

Information Intermediaries and Sustainability

ESG ratings and benchmarks
in the European Union

Matteo Gargantini and Michele Siri

The purpose of the ECMI Working Paper Series is to promote the circulation of work in progress prepared within the European Capital Markets Institute or presented at ECMI Seminars and Conferences by outside contributors on topics of special interest to ECMI.

The views expressed are those of the author(s) and do not necessarily represent the position of ECMI.

Publisher and editor European Capital Markets Institute
Place du Congrès 1, 1000 Brussels, Belgium
www.ecmi.eu
ecmi@ceps.eu

Editorial Board Karel Lannoo and Apostolos Thomadakis

© Copyright 2022, Matteo Gargantini and Michele Siri. All rights reserved.

Information Intermediaries and Sustainability: ESG ratings and benchmarks in the European Union

Matteo Gargantini and Michele Siri*

No. 15 / November 2022

Abstract

The relatively new world of ESG indicators displays many similarities with the original markets for ratings and benchmarks but it also has some distinguishing features. This paper explores to what extent the regulatory strategies that were developed in 'traditional' financial law to support confidence in ratings and benchmarks can be exported to the 'new' world of ESG finance. It concludes that policymakers should be cautious when transposing rules from the 'old world' to the 'new' one.

This is especially the case with ESG ratings, for which credit ratings are the immediate reference for regulation with the common label of 'rating' being rather misleading and leading to the risk of an anchoring effect in the design of new rules. First, due to their multivariate nature, the assessments underlying ESG ratings are often more subjective than those supporting traditional indicators. Second, there seems to be a higher risk of regulatory failures connected to the authorisation and registration labels in the new world of sustainability.

The paper therefore suggests that the legal framework for financial analysts could be a more suitable model to consider at this stage and that the initial approach to ESG ratings should mostly focus on disclosure.

* Matteo Gargantini, University of Genova, Genoa Center for Law and Finance; Michele Siri, University of Genova and SUSFIN, University of Zurich. The authors wish to thank Veerle Colaert and the participants of the EUSFiL Conference of 9 September 2022 for their comments on a previous version of this paper. All errors remain the authors' sole responsibility.

This paper has received the Best Paper Award at the 2022 Annual Conference of the European Capital Markets Institute (ECMI). Financial support from ECMI is gratefully acknowledged.

Contents

- 1. Information intermediaries in financial markets: the old, the new, and the not-so-new ... 2
 - 1.1 Market failures and information intermediaries..... 2
 - 1.2 Different notions of sustainable finance 3
- 2. Sustainability ratings 4
 - 2.1 Sustainability ratings, credit ratings and investment recommendations compared ... 5
 - 2.1.1 Services and methodologies 5
 - 2.1.2 Market structure..... 8
 - 2.2 What do ESG ratings measure?..... 9
 - 2.3 The quality of ESG ratings 10
 - 2.4 A risk of overreliance?..... 11
 - 2.4.1 Avoiding regulatory licences..... 11
 - 2.4.2 The need for simplification in the investment process..... 14
- 3. Sustainability indices and benchmarks 16
 - 3.1 The role of sustainability indices and benchmarks 17
 - 3.2 Governance of administrators and data providers for sustainability benchmarks 18
 - 3.3 Disclosure and labelling of sustainability benchmarks..... 21
- 4. Stocktaking: market failures and how to address them 23
 - 4.1 Regulatory and market failures in the old and the new world –
how different are they?..... 23
 - 4.2 Learning from the past: ‘The \$64,000 Question’ game show 25
- Bibliography..... 27

Sustainable finance has been steadily expanding over the last few years. Financial products that qualify as ‘sustainable’ (or display equivalent labels such as ‘green’ or ‘ESG-compliant’) represent a significant portion of capital markets – according to some metrics, the value of sustainable assets under management (AUM) at the end of 2021 was equal to USD 2.74 trillion worldwide, with EU-domiciled funds having an 80 % lion’s share ([Morningstar 2022](#)). The regulatory lining of this impressive growth was an explosion of new European rules aimed at addressing a broad array of concerns that surround investors’ reliance on the quality of sustainable financial products. At the time of writing, other measures are also in the pipeline to fill regulatory gaps and to update statutes that only entered into force only a few years ago.

Key elements in the development of sustainable finance are sustainability ratings, benchmarks and indices or listing requirements that support investment decisions in this field. In turn, firms providing these services rely on external reviewers to ascertain the reliability of the data they use to release a sustainability rating or include a financial instrument in an index. All these entities are collectively referred to as ‘information intermediaries’ due to their role in the analysis of data and the production of synthetic indicators that other financial market participants can use when determining the composition of their portfolios. Due to their importance in the world of sustainable finance, information intermediaries have been – or will be – made subject to specific rules, with the ultimate purpose to foster investors’ trust in the quality of the financial products that are labelled as sustainable.

The overall impression is that a brand-new area of European law is developing that mirrors in many respects the ‘old’ world of financial law, and that this exercise will rapidly generate a system whose complexity is comparable to that of traditional financial law. In this paper, we will rely on this parallel between the law of sustainable finance and traditional financial law to explore the role and the regulation of information intermediaries in supporting ESG targets in the European Union (EU).

In particular, we will explore to what extent market failures that justify the regulation of traditional information intermediaries can also explain (from a positive perspective) and shape (from a normative perspective) existing and prospective rules on information intermediaries in the world of sustainable finance within the EU. By the same token, we also consider whether regulatory failures from the past have been – or, respectively, should be – considered in the design of that regulatory framework. The analysis proceeds as follows: Section 2 provides a synthetic theoretical framework for the analysis; Section 3 addresses ESG ratings; Section 4 deals with ESG indexes and benchmarks; and Section 5 concludes with some policy recommendations.

1. Information intermediaries in financial markets: the old, the new, and the not-so-new

A key objective of financial regulation is to prevent market failures. These are situations where equilibria resulting from the free interactions among market forces determine suboptimal outcomes in terms of efficiency and, therefore, in terms of social welfare maximisation (Lambert 2017). Among the various market failures that taint financial markets are asymmetric information and agency costs, both of which are particularly relevant to understand the role and the functioning of information intermediaries.

1.1 Market failures and information intermediaries

Free interactions in the market for financial assets may lead to misallocation of resources when some investors are unable to access the same information their counterparty possesses. This dynamic leads to typical adverse selection and moral hazard problems, and exacerbates agency costs after the investment is made. The nature of financial products as experience or credence goods makes asymmetric information particularly intractable because investors will only have full knowledge of the quality of their purchase long after the decision to invest – possibly as far into the future as the maturity date. Or they may not even gain this knowledge by the maturity date, when it proves impossible to tell whether the unsatisfactory performance of the investment is due to mismanagement (normally to be assessed in the light of the business judgment rule) or to the vagaries of market conditions. For ESG factors, even measuring performance can be a complex matter and lead to no clear-cut result.

While the party to the contract who is in possession of material information may have strong incentives to share their superior knowledge to prove the quality of the asset they are selling, finding ways to convey credible signals may prove difficult despite the commitment of market participants – especially in the financial sector. As has been outlined by interinstitutional economics, some firms developed precisely to help address transactions costs, including the negative consequences of asymmetric information and agency costs, some firms developed precisely to help address transactions costs, including the negative consequences of asymmetric information and agency costs. Such firms do so by gathering relevant data and by disseminating, as a specific output, derived information of a synthetic nature that is easier for investors to handle. For this reason, such entities are normally referred to as ‘information intermediaries’. In so doing, they also give credibility to the information they release by putting their reputation on the line in a way that their clients (or the public at large) can trust. This kind of credibility explains why such entities are also labelled as ‘reputational intermediaries’.

Unfortunately, the market for informational intermediaries’ services is subject, in turn, to the same kind of market failures that taint the market for financial products, although with a different level of intensity. In this paper, we will discuss the role and the functioning of two informational (or reputational) intermediaries, namely sustainability rating agencies and index providers, and will explore how regulation does (and should) approach the market failures that impact their activities.

1.2 Different notions of sustainable finance

All markets are, with variable intensity, prone to asymmetric information or agency problems, and the markets for traditional and sustainable finance are no exception. However, the dynamics of these market failures are not necessarily identical in the ‘old’ and the ‘new’ world.

In a traditional setting, material information includes all the data the investors involved in the transaction would use as a basis for their investment decisions¹, and particularly the factors that determine the risk/return profile of the financial product. How different things can look when ESG factors come into play depends on the context.

In a first scenario, investors may include ESG factors in their strategies because they believe that aligning with sound ESG practices will (most likely) have a positive effect on returns or reduce the risks to which the investments are exposed (‘outside-in perspective’)². Here, the new world of sustainability is, indeed, not entirely new. Factoring ESG criteria into the definition of the portfolio is not qualitatively different than factoring other relevant criteria that measure financial risks. In this context, due consideration to sustainability improves the assessment of investments by including a broader range of relevant data in the analysis. This does not mean, however, that the regulatory problems are identical to those of traditional finance. Methodologies for the definition of ratings as well as indices and benchmarks may need to be adjusted. Moreover, the specific nature of the data that it chosen to be included may trigger ‘garbage in, garbage out’ problems that are peculiar to ESG criteria.

In a second scenario, investors may want to look not so much (or not only) at the quality of their investments alone, but rather (or also) at the impact of those investments on ESG targets (an ‘inside-out perspective’), regardless of the potential ability of these consequences to backfire on the risks or the returns of their exposure. This approach, which is less profit-oriented and more focused on pure sustainability, is very different from the traditional approach. This is because the information that the asymmetry refers to is focused not so much on the issuer as such, but rather on all (or some) of the many consequences the investment can have on each of the elements that the environmental, social and governance pillars comprise.

To be sure, the boundaries between the two scenarios may be subjective. For instance, metrics that assess the risk of principal adverse environmental impacts of an investee company (the inside-out perspective) are crucial for evaluating the reputational and liability risks of that company³. To distinguish between the outside-in and the inside-out perspectives of sustainability metrics, this paper relies on the European Commission’s distinction between the

¹ We borrow here the paradigm of the model investor in EU law (see in particular Article 7(4) Regulation (EU) 596/2014 on market abuse – MAR).

² European Commission, 2021, *Proposal for a Directive as regards corporate sustainability reporting* (COM(2021) 189 final) (21 April 2021), 1.

³ See [Bengo et al. \(2022\)](#) classifying metrics of principal adverse impacts on sustainability factors as pertaining to the assessment of long-term financial risks.

two prongs of double materiality, one that looks at how non-financial factors affect the value of the company, the other at the impact of the company's activities on ESG factors⁴. It therefore looks at what ratings, indices and benchmarks measure rather than how users can include those assessments in their decision-making processes.

The following sections will flesh out how the differences between the old, the new, and the not-so-new world play a role in the positive and normative analysis of the legal frameworks on information intermediaries in sustainable finance. The analysis will then proceed with some reflections on the most suitable regulatory strategies to address the market failures that affect ESG ratings and benchmarks. As we shall see, these services are often subject to more pervasive and more intense market failures compared to their traditional equivalent. However, this does not automatically lead to the conclusion that stricter regulation is required. First, market failures leading to large welfare losses may originate from simple dynamics that light-touch strategies can successfully tackle. Second, pervasive strategies may lead to heightened regulatory failures, which might more than compensate for the reduction of market failures.

2. Sustainability ratings

An explosion of sustainability-related products has fuelled the burgeoning market for sustainable investments, and sustainability ratings have played an essential role in this development. For this reason, sustainability ratings have been in policymakers' spotlight since the outset of the agenda for sustainable finance, even though this has not yet led to *ad hoc* reforms. Already in its 2018 Action Plan, the Commission identified the lack of a clear framework for sustainability ratings as an area of concern⁵. More recently, the 2021 Action Plan anticipates that the Commission will 'take action to improve the reliability and comparability of ESG ratings'⁶.

The urge to adopt measures addressing SRAs is the result of a combination of the rapid increase in the number of products and suppliers with a generalised perception that such a development has not been met by adequate levels of transparency. This applies first and foremost to what ESG ratings are actually measuring. In line with the broad distinction we drew in Section 2.2, the main dividing line differentiates 'ESG risk ratings', which focus on issuers' exposure to ESG risks and assess issuers' ability to manage such risks (outside-in perspective), from 'ESG impact ratings', whose purpose is instead to measure the overall effects of issuers' operations on sustainability factors (inside-out perspective) (ESMA 2020; Larcker et al. 2022).

⁴ European Commission, 2019, *Communication. Guidelines on non-financial reporting: Supplement on reporting climate-related information* (C(2019) 4490 final) (17 June 2019), 6-7.

⁵ European Commission, 2018, *Action Plan: Financing Sustainable Growth* (COM(2018) 97 final) (8 March 2018), 7-8 (Action 6).

⁶ European Commission, 2021, *European Commission, Strategy for Financing the Transition to a Sustainable Economy* (COM(2021) 390 final) (6 July 2021), 16 (Action 4).

2.1 Sustainability ratings, credit ratings and investment recommendations compared

While sustainability (or ESG) rating agencies (SRAs) may be regulated entities for other activities they perform (ESMA 2022), the preparation and dissemination of sustainability (or ESG) ratings is not, for the time being, a regulated activity and it does not require any authorisation or registration. In this subsection, we compare sustainability ratings with the closest activities that are currently regulated, namely credit ratings by credit rating agencies (CRAs) and investment recommendations by financial analysts.

2.1.1 Services and methodologies

SRAs do not qualify as CRAs as they do not assess the creditworthiness of debtors or debt instruments. First, they address equity and debt indifferently. Second, when they deal with debt, they do not measure credit risk (or the issuers' ability to pay back their debt).

The services offered by traditional CRAs consist of assessing the creditworthiness of a debtor or of a financial obligation, quantified through a system of symbols that ranks the result of the evaluation (Article 3(1)(a) Regulation (EC) 1060/2009 on credit rating agencies – CRA Regulation). As we mentioned, this exercise can hardly ignore the risks stemming from ESG factors (High-Level Expert Group on Sustainable Finance 2018). For this reason, CRAs stress they include ESG factors in their methodologies (S&P Global Ratings 2022), although with few details on the assessment criteria⁷.

To help shed light on these aspects, ESMA has adopted specific guidelines to enhance disclosure about which key driving factors, among those that determined a rating or an outlook, CRAs consider to be ESG factors and the reasons why they were material (ESMA 2019). At the same time, ESMA has also stressed the importance of not considering credit ratings as an opinion on the sustainability of the rated entity and has suggested that rules mandating the inclusion of ESG factors in CRAs' methodologies be avoided (ESMA 2019). However, the Commission has more recently maintained its commitment to ensure that CRAs consider those factors when determining credit ratings and credit outlooks⁸, so that some more pervasive rules can be expected to come in the near future.

As SRAs do not provide an assessment of creditworthiness, they do not qualify as CRAs under EU law. At the same time, SRAs do not typically convey their conclusions through communications that directly or indirectly propose an investment decision. Hence, SRAs are not financial analysts for the purpose of Market Abuse Regulation, either (Regulation (EU) 596/2014 – MAR). While one can imagine that robust financial analysis can hardly ignore sustainability-related risks, financial analysts do not appear to make broad use of ESG data

⁷ European Commission, *Summary Report: Targeted consultation on the functioning of the ESG ratings market in the EU and on the consideration of ESG factors in credit ratings* (3 August 2022), 4-5; Daniel Cash, 2021.

⁸ European Commission (n 6), 12, 14 (Action 3).

([Hinze and Sump 2019](#)), mostly because they do not trust the reliability of such information ([Abhayawansa 2018](#)).

This shows how the availability of trustworthy ESG ratings and benchmarks is still not optimal, which is likely a symptom of market failures. This situation may connect to the more challenging task SRAs face compared to CRAs and financial analysts. The main difference lies with the higher complexity of the multivariate analyses that underlies their exercise. To begin with, significant uncertainties surround data reliability, which may lack the support of quality assurance mechanisms comparable to those used for credit ratings ([European Commission and ERM 2021](#)). Even if one leaves aside these concerns and trusts external reviewers, many scholars criticise the robustness of ESG ratings in general, as they rely on backward-looking information and are prone to inevitable shortcuts as well as to issues in the identification of causation ([Ingo 2020](#)).

To give just an idea of the arduous methodological choices underlying ESG ratings and of their implications, let us briefly focus on the different perspectives that can be adopted to define the impact of certain activities on greenhouse gases⁹. Some investors may prefer to avoid investing in any activity that significantly contributes to carbon dioxide emissions, and therefore may prefer not to fund any fossil-intensive products at all (constant approach¹⁰). Others may instead start from the assumption that fossil-intensive industrial processes are still entrenched in the economic system and, therefore, reward firms that rely on those processes but credibly strive to improve them (the dynamic approach). The methodologies of sustainability ratings SRAs can and do adopt one or the other criteria ([Pagano et al. 2018](#)), which is understandable in the light of heterogeneous investor preferences. Yet ESG ratings may also diversify their criteria depending on the geographical area of the concerned issuers¹¹. For instance, they can adopt a stricter approach for developed countries and a more flexible one for developing countries – at this point, different metrics could be adopted to weigh the level of a particular country's development.

Other uncertainties may surround differentiations between a constant and a dynamic approach based on the nature of the financial instrument. For instance, equity instruments may accommodate for dynamic criteria better than debt, if only because they allow investors to have a voice in the investees' governance¹². However, how much greener the investment could

⁹ A comparison of ESG rating methodologies can be found in [Larcker et al. 2022](#).

¹⁰ This static assessment is also the most common among the technical screening criteria (TSC) defined in Regulation (EU) 2021/2139, which supplements Regulation (EU) 2020/852 (Taxonomy Regulation). However, not only does Regulation 2139 also include dynamic TSC, but all the TSC are subject to periodical revision to keep pace with technological development (Platform on Sustainable Finance, *Public Consultation. Report on Taxonomy extension options linked to environmental objectives* (July 2021), 16, available at <https://ec.europa.eu>).

¹¹ Ibid.

¹² See e.g. Recital 6 and Article 3 Regulation (EU) 2020/1818 (requiring equity EU Climate Transition Benchmarks and equity EU Paris-aligned Benchmarks to retain exposure to oil, gas, mining and transportation. On these benchmarks see section 4.3 below).

be would depend on the asset manager's engagement policy or the institutional investors as well as on the implementation thereof, which are both difficult to measure objectively.

Also casting doubts on ESG rating is the discretionary nature of the weight of each indicator (such as the tons of carbon dioxide released into the atmosphere over a certain period) in the pertinent criterion (such as climate risk). The same applies to the aggregation of each rating criterion into its respective pillar (such as gathering environmental factors – 'E'), let alone into the overall ESG rating¹³. While quantifying the relative importance of indicators within the context of ESG risk ratings may be challenging, it becomes entirely subject to value-judgement in ESG impact ratings.

Interactions with issuers are also a sensitive part of methodologies. While disclosure to ESG rating agencies of inside information remains subject to the limitations of the market abuse regime (Articles 10 and 18(1)(a) MAR)¹⁴, the communication of other confidential information is not subject to limitations under EU law. Some ESG rating agencies, nonetheless, commit to rely only on publicly available information in their methodology (MSCI 2022; Pagano et al. 2018 p. 357). This reduces the risk that ESG ratings may be subject to capture, although at the risk of reduced accuracy.

The same trade-off affects the sharing of preliminary results with issuers. Once again, market practices are diverse. Some ESG rating agencies anticipate their draft assessment and collect feedback from the issuers (Sustainalitics 2021), while others make the report public and rely on issuers' initiative in case of complaints (MSCI 2022). This is of course a sensitive practice, which may reduce the risk of mistakes but may facilitate capture when combined with issuer-pays remuneration models (AMF and AFM 2020). Frequent exchanges of information in this fashion have reportedly contributed to the inflation of credit ratings for structured finance (securitisation) transactions that preceded the 2007-8 financial crisis (Gene 2018; European Commission 2016). For this reason, these practices are subject to ESMA's scrutiny for CRAs (Articles 17(1)(c), 18(a) and Annex VII(2)(c) and (4)(g) Regulation), and financial analysts that are banks, investment firms or independent analysts must disclose whether the recommendations they release have been disclosed to the relevant issuers and, if so, whether they have been consequently amended (Article 4(1)(a) Regulation (EU) 2016/958).

Concerns about conflicts of interest also stem from the joint provision, in addition to sustainability ratings, of advice or other services that support corporates and financial market participants in the definition of their ESG risk profile (MSCI). Once again, the history of credit ratings shows that rating agencies may have an incentive to be more lenient towards clients that purchase additional services from them (ESMA 2022, p. 19). Today, CRAs are subject to organisational requirements for the identification, management and disclosure of conflicts of interest (Article 6(4) and Annex I(A)(7), (B)(I) and (E)(I) CRA Regulation).

¹³ Ibid, 333-4. For a breakdown of the steps that lead from ESG indicators to ESG ratings see Neisen 2021.

¹⁴ On the potential nature of ESG-related information as inside information see Mülbart and Sajnovits 2021.

For financial analysts, the regulatory framework relies instead on disclosure alone, but it does so with more detailed provision. This difference reflects two different regulatory strategies. Where supervisors are policing conflicts of interest, as is the case with CRAs, disclosure towards the public at large does not play as important a role as it does when, in the absence of a registration system, investors directly assess the kinds of conflicts they are willing to tolerate, as is the case with financial analysts.

For financial analysts, transparency addresses all relationships and circumstances that may reasonably be expected to impair the recommendation's objectivity, including interests or conflicts of interest, including financial interests and the provision of other services to the issuer. For banks and investment firms, this information also includes the internal organisational and administrative arrangements as well as Chinese walls that have been set up for the prevention and avoidance of conflicts of interest. For the same entities, the contents of the recommendations given (such as 'hold', 'buy' or 'sell') are disclosed with a breakout that shows the percentage of the recommendation's content that concerns issuers that the analyst has provided investment or ancillary services in the previous year (Articles 5 and 6 Regulation (EU) 2016/958).

2.1.2 Market structure

Although mapping ESG rating providers is not always easy (Douglas 2017), the market structure of ESG ratings displays remarkable similarities with that of traditional credit ratings, thus raising comparable regulatory concerns. According to ESMA, the market is divided into two segments. The first comprises large firms based in third countries that hold a significant market share. Small EU-based providers with no market power make up the second segment. Overall, this reveals a relatively high level of market concentration (Larcker et al. 2022), which appears to increase over time (ESMA 2022, p. 3 and 19)

Just like in the realm of CRAs, competition is a double-edged sword when it comes to regulatory concerns (Coffee 2006; Dombalagian 2011). On the one hand, as in any other market, low market concentration easily leads to allocative efficiency and it may reduce the systemic impact of major misjudgements. On the other hand, some market power enables incumbent firms to reduce the risk of rating shopping.

Unsurprisingly, traditional players in the market for credit ratings have also entered the market for sustainability ratings (Cash 2021, p. 1-2), partially through the direct provision of those services and partially by external growth via acquisitions (AMF and AFM 2020, p. 5). These developments may be the result of various factors, possibly in combination. The most obvious one seems to be the synergy between the methodologies supporting credit ratings and sustainability ratings. Even if the traditional methodologies can hardly be transplanted in the sustainability segment, ESG factors became part of the risk analyses supporting credit

ratings. Therefore, firms developing expertise in measuring ESG factors from an outside-in perspective will likely develop economies of scope when assessing inside-out impacts.

More uncertain is the role of reputational capital. On the one hand, brands play a role for reputation intermediaries, so that a well-established name can leverage on the trust gained in the old market to attract customers to the new one. At the same time, it appears that some rating agencies prefer to allocate ESG-related services in separate organisational units and to sell them with distinct brands. This strategy may respond to the fear that the low quality of ESG ratings may backfire, causing reputational damage to the main brand.

Finally, SRAs are mostly paid by investors, which somewhat reduces the risks of conflicts of interest. However, the issuer-pays model is also widely used, so that the risk of some rating shopping may exist also for sustainability-related assessments (ESMA 2022, p. 3).

2.2 What do ESG ratings measure?

The obvious distinction between ESG risk ratings and ESG impact ratings raises some regulatory concerns from the perspective of transparency. While the bulk of the available ESG ratings are in fact risk ratings (European Commission 2021, p. 58), the public at large – and reportedly even professional investors – seems to believe that those ratings measure issuer ability to promote ESG factors (impact ratings) (Simpson 2021). As we mentioned, there may be good reasons why a company that performs well from an outside-in perspective might do so because of its positive impact on ESG factors. This is for the simple reason that a smaller environmental footprint or better care for societal and governance matters will likely reduce corporate exposure to the corresponding regulatory, reputational and liability risks. However, the reverse may not be true because there are other actions that may improve ESG risk scorings, including hedging strategies.

In this regard, an essential regulatory measure would be to mandate the disclosure of the very nature of the ESG ratings involved. This form of transparency should refer not only to the alternative between outside-in and inside-out perspectives, but also to other forms of ESG ratings that only measure instrumental factors, such as the availability and (possibly) the quality of non-financial disclosure documents (ESMA 2020, p. 17). For ratings that have a composite nature, rating agencies should also quantify the weight of each approach in their methodology.

A different question relates to the regulatory approach that can best support the development of ESG impact ratings in a world where private incentives are mostly supporting ESG risk metrics (Chiu 2022). As we shall see, in the world of sustainability benchmarks, a soft-law provision delivered good results, but a ‘comply or explain’ rule for ratings could further support the mechanisms by asking for a justification of the decision by SRAs not to publish any ESG impact ratings.

2.3 The quality of ESG ratings

But there are other concerns surrounding the methodology of ESG ratings – and particularly of ESG risk ratings – due to their larger market share. Sustainability metrics try to convey soft information through symbols that are typical of hard data, or at least information than can be quantified, such as the probability of default in credit ratings. This sits uneasily with the nature of sustainability as soft information, which makes it often more amenable to being assessed than to being measured (Edmans 2020).

Therefore, it is not surprising that a growing literature has noticed low levels of correlation among ESG ratings addressing the same issuers. (Kumar et al. 2020; Berg et al. 2022; Gibson et al. 2021; Chatterji et al. 2016; Dimson et al. 2020; Cleary 2022). Inconsistent outputs are not necessarily a matter of concern, the question being whether they result from the noncongruent scope of the underlying assessments (looking at different ESG factors would justify different ratings), dissimilar methodological assumptions (ESG ratings may legitimately rely on different indicators when measuring the same criteria) or different levels of robustness in the methodology or the quality of data. Therefore, one should not rush to the conclusion that low correlation is a sign of poor quality, as only the third alternative would reveal a market failure.

Unfortunately, the empirical literature does not rule out the third alternative, which leaves the question of the reliability of ESG ratings open (European Commission 2021, p. 120-1 and 172-3). While some qualified opinions believe that divergences among ESG ratings are more pronounced at an aggregate level and tend to disappear at the more granular stage of indicators (EU Technical expert Group on Sustainable Finance 2019), part of the empirical literature reaches opposite conclusions¹⁵. This seems to show that ESG ratings may be even less consistent than a superficial analysis would imply, as different assessments of indicators could compensate each other in the aggregations that lead to the final score¹⁶. Any regulatory measure on ESG ratings will therefore have to deal with their methodology if it wishes to restore trust.

For the sake of comparison, CRAs are subject to a detailed set of rules and to strict supervision over their methodology. Substantive requirements include the duty to ensure that ratings are based on a thorough analysis of all the available information, that such information is reliable and originates from reliable sources. The methodologies shall be ‘rigorous, systematic, continuous and subject to validation based on historical experience, including back-testing’, and they should entail a review of the ratings every year (twice a year for sovereign ratings). Methodologies should be reviewed on an annual basis and, in case of material changes, these should be subject to public consultation (Articles 8(2)-(7) and Annex I(A)(9) CRA Regulation; Articles 4-7 Regulation (EU) No 447/2012).

¹⁵ Berg et al. 2022 noticing that poor methodology may explain low correlation among ESG ratings.

¹⁶ Dimson et al. 2020 showing that divergence among SRAs assessments is not only at the ‘macro’ ESG level, but also at ‘micro’ E, S, or G levels.

Transparency requirements support the substantive regime by mandating the disclosure of the methodologies, models and key assumptions underlying credit ratings, including the mathematical or correlation assumptions (Article 8(1) and Annex I(D)(2)(b), (2a), and I(E)(I)(5)). All these requirements are subject to ESMA supervision, subject to the Authority's duty not to interfere with the contents of the ratings or their methodology (Articles 22a and 23 CRA Regulation).

The regulatory regime for financial analysts also relies on substantive and information requirements but its provisions have a more open texture. Investment recommendations must clearly distinguish facts from interpretations and estimates, and have to refer to reliable sources of information (a warning is added in the case of uncertainty as to their reliability). Financial analysts shall also make public their basis of valuation and methodology, together with their underlying assumptions, or information on the proprietary models they use. A summary of these data must accompany each recommendation, together with a sensitivity analysis of the assumptions.

An overview of all the recommendations disseminated during the previous year is also made public, together with the price target and the relevant market price at the time of dissemination and the validity time period of the price target or of the recommendation (Articles 3 and 4 Regulation (EU) 2016/958). As to supervision, financial analysts are bound to substantiate their recommendations to the competent authority upon request (Article 3(3)).

2.4 A risk of overreliance?

Even though not all results are conclusive, empirical evidence can provide hints to financial market participants and policymakers. The low level of correlation among ESG ratings plays a role because this lack of certainty about the quality of the underlying assessment does not seem to reduce their use by investors, which is reportedly widespread¹⁷. Just like with traditional CRAs, overreliance is a matter for both market participants and regulators to consider (Articles 5a, 5b and 5c CRA Regulation), and the regulatory implications of overreliance depend in part on whether such reliance is spontaneous or induced by the applicable rules. The following subsections explore to what extent the regulatory framework relies on ESG ratings, and to what extent financial market participants are induced to refer to ESG ratings, even in the absence of explicit requirements.

2.4.1 *Avoiding regulatory licences*

Regulatory failures stemming from overreliance on ratings are particularly intractable. The risk is that rules incentivising the use of sustainability ratings may lead to an implicit licence that directly or indirectly adopts ratings as a requirement to enter the market. As the credit ratings experience has demonstrated (Partnoy 1999), this approach can magnify the systemic consequences of misjudgements. In the world of sustainability ratings, this risk can manifest

¹⁷ Deloitte 2021 reporting that 65 % of investors declare to use ESG assessments at least once a week.

itself through overinvestments in assets that turn out to be not as sustainable as expected. In this regard, however, policymakers seem to have learned from the past and the current regulatory framework should be praised for its attention in avoiding blind recourse to ESG ratings by market participants (Steuer and Tröger 2022). EU provisions defining transparency obligations for financial market participants perfectly illustrate this point.

Financial market participants must disclose their policies on the integration of ‘sustainability risks’ in their decision-making process, be it part of an investment or advisory activity (Articles 3 and 6 Regulation 2019/2088 on sustainability-related disclosures in the financial services sector – SFDR)¹⁸. In this context, ‘sustainability risks’ refers to possible future occurrences that, if materialised, can ‘cause an actual or a potential material negative impact on the value of the investment’ (Article 2(22) SFDR), which is relevant from an outside-in perspective (Chiu 2022, p. 92). Remarkably, no reference is made to ESG or credit ratings in any of these rules. Therefore, while the inclusion of ESG or credit ratings in the financial market participants’ statements is certainly not prohibited, nothing in this regime determines an implied regulatory licence in favour of sustainability rating agencies.

Even more evident is the lawmaker’s care in avoiding excessive reliance on ESG ratings from an inside-out perspective. Here, disclosure is also due at entity level and product level, in this latter case through both pre-contractual and periodic information. The central legal concept for such disclosure is that of adverse impacts on sustainability factors (Article 2(24) SFDR), which market participants have to identify and prioritise based on their due diligence policy – the requirement is mandatory for large market participants and applies on a ‘comply or explain’ basis otherwise (Article 4(1)(a) and (2)(a) SFDR)¹⁹. Entity-level and product-level disclosure include reference to the ‘indicators’ adopted to measure principal adverse sustainability impacts (Articles 4(2)(a) and 7(1), par 2, SFDR). This also applies to products that claim to ‘promote’ environmental or social characteristics (Articles 8 and 10 SFDR – ‘light green products’) or have ‘sustainable investments’ as their objective (Articles 9 and 10 SFDR – ‘dark green products’)²⁰.

How ‘green’ a financial product can be is, of course, not just a matter of purpose, as in the alternative between light and dark green. It also depends on the allocation of investments among alternative assets (Articles 5, par 2, and 6 Regulation – Taxonomy Regulation).

¹⁸ For corresponding organisational duties for AIF and UCITS managers see Regulation (EU) 2021/1255 and Directive (EU) 2021/1270, respectively.

¹⁹ This is mandatory for large financial market participants, i.e. for firms having more than 500 employees. For smaller firms, an alternative exists to declare that no consideration is given to those adverse impacts, subject to a duty to explain why (‘comply or explain’ approach (Art. 4(1) SFDR)).

²⁰ Consistency between indicators adopted for entity-level and product-level disclosure is ensured by cross references between Arts 2a (for the ‘do no significant harm’ principle), 4(6) and (7) (for entity-level indicators concerning the principal adverse impacts on climate and environmental matters and, respectively, social and employee matters) as well as 7(1), par. 2, SFDR (for product-level disclosure of principal adverse impacts). See also Arts 10 and 11 for website and periodic reports on those matters.

Quantifying this allocation may be up to discretion, however, because the exercise involves the selection of suitable metrics and criteria for their aggregation. This is another area where the SFDR defines standardised methodologies to ensure comparability. In so doing, the SFDR also reduces the need to resort to metrics provided by external suppliers, such as ESG rating agencies. In particular, the default key performance indicator to measure the ratio of the taxonomy-aligned investments and the total investments underlying the product is the turnover (Recitals 36 and Articles 15, 17 and 19 Regulation (EU) 2022/1288)²¹. The aggregation of the data on the ‘green’ turnover occurs on the basis of the specific activity (Annex II Regulation (EU) 2022/1288).

The regulatory licence effect in favour of ESG ratings has also been carefully avoided for benchmarks. As we shall see²², benchmarks play a crucial role in orienting investors’ decisions on sustainable finance, so that reliance on ratings in that context would bring back what was thrown out by the SFDR. In the framework of the European Benchmark Regulation (Regulation (EU) 2016/1011 on indices used as benchmarks – Benchmark Regulation), disclosure obligations concerning the role of ESG factors in the index are drafted in such a way that all the many references to ESG ratings are marked as ‘voluntary’ (Annex II Regulation (EU) 2020/1816).

One last way to reduce a regulatory-induced demand for ESG ratings is to ensure that there is no need to translate issuer information on ESG factors into different metrics under other mandatory disclosure frameworks, such as the SFDR. In this regard, ongoing regulatory efforts are aiming to ensure that common reporting standards for issuers under the forthcoming Directive on corporate sustainability reporting (CSRD,²³ the successor of Directive 2014/95/EU on non-financial reporting – NFRD) are aligned with the indicators financial market participants have to adopt for their investment products or advisory services (ESMA 2022). This should help streamline the information flow from the raw data to disclosure provided under the SFDR without the mandatory involvement of sustainability ratings in the process.

Finally, the consequences of the low correlation among ESG ratings also reverberate on prudential regulation. This is an area where reliance on credit ratings is embedded in the law, a regulatory choice that has already raised criticisms because of the risk it creates in jeopardising bank stability (Kern 2014). Such concerns apply even more to the inclusion of sustainability factors in the definition of own funds and capital requirements (Zetzsche and Anker-Sørensen 2022).

This expansion inevitably relies on the availability of robust methodologies and, for the standardised approach to the definition of capital requirements, on the fact that ECAs actually adopt them. These are matters that EBA has already considered from an outside-in

²¹ Capital expenditure (CapEx) and operational expenditure (OpEx) are the available alternatives, but their adoption requires the disclosure of the reasons why they are able to reflect the features of the portfolio better than the turnover (ESAs Joint Committee 2022).

²² See section 4 below.

²³ See European Commission (n 4).

perspective²⁴. Policy choices on the role assigned to ESG ratings would become critical should the regulatory framework consider focussing on the inside-out prong of double materiality through any means, including adjustments of own funds requirements based on sustainability supporting factors or capital buffers targeted on ESG-related concerns (Dankert et al. 2018; Neisen 2021). For the time being, disclosure duties on ESG risks due under Article 449a Regulation (EU) No 575/2013 (Capital Requirement Regulation – CRR) do not make express reference to ESG ratings, which shows awareness of these matters from the supervisory side (EBA, 2022).

2.4.2 *The need for simplification in the investment process*

The previous section tested the level of regulators' reliance on ESG ratings, and it concluded that this is relatively low. However, direct legal requirements are not the only reason why financial market participants make use of rating services. Investment decisions consist of relatively simple elements (buy or sell a certain quantity at a certain price at a certain time), but they often involve decision-making processes that factor in a very broad set of information on the potential target assets. Sustainability ratings help this process because they equally reduce the complexity of ESG factors to the simplicity of symbols (Dombalagian 2011, p. 63-4).

The importance of sustainability ratings therefore stems from the natural tendency to use synthetic indicators to simplify difficult decision-making processes (Steuer and Tröger 2022, p.7). This inclination is well known to EU policymakers, which require CRAs to warn users that ratings are merely the opinions of CRAs 'and should be relied upon to a limited degree' (Article 8(2) CRA Regulation). Regardless of such warnings, there is however a clear interest in reducing the costs of decision-making and ratings perfectly satisfy this demand. Rational and less rational attitudes co-mingle to magnify the effect of this reliance. On the one hand, there are obvious economies of scale and specialisation factors that make recourse to ratings an efficient way to take decisions. On the other hand, availability and representativeness heuristics may boost reliance on ratings even when their accuracy is notoriously low (Avgouleas 2009).

The traditional concerns about the passive approach towards the use of credit ratings are all the more pertinent to ESG ratings. As we have seen, not only are the metrics on which ESG ratings rely prone to uncertainties but the aggregation of those metrics into synthetic indicators relies on subjective assumptions. In spite of the detailed regulatory framework of the SFDR and the Taxonomy Regulation, many open questions remain as to its implementation by financial market participants. For instance, it is uncertain to what extent the quantification of a 'significant harm' under the SFDR, on the one hand, and the Taxonomy Regulation, on the other hand, can rely on identical quantification techniques (Busch 2021; ESA Joint Committee 2022, p. 11). At the same time, the disclosure of 'principal adverse impacts' and compliance with the 'do no significant harm' principle require the use of the same indicators but the relationship

²⁴ EBA, *Report on Management and Supervision of ESG Risks for Credit Institutions and Investment Firms* (EBA/REP/2021/18) (2021), § 33-42 (focusing on the outside-in perspective) and §§ 135-139 (identifying issuer in the use of ESG ratings and similar metrics).

between the two measures remains blurred and entail, especially for the latter requirement, broad discretion in the assessment (ESA Joint Committee 2022, p. 10-11).

Some of these uncertainties are not necessarily inherent to ESG-related regulations and progressive clarifications may help to solve them. Others, however, seem more ingrained with the very need to handle complexity when aggregating activity-level metrics, first into investment-level or company-level and then into product-level ones. Economic ‘activities’ are the main target of the Taxonomy Regulation and are the reference point for the definition of ‘sustainable investments’ in the SFDR. However, the SFDR refers the ‘do no significant harm’ principle to the ‘investment’ and requires compliance with good governance practices by companies for an investment to qualify as ‘sustainable’ (ESA Joint Committee 2022, p. 11). Yet at another – different – level of granularity, disclosure duties under the SFDR require aggregation at the product and entity level.

There are various ways to combine the building blocks of more granular metrics (such as those referring to the assets) to produce more general indicators (such as those referring to the entity). For instance, one may prefer to proceed with a strict proportionality principle that mirrors the disclosure on the alignment of the asset allocation of ‘light green’ and ‘dark green’ products with the Taxonomy Regulation²⁵. Industry may follow other criteria, however. For instance, financial market participants may decide to only deem activities as ‘green’ that pertain to companies that also meet, in combination with other activities, certain requirements. These could include a minimum percentage of green turnover or the absence of principal adverse impacts on ESG factors (Pierron and Carabia 2022).

For the reasons highlighted at the outset of the section, financial market participants, such as institutional investors and asset managers, have strong incentives to rely on information intermediaries to fill these gaps between information concerning the investee activities and the labelling (in terms of greenness) as well as the disclosure duties that accompany their products.

However, financial market participants can only be satisfied that the quality of an asset with a good ESG score is consistent with their investment strategy after thoroughly checking the assumptions and the methodology underlying that opinion. In this regard, disclosure of the methodology on the model of credit ratings should be a requirement for sustainability rating agencies (Article 8(1) and Annex I(E)(I)(5) CRA Regulation)²⁶. In a context where different methodologies may lead to divergent results, overreliance on ESG ratings is even more detrimental than in the traditional segment of credit ratings.

Therefore, financial institutions should endeavour to run an internal assessment of the investment and refrain from implicitly outsourcing the evaluation of ESG criteria to ratings. Once again, this would mirror the requirement that financial institutions do not ‘solely or mechanistically rely on credit ratings for assessing the creditworthiness of an entity or financial

²⁵ See text accompanying n 21 above.

²⁶ Enhanced transparency on methodologies was suggested already in the Commission’s 2018 Action Plan (n 5).

instrument' under Article 5a CRA Regulation. A major difference would be, however that ESG ratings do not seem to have as many alternatives as credit ratings have. While the latter can be complemented by market-based tools such as information on the pricing of bonds or credit default swaps, in the case of sustainability assessment, internal assessment methodologies seem to be the only viable solution²⁷.

One may also wonder whether low rating consistency strengthens the need for measures that support the engagement of small rating agencies, as is the case with the soft law provision asking issuers to consider appointing an additional credit rating agency with no more than 10 % of the total market share (Art. 8d CRA Regulation). In the credit rating market, this measure aims to reduce the market power of large incumbents by artificially inflating the demand for ratings issued by small agencies. A similar rationale would also hold for sustainability ratings, whose market, as we have seen, is also increasingly concentrated.

For sustainability ratings, however, different metrics would be more likely to show divergent results, thus increasing the informative value of the additional assessments. Currently, users of ESG ratings often rely on multiple providers, sometimes to have broader coverage in terms of relevant assets but also to cross-validate ratings on the same assets (ESMA 2022, p. 17-18). Crucial in making sure that these practices prove helpful is the ability of issuers – or, in principle, financial institutions – to select the second rating agency based on its methodology, in a somewhat strengthened version of the equivalent rule that enables issuers to evaluate whether the second rating agency they engage is 'capable of rating the relevant issuance or entity'. In this context, two results delivered by comparable methodologies would be telling about the actual sustainability of the issuer corporate business.

3. Sustainability indices and benchmarks

Most of the market failures that taint sustainability ratings also affect the market for indices that rely on ESG factors. Both services rely on the screening and the assessment of the underlying activities to bridge the information gap between issuers and investors. Most importantly, even in the absence of regulatory incentives to do so²⁸, benchmark administrators heavily rely on ESG ratings to define their indices (European Commission, 2022). On top of this, many administrators of ESG benchmarks are also SRAs (Pagano et al. 2018, p. 344), which is testament to how the two services often operate as communicating vessels and rely on economies of scope.

In spite of these strong similarities, EU law has not followed the same approach for sustainability benchmarks and ratings. It already set foot in the market for ESG benchmarks through *ad hoc* provisions aimed at supporting the development of sustainable finance, in

²⁷ On the relationship between internal evaluation systems and market-based criteria see [ESAs Joint Committee, 2016](#).

²⁸ See below, in this section.

contrast with the more prudent approach taken so far for sustainability ratings²⁹. The Commission also envisions other measures will support the adoption of sustainability benchmarks in the future³⁰. To be sure, even in the absence of any pro-active approach, sustainability benchmarks were – and are – in any event ‘benchmarks’ for the purpose of the Benchmarks Regulation, while sustainability ratings do not qualify as ‘credit ratings’ under the CRA Directive. Therefore, sustainability benchmarks have required some fine-tuning in an already existing regulatory framework, while regulating sustainability ratings will require some deeper reflections in the months to come.

3.1 The role of sustainability indices and benchmarks

Sustainability indices define a subset of the investable universe that is selected according to criteria that take ESG factors into account ([European Commission and ERM](#), p. 64). Strictly speaking, an index is a public figure that synthesises the value of a basket of underlying assets based on a pre-defined methodology. When that public figure is adopted as a reference by market participants, it qualifies as a benchmark (Article 3(1)(1) and (3) Benchmarks Regulation – therefore, all benchmarks are indices, but the reverse is not true). In the case of sustainable finance, the importance of an index may lie with the figure itself but also with the composition of the underlying basket, depending on the way market participants refer to the benchmark. For instance, active asset managers may use benchmarks as a yardstick to measure their performance – and calculate their remuneration – in terms of returns, sustainability objectives, or both. For passive managers, the composition of the index is key, rather than the figure that displays its performance, as it drives the selection of the target investments ([High-Level Expert Group on Sustainable Finance 2018](#), p. 53).

The criteria that define indices and benchmarks may, for instance, exclude some financial instruments when they do not satisfy certain sustainability requirements, include only a predefined number of top-ranking securities or refer to an open number of financial instruments that meet minimum ESG rating levels³¹. To determine inclusion or exclusion from the index, ESG factors may therefore follow a discrete binary approach, but they may also take continuous values that contribute to the weighting of each component in a more calibrated assessment ([Pagano et al. 2018](#) p. 341-2).

The role of indices in orienting investments combined with the variety of the criteria a benchmark administrator can select explain why proper functioning of benchmarks is crucial in addressing agency problems along the investment chain. Just like ESG ratings, ESG benchmarks may trigger issues of excessive reliance. In traditional finance, blind reliance on benchmarks is an issue for actively managed collective investment schemes, but is part of the game when the

²⁹ The need for sound regulation of ESG benchmarks is well known also outside the EU. For the UK, see [Andrew, 2022](#).

³⁰ European Commission (n 6), 7 (Action 1) (on the need to further develop labels for ESG benchmarks).

³¹ For instance, certain companies cannot be part of EU Paris-aligned Benchmarks but can be part of EU Climate Transition Benchmarks at the administrators’ discretion (on these labels see the text below, in this section).

passive approach to asset allocation is declared³². In the ESG world, complete dependence on benchmarks is seen as more problematic when financial market participants sell light- or dark-green financial products³³, irrespective of the active or passive asset allocation strategy. In this case, enhanced disclosure duties help investors understand the consequences of indexing and therefore incentivise financial market participants to be more active in the selection of the benchmark, upstream of the alignment to such a benchmark.

Disclosure duties are calibrated depending on the nature of the product (Recital 19 Regulation (EU) 2022/1288). For light-green products, financial market participants shall disclose if they refer to a benchmark and, if so, 'whether and how' the benchmark is consistent with the environmental or social characteristics that such products promote (Article 8 SFDR; Article 36 Regulation (EU) 2022/1288). For dark-green products, the SFDR regime focuses instead on sustainability benchmarks (Recital 21 SFDR). Hence, disclosure is due as to whether financial market participants make reference to any such benchmark and, if so, 'how' that benchmark is aligned with the sustainability objectives of the product (Article 9 SFDR).

In spite of the unclear wording of level 1 and level 2 provisions, reference to a benchmark also seems to remain voluntary with regard to benchmarks that qualify as EU Climate Transition Benchmarks or EU Paris-aligned Benchmarks; the two labels that, as we shall see in the next subsections, qualify indices aiming at decarbonisation targets (Article 9(2) and (3) par 2 SFDR and Article 49(1)(b) Regulation (EU) 2022/1288). For both light- and dark-green products that have designated a reference benchmark, periodic performance reports shall compare the performance of three terms of reference: that of the financial product, that of the reference benchmark, and that of a relevant broad market index. The comparisons involving the reference benchmark should focus on the sustainability indicators that characterise the product, and compare them with the ESG factors that characterise the benchmark in light of the methodology the benchmark administrator discloses (Article 57 and 63 Regulation (EU) 2022/1288)³⁴.

3.2 Governance of administrators and data providers for sustainability benchmarks

Due to the applicability of the regulatory framework in force for benchmarks, policymakers did not need to set up a brand new system to foster sustainable indices. The framework therefore also applies to ESG benchmarks, which take on the calibrated regime that distinguishes between critical, significant and non-significant benchmarks. These labels hang on the importance of the benchmark defined by a supervisory decision or are measured in terms of assets under management (AUM) that refer to it and lack of substitutes that can avoid adverse consequences in case of cessation (Articles 20, 24 and 26 Benchmark Regulation). At the

³² See e.g. Art. 7(1) Reg. (EU) No 583/2010 (for UCITS funds).

³³ On these categories of sustainable products see section 3.4.1 above.

³⁴ On the contents of such disclosure see section 4.3 below.

moment, no ESG benchmark qualifies as critical³⁵ but the systemic impact of such indices is already material and likely to increase in the future.

The tripartite taxonomy for benchmarks determines different regimes, from access to market onwards. All administrators of critical benchmarks are subject to authorisation, as well as administrators of significant benchmarks that are not supervised entities. Supervised entities that are administrators of significant benchmarks, as well as any administrator (supervised or not) of non-significant benchmarks are subject to simple registration (Article 34 Benchmark Regulation). In terms of the supervisory assessment of the application, authorisation entails stricter scrutiny than registration but does not lead as such to a lighter regime (Recital 48). ESMA is the competent authority for critical benchmarks³⁶ and for third-country benchmarks that are recognised in the EU, while otherwise supervision remains at the national level (Article 40).

Authorisation or registration brings the administrator within the scope of the benchmark regime. While critical benchmarks are subject to the entire regulatory framework, administrators of significant and non-significant benchmarks may deviate from some specific provisions, subject to a duty to explain the reasons for such a decision. For significant benchmarks, the scope of the provisions subject to the 'comply or explain' principle is narrower than that applicable to non-significant benchmarks. Moreover, for significant benchmarks the justification due in the case of deviation from the default regime shall be based on proportionality, in light of the nature or impact of the benchmark or the size of the administrator. For non-significant benchmarks the explanation can also refer to any other reasons. Finally, only for significant benchmarks can the competent authority overrule the administrator's decision and force the application of the relevant provisions, when this is appropriate (Article 25(3)).

Among the many provisions of the Benchmark Regulation that can be relevant to ESG benchmarks, some are worth recalling here due to their ability to adjust to the broad discretion that characterises certain assessments of sustainability and the high relevance of such evaluations to stakeholders in general. The most noticeable rules relate to the organisational requirements for the administrators and the governance of the input data. Administrators shall identify and prevent or manage conflicts of interests with contributors or users and shall particularly focus on areas where the determination of the benchmark involves 'judgement or discretion' from their side (Article 4(1)). When conflicts cannot be mitigated, the competent authority may mandate the creation of an independent oversight function that includes a 'balanced representation of stakeholders' (Article 4(2)).

Equally suitable to the ESG context is the regime for the governance of input data. The risks stemming from the lack of reliable inputs is a feature shared by traditional and ESG

³⁵ Regulation (EU) 2016/1368 establishing a list of critical benchmarks used in financial markets (last amended on 8 July 2021).

³⁶ With the exception of benchmarks that qualify as critical due to a national assessment (Arts 20(1)(b) and 40 Benchmark Regulation).

benchmarks. The very origin of the Benchmark Regulation is rooted in LIBOR's manipulation through misleading incoming data from participating banks concerning the estimated reference interest rates for hypothetical transactions ([Ashton and Christophers 2015](#)), so that part of its provisions addresses the risk of 'garbage in, garbage out' dynamics. Once again, the approach is gradual. The general provision is that input data shall always accurately and reliably represent the reality that the benchmark is supposed to measure (Article 11(1)(a)). The highest quality comes from data consisting of values from transactions that have occurred among independent parties (transaction data – Article 3(1)(15)), as this reduces the level of discretion characterising estimates on future transactions. However, when this kind of data is not available, as is normally the case with ESG indices which do not refer to transaction prices, other input data are admissible as long as they are verifiable.

The administrator of the benchmark adopts guidelines that define the types of input data and their contribution to the benchmark and that delineate the exercise of discretion as to the way those data contribute to the benchmark ('expert judgement'; Articles 3(1)(12) and 11(1)(c)). Specific control mechanisms verify the quality of the input data and the ability of contributors to provide data from reliable sources supported by their own oversight and verification procedures (Article 11(2) and (3)). Once again, the requirements are more stringent for critical benchmarks and become progressively more flexible for significant and non-significant benchmarks. For administrators of benchmarks other than the non-significant ones, the criteria for the quality assurance of data by both the administrator and the contributors are further detailed in delegated measures (Regulation (EU) 2018/1638). In the ESG world, these practices can help support trust in data whose supply chain may be complex and prone to material mistakes.

The Benchmark Regulation also sets forth governance and control requirements for contributors of input data that are supervised entities (such as banks, asset managers or insurance undertakings; Articles 3(1)(17) and 16). However, in the case of sustainability, more relevant are the codes of conduct that administrators prepare for each benchmark (or family of benchmarks). These codes are an example of 'regulated self-regulation'³⁷ and provide the backbone of the regulatory approach to the quality of data along the supply chain. They specify the requirements for contributors and the data they provide, including control systems, validation procedures, and measures to ensure that all the relevant input data reach the administrator while, at the same time, suspicious input data are flagged and managed (Articles 11(1)(e) and 15 Benchmark Regulation; Regulation (EU) 2018/1639).

Securities exchanges also play a relevant role in the development of sustainability indices. Operators of regulated markets have traditionally provided indices to support investors' decisions and they are now active in the sustainability world with new dedicated products,

³⁷ [Wundenberg 2017](#). The alignment of the codes with the Benchmark Regulation is subject to supervision and, in the case of divergence, to enforcement (Art. 15(4)).

which they sometimes develop with the support of CRAs or SRAs³⁸. To the contrary, they have made more limited use of listing requirements to support specific ESG targets³⁹, possibly to avoid excessive fragmentation in their markets⁴⁰. As a matter of fact, ESG-related requirements in the listing standards have traditionally addressed transparency (Chiu 2022, p. 99), a focus that has also been mirrored by the creation of common disclosure standards through the networks of regulated markets (Fornasari 2020). Notable exceptions are market segments for green bonds⁴¹ or other forms of aggregation of bonds sharing sufficient sustainability levels⁴².

3.3 Disclosure and labelling of sustainability benchmarks

A well-established backdrop of pre-existing rules has also facilitated the main regulatory strategy that specifically addresses ESG benchmarks, namely disclosure. All administrators – regardless of the nature of the benchmark they provide as critical, significant or non-significant – shall disclose, together with the other key elements of their methodologies, whether these reflect ESG factors (Article 13(1)(d) Benchmarks Regulation; Regulation (EU) 2020/1817). Additionally, the benchmark statement, which describes the procedures and the criteria followed to determine the benchmark with a separate indication of the elements subject to discretion (Wundenberg 2017, p. 705), shall specify whether the benchmark pursues ESG objectives and, if so, how (Article 27(2a) Benchmarks Regulation; Regulation (EU) 2020/1816). This disclosure, as we have already seen, enables financial market participants to provide, in turn, information on the performance of their financial products.

The most salient feature of the European regulatory strategy on sustainability indices is, however, the creation of standardised labels for benchmarks. Once again, second-degree market failures explain this strategy. As benchmarks themselves may be subject to asymmetric information, defining labels facilitates the aggregation and sharing of information concerning the quality, in terms of ESG impact, of the indices that decide to adopt those labels. The 2018 amendments to the Benchmark Regulation have added two labels characterised by the inclusion of objectives related to carbon emissions in the selection of the underlying assets. The two labels differentiate themselves based on the ambition of the targets but they also share many features.

Albeit with variable intensity, both types of benchmarks aim to reduce greenhouse gas emissions. Therefore, they do not rule out investments in companies that release these gases (Scope 1 emissions) or use energy that determines their release (Scope 2 emissions) or whose

³⁸ See e.g. Euronext, ESG Indices, available at <https://live.euronext.com/en/products/indices/esg-indices>. In the literature Myklebust 2014, and, on funding platforms more in general, Wendt 2017.

³⁹ For an overview see Sustainable Stock Exchanges Initiative 2017.

⁴⁰ See however High-Level Expert Group on Sustainable Finance (2018, p. 80) recommending stock exchanges create dedicated segments for sustainable financial instruments.

⁴¹ For a list see Climate Bonds Initiative, Green Bond Segments on Stock Exchanges, available at <https://www.climatebonds.net/green-bond-segments-stock-exchanges>.

⁴² See e.g. Euronext ESG Bonds.

upstream and downstream value chains involve it (Scope 3 emissions)⁴³. For equity benchmarks, exposure to these companies is even mandated for an aggregate value that is at least equal to the aggregate exposure of the relevant underlying investable universe (Article 3 Regulation (EU) 2020/1818)⁴⁴. However, the investments allowed must have an intensity of greenhouse gas emissions (for Scope 1, 2, and 3 emissions⁴⁵) that is simultaneously (i) lower than the investable universe and (ii) in line with a pre-defined decarbonisation trajectory of 7 % on an annual basis (Article 7 Regulation (EU) 2020/1818). These two requirements guarantee the overall high sustainability of the underlying assets, both from a backward-looking and, respectively, a forward-looking perspective.

The most ambitious label, dubbed the 'EU Paris-aligned Benchmark', identifies benchmarks selecting assets that, taken together, should allow the Paris Agreement target to keep the global temperature increase well below 2 °C (and possibly 1.5 °C) above pre-industrial levels to be reached (Article 3(1)(23b) Benchmark Regulation)⁴⁶. The intensity of greenhouse gas emissions connected to the underlying assets shall be at least 50 % lower than that of the investable universe (Article 11 Regulation (EU) 2020/1818). The benchmark is also subject to a 'do no significant harm' principle with regard to other ESG objectives, which entails the exclusion of investments in critical companies. This includes companies producing controversial weapons or that derive a predefined percentage of their revenues from activities related to fossil fuels (Article 12 Regulation (EU) 2020/1818).

The other *ad hoc* category of benchmarks falls under the 'EU Climate Transition Benchmarks' label. In this case, the intensity of greenhouse gas emissions connected to the underlying assets shall be, less ambitiously, at least 30 % lower than that of the investable universe (Article 9 Regulation (EU) 2020/1818). Just like EU Paris-aligned Benchmarks, EU Climate Transition Benchmarks are bound to exclude certain companies, but the scope of the exclusion is narrower (for instance, producers of controversial weapons are excluded but not companies that derive their revenues from fossil fuels); they shall have a policy concerning additional exclusions, however, and shall make that policy public with their methodologies (Article 10 Regulation (EU) 2020/1818). A soft-law provision has successfully encouraged the creation of EU Climate Transition Benchmarks by asking administrators of significant benchmarks to 'endeavour to provide one or more' of such benchmarks by 1 January 2022 (Article 19d Benchmark Regulation).

⁴³ See Annex III Benchmark Regulation.

⁴⁴ For an explanation of the rationale see text accompanying n 9 above.

⁴⁵ Scope 3 emissions are included after the expiration of a phase-in period (Art 5 Reg. (EU) 2020/1818).

⁴⁶ See also Recital 5 Council Decision (EU) 2016/1841 on the conclusion, on behalf of the European Union, of the Paris Agreement.

4. Stocktaking: market failures and how to address them

In this section, we take stock of the previous analysis and highlight some differences between market failures affecting ‘traditional’ finance and their equivalent in the more recent world of sustainability. This comparison will help us draw some policy recommendations.

4.1 Regulatory and market failures in the old and the new world – how different are they?

The previous sections have shown the main features of the markets for sustainability ratings and benchmarks. The failures that impact those markets are currently addressed by the regulatory framework for benchmarks but not for ESG ratings. But how similar are the market failures that affect traditional services and the comparable new services that relate to sustainability? While asymmetric information and agency problems pervade both the old and the new world, there are some differences that are worth pointing out in the limited space of this paper.

One element to consider in this comparison is that market mechanisms may not work in the same way as in traditional finance when one factors sustainability considerations into investment decisions and, hence, into the dynamics of price discovery⁴⁷. This has some remarkable implications on the ability of equilibrium market prices to approximate market participants’ preferences. While in a traditional setting market participants will all look, although with their own personal assessments and biases, at the discounted expected value of an asset’s future cash flow, attention to ESG factors (particularly from an inside-out perspective) introduces a set of preferences the diversity and variance of which are typically higher than those focussing on risk/return considerations. This exacerbates the negative consequences of asymmetric information because it reduces the ability of market prices to protect weak market participants, such as retail investors, by enabling them to free ride on the more sophisticated market participants that move market prices. This mechanism is one of the main drivers of investor protection, not only on secondary markets ([Armour et al. 2016](#)) but also during IPOs, where book-building mechanisms may support prices’ ability to reflect information⁴⁸.

In the ‘new world’, market prices still perform their role as aggregators of information, at least under the paradigm of the efficient capital markets hypothesis. However, the statistical dispersion of individual investors’ preferences around market prices will be higher, compared to the ‘old world’ where investor preferences are aggregated along a univariate variable. As the previous analysis has shown, each investor can have her own preferences as to the ESG factors to consider, and on the relative weight they should have. Therefore, redress through private litigation may be hard to obtain and quantify. First, the legal presumption that the damage

⁴⁷ For a thorough analysis see [Steuer and Tröger 2022](#), p. 19-23 and 29-31.

⁴⁸ CJEU, C-910/19, Bankia, 3 June 2021, ECLI:EU:C:2021:433.

suffered by any investor can be calculated on the basis of market prices even without proving reliance on a misleading rating or benchmark – which is the basis of the fraud on the market theory (FOMT)⁴⁹ – might be harder to defend, for the simple reason that market prices say little about sustainability.

This brings us to a second connected element that exacerbates market failures in the sustainability world, which is the weaker role that private enforcement can play in penalising misleading information or misguided assessment related to sustainability factors. At least until the regulatory framework starts to address these matters, the already weak role of civil liability in policing information intermediaries (Picciau 2018) seems to be even more problematic for sustainability-related matters. Not only may investors have to demonstrate reliance on ESG ratings or benchmarks, but even quantifying the damage (or at least assessing such quantification *ex ante*) for less-than-expected performance in any of the ESG factors will be challenging (Lenzi 2021).

Finally, asymmetric information and agency problems may also be more intense in the realm of sustainability because, at least for the time being, knowledge of ESG matters is not yet as widespread in the investment chain as the well-established expertise in traditional finance (Zetzsche and Anker-Sørensen 2022). For this reason, justifying regulatory measures is easier than in the traditional world. Unfortunately, this knowledge problem also affects policymakers, not only because pooling the required expertise requires time and effort, just like in the investment chain, but also because anticipating and quantifying the impact of rules fostering sustainability may prove impossible (Zetzsche and Anker-Sørensen 2022, p. 74). The risk of regulatory failures suggests that, while regulation should play a crucial role, caution is warranted in its design.

To be sure, some systems may be devised to tackle these shortcomings through private ordering solutions. For instance, public interest litigation might play a role in enforcing misleading ESG disclosure, ratings or benchmarks (Macchi 2021). Some forms of guarantees that attach claims to the violation of predefined ESG targets may also facilitate *ex ante* quantification of damages and partially address asymmetric information issues. This technique is well-known in many markets for non-financial assets where guarantees support credible commitments⁵⁰ but it normally cannot support transactions on financial instruments where investors look – as is the case in traditional financial markets – at the risk/return profile of the product they buy. Transferring the risk of negative performance to the issuer would usually contradict the very essence of the contract underlying the financial instrument. To be sure, specific covenants such as negative pledges can support commitment to pre-defined performance requirements but criteria that go beyond these instrumental metrics may be hard to define and ascertain, also considering the nature of financial instruments as credence goods.

⁴⁹ For an application to credit ratings see Picciau 2018.

⁵⁰ See in general Lambert 2017, p. 201.

When performance instead relates to sustainability, nothing prevents the issuers from committing to attaining pre-defined ESG targets and to paying damages when the targets are missed. To be sure, the ability of such a remedy to fix the serious market failures we identify above remains dubious, as the ascertainment of these targets will be subject, in turn, to issues of asymmetric information which will make information intermediaries all the more necessary.

4.2 Learning from the past: ‘The \$64,000 Question’ game show

The previous sections have explained why regulation should play a crucial role for sustainability ratings and why it already does so for sustainability benchmarks. They have also highlighted, however, that the risk of regulatory failures is quite pervasive. EU policymakers have been careful not to create a form or regulatory licence that delegates asset quality screening to SRAs or benchmarks administrators. The risk however remains that such dynamics will develop in certain areas, including banks’ capital requirements.

Moreover, even in a context where no rules explicitly rely on ESG ratings or benchmarks, the whole regulatory framework for sustainable finance provides strong incentives to resort to ESG ratings services or to use sustainability benchmarks. Financial market participants need to address the uncertainties when assessing sustainability-related information and will always use synthetic indicators to manage the complexity of ESG metrics. While legal requirements on the definition of ESG pillars and indicators can be streamlined and clarified over time, the cognitive need to simplify complexity is here to stay.

Against this backdrop, there is little doubt that targeted disclosure duties can support financial market participants and – ultimately – investors in the selection and handling of ESG ratings (and benchmarks). Enhanced transparency on the crucial matters we have highlighted above, and in particular for methodologies and conflicts of interests, is the cheapest and least intrusive form of regulation that can help tackle asymmetric information and agency problems in the market for sustainability ratings (and benchmarks).

The remaining question is whether the uncertainties surrounding ESG ratings and their quality justify regulatory measures that go beyond mandatory disclosure. Policymakers are always facing a conundrum in these contexts. On the one hand, strengthening the standards for the provision of services can increase their quality. On the other hand, regulation comes at a cost because it can have pervasive side effects in terms of barriers to entry and of implicit regulatory backup. As to entry barriers, it is no coincidence that the most enthusiastic supporters of the first railway regulations in the US were incumbent railway companies and similar dynamics can of course develop elsewhere⁵¹. As to the implicit regulatory backup, past reforms of credit ratings that involved strengthened supervision have been criticised for underscoring the importance of CRAs, thus offsetting the efforts to reduce reliance ([Manns 2013](#)).

⁵¹ Support by the ESG industry for stricter regulation is reportedly increasing: [Kishan 2022](#).

Luckily enough, regulators are in a better position than the players of *'The \$64,000 Question' game show* (Enriques and Gargantini 2010). The choice is not necessarily between doing nothing and quitting the regulatory game to avoid regulatory failures, on the one hand, or going all-in with the full menu of possible measures, on the other. Other intermediate models are available that can help address the conundrum.

The CRA Regulation model is certainly looming in the background and seems to provide a model for most stakeholders, which is equal to raising the bet on ESG ratings. The commercial practice of dubbing ESG ratings as 'ratings' may also contribute by creating an anchoring effect that influences public debate in this regard. The results of the recent Commission consultation on the 'Functioning of the ESG ratings market' show a strong preference not only for transparency measures of the kind we have summarised above but also for more pervasive strategies and, among these, an authorisation or registration system⁵².

Viable alternative strategies that look at other models should therefore be considered. These strategies could take inspiration from the regulation of financial analysts, with its lighter-touch approach that differentiates depending on the nature of the analysts as an 'expert' and its reduced barriers to entry. In combination with this, recourse could also be had to self-regulation and 'comply or explain' models in the definition of methodologies and governance requirements⁵³. A wise policy agenda could start with this lighter-touch approach and then assess its results. Should market failures persist after a reasonable time, a higher bet can be made with a fully-fledged authorisation and registration system along the line of credit ratings.

⁵² European Commission (n 5), 4.

⁵³ For a calibrated approach see Chiu 2022, p. 112-17.

Bibliography

- Abhayawansa, Subhash, et al, 2018, A practice theoretical analysis of the irrelevance of integrated reporting to mainstream sell-side analysts, in *59 Accounting and Finance*, 1615.
- AMF and AFM, 2020, Position Paper: Call for a European Regulation for the Provision of ESG data, ratings, and related services, 10.
- Andrew, Theo, 2022, Misleading benchmarks creating ‘trust deficit’ for ESG ETFs, FCA warns, ETF Stream, available at www.etfstream.com.
- Armour, John, et al, 2016, *Principles of Financial Regulation*, OUP 2016, 164.
- Ashton, Philip, Christophers, Brett, 2015, On arbitration, arbitrage and arbitrariness in financial markets and their governance: unpacking LIBOR and the LIBOR scandal, in *44 Economy and Society*, 188.
- Avgoeulas, Emilios, 2009, What Future for Disclosure as a Regulatory Technique? Lessons from the Global Financial Crisis and Beyond, Working Paper, available at www.ssrn.com.
- Bengo, Irene et al, 2022, EU financial regulations and social impact measurement practices: A comprehensive framework on finance for sustainable development, in *29 Corporate Social Responsibility and Environmental Management*, 809, 814.
- Berg, Florian, et al, 2022, Aggregate confusion: The divergence of ESG ratings, in *26 Review of Finance*, 1.
- Busch, Danny, 2021, Sustainability Disclosure in the EU Financial Sector, in Danny Busch et al (eds), *Sustainable Finance in Europe. Corporate Governance, Financial Stability and Financial Markets*, Palgrave, 406-7.
- Cash, Daniel, 2021, Sustainability Rating Agencies vs Credit Rating Agencies. The Battle to Serve the Mainstream Investor, Palgrave, 69.
- Chatterji, Aaron K., et al, 2016, Do Ratings of Firms Converge? Implications for Managers, Investors and Strategy Researchers, in *37 Strategic Management Journal*, 1597.
- Chiu, Iris, 2022, The EU Sustainable Finance Agenda: Developing Governance for Double Materiality in Sustainability Metrics, in *23 European Business Organization Law Review*, 87, 102.
- Cleary, Siobhan, 2022, ESG v Sustainability. Are We Heading in the Right Direction, available at www.bailliegifford.com.
- Coffee, John jr, 2006, *Gatekeepers: The Professions and Corporate Governance*, OUP: 2006, 289.
- Dankert, Jacob, et al, 2018, A Green Supporting Factor — The Right Policy?, in *SUERF Policy Note Issue No 43*.
- Deloitte, 2021, ESG Ratings: do they add value? How to get prepared?, available at www2.deloitte.com.
- Dimson, Elroy, et al, 2020, Divergent ESG ratings, in *47 Journal of Portfolio Management*, 75.
- Dombalagian, Onnig, 2011, Regulating Informational Intermediation, in *1 American University Business Law Review*, 58, 70.
- Douglas, Elyse, et al, 2017, Responsible Investing: Guide to ESG Data Providers and Relevant Trends in *8 Journal of Environmental Investing*, 92.
- EBA, 2021, Report on Management and Supervision of ESG Risks for Credit Institutions and Investment Firms (EBA/REP/2021/18).

- EBA, 2022, Implementing Technical Standards (ITS) on prudential disclosures on ESG risks in accordance with Article 449a CRR, Final Draft Submitted to the European Commission (EBA/ITS/2022/01), January 24.
- Edmans, Alex, 2020, Grow the pie: How great companies deliver both purpose and profit, CUP 2020.
- Enriques, Luca, Gargantini, Matteo, 2010, Regolamentazione dei mercati finanziari, rating e regolamentazione del rating, in *9 Analisi Giuridica dell'Economia*, 475.
- ESAs Joint Committee, 2016, Final Report. Good Supervisory Practices for Reducing Mechanistic Reliance on Credit Ratings (JC 2016 71), December 20.
- ESAs Joint Committee, 2022, Clarifications on the ESAs' draft RTS under SFDR (JC 2022 23), June 2.
- ESMA, 2019, Final Report. Guidelines on Disclosure Requirements Applicable to Credit Rating (ESMA33-9-320), July 18, 26.
- ESMA, 2019, Technical Advice to the European Commission on Sustainability Considerations in the credit rating market (ESMA33-9-321), July 18, 32.
- ESMA, 2020, Response to public consultation EC consultation on a Renewed Sustainable Finance Strategy (ESMA30-22-821), 16-17.
- ESMA, 2022, Outcome of ESMA Call for Evidence on Market Characteristics of ESG Rating and Data Providers in the EU (ESMA22-328-603), June 24, 8.
- ESMA, 2022, Response to public consultation. ESMA's response to EFRAG's consultation on the first set of draft ESRS (ESMA32-334-551), August 8, 5-6.
- EU Technical Expert Group on Sustainable Finance, 2019, Report on Benchmarks. Handbook of Climate Transition Benchmarks, Paris-Aligned Benchmark and Benchmarks ESG Disclosures, December 20, 20.
- European Commission, 2016, Study on the State of the Credit Rating Market Final Report (MARKT/2014/257/F4/ST/OP), 111, available at <https://ec.europa.eu>.
- European Commission, 2018, Action Plan: Financing Sustainable Growth (COM(2018) 97 final), March 8.
- European Commission, 2019, Communication. Guidelines on non-financial reporting: Supplement on reporting climate-related information (C(2019) 4490 final), June 17.
- European Commission, 2021, Proposal for a Directive as regards corporate sustainability reporting (COM(2021) 189 final), April 21.
- European Commission, 2021 Strategy for Financing the Transition to a Sustainable Economy (COM(2021) 390 final), July 6.
- European Commission, 2022, Received contributions: Functioning of the ESG ratings market in the European Union and on the consideration of ESG factors in credit ratings, June 14, available at <https://ec.europa.eu>.
- European Commission, 2022, Summary Report: Targeted consultation on the functioning of the ESG ratings market in the EU and on the consideration of ESG factors in credit ratings, August 3.
- European Commission, Environmental Resources Management (ERM), 2021, Study on Sustainability-Related Ratings, Data and Research, Report prepared by SustainAbility, 82, 89-92, available at <https://ec.europa.eu>.

- Fornasari, Federico, 2020, Knowledge and power in measuring the sustainable corporation: stock exchanges as regulators of ESG factors disclosure, in *19 Washington University Global Studies Law Review*, 167.
- Gene, Phillips, 2018, Are ABS Credit Ratings = Free Speech?, in *24 Journal of Structured Finance*, 55, 61.
- Gibson, Rajna, et al, 2021, ESG Rating Disagreement and Stock Returns, ECGI Finance Working Paper N° 651, available at www.ssrn.com
- High-Level Expert Group on Sustainable Finance (HLEGSF), 2018, Final Report. Financing a Sustainable European Economy, Brussels, 76.
- Hinze, Anne-Kathrin, Sump, Franziska, 2019, Corporate social responsibility and financial analysts: a review of the literature, in *10 Sustainability Accounting, Management and Policy Journal*, 126, 145.
- Ingo, Walter, 2020, Sense and Nonsense in ESG Ratings, in *Journal of Law, Finance and Accounting* 307, 331-2.
- Kern, Alexander, 2014, The Risk of Ratings in Bank Capital Regulation, in *25 European Business Law Review*, 295.
- Kishan, Saijel, 2022, ESG Insiders Demand Course Correction to Fix Industry Woes, Bloomberg Europe Edition, June 7, available at <https://www.bloomberg.com>.
- Kumar, Rakhi, et al, 2020, Into the Mainstream ESG at the Tipping Point, in *Harvard Law School Forum on Corporate Governance*, available at <https://corpgov.law.harvard.edu>.
- Lambert, Thomas, 2017, How to Regulate. A Guide for Policymakers, CUP, 10-13.
- Larcker, David, et al., 2022, ESG Ratings: A Compass without Direction, Working Paper, available at www.ssrn.com.
- Lenzi, Diletta, 2021, Corporate Social Bonds – A Legal Analysis, in *18 European Company and Financial Law Review*, 291, 314.
- Macchi, Chiara, 2021, The Climate Change Dimension of Business and Human Rights: The Gradual Consolidation of a Concept of ‘Climate Due Diligence’, in *6 Business and Human Rights Journal*, 93.
- Manns, Jeffrey, 2013, Downgrading rating agency reform, in *81 George Washington Law Review*, 749, 767.
- MSCI, 2022, ESG General FAQs for Corporate Issuers, June, available at <https://www.msci.com>.
- MSCI, 2022, ESG Ratings Methodology. Executive Summary, 14, available at www.msci.com.
- MSCI, Corporates. Be Informed on ESG and Climate, available at www.msci.com/our-clients/corporates.
- Morningstar, 2022, Global Sustainable Fund Flows: Q4 2021 in Review. *Flows and assets continue to grow at the end of a landmark year*, January 31, available at <https://assets.contentstack.io>.
- Mülbert, Peter, Sajnovits, Alexander, 2021, The Inside Information Regime of the MAR and the Rise of the ESG Era, in *18 European Company and Financial Law Review* 256, 287-8.
- Myklebust, Trude, 2014, The Role of Stock Exchanges in Shaping More Sustainable Company and Market Practices, available at <https://papers.ssrn.com>.
- Neisen, Martin, 2021, ESG rating as input for a sustainability capital buffer, in *15 Journal of Risk Management in Financial Institutions*, 72.
- Pagano, Michael, et al, 2018, Understanding ESG Ratings and ESG Indexes in *Sabri Boubaker et al (eds), Research Handbook of Finance and Sustainability, Edward Elgar 2018*, 357 and 359.

- Partnoy, Frank, 1999, The Siskel and Ebert of Financial Markets: Two Thumbs Down for the Credit Rating Agencies, in *77 Washington University Law Quarterly*, 619.
- Simpson, Cam, et al, 2021, The ESG Mirage, in *Bloomberg Businessweek*, December 10.
- Picciau, Chiara, 2018, The Evolution of the Liability of Credit Rating Agencies in the United States and in the European Union: Regulation after the Crisis in *15 European Company and Financial Law Review*, 339, 391.
- Pierron, Axel, Carabia, Arthur, 2022, Sustainable Investment Calculations Under MiFID II and SFDR Remain Perplexing for ESG Investors, July 6, available at <https://www.sustainalytics.com>.
- S&P Global Ratings, 2022, General Criteria: Environmental, Social, And Governance Principles In Credit Ratings, available at <https://disclosure.spglobal.com>.
- Steuer, Sebastian, Tröger, Tobias, 2022, The Role of Disclosure in Green Finance, in *8 Journal of Financial Regulation*, 1, 17.
- Sustainable Stock Exchanges Initiative, 2017, How Stock Exchanges Can Grow Green Finance. A Voluntary Action Plan, available at <https://sseinitiative.org>.
- Sustainalytics, 2021, ESG Risk Ratings - Methodology Abstract (January 2021), 14, available at www.sustainalytics.com.
- Wendt, Karen, 2017, Social Stock Exchanges - Democratization of Capital Investing for Impact, Working Paper, available at <https://papers.ssrn.com>.
- Wundenberg, Malte, 2017, Regulation of Benchmarks, in *European Capital Markets Law* (Hart 2017), Rüdiger Veil, 705-7.
- Zetsche, Dirk, Anker-Sørensen, Linn, 2022, Regulating Sustainable Finance in the Dark, in *23 European Business Organization Law Review*, 47, 79-80.