ESG Measurement

Subjects: Environmental Sciences
Contributor: Shirley Kempeneer

Investors are currently obliged to take environment, social, and governance (ESG) issues into consideration as part of their fiduciary duty. As such, it becomes increasingly important to identify sustainable investments that also hold financial value. A sector where this is especially underdeveloped is real estate.

ESG | sustainable finance | smart real estate | sustainable real estate | user wellbeing | social sustainability | environmental sustainability

1. Introduction

In the last two decades, promulgated by the financial crisis and the Paris Climate Agreement, global concerns about climate change and business ethics have fueled interest in environmental, social, and governance (ESG) issues and their associated risks [1]. However, interest in non-financial information and notions of socially responsible investment (SRI) and corporate social responsibility (CSR) have been around much longer, gaining momentum due to historical events, such as civil and women's rights movements [2]. The term ESG was coined in a 2004 United Nations (UN) report titled "Who Cares Wins", aimed at raising awareness about the importance of environmental, social, and corporate governance issues for financial markets. A year later, the UN Environmental Program's Finance Initiative (UNEP-FI) provided evidence on the financial relevance of ESG issues and promulgated the use of ESG information in investment decisions. Moreover, UNEP-FI's 2019 report on "fiduciary duty in the 21st century" describes how ESG issues are increasingly integrated into regulatory and legal requirements for institutional investors, warning that investors who fail to take ESG into account will likely face legal challenges [3].

As such, a dual purpose can be identified in the use of ESG. Initially, investors focused on the value of ESG issues in and of themselves, stressing the environmental and social costs and benefits. Over time, other investors became interested in ESG from a more financially focused position, where sustainability is taken into account more rationally in function of its material costs and benefits. Eccles, Lee, and Stroehle (2020) call these two approaches the values-based, and value-based approach, respectively. Although analytically distinct, the two approaches often coincide in practice, where both the societal and financial benefits of sustainable investment are deemed important. Today, regardless of more altruistic or pure financial motives, investors increasingly have no way around incorporating ESG considerations in their investment decisions, as it has become an almost global legal prerequisite [3]. As such, investors and their clients are increasingly interested in finding profitable sustainable investments.

Over the past years, a substantial body of research has focused on understanding the relationship between financial and nonfinancial investment performance. The consensus to date is that paying attention to ESG issues can generally lead to better financial performance [4][5][6][7][8], although this body of literature is rife with uncertainty. A sector where this relationship is particularly unclear is real estate. When it comes to real estate investments and asset management, there are many mixed and contradictory findings. The catchall statement that any improvement in ESG would automatically lead to higher investment value is untrue. Conclusions range from finding no correlation at all between ESG and financial performance [9][10][11], to mixed results [12][13][14], with several cases even showing an inverse relationship [5][15][16]. However, some studies do give evidence of a positive relationship, often emerging in the long run [17][18]. To complicate the matter further, it is in many cases still unclear what it means to improve ESG factors in the first place.

This is for a large part due to a lacking universal conceptualization of ESG and a divergence in ESG measurement practices among rating agencies, practitioners, and academics [19][20]. This divergence can be traced back to the diverging value and value-based philosophies mentioned earlier. Depending on the indicator selection, measurements, and weights applied, different assessments of the same company's ESG performance may diverge [2]. A better contextualization of findings is necessary to determine which interventions can improve ESG factors in the first place, and secondly which of those hold additional financial benefits for investors. Most of the literature to date has neglected the role of the user of the building in all of this. As such, this paper fills the knowledge gap of how user behavior might affect both the ESG value of real estate as well as its investment value.

2. The Current State of ESG Measurement

Environmental, social, and governance measurements have significantly increased in usage due to growing concerns for environmental and societal problems. They increasingly influence financial decisions, with potentially far-reaching effects on asset prices and corporate policies [5][10]. ESG rating agencies offer investors a way to screen companies for ESG performance in a similar way to how credit ratings allow investors to screen companies for creditworthiness. However, despite this similarity, there are important differences between ESG ratings and credit ratings. The key difference is that while creditworthiness is relatively clearly defined as the probability of default, there are no commonly agreed-upon measurement criteria for ESG ratings yet. Moreover, research suggests that rather than using generic criteria, ESG ratings should be sector-specific, as key ESG concerns are bound to differ over sectors, such as real estate, healthcare, finance, telecommunications, and others [21]. This lack of conceptual validity leads to divergences in ratings, creating confusion both at the investor and company level and raising a call for more conceptual clarification [22][23].

2.1. Aggregate Confusion

Transparency and disclosure are fundamental to sustainable finance. Thus, for thirty years, information gathering and reporting have been viewed as a priority. Some well-known initiatives include the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), the Carbon Disclosure Project (CDP), the International Integrated Reporting Council (IIRC), and the Task Force on Climate-related Financial Disclosures

(TCFD). The aim of all of these initiatives is to provide a framework by which it becomes possible to measure externalities, internalities, and the level of sustainability of a particular investment [24]. However, disclosure is only useful when one can make sense of the information disclosed. This is hampered by the divergence in ESG measurement practices.

Divergence in ratings is driven by three distinct measurement causes: divergence in scope, divergence in indicators, and divergence in aggregation rules. First, divergence in scope refers to the situation where ratings or measurements are based on different sets of attributes, such as labor practices or lobbying activities. One rating agency may include both, while another may include neither, causing ratings to diverge. Secondly, divergence in indicators means that different rating firms use different indicators to measure the same attribute, such as labor practices, again, leading to different scores. Finally, divergence in aggregation rules appears when firms attribute different weights to attributes. As these are all intertwined, it makes it difficult to interpret ratings and understand divergence in scores. For instance, Berg et al. (2019) show the category “environmental reporting” is included in ratings from Sustainalytics, RobecoSAM, Asset4, and Vigeo Eiris, but not taken into account by MSCI and KLD. Moreover, Sustainalytics uses two indicators to measure this category, while the others use only one. Finally, Sustainalytics and RobecoSAM attribute a higher weight to this category than the others.

The root cause of these differences can be explained by multiple factors. Agencies may use different metrics because of different ideologies, as mentioned earlier. More pragmatically, they can simply focus on different factors, because processing all the information contained in disclosures may be too costly [25][26]. The underlying issue here is that it is in many cases unclear which interventions benefit ESG factors to which extent, and, as such, which attributes, indicators, and weights should be applied. This makes it nearly impossible to decide which rating agency or measurement procedure is “the right one”. Take Tesla, which was given a top ESG score by MSCI, ranking the company best in the global car industry; however, it simultaneously made the bottom of the FTSE’s list, and ended up somewhere in the middle on Sustainalytics ESG ranking—all acclaimed rating agencies, all with different outcomes [27].

2.2. A Road to Standardization

Although “disclosing ESG issues” is increasingly seen as part of the fiduciary duties of investors, it is not at all clear what exactly should be disclosed. The plethora of existing (national) labelling schemes and requirements use different criteria to determine which economic activities qualify as sustainable, confusing investors and discouraging them from investing across borders due to difficulties in comparing different investment opportunities. This has led to wide-spread calls for standardization of ESG measurement to combat the inefficient proliferation of rating agencies and measurement standards.

The European Union (EU) has recently answered this call, publishing a new EU taxonomy classification system to start closing this gap, which is to be implemented by January 2022/2023 [28]. This process started in December 2016, when the Commission mandated a High-Level Expert Group to develop an overarching and comprehensive Union strategy on sustainable finance and ESG in order to help reach the sustainable development goals and implement the European Green Deal. By providing EU-wide appropriate definitions to companies, investors, and policymakers on what is considered sustainable, the EU hopes to enable and shift investments towards more sustainable ones.

It is important to note that “sustainable finance” is predominantly interpreted as environmental sustainability, with the current taxonomy focusing exclusively on six environmental goals. To be sure, there is a cursory mention that economic activities must comply with minimum international human and labor rights and standards to qualify as environmentally sustainable (which can be seen as a social element). Additionally, it is stated that other sustainability goals, including social objectives, will be developed at a later stage (EU/2020/852)—even noting that a report is planned for 31 December 2021 describing the provisions required to extend the scope of the regulation to include social objectives. Still, the social dimension of ESG and sustainability remain grossly neglected.

References

1. Dorfleitner, G.; Halbritter, G.; Nguyen, M. Measuring the level and risk of corporate responsibility–An empirical comparison of different ESG rating approaches. J. Asset Manag. 2015, 16, 450–466.
2. Eccles, R.G.; Lee, L.-E.; Stroehle, J.C. The Social Origins of ESG: An Analysis of Innovest and KLD. Organ. Environ. 2020, 33, 575–596.
3. UNEP-FI. Fiduciary Duty in the 21st Century. 2019. Available online: (accessed on 20 January 2021).
4. Wong, W.C.; Batten, J.A.; Ahmad, A.H.; Mohamed-Arshad, S.B.; Nordin, S.; Adzis, A.A. Does ESG certification add firm value? Financ. Res. Lett. 2021, 39, 101593.
5. Cajias, M.; Fuerst, F.; McAllister, P.; Nanda, A. Do responsible real estate companies outperform their peers? Int. J. Strat. Prop. Manag. 2014, 18, 11–27.
6. Xie, J.; Nozawa, W.; Yagi, M.; Fujii, H.; Managi, S. Do environmental, social, and governance activities improve corporate financial performance? Bus. Strat. Environ. 2019, 28, 286–300.
7. Abdi, Y.; Li, X.; Càmara-Turull, X. Impact of Sustainability on Firm Value and Financial Performance in the Air Transport Industry. Sustain. J. Rec. 2020, 12, 9957.
8. Signori, S.; San-Jose, L.; Retolaza, J.L.; Rusconi, G. Stakeholder Value Creation: Comparing ESG and Value Added in European Companies. Sustain. J. Rec. 2021, 13, 1392.
9. Hebb, T.; Hamilton, A.; Hachigian, H. Responsible Property Investing in Canada: Factoring Both Environmental and Social Impacts in the Canadian Real Estate Market. J. Bus. Ethic. 2010, 92, 99–115.
10. Siew, R.Y.; Balatbat, M.C.; Carmichael, D.G. The relationship between sustainability practices and financial performance of construction companies. Smart Sustain. Built Environ. 2013, 2, 6–27.

11. Holtermans, R.; Kok, N. On the Value of Environmental Certification in the Commercial Real Estate Market. Real Estate Econ. 2017, 47, 685–722.
12. Alareeni, B.A.; Hamdan, A. ESG impact on performance of US S&P 500-listed firms. Corp. Gov. Int. J. Bus. Soc. 2020, 20, 1409–1428.
13. Marzuki, M.J.; Newell, G. The evolution of Belgium REITs. J. Prop. Investig. Financ. 2019, 37, 345–362.
14. Nekhili, M.; Boukadhaba, A.; Nagati, H. The ESG-financial performance relationship: Does the type of employee board representation matter? Corp. Gov. Int. Rev. 2020, 12345.
15. Kuykendall, J. 5 Year Analysis of Company ESG Ratings Verses Financial Performance. Ph.D. Thesis, University of Nevada, Reno, NV, USA, 2019.
16. Auer, B.R.; Schuhmacher, F. Do socially (ir)responsible investments pay? New evidence from international ESG data. Q. Rev. Econ. Financ. 2016, 59, 51–62.
17. Lu, W.; Ye, M.; Chau, K.; Flanagan, R. The paradoxical nexus between corporate social responsibility and sustainable financial performance: Evidence from the international construction business. Corp. Soc. Responsib. Environ. Manag. 2018, 25, 844–852.
18. Friede, G.; Busch, T.; Bassen, A. ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. J. Sustain. Financ. Investig. 2015, 5, 210–233.
19. Veenstra, E.M.; Ellemers, N. ESG Indicators as Organizational Performance Goals: Do Rating Agencies Encourage a Holistic Approach? Sustain. J. Rec. 2020, 12, 10228.
20. Glass, J.; Glass, J. The state of sustainability reporting in the construction sector. Smart Sustain. Built Environ. 2012, 1, 87–104.
21. Halbritter, G.; Dorfleitner, G. The wages of social responsibility—where are they? A critical review of ESG investing. Rev. Financial Econ. 2015, 26, 25–35.
22. Berg, F.; Kölbel, J.F.; Rigobon, R. Aggregate Confusion: The Divergence of ESG Ratings. SSRN Electron. J. 2019.
23. Leiringer, R. Sustainable Construction through Industry Self-Regulation: The Development and Role of Building Environmental Assessment Methods in Achieving Green Building. Sustain. J. Rec. 2020, 12, 8853.
24. University of Cambridge Institute for Sustainability CISL. Module 3 Unit 2 Disclosure, Scalability and Drivers for Change, in Course on Sustainability Leadership, Module 3 Unit 2, 2020. Available online: (accessed on 20 January 2021).
25. Merton, R.C. A Simple Model of Capital Market Equilibrium with Incomplete Information. J. Financ. 1987, 42, 483–510.

26. Bonsall, S.B.; Miller, B.P. The impact of narrative disclosure readability on bond ratings and the cost of debt. Rev. Account. Stud. 2017, 22, 608–643.
27. Van Hamme, K. Goede Bedoelingen Zijn Geen Goede Beleggingen. De Tijd, 16 March 2019.
28. Regulation (EU) 2020/852. Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the Establishment of a Framework to Facilitate Sustainable Investment, and Amending Regulation (EU) 2019/2088. Available online: (accessed on 20 January 2021).