indicated that there has been almost no movement, however, toward standardization of data quality or control processes (Cort. Todd and Esty Daniel, 2020).

Significance and Alternatives

There are some metrics in the ESG criteria that are weighted significantly more than the others by investors and the general public. Most of the weight is assigned to these metrics and there have been various reports and observations on what metrics are these. The World Economic Forum (WEF) released a white paper involving a set of stakeholder capitalism metrics that were based on their research of the ESG metrics that people and investors are most concerned about. The structure was based on four P's, namely, principles of governance, people, planet and prosperity. The point to be clarified here is that people tend to look at various metrics that cannot be termed in a numeric form and it is completely acceptable. However, a possible alternative consists of using quantitative metrics that heavily relate to

the qualitative ones. For example, rather than a qualitative metric that relates to employee satisfaction and employer behavior, both of which are difficult to explain in quantifiable terms, a report could use attrition rates (Number of employees who left the job divided by the Total Number of Employees in the organization). It could be linking the use of renewable energy resources and the impact on a company's performance. It is imperative to transform certain metrics into metrics that can be measured and at the same time, provide a clear idea of what prevails. This is exactly what the World Economic Forum pointed out in their white report. Self-disclosure is also an issue that needs to be highlighted because greenwashing has prevailed for various reasons in various organizations. WEF calls this a recipe for inconsistency, subjectivity and opacity.

Conclusion

There are always going to be questions about the credibility of the ESG criteria, and rightly so. One needs to know how things are analyzed and presented, given the value of ESG assets, institutions and funds around the world. However, a few things are established, mainly relating to the methodology of the metrics used and how important they can be. Qualitative metrics are vague as these metrics answer the questions that hardly anyone can. Estimating the lack of due diligence in the organization or trying to figure out the board's independence along with employee satisfaction is based on a far-fetched, unrealistic approach. This kind of data is difficult to quantify, also because of how the organizations report them. Complexity follows the ESG criteria from all the ways, be it data manipulation or disagreement over ESG data. How these metrics are approached and evaluated is subjective, and that is the serious part, given how big this asset class is turning out to be. It makes the ESG criteria less credible, opaque and an overdependent gospel tool for estimating the ideology of an organization concerning sustainability. This can be corrected by either having a very personalized and specific approach for each organization or developing a set of quantifiable standards that mostly cater to every organization. Linking numeric to qualitative elements couldbe of great help as well. Kramer and colleagues (2020) note:

> Linking social/environmental performance to standard measures of financial performance would be especially useful in an investment world increasingly driven by quantitative algorithms that cannot easily accommodate qualitative data.

The implication is that researchers and analysts face the problem of dealing with vast "data gaps" that span ranges of companies, time periods, and ESG metrics (Sakis Kotsantonis, KKS Advisors, and George Serafeim, 2019). What it also means is that the ideas and approach of investors, companies and analysts should change. The companies should be focusing on the internal operations and disclosing the information completely while cooperating with investors and the sustainability officers. The analysts, on the other hand, could be more

specific in their approach and relate it to a company’s revenue projections and profitability, because at the end of the day, a company is bound to make returns. Which technique ends up working is a question that still stands. From what I have observed, focusing on the metrics that people consider imperative is the way forward. This process involves working towards collecting data personally through relevant sources, and trying to make sure that the data can be presented in a manner where it can be compared while evaluating different organizations for different purposes. These criteria, while in need work, can prove to be a salient feature of investing in the future.

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