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Greater ESG Rating Consistency Could Encourage Sustainable Investments

Closer Scrutiny on ESG Measurements, Disclosures and Methodologies Could Improve Rating Systems

Executive Summary

Investors are increasingly applying environmental, social and governance (ESG) factors, in addition to traditional financial analyses, as part of their process to better understand a company's growth opportunities, material risk and sustainability levels.

As sustainable investments become mainstream, new tools have developed to assess how companies perform from these new angles and facilitate investment decision-making. One such tool is ESG ratings.

ESG rating providers are predominantly measuring a company's long-term value creation, particularly aiming to maximize financial value by taking into consideration its exposure to ESG risks based on company ESG disclosures. These ESG disclosures are often non-financial and therefore not reflected in financial statements.

ESG ratings have been seen as a gimmick, as current rating practices are inconsistent with the way they measure a company's long-term value creation and do not necessarily incorporate a company's positive or negative impact on the environment or society. This means that investors who rely on ESG ratings can unknowingly be building a better portfolio but not necessarily a better world.

For example, a recent backlash on ESG was sparked by the tweet "ESG is a scam" from Tesla CEO Elon Musk, following Tesla's removal from Standard & Poor's (S&P) 500 ESG Index in May 2022, while Exxon Mobil was retained.

According to the Index, which tracks companies based on S&P's own ESG standards, the fossil fuel major has better environmental, social and governance credentials than the electric vehicle giant.

However, IEEFA's research shows that this view may not be shared by other rating providers, which indicates differences in rating practices. This report investigates current ESG rating practices and analyses Refinitiv ESG ratings of over 7,600 listed companies as of June 2022. The Refinitiv ratings are used as a proxy to assess the overall trend of the ESG rating industry.

It shows that ESG ratings are wide and conflicting, making them difficult to compare; that clean energy companies may be underrated due to a lack of transparency and subjectivity around ESG methodology; and the ESG rating system is highly reliant on the degree of companies' ESG disclosure resulting in geographical location and company size biases. It also makes recommendations on ways to address the issues.

Some key findings are as follows:

- **Wide-ranging and conflicting ESG ratings.** The outcome disparity of ESG ratings between providers stems from the lack of unified objectives and standards for ESG measurements, disclosures and methodologies. The subjective nature of ESG ratings makes them incomparable and difficult for investors to therefore make well-informed investment decisions.

- **The "best-in-industry" approach dilutes company-specific ESG performance.** Often, ESG ratings reflect a company's environmental, social, and governance issues compared to its industry peers. For example, Tesla's score on the S&P Index has remained fairly stable year over year. However, compared to its peers in the automotive industry in which it is assessed, the company had fallen behind resulting in its exclusion from the index. The ESG assessment of a company is more dependent on its industry-specific risk exposure than on its underlying company-specific ESG risk and performance.

- **Aggregating ESG scores into a single metric may not be appropriate.** Each pillar of the E, S and G scores cover a wide range of factors. Aggregating these elements into a single metric is not an accurate translation of a company's ESG performance. As a result, a clean energy company, for example, with moderate risk exposure to social and governance issues could be assigned an overall lower ESG score, despite its substantial environmental performance.

- **Biases due to geography and company size.** Companies that are domiciled in countries with robust ESG regulatory reporting requirements and larger market capitalisation are awarded with favourable ESG ratings. This underscores the over reliance of the ESG rating system on publicly available data disclosures, while companies with sound and sustainable businesses that disclose less ESG-related data could be unfavourably rated.

Given these issues, clean energy companies that fundamentally contribute to reducing greenhouse gas emissions and curbing climate change are not necessarily scoring high "E" or ESG marks, and therefore risk being underrated.

The report makes some recommendations to address these issues including the adoption of universally accepted ESG disclosure frameworks, more transparent ESG rating methodology disclosure by rating providers, a standardized and specific definition of ESG rating, and prioritising impact materiality integration in ESG data reporting and rating, among other considerations.

If ESG ratings are to function as intended to encourage sustainable investments, significant measures to improve and standardize the rating system are needed.

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What Does ESG Rating Measure?

Investors are increasingly applying environmental, social and governance (ESG) factors, in addition to traditional financial analyses, as part of their process to better understand a company's growth opportunities, material risk and sustainability levels.

When additional factors under ESG such as energy usage, carbon emission, waste management, working conditions and diversity of board members are considered, it is common for sustainability investors to avoid companies that are less ethical or environmentally conscious such as fossil fuel power plants, mining and tobacco.

As sustainable investments (defined as an investment strategy that incorporates ESG criteria to generate long-term competitive financial returns and positive societal impact)[1] become mainstream, new tools have been developed to assess how companies perform from these new angles and facilitate investment decision-making. One such tool is ESG ratings.

ESG rating providers are predominantly measuring a company's long-term value creation, particularly aiming to maximize financial value or returns for shareholders. This is done by evaluating its exposure and management capability in managing environmental, social, and governance risks, based on a company's ESG disclosures, which are often not reflected in financial statements.

Some ESG ratings providers claim to also measure a company's adverse impacts on society and the environment (ISS), commitment to sustainability (RobeccoSam), as well as commitment and effectiveness to ESG (Refinitiv). However, based on its disclosed methodologies, these claims are a challenge to ascertain.

With a few exceptions, ESG ratings do not specifically measure a company's impact on the planet and society. This is evident by an analysis published by Bloomberg Businessweek on MSCI's 155 ESG rating upgrades from January 2020 to June 2021 of companies that were in the S&P 500.[2] It showed that only 1 out of the 155 cited an actual cut in emissions as an environmental factor, and some companies that have controversial records on climate change were still upgraded. Almost 50% of the companies were upgraded due to underlying methodology changes.

The article also cited that McDonalds's Corp, which generates more greenhouse gas emissions than Portugal or Hungary, was awarded an ESG rating upgrade from MSCI in 2021.

[1] Sustainable Investing Basics. The Forum for Sustainable and Responsible Investment. 2021
[2] Bloomberg Businessweek. The ESG Mirage. December 2021

Table 1: MSCI's rating upgrade factors for S&P 500 companies

Key ESG Factors	Count of Companies	Distribution
Corporate behaviour	51	33%
Employment Practices	35	23%
Data Protection	23	15%
Structure of boards	25	16%
Carbon emissions reduction	1	1%
Undefined	20	13%
Total	**155**	**100%**

Source: Bloomberg Newsweek.

In IEEFA's view, this measurement appears to be in conflict with what an ESG is perceived to be. A company with a favourable ESG rating is generally seen as having good ESG practices in terms of its impact on the environment, society and long-term financial value. However, ESG providers appear to be placing emphasis on the latter.

In the case of McDonald's Corp, which has poor carbon practices as cited in the article, the company still receives a high ESG rating as its practices are not a major risk affecting the company's financial health. As a result, such companies will continue to be labelled "sustainable," which benefits their reputation and provides them with a cost-of-capital advantage.[3]

Investors who rely on ESG ratings could unknowingly be building a better portfolio but not necessarily a better world.

Accordingly, based on the wider industry practice, a strong ESG rating merely signals a company's low exposure and good management of ESG risk, which is a driving factor for financial returns. Investors who rely on ESG ratings could unknowingly be building a better portfolio but not necessarily a better world.

While it is prudent to incorporate ESG risk and management for long-term financial benefit to the corporation and its shareholders, measuring a company's impact on society and the planet should be an integral component of ESG ratings.

ESG Ratings are not Credit Ratings

A company's ESG rating should not be conflated with its credit ratings. The latter provides a forward-looking assessment of the company's creditworthiness or risk of default in the near term and has no bearing on the company's ESG rating.

[3] MSCI.ESG and the cost of capital. February 2020

There is an agreed objective in the market regarding the specific purpose and measurements of a credit rating. The credit rating industry is already subjected to a comprehensive regulatory framework in major jurisdictions. Credit agencies also use similar methodologies and key credit ratios in computing their final credit rating. In addition, there is some form of uniformity and defined rating scales (AAA-D) which enables comparison.[4]

ESG ratings, on the other hand, have no one widely accepted answer as to what it should measure (ESG risk and/or ESG impact) and what qualifies as material ESG factors. The current ESG rating practices are inconsistent with the way they measure a company's long-term value creation and do not necessarily incorporate a company's positive or negative impact on the environment or society.

Methodologies in terms of weights, measurements, and ESG rating scales are also distinct across providers. Presently, there are no legally binding regulations applicable to ESG ratings, which impact its reliability.

Table 2: Credit Ratings vs ESG Ratings

Category	Credit Ratings	ESG Ratings
Subject to regulatory framework	Yes	No
Clear definition and measurement	Yes	No
Defined ranking scale	Yes	No
Comparable ratings across providers	Yes	No

Source: IEEFA's analysis.

While ESG ratings are essentially different from credit ratings, the ESG rating sector should attempt to mirror the credit rating sector in terms of transparency, consistency and reliability. The general lack of these components in the ESG rating system merits closer scrutiny of ESG measurements, disclosures and methodologies. Some of the key shortcomings of ESG ratings are discussed in detail in the following sections.

Wide-ranging and Conflicting Ratings

The recent exclusion of Tesla from and the retention of Exxon Mobil in Standard & Poor's (S&P) 500 ESG Index[5] have raised questions about the subjectivity of ESG ratings.

As there is no standard definition of what an ESG rating should measure, there is no consistency in a company's ESG score from one rating provider to another. A November 2021 report by the International Organization of Securities Commissions

[4] Corporate credit ratings: a quick guide. Treasurer's companion. 2008
[5] Tesla cut from S&P 500 Index, and Elon Musk tweets his fury. Reuters. May 2022.

on ESG ratings and providers found that "there is little clarity and alignment on definitions, including on what ratings or data products intend to measure".[6]

Given the lack of unified standards for ESG disclosures, measurements, methodologies and ratings vary significantly across providers. As a result, one company can be assigned diverging ESG ratings based on the provider's interpretation of what to measure. ESG rating outcomes are also presented in different scales such as numerical (0–100 or 0–10) or grade (AAA to D). This makes it incomparable and challenging to rank accurately companies based on their ESG performance.

The MIT Sloan School of Management[7] found the correlation of overall ESG scores provided by six major rating providers to be 0.38 to 0.71. The average correlation is 0.54, which is considered weak. For comparison, the correlation of long-term debt ratings among the three largest credit rating agencies (Moody's, S&P and Fitch) is strong, at 0.94 to 0.96.[8]

Table 3: Diverse ESG Rating Scales Creates Comparability Issues

ESG Rating Providers	Rating Scale (Highest/Best)	Rating Scale (Lowest/Worst)
Refinitiv (ESG Score)	A+ (100-Excellent)	D (0-Poor)
MSCI	AAA (Leader)	CCC (Laggard)
Sustainalytics	0 (Negligible Risk)	40+ (Severe Risk)

Source: Author compilation from respective ESG rating methodologies.

The divergent measurements and conflicting ratings across ESG rating providers can be observed using Tesla (Automotive – an electric vehicle manufacturer) and Exxon Mobil (Energy – Oil and Gas Integration) as examples.

Refinitiv assesses a company's relative ESG performance, commitment and effectiveness, based on reported data. It assigned an ESG rating of B to both Tesla and Exxon. This indicates a relatively good ESG performance and above-average degree of transparency in reporting material ESG data publicly.

MSCI typically measures a company's ESG risk exposure and management capabilities relative to industry peers. MSCI gave Tesla an ESG rating of A, which is deemed "average" among 42 companies in the automobile industry. Exxon is rated BBB, which is also considered "average" among 24 companies in the integrated oil & gas industry. While MSCI considers the risk exposure and management capabilities of both Tesla and Exxon as average, Tesla scored more favourably than Exxon.

[6] International Organization of Securities Commissions. Environmental, Social and Governance (ESG) Ratings and Data Products Providers: Final Report. November 2021.
[7] MIT Sloan and University of Zurich, The Divergence of ESG ratings. April 2022.
[8] BDO USA, LLP. ESG Ratings: Navigating Through the Haze. August 2021.

Sustainalytics evaluates a company's exposure to material ESG risk such as climate change, human resource and supply chain management that can impact financial risk-return profile. It also incorporates management's ability to mitigate that risk. Its risk categories are absolute, meaning a company can be compared across companies from various industry groups. Sustainalytics scored Exxon 36.5 (a high risk company) and Tesla 28.6 (a medium risk company).

In summary, while Refinitiv and MSCI placed Exxon Mobil in the "good" or "average" rating bands respectively, Sustainalytics has assigned it to the weaker end of its rating scale, the "high risk" category (Table 4).

Table 4: How ESG Rating Providers View Tesla vs Exxon Mobil

Company	Business Sector	Refinitiv	MSCI	Sustainalytics
Tesla	Automotive	B (63/Good)	A (Average)	28.6 (Medium Risk)
Exxon Mobil	Energy — Fossil Fuels	B (66/Good)	BBB (Average)	36.5 (High Risk)

Source: Thomson Reuters, Refinitiv ESG score. ESG period last updated: June 2022.

It is unclear how the disparity in ratings would facilitate sustainable investment decisions. As most investors[9] use third-party ratings providers across their investment processes, the lack of consensus on the objectives of ESG ratings would inevitably lead to mispricing of stocks and bonds, and an inaccurate inclusion in or exclusion from investment funds. This also impedes companies' incentives to disclose and improve ESG performance, owing to the mixed outcomes caused by rating providers.

Clean Energy Players May Be Underrated

ESG ratings, particularly the environmental category, can be instrumental to the clean energy transition as it gauges a company's greenhouse gas (GHG) emissions, carbon use intensity, and carbon reduction strategy plans and goals, among other things.

However, companies that are transitioning or already contributing to a low-carbon economy could have their sustainability impact downplayed due to a number of factors. These include the subjective nature of ESG ratings, the industry peer assessment, the company's ESG data disclosure and the methodology applied to various ESG indicators.

A coal-based power company could be rated the same or even more favourably than a utility company that uses a low-emission source, such as renewable energy. For example, AC Energy is a power generation company domiciled in the Philippines. It has an 87% renewable energy share of power capacity, one of the highest in the region, and a net zero commitment by 2050. It plans to retire its remaining coal-

[9] ESG Clarity. Investors 'overly reliant' on ESG ratings. May 2022.

fired plant by 2040, 15 years before the end of its useful life. The company's reported GHG emissions totalled 2,354 $ktCO_2$ in FY2021.[10]

Refinitiv gave AC Energy a C+ (Satisfactory) rating, with an overall ESG score of 47 and Environmental score of 32.

Meanwhile, Origin Energy is a major integrated electricity generator that focuses on gas production, power generation and energy retailing in Australia. Its power generation portfolio capacity comprises 74% of fossil fuels[11] and it operates Australia's largest coal-fired power station. Similarly, Origin Energy has a net zero commitment by 2050 and plans to retire its coal-fired power plants by August 2025.[12] Its GHG emission in FY2021 totalled 17,085 $ktCO_2$.

Refinitiv assigned Origin Energy a rating of B+ (Good), with an overall ESG score of 67 and Environmental score of 57.

Neither the lack of clean energy transition by Origin Energy nor the renewable energy procurement of AC Energy is distinctly reflected in their respective ESG and Environmental scores.

Table 5: AC Energy vs Origin Energy

	AC Energy Corp	Origin Energy Ltd	Deviation (AC Energy – Origin Energy)
Region	Asia	Australia	-
Sector	Electric Utilities and IPP		-
Market Capacity (US$ billion)	5.7	6.7	-
MSCI	**BB (Average)**	**A (Average)**	2 notches lower for AC Energy
Sustainalytics	**43.9 (Severe Risk)**	**34.0 (High Risk)**	**+9.9**
Refinitiv	**C+ (Satisfactory)**	**B+ (Good)**	
ESG Score	**47/100**	**67/100**	**-20**
Environmental Pillar Score	32/100	57/100	-25
Social Pillar Score	49/100	67/100	-18
Governance Pillar Score	73/100	86/100	-13

Source: Thomson Reuters, Bloomberg and IEEFA's analysis. ESG period last updated: June 2022.

Based on the energy profile of both companies, it is expected that Origin Energy's exposure to carbon transition risk, as opposed to AC Energy, is a significant concern. However, the ESG scores do not appear to reflect the elevated risk. Even if other ESG factors are offsetting the overall environmental exposure, the deviation of ESG scores between both companies remains substantial across rating providers.

This suggests that companies that are transitioning into cleaner energy may be underrated in contrast to companies that still have active operations in fossil fuels.

[10] ACEN. Integrated Annual Report FY 2021.
[11] Origin Energy. Annual Report FY 2021.
[12] Origin Energy. Origin proposes to accelerate exit from coal-fired generation. February 2022.

ESG Rating Methodology Remains Arbitrary

There is a lack of transparency in rating agencies' methodologies, with much of it remaining a "black box".

While the general methodology used by individual ratings agencies is made public, the number of ESG indicators, assumptions behind the weightings, treatment of missing information and materiality of ESG risks, as well as how ESG scores are calculated, remain vague and may differ significantly across agencies.

In addition, the availability of climate-related data remains scarce, and its collection is not straightforward. For example, carbon dioxide and GHG emission data are often self-reported by companies themselves[13] and are therefore not able to be audited by third-party sources or ESG providers.

There is a lack of transparency in rating agencies' methodologies, with much of it remaining a "black box".

Relying solely on company disclosures or third-party data without further engagement leaves room for companies to manipulate their ESG credentials, increasing the risk of greenwashing. However, it appears that ESG rating providers' analysts depend on unregulated data and do not have access to non-public information of a company. This differs significantly from a credit analyst who often consults with internal management teams and thoroughly analyses the issuer's operation strategy and rating aspirations.[14]

Thus, investing in sustainable companies requires in-depth analysis of its business model and underlying environmental, social and financial value in the long-term. If this requirement is disregarded, companies that are not sustainable could therefore receive a favourable ESG rating.

In this report, IEEFA analysed Refinitiv's ESG ratings of 7,659 listed companies covering Europe, Asia, Australia and North America based on the latest fiscal year update available as of June 2022.

Refinitiv was the selected provider for our research due to data availability and its global coverage, of which some companies are constituents of various indices such as the Russell 3000 Index. It also captures and calculates over 630 company-level ESG measures. Trends for a subset of 106 utility companies were also analysed based on available renewable energy data as of June 2022.

This analysis based on Refinitiv's ESG score was applied as a proxy and aimed to assess the overall trend of the ESG rating industry in terms of industry, geographical location and company size biases as well as the effect of aggregating ESG scores into

[13] Environmental Finance. Debate: Can self-reporting be effective for investors? November 2018
[14] Income Research + Management. Consistently Inconsistent: Credit Ratings versus ESG Ratings. February 2022.

a single metric. It also includes specific case studies that illustrate how clean energy players or sustainable companies could be underrated due to these trends. See Appendix – Data Profile for further details.

Industry-level Assessment Acts as a Bellwether for ESG Rating

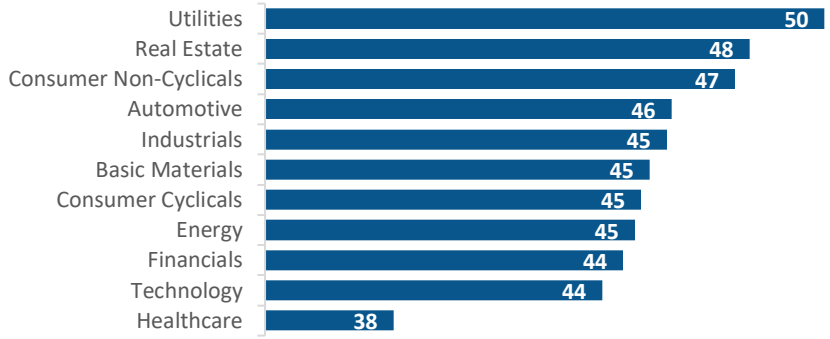
ESG rating methodology largely hinges on industry-level assessment, where ratings are calibrated and normalized based on a company's exposure to industry-specific ESG risk. Therefore, by their very nature, ESG indicators that are considered material vary across industries, as do the overall ESG risks and weightings. In addition, industry ratings can differ significantly across providers.

Looking at the Refinitiv ESG scores of 7,659 companies by industry, the utilities sector had the highest ESG score with an average of 50. It also had the highest environmental and governance scores of 47 and 55, respectively. A higher score reflects good ESG performance and high degree of transparency in public reporting of ESG data.

The utilities sector plays a critical role in the low-carbon transition, particularly utility companies developing clean power. Its high environmental score reflects company efforts to adapt to more sustainable operations including through clear plans to fully decarbonize, diversification of energy sources and investment in technologies that can curb climate change.

However, utility companies that are dependent on fossil fuels to meet energy demand can still attain a favourable ESG score, owing to high regulatory oversight that require stringent policy disclosures[15], which then demonstrates better governance. Additionally, IEEFA's analysis shows that 80% of utility companies have large market capitalisation indicating greater capacity and resources to provide better ESG disclosure.

Figure 1: Average ESG Score by Industry (Out of 100)



Source: Thomson Reuters, Refinitiv ESG Score and IEEFA's analysis.

[15] Moody's. Utilities sector demonstrates generally favorable governance practices. September 2019.

Looking next at the energy sector, it recorded an average ESG score of 45. Oil and gas companies such as fossil fuel producers are among the most susceptible to ESG risk. Negative impacts due to business operations, ranging from, ecological damage, poor safety management to slow energy transition efforts could heighten overall ESG risk and result in lower ESG ratings.

Finally, the healthcare sector scored the lowest with an average ESG score of 38. Much of this drag stems from a low average environmental score of 19 while it had a social and governance scores of 46 and 43, respectively. Emission targets, disclosure of Scope 1, 2 and 3 emissions and other environmental information remains scarce within the sector. This shows the lack of high-quality publicly available ESG information can correspond to a poorer ESG rating.

This "best in industry" approach is resulting in industry biasness as a company's ESG assessment is more reliant on its industry-specific risk exposure.

The above examples illustrate that the industry level ratings are heavily reliant on its identified industry and it does not facilitate cross-industry comparison as well as the dependence of rating providers on a company's ESG disclosure. Consequently, companies typically obtain higher or worse ESG ratings based on its industry operations.

Industry-level ratings are also problematic as they can lead to bias. A telling example of industry bias is Tesla's exclusion from the S&P 500 ESG Index in May 2022 and Exxon Mobil's inclusion. Tesla's score on the S&P Index has remained fairly stable year over year. However, when examined through a wider ESG lens the company had fallen behind its peers in the automotive industry in which it is assessed. Among the contributing factors were a decline in codes of business conduct criteria, claims of racial discrimination and poor working conditions.[16]

The retention of Exxon Mobil in the S&P Index is a more ambiguous result. Based on its latest sustainability report,[17] efforts to reduce methane intensity, as well as investment and development in energy-efficient process technology, may have contributed to a more positive ESG score. This could in turn have contributed to Exxon receiving a better rating than its peers in the energy industry.

There is some clarity from S&P, albeit limited, regarding the removal of Tesla from the ESG Index list. However, questions on the retention of Exxon Mobil and the exclusion of its rival Chevron Corp in this major index remain unanswered, demonstrating the arbitrary nature of ESG ratings.

[16] Standard and Poor (S&P). The (Re)Balancing Act of the S&P 500 ESG Index. May 2022.
[17] Exxon Mobil. Sustainability Report. FY 2021.

This "best in industry" approach is resulting in industry bias as a company's ESG assessment is more reliant on its industry-specific risk exposure, as opposed to its underlying company-specific ESG risk and performance.

Applying Refinitiv scoring methodology as a proxy, industry-specific weightings vary across industries for each of the E, S and G components. These weightings indicate the degree of exposure to environmental, social or governance factors for a particular sector. Thus, a higher weighting can denote higher exposure to and materiality of these factors.

For the automotive industry, the weight of the E pillar accounted for 34% while the S and G pillars comprised a respective 42% and 24% of the total ESG score. The E weighting in this sector is 9% lower than the electric utilities sector, highlighting a lower level of materiality and exposure to environmental risk.

This means that Tesla as a clean energy company may be identified as an industry laggard in terms of ESG performance relative to its peers. However, its substantial contribution to decarbonisation and mitigating climate change have been underestimated based on its industry assessment in the automotive sector.

A company's business operations based on ESG criteria may be positive or stable, but the industry-specific risks and weightings applied for each E, S and G component could skew the overall ESG score and rank the company below its industry peers.

Aggregation of ESG Scores Into a Single Metric

The E, S and G pillars cover a wide range of factors on which each is scored. Aggregating the analysis into a single metric does not precisely reflect the actual ESG performance of a company's operation.

For example, Tesla's efforts in accelerating the transition to sustainability on the back of its electric vehicle production resulted in a favourable or high environmental score of 72.

But other components of the social (58) and governance (58) factors resulted in lower scores and contributed to a downward pressure on its overall ESG score. In this context, a company such as Tesla may have an overall weaker ESG score than its peers despite its efforts to accelerate the transition to sustainable energy.

Table 6: Tesla's Environmental, Social and Governance Score

	Refinitiv ESG Score	Environmental Score	Social Score	Governance Score
Tesla	B (63/100)	72/100	58/100	58/100

Source: Thomson Reuters, Refinitiv ESG Score.

A survey of ESG finance professionals found that 86% of respondents think it should be mandatory for ESG scores to provide the constituent "E", "S", "G" score as individual parameters. In addition, more than 50 % of respondents were in favour of abolishing aggregated ESG ratings and replacing it with individual E, S, G ratings.[18]

To further gauge the impact of aggregating ESG score into a single metric, the differences between individual E, S and G scores for 106 companies in the utilities sector with varying degrees of renewable energy usage were also analysed.

The aim of this analysis is to demonstrate that companies which are truly contributing to the environment through greater renewable energy usage can be underrated due to social and governance factors.

The level of renewable energy usage was determined based on a review of applying Refinitiv's ESG Indicator Scores—Total Renewable Energy To Energy Use in million—shown as a score of between 0 and 1.

For the purpose of this analysis, a score of 0.40 or lower (≤) indicates that these companies have less of a focus on renewable energy while a score greater than 0.40 (>) reflects more focus on renewable energy.

To further gauge the impact of aggregating ESG score into a single metric, the differences between individual E, S and G scores for 106 companies in the utilities sector with varying degrees of renewable energy usage were also analysed.

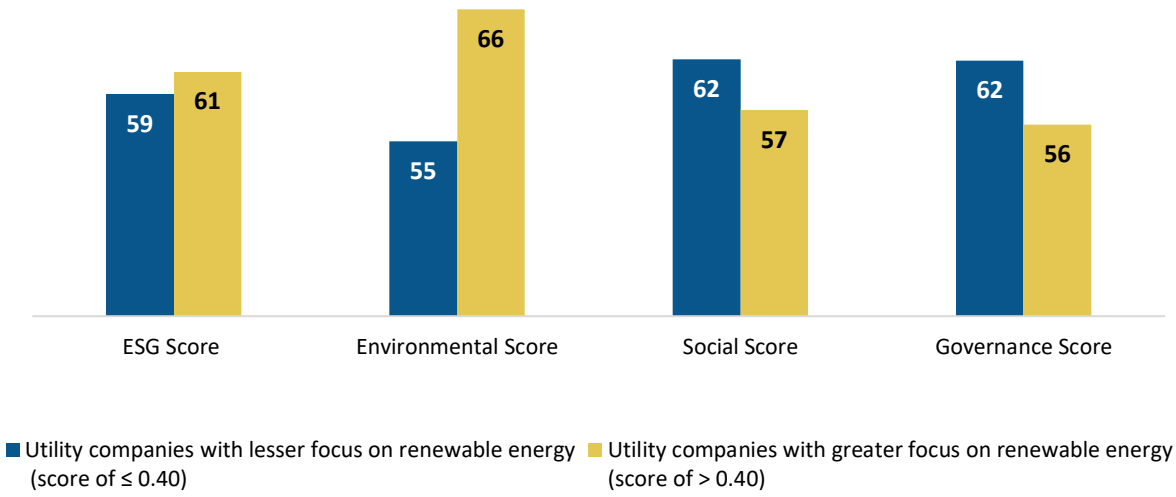
Of the 106 utility companies, those that have greater focus on renewable energy scored an average environmental score of 66, which is 5 points better than its ESG score average (61).[19] The environmental score of this sector made up 42.5% of its total ESG score.

The social and governance components of companies with a greater focus on renewable energy received scores of 57 and 56, respectively. These scores were 4 and 5 points lower than the overall ESG score of 61.

Companies that are less focused on renewable energy (≤ 0.40) have an appropriately lower average environmental score (55) that is 4 points lower than the average ESG score of 59. Meanwhile, social and governance scores charted higher at 62 (7 points higher).

[18] Do We Speak the Same Language? 2 degrees investing. May 2022.
[19] This average score is based on limited pool of companies due to lack renewable energy use data disclosure. Hence, this may not necessarily tally with other exhibits.

Figure 2: Average E, S and G Score – Utilities Sector (Out of 100)



Source: Thomson Reuters, Refinitiv ESG Score and IEEFA's analysis.

This analysis shows that clean energy players or companies with greater focus on renewable energy (> 0.40) usage can be underrated.

Despite a high environmental score, the lower social and governance factors have impacted the overall ESG score. Therefore, an aggregated score does not always provide an accurate interpretation of a company's overall ESG performance.

Disclosure of individual rankings or scoring for each of the E, S and G components and key sub-components that influence these scores could help improve clarity for investors when making decisions on sustainable investments.

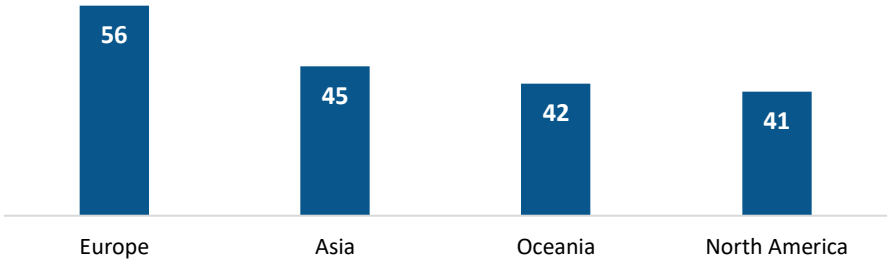
It would also ensure that firms with good environmental or clean energy transition performance are awarded with accurate and favourable scoring metrics.

Implicit Structural Bias in ESG Ratings – Geographical Location and Company Size

Companies in a Region with More Advanced ESG Disclosure Requirements Score Favourably

IEEFA analysis of over 7,600 companies finds that company ESG ratings differ significantly across regions. As shown in Figure 3, European- based companies received the highest average ESG score of 56, compared to companies domiciled in Asia (45), Australia (42) and North America (41).

Figure 3: Average ESG Score by Region



Source: Thomson Reuters, Refinitiv ESG Score.

These scores reflect the lack of standardized regulatory reporting requirements by region and jurisdiction, rather than the actual ESG impact and performance of companies.

More advanced ESG disclosure requirements are observed in the European Union (EU), such as the Non-Financial Reporting Directive (NFRD) for large companies with more than 500 employees. For example, large companies in the EU are required to disclose non-financial information to gauge sustainability risk and are required to publish reports on implemented policies in relation to social responsibility.[20] Guidelines are also provided to help companies disclose environmental and social information.[21] Therefore, this contributed to a more favourable ESG score for Europe compared to other regions.

Given that disclosure of corporate information is a pivotal source for ESG rating providers, providing accurate, complete and standardized data of a company's ESG credentials is a key determinant of an ESG rating.

Consequently, companies in the same industry with similar company-specific attributes are likely to receive diverging ratings depending on the region in which they are established.

To illustrate, Table 7 compares AC Energy domiciled in the Asia region with Albioma SA established in Europe. These two power generation companies essentially share a similar underlying business operation and market capital of around US$2–6 billion.

AC Energy is a power generation company domiciled in Philippines with 87% of renewable share of power capacity. Albioma SA is an independent power producer (IPP), active in biomass energy from sugar cane residues (bagasse), solar and geothermal power.

Commendably, AC Energy and Albioma SA are aggressively expanding their renewable energy portfolios and targets. In FY2021, Albioma's energy mix

[20] European Parliament. Non-Financial Reporting Directive. 2021.
[21] European Commission. Corporate Sustainability Reporting.

comprised 74% in renewable energy,[22] 11% lower than AC Energy. AC Energy shifted towards renewable sources such as solar, wind, and geothermal energy in its generation capacity. Meanwhile, Albioma is expected to phase out coal use, by gradually increasing the share of renewables in its mix to 90% by 2025 through biomass, solar and geothermal energy.

However, in October 2021, S&P removed Albioma SA from its Clean Energy Index due to its high carbon emissions[23] from burning large quantities of wood pellets. In FY2020, the vast majority of Albioma's energy stemmed from coal-fired power stations. Despite its solar power installations and a geothermal energy plant, they accounted for a much smaller share of its electricity generation, compared to its coal and biomass units which use wood pellets.

The emissions from Albioma's biomass production and burning of wood pellets is still bad for climate change. Its planned capacity of burning an estimated 1.4 million tonnes of wood pellets would result in 2,000 ktCO_2 annually.[24] Moreover, bioenergy sources require enormous amounts of land. This additional land capacity typically stems from deforestation, which leads to other environmental impacts in the long term.

Table 7: Case Study on Geographical Bias

	AC Energy Corp	Albioma SA	Deviation (AC Energy –Albioma SA)
Region	Asia	Europe	-
Sector	Electric Utilities and IPP		
Market Capital (US$ billion)	5.7	1.7	-
MSCI	BB (Average)	n.a	-
Sustainalytics	**43.9 (Severe Risk)**	**34.6 (High Risk)**	**+9.3**
Refinitiv	**C+ (Satisfactory)**	**B- (Good)**	
ESG Score	**47/100**	**57/100**	**-10**
Environmental Pillar Score	32/100	65/100	-33
Social Pillar Score	49/100	36/100	+13
Governance Pillar Score	73/100	72/100	+1

Source: Thomson Reuters, Bloomberg and IEEFA's analysis. ESG period last updated: June 2022.

As of June 2022, Refinitiv and Sustainalytics rated Albioma SA more positively compared to AC energy with respective ratings of B- (Good) and 34.6 (High Risk) for Albioma SA compared to C+ (Satisfactory) and 43.9 (Severe Risk) for AC Energy.

Despite the valid assumptions behind the assigned ESG scores, the differences were significant for two companies that share a similar narrative on environmental grounds. This is likely due to the greater disclosure from Albioma SA required under the more advanced ESG data disclosure regulations in Europe.

[22] Albioma SA. The Essential. FY 2021.
[23] Bloomberg. NextEra, Renewables Giants Among 15 Kicked Off Clean Energy Index. October 2021.
[24] Environmental Paper Network, French company's greenwashing unveiled. February 2022.

Moreover, the lack of transparency around ESG rating methodologies by providers means there is not enough information to understand the key factors or indicators examined in their ESG analysis.

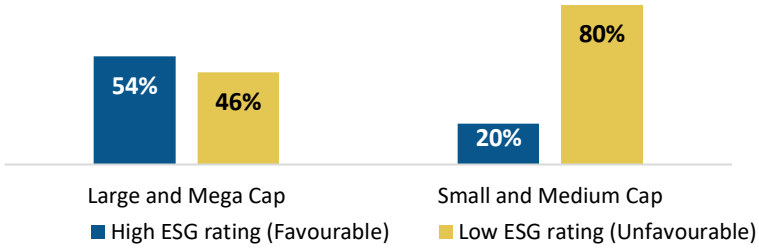
Such discrepancies also highlight the need for the viability of a company's low carbon transition strategy to be incorporated into the ESG rating methodology. A mere shift away from fossil fuels may not meaningfully reflect a company's long-term sustainable operation.

ESG Ratings Are Skewed Towards Large and Mega Cap Companies

Another prevalent bias in ESG ratings is company size. ESG ratings of larger companies are usually assigned with favourable ratings as opposed to small and mid-sized (SME) companies.

IEEFA's analysis of over 7,600 companies finds that 80% of total small and medium cap companies have low ESG ratings. Lower ratings can be attributed to less favourable ESG performance and insufficient transparency of ESG data. Conversely, 54% of large and mega cap companies were assigned with high ESG ratings.

Figure 4: Distribution of ESG Ratings by Company Capital Size



Source: Thomson Reuters, Refinitiv ESG Score and IEEFA's analysis.

This distinct bias reflects the available resources within large firms to provide better quality disclosures. Larger companies are also more accustomed to extensive scrutiny by the public and regulators and are more prepared for ESG data and risk management.

SMEs, on the other hand, have not fared well on ESG ratings due to limited resources for comprehensive and accurate assessments of ESG performance. This could happen despite their business models being deemed to be in line with ESG criteria. The requirement of high-quality frequent disclosures can be capital-intensive, while onboarding relevant expertise[25] may constrain the underlying financial health of these companies.

[25] Organisation for Economic Co-operation and Development (OECD). ESG Investing: Practices, Progress and Challenges. 2020.

In addition, ESG rating providers also lack coverage of smaller companies which further skews results.

Table 8: Case Study on Company Size Bias

	Solaria	Endesa SA	Deviation (Solaria – Endesa SA)
Region	Europe	Europe	-
Sector	Electric Utilities and IPP		-
Market Capital (US$ billion)	2.7	20.5	-
MSCI	n.a	AAA	-
Sustainalytics	21.2 (Low Risk)	17.2 (Low Risk)	+2.5
Refinitiv	B- (Good)	A (Excellent)	
ESG Score	55/100	86/100	-31
Environmental Pillar Score	63/100	79/100	-16
Social Pillar Score	66/100	90/100	-24
Governance Pillar Score	28/100	94/100	-67

Source: Thomson Reuters, Bloomberg and IEEFA's analysis. ESG period last updated: June 2022.

As an example, Endesa SA is an integrated renewable utility in Spain with a market capitalisation of US$20.5 billion. In FY2021, Endesa's net electricity production of 57,592GW comprised of 44% nuclear energy while renewable and thermal production accounted for 15% and 7%, respectively.[26]

Commendably, Endesa has a defined roadmap to reduce coal-based activity, including a 99% reduction by 2022 and a complete cessation by 2027. As of June 2022, Refinitiv assigned Endesa an ESG rating of A, indicating excellent ESG performance and high transparency of disclosed ESG public data while Sustainalytics rated it 17.2 (Low Risk).

Meanwhile, Solaria Energia y Medio Ambiente SA (Solaria) is a leading developer and generator of solar photovoltaic energy in southern Europe. It has a 100% renewable energy production that totalled 862.53 GWh in 2021.[27] The company has targeted the installation of 18GW of emission-free green energy by 2030. Notably, its renewables capacity grew by 123% in the last three years.

Solaria is a renewable energy company with a market capitalisation of US$2.7 billion. As of June 2022, it rated 21.2 (Low Risk) and B- (Good) respectively by Sustainalytics and Refinitiv.

Based on the assigned ratings, a wholly renewable energy player such as Solaria received a less favourable ESG rating (55) compared to Endesa (86), an integrated utility which is currently dependent on nuclear and fossil fuel sources.

As one of the leading electric utilities in Spain, Endesa undoubtedly garners more attention and increased scrutiny of its operations. It is also a large company and

[26] Endesa SA. Statement of non-financial information and sustainability. FY 2021.
[27] Solaria Energia. Sustainability Report. FY 2021.

therefore has greater ability and more resources to provide updated and thorough ESG disclosure, compared to Solaria.

This reflects how company size may have a role to play in the deviation of ESG scores, particularly the environmental score. Despite its contributions to a low-carbon economy and emphasis on a sustainability strategy, a smaller company may not measure up against a larger one that is still reliant on nuclear and fossil fuel sources.

In the example above, Endesa's and Solaria's ESG ratings do not seem to match their core operations, underscoring the size and capital biases of the rating mechanism. Smaller companies with greener or cleaner business operations may be downplayed for their lack of disclosure.

The overall ESG rating system is highly reliant on a company's level of disclosure of ESG performance, resulting in regional and company size biases. IEEFA's analysis shows that overall, companies with lower disclosure levels are likely to perform worse than those with better disclosure.

However, providing excessive disclosure does not necessarily translate into meaningful impacts and actions. It is possible that a company with a sustainable operation but lower disclosure could be rated below its peers.

It is possible that a company with a sustainable operation but lower disclosure could be rated below its peers.

These entrenched biases and misrepresentations of a company's actual ESG performance, on top of the ambiguity associated with ESG ratings, could underrate clean energy players and subsequently misalign investment decisions.

Recommendations for Enhancement

ESG ratings are increasingly important for companies' assessment of their long-term value creation. While absolute objectivity by ESG rating providers is almost unattainable, a lack of standardisation and transparency and varying proprietary methodologies will result in diverging and conflicting ESG views.

Whether due to industry, geographical location or company size, these rating biases may represent an inaccurate ESG performance and project a greater risk than reality.

As illustrated earlier in this report, clean energy players are underrated, despite their positive environmental contributions and efforts to mitigate climate change.

Investors wanting to make sustainable investments need to identify and evaluate the pros and cons of complex methodologies for the most appropriate ESG rating before making an investment decision.

Instead, ESG rating providers should ideally align their objectives, measurements, methodologies and final ESG outcomes. While that has not been the case in practice, there are some things that ESG providers or regulators can do.

A standardized and specific definition as to what an ESG rating should seek to measure is critical as there is no clear objective and consistent definitions. Currently, most ESG ratings providers are inconsistently measuring a company's long-term value creation in line with ESG criteria and neglecting the environmental and societal impact of a company.

ESG rating providers should prioritize double materiality, which includes both financial and impact materiality. This allows investors to earn a financial return while also making a positive impact on the environment and society.

In line with this, an updated ESG+Impact rating system proposed by Proof of Impact[28] could be considered. This rating would include the evaluation of data quality, practices in ESG and impact management (e.g. based on Sustainability Development Goals (SDG))[29] as well as a performance rating based on a company's ESG related KPIs (e.g. GHG emissions, gender diversity and employee turnover). This approach would be more comprehensive and easier to integrate into the current ESG rating system, which focuses solely on financial materiality.

Adopting universally accepted ESG disclosure frameworks is pivotal. This will enable a standard, complete and comparable ESG data disclosure, paving the way in aligning ESG methodologies and converging ESG ratings to an extent. Additionally, it would also help investors to make well-informed decisions based on a rating that accurately represent a company's ESG performance and enables comparability between companies irrespective of the sector, geographical region or company size.

There is also a prevalent lack of adequate details and credibility in the critical renewable energy disclosure, which is based on estimates by ESG providers, third-party resources or the company itself, including a company's Scope 1, 2 and 3 emissions and climate transition plans.

IEEFA's analysis of 267 utility companies finds that only 40% disclosed complete and material metrics related to renewable energy usage. Strengthening rating providers' or companies' renewable energy disclosure is needed to gauge overall low carbon transition measures. Renewable energy procurement[30] such as new renewable generation added to the grid,[31] viability of clean energy strategy and carbon reduction should be distinctly addressed in ESG scoring methodologies.

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[28] Proof of Impact. Double Materiality Benchmarking. August 2022.
[29] United Nations. SDG Impact Standards.
[30] Greenbiz. The latest trends in renewable energy procurement. May 2021.
[31] ESG 2.0 How to Improve ESG Scoring to Better Reflect Renewable Energy Use and Investment. September 2019.

A green revenue indicator could help gauge the proportion of a company's revenue that is truly "green", such as the disclosure of renewable energy power generation revenue.[32]

A comprehensive approach to ESG reporting that includes financial and impact reporting factors such as renewable energy procurement, green revenue indicators, and level of carbon transition readiness (high, medium, or low) would strengthen ESG credentials and improve ESG ratings' validity.

A single metric for an ESG score may not be appropriate for investors with a specific ESG focus, such as climate change or human development. Therefore, a mandatory reporting of each E, S, and G pillar separately, as well as sub-key components that influence these scores, would accurately reflect a company's key drivers and risk in terms of ESG performance.

Given that ESG ratings are highly reliant on transparent ESG disclosure by companies themselves, a disclosure vs performance score would be valuable. A disclosure score examines the level of information disclosure by companies with a focus on qualitative indicators, while a performance score measures ESG performance with an emphasis on quantitative indicators.[33] This is to ensure that investors can objectively measure a company's relative ESG performance by minimising transparency or disclosure biases.

In addition, a more transparent ESG rating methodology disclosure by rating providers including key weightings, treatment of missing information, sub-indicators, ESG risk materiality assessment and their underlying key assumptions could guide investment screening. This would provide more clarity on the criteria applied in identifying key ESG factors and subsequently help investors understand changes in (upgrade/downgrade) and the calculation of ESG rating scores.

ESG rating providers should also disclose ESG rating transition over time or provide an accuracy rate. Credit rating agencies undertake a similar approach, by disclosing the accuracy rate and credit transition to indicate the stability of ratings assigned over time. Similarly, the accuracy and credibility of ESG ratings could be reflected in stable ratings, with no steep or drastic changes since its initial rating assignment. This would help investors to evaluate the validity of the provider's ESG rating source and incentivize ESG providers to constantly improve their ESG rating performance model or approach.

Overall, a regulatory intervention in the ESG rating sector is necessary. A unified approach through regulatory initiatives would refine necessary areas to reduce the incidence of misconception about the purpose, methodology and results of ESG ratings. ESG ratings will be meaningful to investors and companies when this sector is regulated and has a common language.

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[32] AsianInvestor. ESG with Chinese characteristics? Ping An upgrade puts green scores in context. August 2022.
[33] Yahoo!Finance. Ping An Upgrades AI-based ESG Evaluation System to Drive Responsible Investment. July 2022.

In IEEFA's view, effective regulation would define the purpose of ESG ratings while also improving the consistency and transparency of its measurement, methodology disclosures, and the accuracy of the underlying rating.

Conclusion

There is inevitably ample room for improvements in existing ESG rating systems. As this report has shown, the shortcomings and biases of ESG ratings are downplaying companies that are truly undertaking and adapting to sustainability-related changes. Greening efforts of companies in transition or contributing to a low-carbon economy could risk being underrated.

The lack of consensus on the measurements of ESG ratings would inevitably lead to mispricing of stocks and bonds, and inaccurate inclusion or exclusion of a company in investment strategies.

The ESG rating sector needs to be clear about the trade-off between financial returns and environmental or societal impact. While these fundamentally sustainable companies may be based in a region where ESG disclosure is not mandatory, have a smaller capital size, and be deemed risky due to their inherent industry, their business operations are making the world a better place and that should not be overlooked.

ESG ratings should be a tool that helps investors to make sustainable investment decisions, where environmental, social and corporate governance (ESG) factors are all considered to achieve both long-term competitive financial returns and positive environmental and societal impact.

A more defined, transparent and consistent ESG rating system through the adoption of universally accepted ESG disclosure frameworks, more transparent ESG rating methodology disclosure by rating providers, a standardized and specific definition of ESG rating as well as impact materiality integration in ESG data reporting and rating, among other considerations, can ensure that ESG rating could encourage sustainable investment.

Resolving these shortcomings will take time and is no easy task. By focusing their efforts, companies, rating providers and regulators could maximize the full potential of ESG ratings.

Appendix

ESG Rating Scales by Selected Providers

ESG Provider	Score range	Grade	Rating Scale Description	Measurement Description
REFINITIV ESG Score	0.916666 < score <= 1	A+	'A' score indicates excellent relative ESG performance and high degree of transparency in reporting material ESG data publicly.	Measures the company's ESG performance based on verifiable reported data in the public domain.
	0.833333 < score <= 0.916666	A		
	0.750000 < score <= 0.833333	A-		
	0.666666 < score <= 0.750000	B+	'B' score indicates good relative ESG performance and above-average degree of transparency in reporting material ESG data publicly.	
	0.583333 < score <= 0.666666	B		
	0.500000 < score <= 0.583333	B-		
	0.416666 < score <= 0.500000	C+	'C' score indicates satisfactory relative ESG performance and moderate degree of transparency in reporting material ESG data publicly.	
	0.333333 < score <= 0.416666	C		
	0.250000 < score <= 0.333333	C-		
	0.166666 < score <= 0.250000	D+	'D' score indicates poor relative ESG performance and insufficient degree of transparency in reporting material ESG data publicly.	
	0.083333 < score <= 0.166666	D		
	0.0 <= score <= 0.083333	D-		
SUSTAINALYTICS ESG Risk Rating	0 – 10	n.a	Negligible Risk	Measures a company's exposure to industry-specific material ESG risks and how well a company is managing those risks.
	10 – 20		Low Risk	
	20 – 30		Medium Risk	
	30 – 40		High Risk	
	40+		Severe Risk	
MSCI Industry Adjusted Company Score to Letter Ratings	8.571* – 10.0	AAA	Leader	Measures a company's management of financially relevant ESG risks and opportunities. Identifies industry leaders and laggards according to their exposure to ESG risks and how well they manage those risks relative to peers.
	7.143 – 8.571	AA		
	5.714 – 7.143	A	Average	
	4.286 – 5.714	BBB		
	2.857 – 4.286	BB		
	1.429 – 2.857	B	Laggard	
	0.0 – 1.429	CCC		

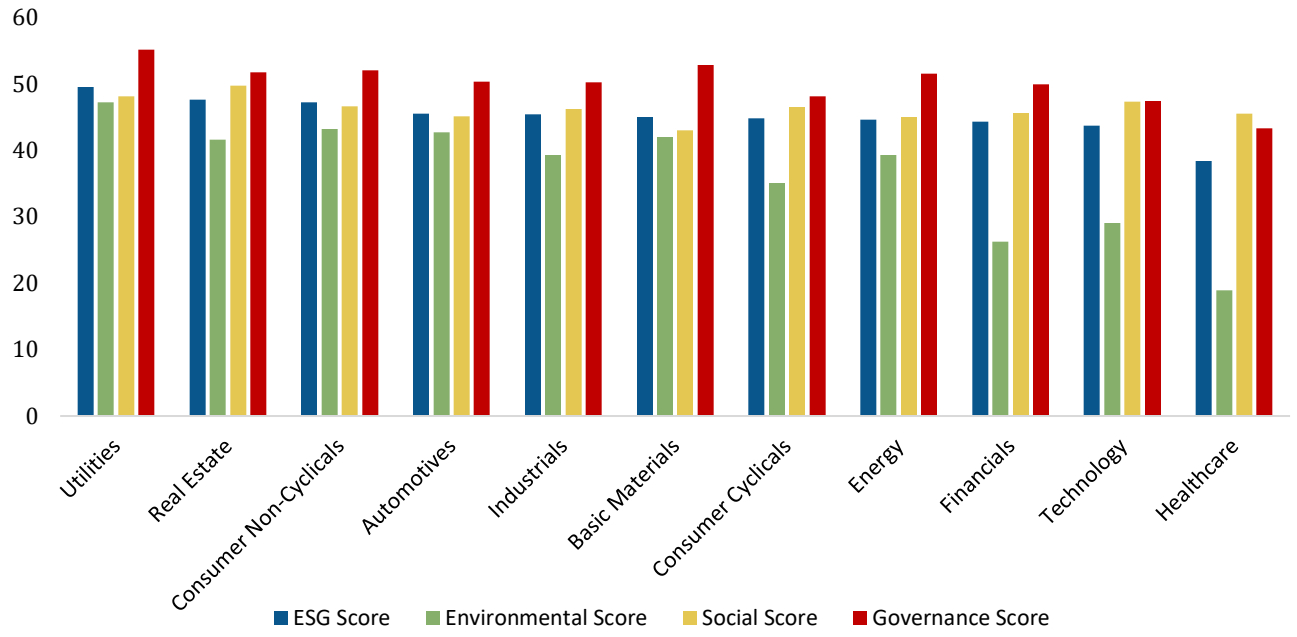
Source: Author compilation from respective ESG rating methodologies.

Data Profile

Profile	Number of Companies	Description
By Region	**Count of Companies**	
Europe	1077	n.a
Asia	2319	
Oceania	445	
North America	3816	
Total	***7657***	
By Industry	**Count of Companies**	
Healthcare	1007	n.a
Technology	1049	
Financials	1025	
Energy	421	
Consumer Cyclicals	854	
Basic Materials	683	
Industrials	1095	
Automotive	187	
Consumer Non-Cyclicals	493	
Real Estate	576	
Utilities	267	
Total	***7657***	
By Capital Size	**Count of Companies**	
Small Cap/Medium Cap	3349	Less than or equal to USD 1.5 Bil
Large and Mega Cap	4304	In between USD 1.5 bil to 2,200 bil
Total	***7653***	
By Renewable Energy Focus	**Count of Utility Companies**	
Lower Renewable Energy Focus	40	Utility companies with lesser focus on renewable energy (score of ≤ 0.40)
Greater Renewable Energy Focus	66	Utility companies with greater focus on renewable energy (score of > 0.40)
Total	***106***	

Source: Author compilation. The data are based on the latest fiscal year data available as of June 2022.

Average Environmental, Social and Governance score by industry



Source: Thomson Reuters, Refinitiv ESG score and IEEFA's analysis.

About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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