



ESG Meta Score Report

Texas SIG

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Project Overview

In this project, we create a proprietary scoring algorithm for SIG to use to evaluate stocks and funds on a range of ESG metrics in the environmental, social, and governance categories. Once completed, our members will be able to select a sector for which the company they are evaluating belongs to and calculate an ESG rating for that company. The user can either use default weights for their respective sector or input adjusted weights, ratings, and justifications for adjusted weights based on information found in annual reports, quarterly reports, earnings calls, financial news outlets, and relevant ESG media reports. The model will then calculate and display a weighted-average score from 0-10 and a corresponding letter rating (CCC - AAA). Additionally, in another sheet, there will be an ESG report summary, including but not limited to company info, most important/relevant drivers, statistics on score distributions, and qualitative explanations for these relevant scores or overall score. In the long-term, the goal is to be able to compile an annual database by evaluating companies' past years' performances based on our ESG model and see how they have performed over time.

Objectives

Why is an ESG Meta Score important for SIG?

1. We will have our own proprietary ESG scoring system that will be used as a reference for stock pitches and when choosing which companies to include in the SIG portfolio.
2. Our own ESG scoring system will accurately reflect what SIG members believe to be the most valuable ESG drivers for a public company.
3. We can avoid costly paywalls of third-party services that conduct their own research and ESG scores/ratings.
4. Using this model, we can easily determine which factors of a company are the most important and use this as supplementary analysis when pitching stocks and comparing companies.
5. Using this model, we can compare the similarities and differences of our scores and rationale by comparing them to other third-parties.
6. We will be able to expand and enhance the model as the next generations of SIG come along to ensure that it is scoring effectively and appropriately.

The Algorithm

We divided this research project into two sections:

1. Research each driver and how to measure it
2. For each sector, assign weights to each driver based on relevance

There are 37 drivers, belonging to 10 subcategories: Climate Change, Natural Resources, Pollution & Waste, Environmental Opportunities, Human Capital, Product Liability, Stakeholder Opposition, Social Opportunities, Corporate Governance, and Social Governance Opportunities. These subcategories helped us rationalize which groups of drivers were more relevant to different sectors. For example, the Finance sector had less weight on the Natural Resources and Pollution & Waste categories, but more emphasis on Corporate Governance or Social Opportunities.

For task one, we described each driver and listed questions or metrics that would help measure the success of the company for that driver. Some drivers were more subjective than others, and thus harder to measure, but we aimed to include both quantitative and qualitative measures for each driver. For example, for Carbon Emissions, in addition to a quantitative amount of carbon emissions, we asked qualitative questions such as “How much carbon is the company exhibiting compared to the overall sector average? What are the company’s carbon emission initiatives and goals? Does the company have any investments or projects to reduce emissions? Has the company had any controversial press or emission scandals? Have they faced increased costs due to carbon pricing or regulation?”

For Human Capital Development, which is more subjective, we included measures such as employee retention rates, frequency, quality, and variety of training for employees, internal mobility (% of employees who advanced to higher position in past year), and employee performance ratings which can help convert qualitative information into quantitative data that can be compared against other companies.

Our second task was to assign weights to each of the 37 drivers, based on their relevance to each sector. There were 11 sectors to evaluate: Energy, Materials, Industrials, Consumer Discretionary, Consumer Staples, Financials, Healthcare, Utilities, Real Estate, Information Technology, and Communication Services.

The energy sector is focused on fossil fuel extraction and conversion to usable energy. The process of extracting fossil fuels (drilling, mining, etc.) has numerous environmental hazards; the conversion process (refining, piping,

etc.) requires a lot of energy; and the carbon emissions from the actual usage of the final product (burning coal/gas) also poses environmental dangers. Thus, the energy sector is mainly focused on the environmental category of the ESG pillars, with a focus on sourcing methods, toxic emissions & waste, including carbon emissions & footprint, and any steps towards renewable energy. Some drivers, such as packaging waste, were weighted 0 because they were completely irrelevant to energy production.

Like energy, the ESG score for the materials sector revolves mainly around environmental drivers because the industry is completely reliant on the environment to extract and process raw materials. There was a greater emphasis on sourcing, and the impact of sourcing on the environment, such as water stress or biodiversity & land use.

The industrials sector makes machinery and equipment for construction and manufacturing. Therefore, there are still relevant drivers in environmental pillar, but also importance in the human capital and product liability categories. For example, in the environmental drivers, carbon metrics, water stress, and toxic emissions & waste are important, but biodiversity & land use are less relevant. In addition, product safety is very important for this sector, because other companies will be using their equipment in production processes. The manufacturing nature of the sector also brings health and safety risks to its workers, so it is important to consider the measures put in place to protect workers.

Both the consumer discretionary and consumer staples sectors focus on consumer goods - final products sold directly to consumers. In these sectors, environmental impacts are still important, but are not as direct as the energy and materials sectors because they are buying processed materials from suppliers. There is more importance on product safety, and health & safety hazards that may come from using the product. In addition, because many consumer goods are mass produced in factories, labor conditions are also important. Thus, these two sectors have higher weights in the product liability and human capital categories.

There are not many environmental concerns in the healthcare sector, apart from carbon emissions from powering equipment, and disposal of toxic waste, such as biohazardous waste. On the other hand, the health & safety liabilities are much higher, both for the customers and the employees, who are at higher risk of contracting illnesses. In the healthcare sector, there needs to be an extremely high standard of labor conditions and treatment, thus we gave higher weights to human capital and product liability. Managerial metrics are important in any industry, but especially in the

healthcare sector. Board diversity is important to make sure all patients are being served fairly and to the best of their ability. Transparency, ethics, and style of ownership & control are extremely important to avoid any unethical practices when there could be a direct impact on other people's lives. Finally, data security & privacy is extremely important in the healthcare sector, to maintain doctor-patient confidentiality, so this driver also received a high weight.

The ESG score for the financial sector is also very lightly influenced by environmental metrics, but there is a great importance on the data privacy & security of consumers, and corporate governance drivers such as accounting, tax transparency, and business ethics because clients entrust these companies with their private financial data. Because there are usually no physical products being produced in the financial sector, drivers such as packaging waste, controversial sourcing, and toxic waste get very low weights, but electronic waste gets a higher weight than the energy and materials sector. Financial environmental impact receives a higher weight than other sectors, because the financial sector has direct control over where they choose to give and receive funding.

The information technology sector again has little relevance to environmental drivers, apart from carbon footprint, but higher weight in drivers such as electronic waste. Similar to the financial sector, data privacy & security is extremely important, as billions of users may supply personal information to companies. For the same reason, corporate governance is also extremely important in order to ensure that consumers' data is being used in an ethical way. For example, some tech companies have been known to sell customer information to third party advertising companies, without the consent or knowledge of customers.

Telecommunications seeks to provide a service rather than a product, so there is less weightage put behind factors regarding production. However, companies are responsible for large amounts of personal data, messages, and security during operations. There are also secondary concerns regarding labor due to the risk of maintaining elevated cell-site towers and other remote equipment. We also list e-waste as a concern due to the rapid obsolescence of transmission equipment and receivers.

The weights for the utilities sector are similar to the energy sector because both focus on harnessing energy. Therefore, its weights are more heavily influenced by environmental factors such as water stress or carbon emissions. In addition, chemical safety, toxic waste, and product safety are very important to measure the quality of utilities that customers are receiving.

In contrast to the energy sector however, the utilities sector is heavily regulated by the government, so corporate governance measures such as tax transparency or corruption are very important in this sector as well.

The real estate sector seems to follow closely with the financial sector, in that agencies provide services rather than tangible products. However, agencies do have control over which houses or areas they choose to list, so they have an additional responsibility to make sure they are not covering any endangered or environmentally dangerous areas (i.e. close to a landfill where there might be toxic waste). Thus, health & safety standards and product quality are more important in real estate than in the financial sector. Business ethics and transparency are also very important when working clients - ensuring that clients are treated fairly and are not taken advantage of. This includes commitment to fair housing laws and non-discrimination statutes to stop harmful practices such as redlining.

Limitations

Like any models, our meta-score is only an estimation of what reality presents. Our system may fail to consider the appropriate trade-offs of valuing one factor from another, especially at the sector level. Currently, our weightage emphasizes some factors such as carbon emissions, board diversity, and executive pay universally over others. As SIG continues to gain experience in industry-by-industry breakdowns, we expect these weights to improve. Additionally, the use of a weighted average as the principal mathematical organization for the scoring rubric can lead to scenarios in which a firm scores incredibly bad in one metric but still retains an ambivalent rating due to positive evaluations on other factors.

Current and Future Developments

We have a one-year plan that will guide us through three (3) phases of the project's life, including two major quality of life updates that will increase model usability, reliability, effectiveness, and applicability. The phases will help push through the first year of a product's adversities and unexpected mishaps. We have expectations of an overall higher quality model for v.2.0 to be used in more appropriate settings such as case competitions and mock investment funds.

Phase 1: May 2020

Oversees the release of our ESG Score Report v.1.0 which we have outlined in previous sections. Main capabilities include inputs for adjusted weights and ratings with limited guidance regarding some KPIs, including qualitative factors. Scores of the same company may vary depending on user's interpretation of subjective factors. During this time, we'll compile a database of public companies that we'll evaluate using this version. Feedback will be compiled over a three-month period to guide updates for v.1.1. Any new feedback not accounted for will be considered in the following phase(s).

Phase 2: September 2020

Oversees the release of our ESG Score Report v.1.1 with increased capabilities, bug fixes, and enhanced user guidance on qualitative and quantitative drivers. Update preexisting company database and evaluate patch effectiveness. Feedback will be compiled over a four-month period to guide updates for v.1.2. Any new and existing feedback not accounted for will be considered in the following phase(s).

Phase 3: January 2021

Oversees the release of our ESG Score Report v.1.2 with new automated input processes (expected to be limited to quantitative factors) for a quicker completion time for ratings. Increase number of evaluated companies in our database and evaluate patch effectiveness. Feedback will be compiled over the Spring 2021 semester to conclude changes to our first year of our model. Any new and existing feedback not accounted for will be considered in the future.

About Other ESG Scoring Agencies

MSCI is an American finance company headquartered in New York City and serving as a global provider of equity, fixed income, hedge fund stock market indexes, and multi-asset portfolio analysis tools. MSCI has been at the forefront of index construction and maintenance for more than 40 years, launching its first global equity indexes in 1969.

MSCI's purpose:

"We strive to bring greater transparency to financial markets, enabling the investment community to make better decisions for a better world."

MSCI view on ROI:

"Powered by the belief that ROI also means return on community, sustainability and the future that we all share. Healthy economies stimulate job creation, encourage infrastructure development and generate the returns necessary to improve living standards for everyone, everywhere."

Morningstar, Inc. is a global financial services firm headquartered in Chicago, Illinois, United States. It provides an array of investment research and investment management services.

Morningstar's research and recommendations are considered by financial journalists as influential in the asset management industry, and a positive or negative

Both MSCI and Morningstar are two of the most prominent ESG rating agencies that provide investor solutions for increased utility and educated investments. We utilized MSCI's base model and took into consideration the ideals of both rating agencies to help drive our initial ideas of what we wanted our model to measure and evaluate. Although trustful sources, we still will consider changes to our base model to ensure it fits our needs as students and potential investors.

Sources

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