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Article

Will the EU Taxonomy Regulation Foster Sustainable Corporate Governance?

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Abstract: EU securities regulation has established a taxonomy of environmentally sustainable activities. This article discusses, from a law and economics standpoint, the potential of this taxonomy to support sustainable corporate governance. Corporate governance can be an efficient way to channel investor preferences towards sustainability because the concentration of institutional shareholding has lowered the transaction costs of shareholder action. However, there is a principal-agent problem between institutional investors and their beneficiaries, which depends on greenwashing and undermines sustainable corporate governance. This article argues that introducing environmental sustainability into EU mandatory disclosure aligns the institutional investors' incentives with the interest of their beneficiaries and may foster the efficient inclusion of sustainability in corporate governance. The argument is threefold. Firstly, the EU Taxonomy may curb greenwashing by standardizing the disclosure of environmental sustainability. Secondly, this information may become salient for the beneficiaries as the same standards define the sustainability preferences to be considered in recommending and marketing financial products. Thirdly, sustainability disclosure prompts institutional investors to compete for sustainability-minded beneficiaries. Being unable to avoid unsustainable companies altogether, institutional investors are expected to cater to beneficiaries' preferences for environmental sustainability using voice instead of exit.

Keywords: environmental sustainability; law and economics; securities regulation; corporate governance; institutional investors; greenwashing; voice vs. exit

JEL Classification: G38; K22; Q56



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1. Introduction

Institutional investors are the largest owners of publicly held companies in the world [1]. Taking a law and economics approach, this article analyzes the role of institutional investors in pursuing sustainable corporate governance and how EU securities regulation can foster this role. I look at sustainable corporate governance from the perspective of shareholders. In particular, I ask whether the mandatory disclosure centered on the EU Taxonomy Regulation [2] can incentivize institutional shareholders to act as agents of their prosocial beneficiaries and steer the decision-making of their portfolio companies towards sustainability.

This article's approach to sustainable corporate governance is different from that of EU policymakers. The European Commission and the European Parliament have recently proposed a sustainable corporate governance framework based on director duties and due diligence obligations towards all company stakeholders [3,4]. That approach to sustainable corporate governance constrains the decision-making of corporations directly by requiring corporate managers not to pursue only profit but to balance the conflicting interests of shareholders and non-shareholder constituencies such as suppliers, customers, employees, and the society at large. Conversely, this article looks at how corporate governance can

be made more sustainable by empowering rather than disenfranchising shareholders. Consequently, this article aims to investigate how EU securities regulation can ameliorate the principal-agent relationship between institutional investors, which have the power to influence corporate decision-making, and their beneficiaries, who may be interested not only in financial returns but also in the well-being of other stakeholders.

The starting point of the analysis is that, within the limits established by law, corporations pursue whatever goals their shareholders choose. According to neoclassical economics, business corporations maximize shareholder welfare by pursuing profit while governments correct market failures, and this results in the efficient allocation of resources [5]. The Corporate Social Responsibility (CSR) literature has uncovered the limitations of this model. When governments are unable to reach the first-best allocation of resources by correcting market failures, corporations acting to reflect the prosocial preferences of their stakeholders (including, but not limited to shareholders) improve social welfare as second best [6]. Recently, Hart and Zingales [7] have taken the CSR approach one step further, claiming that corporations are in the best position to pursue the prosocial preferences of their shareholders. Profit maximization is insufficient to maximize shareholder welfare if shareholder preferences also include a concern for a common good that is undermined by profit maximization and whose damage is costlier to repair than to avoid, as with climate change.

I define sustainability in narrow economic terms as the correction of negative externalities. Moreover, I focus on a prominent example of negative externality: climate change. Negative externalities are market failures. Corporations produce negative externalities by adversely affecting the well-being of individuals (“stakeholders”) with no contractual relation with the corporation, including future generations. Sustainability and sustainable development are often understood more broadly in terms of meeting the needs of present generations without destabilizing the planet boundaries and the social foundation on which the well-being of future generations depends [8]. Because this article studies the tradeoff between shareholder financial and prosocial preferences as it affects corporate governance, the notion of negative externality is more tractable because it identifies a specific adverse impact of profit maximization on the society.

This article focuses on climate change for two reasons. First, the EU Taxonomy Regulation, which—I will argue—is a major legal underpinning of sustainable corporate governance, will initially cover only climate change mitigation and adaptation. The other environmental and social dimensions of sustainability are also important. However, they will be covered by disclosure regulation and analyses thereof in the future. Secondly, because climate change is more measurable than other dimensions of sustainability—for instance, in terms of greenhouse gas emissions (GHGs)—this focus reduces the ambiguity about the meaning of sustainability and allows us to cope with a fundamental problem: greenwashing. Greenwashing means the selective disclosure of positive sustainability information, without full disclosure of negative information [6]. Greenwashing undermines the incentives of institutional investors to pursue sustainable corporate governance on behalf of their beneficiaries. EU securities regulation can support sustainable corporate governance by establishing mandatory disclosure to curb greenwashing.

This article’s view of sustainable corporate governance is based on corporations deciding to earn lower profits to reduce negative externalities because the shareholders so wish. Today, only a minority of retail investors hold stock directly [1], and they hardly vote their shares [9,10]. Most retail investors hold shares through institutional investors, which are therefore the most influential shareholders of publicly held corporations worldwide. The world’s largest institutional investors are asset managers such as Blackrock, Vanguard, and State Street. These are known as the “Big Three” [11]. They manage so-called “families” of funds, which include actively managed funds and funds passively tracking a market index. Both active and passive funds can be conventional or pursue an Environmental, Social, and Governance (ESG) investment strategy. As I will explain, actively and passively managed mutual funds have different business strategies, resulting in different incentives

to pursue sustainable corporate governance. Institutional investors differ particularly on whether they engage with companies (“voice”) or avoid them altogether (“exit”) [12].

Institutional shareholders have the power to request that publicly held corporations pay attention to sustainability, but they do this on behalf of their beneficiaries. Retail clients of mutual funds, pension funds, and of comparable collective investment schemes are ultimately bearing the financial consequences of what corporations do—they are the so-called “residual claimants”. Only they can legitimately decide to trade financial return for negative externalities. A key question of sustainable corporate governance is therefore whether the corporate governance behavior of institutional investors reflects the preferences of their beneficiaries. This is an agency cost problem [13].

Institutional investors include a variety of financial intermediaries with different relationships with their beneficiaries. This article focuses on mutual funds and will refer exclusively to the latter as institutional investors. Beneficiaries can choose freely whether and how much to invest in mutual funds. The possibility of switching between competing funds allows beneficiaries to discipline asset managers based not only on the financial return they provide but also on how they meet their preferences in terms of sustainability. This is not necessarily the case for other institutional investors, such as pension funds and sovereign wealth funds, which are thus excluded from the analysis.

As they can “fire” an asset manager by switching between funds, mutual fund beneficiaries are effectively—albeit not formally legally—the ultimate owners of the publicly held companies in the mutual funds’ portfolios. This is not sufficient to overcome the agency cost problem. The incentives of asset managers, which are profit-maximizers, are not aligned with the interest of their beneficiaries. As a result, institutional investors may fail to pursue sustainability even though their beneficiaries want it or may pursue sustainability when beneficiaries do not want it. To attract sustainability-minded beneficiaries without disappointing more profit-oriented beneficiaries, institutional investors can pretend to pursue sustainability while in fact they engage in greenwashing.

This article claims that securities law can reduce the agency cost of sustainable corporate governance by curbing greenwashing. Aiming to encourage private investment in sustainability [14], the EU legislator has mandated unambiguous disclosure as to whether and to what extent investments are environmentally sustainable. From 2022, the EU Taxonomy Regulation [2] will enable beneficiaries to choose institutional investors also depending on how sustainable their portfolios are according to a standard EU metric. A regulatory taxonomy has unavoidable imperfections, but it reduces the ambiguity underlying greenwashing and prompts institutional investors to act on their portfolio companies, by way of exit or voice, to meet the preferences of sustainability-minded beneficiaries. Due to a lack of data, which will become available only in a few years, this article discusses how institutional investors will react to the Taxonomy based on theory and existing evidence.

This article contributes to a burgeoning literature on sustainable corporate governance. Hart and Zingales [7] first argued that incorporating sustainability in corporate governance may maximize shareholder welfare as opposed to shareholder wealth. However, they considered the law only as an obstacle, not a facilitator, of this mechanism. Ferrarini, Siri, and Zhu [15] have flagged the potential of the EU Taxonomy Regulation for sustainable corporate governance, without working out the details. The work most similar to the present one is by Troeger and Steuer [16]. Although they discuss the impact of mandatory sustainability disclosure on investor’s choice, they focus on the stock pricing implications more than on institutional investors’ reactions towards portfolio companies.

The remainder of this article is as follows. In Section 2, I discuss the theoretical conditions under which it is efficient for sustainability-minded investors to pursue environmental sustainability through corporate governance, as opposed to the political process, and how the legal system can support this by reducing the agency cost of institutional investment. In Section 3, I analyze the recent changes in EU securities regulation focusing on how, by bringing the EU Taxonomy metric into the decision set of retail investors, these rules will curb greenwashing. In Section 4, I move on to the implications for the role of

institutional investors in corporate governance. Being unable to study the impact of the Taxonomy empirically, as it is not yet fully in force, I discuss theoretically how institutional investors are expected to react to the introduction of the new disclosure rules. I pay particular attention to the question of whether institutional investors will respond to the increased saliency of sustainability for beneficiaries by exercising voice or exit towards their portfolio companies. Section 5 concludes this work.

2. The Law and Economics of Sustainable Corporate Governance

In this section, I discuss the theory behind the control of negative externalities through corporate governance, as opposed to government regulation. Moreover, I discuss how legal rules can ameliorate the former mechanism. This is a law and economics question as it deals with how legal rules supporting the corporate governance role of shareholders can cope with climate change and improve welfare compared to direct government regulation. This question overlaps with the literature on CSR to the extent that corporations reduce environmental externalities to satisfy the nonfinancial preferences of shareholders, along with those of other stakeholders [6].

In economics, corporations are assumed to maximize profit and contribute in this way to the optimal allocation of scarce resources short of market failures. Market failures include negative externalities, such as GHGs, which depend on private cost being lower than social cost. Governments try to correct externalities, increasing the price of input by way of taxes or limiting the quantity of input/output by way of command-and-control regulation. Following this traditional framework, Milton Friedman argued that the social responsibility of corporations is to maximize shareholder profit, within the limits of regulation, taxation, and ethical norms [5]. This is not because all shareholders are selfish, but because the shareholders who care for other members of society are supposedly better off giving (a part of) their share of maximum profit to charity instead of obtaining a lower profit net of charity decided by someone else. Thus, governments should take care of aligning private cost with social cost, whereas individuals should manage their nonfinancial preferences. As uncovered by the CSR literature [6], this approach faces several limitations. For the purposes of this article, two limitations are of essence: first, governments have proved not very good at policing externalities after all; second, charity is insufficient to support individuals' concern for the well-being of society when negative externalities are costly to reverse.

As explained by Bénabou and Tirole [17], governments face shortcomings in policing externalities. Governments' ability to effectively align private cost with social cost is affected by lobbying. Moreover, interjurisdictional externalities undermine the impact of an individual government's action. Governments try to coordinate but face higher costs of coordination than lobbying multinational firms. Finally, governments respond, albeit imperfectly, to the preferences of the median voter, which due to the ageing Western population undervalues the interest of younger generations. The second problem, highlighted by Hart and Zingales [7], is that externalities are not always separable from the production process. If Walmart sells firearms that can be used in mass shootings of children, correcting this externality—for instance, by patrolling schools and playgrounds—costs society more than stopping selling firearms in the first place. A similar reasoning applies to climate change. Although investors may pay to offset CO₂ individually, this is not a solution in the aggregate, at least to the extent that the technology to capture and store CO₂ is not sufficient to avert the climate change problem.

There is therefore an economic case for investors trying to stop companies from producing externalities. However, because investors face coordination problems like those of voters, if not more severe, one might doubt whether investors can fare any better in the control of externalities than citizens electing governments. This is a relevant question for policymakers deciding whether, to cope with negative externalities, they should focus on improving direct regulation as opposed to corporate governance. I posit that the answer depends on comparative institutional analysis. Ronald Coase not only argued that

externalities would self-correct in a world without transaction costs [18] but also—and more importantly—that the most efficient way to correct externalities in the real world depends on how different institutional arrangements score in terms of transaction costs [19]. Corporate governance is a good approach to correct externalities if the transaction costs are lower compared to correcting externalities via the political system or by way of charity.

For the purposes of this analysis, I define transaction cost narrowly, as the cost of operating an organization [20]. I compare the political system, by which citizens make governments impose taxes and regulations on companies to internalize environmental externalities, with corporate governance, by which shareholders persuade the company's management to curb such externalities. As mentioned, transaction cost undermines government control of externalities because of lobbying, international coordination, and the ageing population of voters. In corporate governance, the transaction cost depends on the shareholder collective action problem. This cost used to be huge because shareholders individually had stakes that were too small to coordinate and influence management in one way or another [21]. Facing high transaction costs, to be viable, corporations had to minimize the agency cost of management via indirect mechanisms such as executive compensation or takeovers, which could only align incentives with shareholders' financial preferences [13]. Things have changed with the institutionalization of savings. The bulk of retail investors now holds shares in the largest publicly held companies indirectly, via institutional investors that can hold management directly accountable [22]. This fact has arguably reduced the transaction cost of corporate governance to levels lower than the transaction cost of the political system, as far as internalizing environmental externalities is concerned. This situation is reminiscent of the general economic case for CSR [6], in which governments fail to reduce negative externalities to the optimal level and firms enjoy a comparative advantage (i.e., lower cost) in aggregating heterogeneous, nonfinancial preferences.

Large, publicly held companies account for one-third of the top 100 CO₂ producers, which, in turn, are responsible for 71% of GHGs [23]. The Big Three institutional investors hold significant stakes in all these companies, as well as in thousands of smaller contributors to GHGs. The holdings of other institutional investors are also concentrated. In 2018, the firms included in the MSCI World index produced 56% of CO₂. Institutional investors own collectively 45% of the capital of these MSCI firms, whereas the Big Three hold on average 4.8% [24]. Because these firms are established and operate in different jurisdictions, in contrast to governments, institutional investors *can* influence CO₂ abatement on a worldwide rather than on a national basis. Institutional investors potentially score better than governments also in terms of lobbying. Although institutional investors also lobby for more favorable regulation, their efforts concentrate on financial regulation. They are less likely to be captured by a specific industry's vested interest than a government [25]. As their holdings are diversified, institutional investors do not share the interest of large multinationals to lobby for less stringent environmental regulation. Finally, because institutional investors must attract long-term savings to their funds, they are more interested in catering to the younger generations' preferences than governments focusing on short-term reelection [26].

Although institutional investors have reduced the transaction cost of sustainable corporate governance, they might still be ill-positioned to police environmental externalities. There are two issues: firstly, there is the question of the extent to which the preferences of retail investors include a concern for environmental sustainability; secondly, there is an agency cost problem. The incentives of institutional investors may be insufficiently aligned with the interest of beneficiaries to channel the latter's preferences to the portfolio companies. There is also a third issue, which I leave for future research: the beneficiaries' concern for sustainability, if present, should be legally binding on the institutional investors. This is a surprisingly under-researched topic. In this article, I assume that if mutual funds include a commitment to sustainability in their contracts, this commitment will be legally enforceable.

The first issue is a classic CSR question: why do shareholders want firms to pursue sustainability [6]? There are three models [17]. The first is “Doing Well by Doing Good”. Companies that engage in “greening” to cope with any component of climate risk (physical, regulatory, and technological risk) will eventually outperform competitors when this risk is priced correctly. Indeed, there is evidence that financial markets misprice climate risk [27]. As this model assumes market myopia, there is no long-term tradeoff between the financial and nonfinancial preferences of shareholders. Following this model, corporations reduce externalities to maximize long-term profit. The second model, “Delegated Philanthropy”, is more ambitious. It posits that shareholders expect corporations to pursue sustainability, even though this results in lower long-term returns. This theory implies curbing externalities more than needed to cope with future risks. The third model, “Corporate Philanthropy”, posits that corporations should pursue sustainability regardless of shareholders’ financial preferences. As it disenfranchises shareholders, this model resonates with the recent proposal by EU institutions to regulate corporate decision-making directly [3,4]. Both result in potentially extreme agency costs that could undermine the goal of pursuing sustainability via corporate governance as opposed to direct regulation [28]. I am therefore not considering this model further.

Doing Well by Doing Good is implicit for shareholders investing as beneficiaries of index institutional investors. Institutional investors that do not actively manage their portfolios track market indexes. When these investors are large, such as the Big Three, they hold stock in virtually any company in the world. Such diversified, universal owners and their beneficiaries are going to suffer from climate risk in one way or another, so minimizing climate risk is akin to maximizing profit. Index investors thus have incentive to pursue sustainable corporate governance, asking portfolio companies to minimize climate risk. Jeffrey Gordon has named this strategy ‘Systematic Stewardship’ as it echoes systematic risk in portfolio theory [29]. This strategy matches the financial preferences of beneficiaries who are neutral with regards to sustainability.

However, some beneficiaries may want more than financial return, in line with Delegated Philanthropy. As framed by Hart and Zingales [7], it is plausible to assume that investors also have ethical concerns for which they feel responsible—such as the investee corporation’s GHGs—and are willing to accept lower returns on this basis. This leads to the question of why mutual funds have not tried to attract such investors offering explicitly more sustainability in exchange for lower returns. According to Hart and Zingales, this is because, in the U.S., fiduciary duties prevent corporations and their institutional shareholders from pursuing nonfinancial interests. However, under the main law of incorporation in the U.S. (Delaware’s), shareholders with no conflict of interest can vote also in ways that do not lead to profit maximization [30]. Although varying corporate laws frame this matter differently, including nonfinancial preferences of shareholders in corporate governance is generally legal. The problem is rather how to aggregate shareholder financial and nonfinancial preferences.

Both economists and legal scholars have discussed the preference aggregation of beneficiaries of institutional investors. According to Hart and Zingales [7], mutual funds could simply poll their beneficiaries on specific tradeoffs between financial and nonfinancial goals, but they do not do this for fear of breaching their fiduciary duties. In the legal scholarship, Griffith [31] has argued that mutual funds could legitimately incorporate the nonfinancial preferences of their beneficiaries via pass-through voting, namely asking beneficiaries’ binding voting instructions. Pass-through voting has the advantage of letting beneficiaries decide how much financial return to give up for sustainable choices and curbing ESG excesses accordingly [32]. However, the big disadvantage of polling beneficiaries is that, in this way, large institutional investors would de-concentrate high voting power which, as I explain in Section 4, incentivizes them to engage with portfolio companies [33]. In theory, there is another way to aggregate beneficiaries’ preferences consistently [31]: mutual funds could commit ex-ante to a specific, possibly measurable, sustainability goal to constrain the quest for financial return and attract beneficiaries with

stronger nonfinancial preferences on this basis. However, such commitments are rarely observed in practice.

There are two possible explanations for the failure of institutional investors to commit to Delegated Philanthropy: firstly, there is insufficient support from beneficiaries; secondly, beneficiaries are confused. Beneficiaries would support sacrificing some financial return to internalize environmental externalities, but in practice they cannot appreciate the impact of their sacrifice—and compare mutual funds along this dimension—because of greenwashing. Below, I argue that the empirical evidence supports the second explanation, making the case for legal intervention to curb greenwashing.

There is evidence that beneficiaries want Delegate Philanthropy. Using the introduction of the Morningstar Globes rating—an unambiguous, visual indicator of Environmental–Social–Governance (ESG) sustainability—as a natural experiment, Hartzmark and Sussman [34] found that beneficiaries switched several tens of billion dollars from funds with the lowest ratings towards funds with the highest ratings. A companion lab experiment revealed that the beneficiaries' choice was driven by nonpecuniary motives, also because higher-rated funds underperformed compared with lower-rated funds. Another finance study found that the introduction of the Morningstar Low Carbon Designation—another unambiguous label of environmental sustainability based on GHGs—not only had an even stronger impact than Globes on fund flows but also triggered a reaction from fund managers, who altered their portfolio composition to obtain the designation in the next period [35]. In this study, the motivation to switch funds by beneficiaries was also non-pecuniary. Empirical evidence thus confirms that many retail investors are willing to give up financial return to improve sustainability, particularly in the context of climate change, although it cannot determine whether and to what extent nonfinancial preferences outweigh the financial preferences of beneficiaries [16,36].

Granted that beneficiaries' nonfinancial preferences exist and are significant, the key problem of sustainable corporate governance is agency cost. I posit that institutional investors find it too expensive to overcome asymmetric information with their principals (the beneficiaries) by credibly signaling [37] a commitment to sustainability. This is because greenwashing, namely selective sustainability disclosure, is possible at a lower cost and is undistinguishable from a credible signal. Institutional investors and their portfolio companies can pretend to be environmentally sustainable by disclosing only positive information that boosts their ESG ratings, while failing to disclose the negative information. Indeed, there is evidence that ESG scores depend on the quantity of disclosure, not on its quality [38]. In the presence of greenwashing, mutual funds have an incentive to acquire ESG labels to attract sustainability-minded beneficiaries but do not have incentives to make their portfolio companies more sustainable. Therefore, the fact that, recently, inflows into ESG funds tend to exceed those into conventional funds in the mutual fund industry [39,40] potentially exacerbates the agency problem. Asset managers could respond to the increasing demand for ESG funds with greenwashing, focusing on the dimensions of sustainability that are easier to achieve but not necessarily more material. This can result both in more and in less sustainability than optimal [32].

Greenwashing is borne out by the empirical evidence. In the U.S., ESG mutual funds underperform compared with non-ESG funds on several sustainability measures, notably including regulatory compliance and GHGs. Moreover, these funds are more expensive and financially less attractive than the non-ESG funds in the same family [41]. It seems that neither issuers nor institutional investors “walk the talk” as their ESG scores reflect selective disclosure rather than actual sustainability [42,43]. Adding to the confusion, ESG ratings do not simply mean greenwashing: the international ownership of portfolio companies by conventional mutual funds is associated with higher environmental scores across different rating providers, except when the funds are based in the U.S. [44]. More recent data reveal that, also in the U.S., ESG funds are more aggressive than non-ESG funds as regards the sustainability of portfolio companies [45]. Despite these qualifications, ESG

ratings are unreliable as they are not consistently associated with lower CO₂ emissions or a reduction of other negative externalities.

The greenwashing problem is twofold. First, there is no single ESG metric, but many that diverge considerably. This incentivizes companies and institutional investors to arbitrage between ratings to get a good score at the least cost. Second, ESG combines different prosocial goals, most of which are hard to measure and even harder to weigh against each other. Rating providers publish more granular information about the E, S, and G components, but this does not solve the problem. Unreliable ESG ratings undermine beneficiaries' ability to reduce negative externalities by picking institutional investors committed to sustainable corporate governance. Likewise, unreliability undermines institutional investors' ability to commit because of adverse selection [46].

Institutional investors, particularly large conventional index funds, have been able to do more than greenwashing focusing on climate change. A recent study [24] found that the Big Three have engaged with some of the world's largest contributors to GHGs, in which they hold large stakes, on CO₂ emissions. Apparently, this engagement was effective. Ownership and ownership increases by the Big Three and comparably large index fund managers are associated with lower CO₂ emissions by the portfolio companies. The question is whether law can enable beneficiaries to distinguish this behavior from greenwashing and support sustainable corporate governance on a broader scale.

The law can curb greenwashing by establishing mandatory disclosure that supports institutional investors' credible commitment, recognizable by beneficiaries, to pursue the environmental sustainability of the portfolio companies. Disclosure should be based on a standardized metric—for instance, linked to CO₂ emissions—allowing for comparison and external verification, for instance by courts enforcing the commitment. These characteristics make the signal credible, i.e., costlier to imitate by greenwashing. Regulation should also include rules of conduct ensuring that retail investors understand mandatory disclosure and translate it into investment choices matching their nonfinancial preferences. To date, no legal system supports such a mandatory disclosure, although the European Union is rapidly moving in this direction.

3. The EU Taxonomy Regulation as a Curb on Agency Cost

In this section, I discuss how EU securities regulation can reduce the agency cost in the relationship between institutional investors and their beneficiaries. Based on the previous analysis, a few beneficiaries want to invest in environmentally sustainable financial products even though this results in lower returns. Institutional investors would have incentive to cater to such preferences if it were not for the greenwashing problem; it is too tempting to pretend to be environmentally sustainable and attract fund flows. Regulation can align these incentives with the interests of beneficiaries.

A prominent goal of securities regulation is investor protection [47]. This includes supporting retail investors' knowledgeable choices of investment products. Securities regulation traditionally pursues this goal by way of mandatory disclosure. This approach has long revealed its limitations, as retail investors neither read nor understand complex disclosures. Retail investors focus on salient information, which, however, can be manipulated by financial intermediaries and lead to mis-selling. The reaction of securities regulation has been to simplify disclosure, on the one hand, and complement it with conduct of business rules, on the other, increasingly placing the responsibility of matching their products with the preferences of retail investors on the financial intermediaries.

Sustainability complicates the matter. It is already difficult to interpret the financial preferences of unsophisticated investors. Guiding them to solve the tradeoff between financial return and negative externalities is a daunting task. However, the European legislator has embarked on this task with the Sustainable Finance Action Plan [14]. This has resulted in a significant overhaul of EU securities regulation, introducing features that are unique worldwide, such as a regulatory taxonomy of sustainable economic activities.

It would be impossible to discuss the Action Plan comprehensively in this article. In this journal, Siri and Zhou [48] provide an excellent overview. In what follows, I focus on three characteristics that may align institutional investors' incentives with the sustainability preferences of their beneficiaries, thereby reducing the agency cost of sustainable corporate governance. First, the Sustainable Finance Disclosure Regulation (SFDR) [49] has created a system whereby every institutional investor offering financial products in the EU must publish qualitative and quantitative information about the impact of their investments on sustainability. Second, the Taxonomy Regulation (TR) [2] has established a system whereby every investment, offered in the EU, that claims an impact on sustainability must substantiate this claim *quantitatively*, in terms of alignment with a regulatory taxonomy of sustainable economic activities. Third, the overhaul of sectoral EU financial regulation, in particular the MiFID [50], will mandate the inclusion of sustainability preferences—framed in terms of the above-mentioned regulations—in the suitability and product governance obligations of financial intermediaries. I illustrate these three aspects in turn.

The SFDR is pivotal in the EU regulation of sustainable finance. It applies to virtually every institutional investor and asset manager that offers financial products in the EU. Consequently, it applies to mutual funds, which are the focus of this analysis, wherever established (including in the U.S.) so long as they are offered in the EU. Fund managers subject to SFDR must disclose in their reports and websites how they tackle sustainability risk and the *Principal Adverse Impacts* (PAIs) of their investments on sustainability factors, detailed by secondary regulation. Institutional investors may choose not to disclose, but in this case, they must explain their choice. Extensive disclosures are mandated at the product level as well.

There are three types of financial products that can be offered in the EU according to the SFDR. First are art. 9, or so-called “dark green” products, which have sustainable investment as their objective and must disclose how this objective is pursued concretely. Sustainable investments are those which contribute to an environmental or social goal, without harming any of these and featuring good governance practices—all notions specified by secondary regulation. Second are art. 8, or “light green” products, which promote, among others, environmental or social characteristics and must disclose how these characteristics are met concretely. Third are all conventional financial products, which do not pursue sustainability but must nevertheless disclose how they integrate sustainability risks into investment decision-making (art. 6) and their PAIs on sustainability factors (art. 7), unless they explain why either sustainability risks or PAIs are irrelevant for their investments.

The SFDR has been in force since March 2021. The disclosure templates and the quantitative and qualitative indicators of PAIs are specified by Regulatory Technical Standards [51] that will apply from 2022. The quantitative dimension is important here because, in principle, it enables retail investors to compare how institutional investors and their financial products score in terms of negative externalities. The indicators notably include the GHG emissions of investee companies, specifically scope 1 (direct emissions) and scope 2 (emissions from energy purchased), whereas the publication of scope 3 emissions (GHGs along the supply and value chain) is postponed until 2023 considering the current gaps in the data worldwide. However, sustainability is not only about limiting the harm to the environment or the society but also about transitioning to technologies that generate fewer negative externalities. On the investments in transition, the SFDR mainly prescribes explanations by way of narratives, but it is complemented by the EU Taxonomy. Art. 3 TR defines environmentally sustainable economic activities and investments depending on whether they make a substantial, measurable contribution to improving one of the environmental objectives indicated by art. 9 TR.

The Taxonomy Regulation is the first step of a very ambitious project of the EU, aiming to establish a full classification of sustainable economic activities based on standards endorsed by regulation. The project has started from the classification of environmental sustainability, focusing on two environmental objectives: climate change mitigation and adaptation. The pertinent standards will apply from 2022. For every activity considered,

the standards set a quantitative threshold, typically but not exclusively in terms of GHGs, establishing whether the specific activity substantially contributes to the environmental objective. Looking at climate change mitigation, for example, activities may contribute directly (low to zero carbon transportation), as transition activity (efficient electricity production), or as enabling activity (efficient building renovation). Listed activities are taxonomy-aligned if they perform above the threshold; otherwise, they are not to be considered sustainable according to the Taxonomy [52]. Many activities are not included in the Taxonomy, although they may be included at a later stage by the Platform on Sustainable Finance [53]—a permanent expert group of the European Commission. An investment is taxonomy-aligned to the extent that it finances taxonomy-aligned activities. An investment's degree of taxonomy alignment is a straight percentage immediately recognizable by retail investors.

The Taxonomy Regulation mandates the disclosure of taxonomy alignment for several entities and financial products, adding a straightforward quantitative dimension to the broad coverage of SFDR. Entities subject to the TR—which include the financial and nonfinancial firms subject to the Non-Financial Reporting Directive (NFRD) [54]—must disclose the proportion of their *turnover* and of their operating and *capital expenditures* that are taxonomy-aligned. In this way, the issuers and the financial firms within the NFRD scope—with the latter being expanded to all listed companies and financial intermediaries [55]—will have to publish precise information about how sustainable they currently are (turnover) and aim to become (capital expenditures). This is important information, which feeds into the definition of environmental sustainability for both asset managers and the financial products they supply.

The Taxonomy also applies to the three categories of financial products defined by the SFDR. Dark green products will have to disclose the proportion of sustainable investment that is taxonomy-aligned with respect to a specific objective as a percentage of all investments. Similarly, light green products will have to include such a disclosure to the extent that they promote environmental characteristics by including sustainable investments, specifying that the remaining portion of the underlying investments “does not take into account the EU criteria for environmentally sustainable activities”. Such a *negative disclosure* also applies to all the conventional products that make no sustainability claim. These will have to include a warning that the financial product “does not take into account the EU criteria for environmentally sustainable activities” (art. 7 TR).

In this context, all asset managers offering products in the EU will have to disclose how much of their total investments are taxonomy-aligned. Fulfilling this obligation will be challenging, particularly in the first years of application of the Taxonomy. Institutional investors must rely on issuers for this kind of information, but issuers will only be obliged to publish the proportion of taxonomy-eligible activities for the year 2022 (in 2023) and their taxonomy alignment for the year 2023 (in 2024). Moreover, non-EU issuers are not subject to the Taxonomy and, as mentioned, many economic activities are not included in the Taxonomy. Thus, in the initial phase, a great deal will depend on voluntary disclosures. The expectation is that institutional investors will have a strong incentive to calculate—and ask their investee companies to calculate—their degree of taxonomy alignment to avoid losing clients to competitors. At the same time, because the regulator has intentionally set the bar of environmental sustainability high (in line with the language “substantial contribution” to climate change mitigation and adaptation), the first data on taxonomy-alignment are expected to be modest and only improve with time. Therefore, institutional investors managing mainly conventional index funds, such as the Big Three, might well disclose the taxonomy alignment of their products as well, if only to avoid the stigma of negative disclosure.

By mandating the disclosure of the degree of taxonomy alignment, the EU mandatory disclosure will reduce greenwashing. It will do so because the taxonomy alignment of a portfolio is a signal of environmental sustainability. Because it is a simple percentage of “greenness”, it is easily recognizable by beneficiaries who care about that. Moreover, the

signal is credible because it is based on sustainability measures established and enforced by regulation.

A few qualifications are in order. Firstly, environmental sustainability is not entirely measurable. Measures reflect the current state of knowledge, whereas sustainability depends also on transition, which is uncertain [16]. However, on the one hand, EU regulation tackles this problem by mandating the disclosure of narratives along with quantitative information. On the other hand, the regulatory function considered in this article is to curb greenwashing. In this respect, a standard metric, such as the degree of taxonomy alignment, makes it easier for beneficiaries to compare and for courts to verify the information provided by issuers and mutual funds. A second issue is that these metrics reflect a political compromise and thus may be flawed. As a prominent example, the EU has failed to set transition standards for natural gas and nuclear energy [56]. Moreover, issuers will have quite some discretion in calculating their taxonomy alignment, which may reduce the credibility of the signal for issuers and institutional investors [57]. Nevertheless, the existing taxonomy measures are ultimately based on CO₂ emissions, which make the signal costlier to imitate for companies that claim the ESG label but do not substantially contribute to GHGs reduction, and thus reduce greenwashing compared to the status quo. The Taxonomy thus ameliorates the adverse selection problem stemming from the ambiguity of private-label ESG indicators discussed in the previous section. In principle, the Taxonomy should also lead beneficiaries to a knowledgeable choice of institutional investors that match their sustainability preferences, thereby reducing agency cost. For this purpose, however, the Taxonomy should be salient to retail investors—a point to which I now turn.

As discussed in the previous section, some retail investors are prepared to give up financial return in exchange for the abatement of negative externalities. However, they are not necessarily alert to indicators such as PAIs or the degree of taxonomy alignment when they choose a mutual fund. Even if they are alert, they might fail to appreciate the consequences of these indicators on their investment choice. In short, retail investors must be guided to make knowledgeable investment choices [58]. Most retail investors buy financial products through financial intermediaries, such as investment firms or, in Europe, banks providing investment services. A third, important aspect of the Sustainable Finance Action Plan [14] is, therefore, the inclusion of investor sustainability preferences into the conduct of business rules governing the provision of investment services, particularly suitability and product governance.

Financial intermediaries offering advisory or asset management services must provide their clients with recommendations *suited* for their preferences about the risk/return trade-off. With a recent amendment to the MiFID Delegated Regulation [59], the EU legislator has included the consideration of the client's "sustainability preferences" in the suitability test. The sustainability preference will have to be expressed in terms of SFDR or the Taxonomy Regulation, indicating, in particular (i) a minimum proportion of taxonomy-aligned activities, (ii) a minimum proportion of sustainable investment, or (iii) qualitative or quantitative elements of acceptable PAIs. In the provision of advised investment services, investment service providers will have to ask their clients whether they request a minimum sustainability threshold and only then advise on the suitable risk/return combinations.

The suitability rule is important to enable unsophisticated investors to make investment choices consistent with their preferences. In the EU, however, this rule applies only to situations in which investors receive personalized recommendations. Retail investors seldom make choices in this way [47]. More often, they receive investment advice as marketing communications, which are excluded from the suitability rule and are prone to conflicts of interest. EU securities regulation has responded to this problem with *product governance*. Product governance is a form of principle-based regulation that places the responsibility on the investment service provider to pursue the client's best interest. Finan-

cial intermediaries must embed product governance in their internal procedures, notably including those governing the design and the marketing of financial products.

The Sustainable Finance Action Plan has also reformed product governance to incorporate investor sustainability preferences [60]. All providers of investment services will have to include sustainability factors, as defined by the SFDR and the Taxonomy Regulation, in the definition of their target markets and distribute financial products accordingly. Moreover, the sustainability factors of financial products will have to be presented in a transparent fashion to allow distributors to determine whether they are consistent with the client's sustainability objectives.

It is too early to say whether product governance will effectively align the institutional investors' incentives with the sustainability preference of their beneficiaries. This part of the MiFID's reform will be implemented differently by different EU member states. However, in theory, the combination of suitability and product governance completes the sustainable finance approach. Investment products will have to disclose objective and comparable measures of environmental sustainability. In offering these products to retail investors, whether through formally advised or non-advised channels, banks and investment firms will have to make sure that these measures are aligned with the client's sustainability preferences. Likewise, beneficiaries of institutional investors will be prompted to indicate a minimum degree of sustainability that they consider acceptable and then compare what is on offer in terms of the risk/return trade-off.

Based on the EU Taxonomy and the related reforms, the overhaul of EU mandatory disclosure will reduce the agency cost of environmentally sustainable investments via mutual funds. This potentially harnesses the role of beneficiaries' concern for environmental sustainability in financial markets. Whether this reform will also have an impact on the environmental sustainability of publicly held companies and whether this impact is desirable will depend on the reaction of institutional investors. In the next section, I discuss whether asset managers can be expected to implement a sustainable corporate governance, and if so, in which way.

4. Institutional Investors: Exit or Voice?

In this section, I look at the institutional investor's corporate governance response to the increased saliency of environmental sustainability for their beneficiaries. More specifically, I ask whether, to attract beneficiaries, institutional investors will choose to exit the portfolio companies that drag down their sustainability scores or rather use their voice to make these companies more sustainable.

Voice and exit are the two ways in which members can influence the decision-making of an organization [61], persuading the management or leaving (threatening to leave) the organization. When the ownership of publicly held companies was dispersed, shareholders—including institutional investors—could only practice the exit option due to severe collective action problems. As we have seen, the concentration of institutional ownership has changed the situation. Institutional investors can use their voice. However, in the context of climate change, it is debated whether institutional investors should use their voice. On the one hand, legal commentators [29,32] doubt whether the fiduciary duties of institutional investors allow goals other than profit maximization to be pursued, unless funds have a specific ESG mandate, which would naturally lead to an exit from non-ESG investments. On the other hand, economists [62,63] have shown that voice is more effective than exit to correct negative externalities and to maximize social welfare. Exit from unsustainable investments is akin to consumer boycotts. Both are forms of "private politics" that incentivize firms' sustainability by altering the relative prices (more sustainable products and stocks fetch a higher price) [6]. The impact of exit is limited, however, by the fact that not all consumers and investors are prosocial, and purely selfish agents partially offset the effects of divestments and boycotts by increasing their purchases of unsustainable products [63]. The contribution of exit to sustainability is therefore as slow as the impact of stock prices and funding costs on managers' decision-making. Voice, instead, is all-or-nothing;

company managers will have to pursue sustainability if a majority of the shareholders or a key investor want them to do so or else be fired.

The question of whether institutional investors will respond to the Taxonomy more by exit or by voice—if at all—cannot be answered empirically. A first reason for this is that, because most of the regulations described in the previous section are not yet in force, institutional investors and their portfolio companies are still figuring out how to adjust to the new measures. This leads to a second reason: although some beneficiaries of institutional investors care about reducing negative externalities, how many actually do and how much they are willing to sacrifice in terms of financial return is an empirical question whose answer, so far, has been undermined by greenwashing. Assuming, as I have done, that the reform of EU securities regulation will curb greenwashing, one would still have to wait for the first data on taxonomy-alignment to study the beneficiaries' demand for sustainable investments. This is a promising avenue for future research.

Based on theoretical analysis and the existing evidence, this section will argue that asset managers will take the opportunity, offered by the EU Taxonomy, to credibly commit to environmental sustainability and increasingly pursue sustainable corporate governance by way of voice rather than exit. This is counterintuitive because the Taxonomy seemingly rewards investment in companies that are already green as opposed to greening environmentally unsustainable companies. However, the analysis of mutual fund business models suggests that voice will become the dominant strategy to achieve high levels of taxonomy alignment and attract sustainability-minded clients.

Mutual funds have an incentive to attract beneficiaries that cater to their preferences. This is because their income is a percentage of the assets under management. Mutual funds strive to increase beneficiaries' inflow by offering comparatively higher returns, net of cost, and sustainable investment if relevant. This article focuses on mutual funds because retail investors can discipline them by switching freely to another fund, also based on sustainability considerations. This freedom definitely applies to funds offered in the EU, which will be subject to mandatory sustainability disclosure. However, institutional investors offering these products are often based elsewhere, particularly in the U.S., which brings us to the question of whether their alignment with the EU Taxonomy will also be relevant to attract non-EU beneficiaries. In the U.S., substantial parts of mutual funds are purchased as 401 (k) plans for retirement, in which the employer chooses the options available and the default fund. It is possible for beneficiaries to opt out of the default, although there are legal and behavioral constraints [64] making it harder for beneficiaries to switch to sustainability-related funds. However, not only are the legal constraints easing up [16,45], but also institutional investors, such as the Big Three, are offering increasing numbers of sustainability-related 401 (k) products to attract younger generations that are reluctant to put their savings into 401 (k) plans [26]. Therefore, because U.S. beneficiaries can also switch mutual funds and increasingly do so based on sustainability considerations, the EU Taxonomy will likely have an indirect impact in the U.S. as well.

How mutual funds attract beneficiaries depends on their business model. A key difference is whether mutual funds have an active or a passive management strategy. This longstanding distinction [65] is complicated by the fact that the large asset managers—including but not limited to the Big Three—today combine active and passive strategies into so-called “fund families”. Although this fact has important implications for sustainable corporate governance, particularly on the incentive to use voice, I discuss active and passive funds as if they were always separate institutional investors.

Active funds, when they invest in equities, are stock pickers. To attract beneficiaries, they can replace companies which they consider to be underperforming or insufficiently sustainable. Active funds must be able to offer beneficiaries an attractive risk/return combination net of their fees, reflecting the cost of screening the market for best-performing companies. On the contrary, passively managed funds, which include index funds and so-called closet indexers, simply track an index. To attract beneficiaries, they offer plain market returns in exchange for extremely low management fees, which is intuitive as

their portfolios are essentially automated. However, passively managed funds cannot dump companies they do not like. They can engage with the companies they think are underperforming or insufficiently sustainable but still belong to the index they track. Alternatively, index funds can change their index by creating new funds or repurposing existing ones, for instance to include ESG requirements or sustainability indices [11,57].

The leading strategy of actively managed funds is exit. The competitive advantage of active fund managers lies in information on the expected performance (financial and nonfinancial) of stock they do and may invest in. It is more profitable for active funds to underweight the losers and overweight the winners than to enter into costly engagements with the underperforming companies. This strategy also disciplines portfolio companies to the extent that management cares about stock price [66]. Exit remains the dominant strategy to pursue environmental sustainability as well. Asset managers that want to cater to the beneficiaries' demand for green funds can (threaten to) avoid the least sustainable companies (so-called "negative screening") and pick the more sustainable ones; for instance, focusing on best-in-class transition companies in the industries for which climate change is more material [67]. Because green funds currently attract more than half of European fund flows, it is expected that 25% of European funds will aim to be classified as art. 8 and art. 9 SFDR funds [39], for which funds will have to show a significant degree of taxonomy alignment.

The exit approach to environmental sustainability has limitations. Firstly, there are fewer companies that green funds can invest in. If the excluded companies are delivering higher risk-adjusted returns, these will be picked by conventional funds that will outperform green funds. The performance gap acceptable for sustainability-minded beneficiaries is an open question that cannot be resolved here but is a matter of concern. Secondly, funds that cater to investors' demand for sustainable portfolios miss out in terms of risk diversification [35]. This implies that green funds may eventually underperform conventional funds on two counts: return *and* risk. Moreover, insufficiently diversified green funds make society bear more risk than efficient. Thirdly, the negative screening of the unsustainable companies is insufficient to internalize the externality. Exit impacts sustainability via the cost of capital and the managerial incentives depending on it [16]. As discussed earlier, economic theory has shown that this impact is smaller than the effect of voice on the redeployment of capital and fails to maximize social welfare.

Apart from the extreme case of changing their index, index funds cannot exit, which makes them natural candidates for the voice approach. However, index funds have apparently no incentive to use their voice. Holding stock in thousands of companies, index funds cannot meaningfully engage with all of them. Even the Big Three asset managers have insufficient staff to decide and execute engagements with portfolio companies [68], whereas smaller index fund managers simply follow the proxy advisors [69]. Moreover, engagement is expensive, but the business case of index funds is based on keeping costs low. Some index funds even advertise zero fees. Zero fees are partly subsidized by the income from stock lending, which further disincentivizes engagement as asset managers cannot vote lent out stock. Finally, and most importantly, index funds cannot profit from improving the performance of individual companies. Because index funds cannot overweight any company, all other investors can free ride on the firm-specific improvements they achieve.

Many commentators are therefore skeptical that index funds can ameliorate corporate governance, let alone lead to a sustainable corporate governance. According to Bebchuk and Hirst [68], index funds exacerbate the agency problem between companies and their ultimate investors. Rock and Kahn [70] see a governance role for index fund managers when the stakes are high and the issues are widespread, but not on firm-specific matters. Gordon [29] regards index funds as universal owners that want to minimize climate change and other cross-cutting risks because these are undiversifiable within their portfolios, but to economize on cost would rather let activists take the initiative.

Despite the skepticism of the theory, the empirical evidence suggests that index funds use their voice with at least some of their portfolio companies. Companies largely owned by

index funds have a stronger corporate governance [71] and are more successfully targeted by activists [72]. Moreover, global institutional ownership, of which more than one-third is indexed [1], correlates positively with several ESG scores, and this seems attributable to voice [44]. Finally, to dissipate greenwashing concerns, significant ownership by the Big Three correlates with more environmental engagements with portfolio companies and lower CO₂ emissions [24].

There are three reasons why index funds have an incentive to use their voice and can be expected to increasingly engage with portfolio companies on environmental sustainability: first is their sheer size, which makes their voice powerful, but also less visible; second is the fact that index funds compete for beneficiaries with active funds, including prospectively on the degree of taxonomy alignment, which prompts them to act in this respect; the third reason to use voice is that especially the largest index funds belong to fund families that include active funds, making engagement cheaper and more profitable. I discuss these reasons in turn.

Index funds have attracted enormous investments in recent years [73]. As a result, large asset managers, particularly the Big Three, have gained high voting power. In the U.S., the Big Three hold collectively an average 20% stake in S&P500 companies, and about 16% in Russell 3000 companies [10]. The figures in the UK are similar, but this is not only an Anglo-American phenomenon [1]. The 20 largest institutional owners, who typically include the Big Three and other index funds, own more than 25% of the average company in countries such as the Netherlands and Sweden and more than 15% in countries such as Italy, Germany, and France—only to mention the EU. Because most retail investors do not cast their votes, these stakes often result in effective control by a handful of asset managers [10], particularly in companies with higher institutional ownership than average.

It is hard to imagine index funds sitting on such a power and not using it. However, the Big Three and other large institutional investors rarely vote against the management. Seemingly, this supports the conclusion that index funds do not use their voice. The story may however be subtler. Large asset managers are careful about openly influencing corporate decision-making for fear that governments will curb their power if they consider it excessive [74]. Controversial issues are rarely put to a vote because it normally suffices for institutional investors to engage privately [75]. Only the bigger conflicts, which cannot be settled, come to the fore—and then, the votes of the Big Three are decisive, as the recent Exxon case reveals [76].

The sheer presence of large institutional owners is a credible threat that counts as voice as it reflects behind-the-scenes engagement. This is enough to affect outcomes, including on environmental sustainability, because managers know that they would lose their job if only index funds took the trouble to vote against them. Commentators [77] have argued that this threat would not be credible in the presence of controlling shareholders who hold the lion's share of voting power. However, large institutional investors are also powerful in countries with concentrated ownership, because in these countries, not all publicly listed companies have a controlling shareholder, and many existing controlling shareholders can be outvoted by a coalition of institutional investors [78]. Azar et al. [24] found that ownership by the Big Three also correlates with lower CO₂ emissions in countries with concentrated ownership, and so does ownership by other index investors if they are sufficiently large.

Although index funds are influential, their incentive to pursue sustainability by using their voice remains questionable. Holding a market index, they cannot profit from engaging with individual companies because competitors would be able to get a free ride. However, index funds can benefit from improving the performance of the indices they track relative to actively managed funds, engaging with companies on cross-cutting issues, such as environmental sustainability [11]. Index fund managers, including the Big Three, are not monopolists in the mutual fund industry. They compete with active funds and with virtually any other investment option for beneficiaries who can always vote with their feet. After the entry into force of the EU Taxonomy, active funds will be able to attract sustainability-minded beneficiaries by offering green funds with a high degree of

taxonomy alignment. Short of repurposing some of their funds towards ESG indexes, managers of conventional index funds will not be able to exit companies that bring down their taxonomy alignment. The only way for such index funds to compete for sustainability-minded beneficiaries, within a business model pursuing low-cost risk diversification, is to use their voice efficiently to improve the taxonomy alignment of their portfolios. Index fund managers pick their battles; in particular, the Big Three's environmental engagements have been with companies in which they had higher stakes and for which CO₂ emissions were more material [24].

Index funds still face free riding by other funds tracking similar indices. Large asset managers, however, have additional incentives to use their voice. As they operate so-called fund families, they benefit from simultaneously managing index funds, which are indistinguishable from competitors, and active funds that are unique. For instance, the Big Three manage mainly index funds, but also a few active funds [73]. The proportion of active and passive funds varies across fund families, which allows fund families to differentiate themselves as their sources of income differ. Within families, mutual funds do not always vote in lockstep, but importantly, they can do so when they need to flex their muscles. Operating fund families creates many other synergies, reducing the cost of engagement and increasing its benefits [11]. At BlackRock, for instance, engagement and investment teams share information on a platform called Aladdin [24]. The investment teams learn where companies will be going in terms of cross-cutting issues from engagement teams, whereas engagement teams learn firm-specific information from the investment teams. Index fund managers engaging with the companies on material sustainability issues generate returns for sister active funds that not only can rebalance their portfolios but also benefit from higher inflows of sustainability-minded beneficiaries into the family. Active fund managers sharing information with engagement teams reduces the cost of tailoring general engagement policies to the specific company being engaged.

Although synergies within fund families incentivize the use of voice, they might also exacerbate conflicts of interest. For instance, in the U.S., fund families appear to vote strategically on environmental and social issues, fostering the financial interest of active funds rather than the nonfinancial preferences of ESG clients in contentious votes [79]. However, voting is only the tip of the iceberg in the context of engagement, particularly in the U.S., where shareholder proposals are not binding. Although more research is needed on this topic, U.S. funds and fund families profiling on ESG oppose management more frequently, both in shareholder proposals and in more salient director elections, suggesting that asset managers declaring to pursue sustainability engage more with their portfolio companies [45].

Large index fund managers have the historic opportunity to use their voice to lead the transition towards environmental sustainability. So far, their incentive to do so has been weakened by greenwashing, which makes it cheaper to meet the demand of sustainability-minded beneficiaries by creating ESG products of dubious quality. After the reform of EU mandatory disclosure, greenwashing will be reduced. Beneficiaries will be able to select institutional investors not only based on financial performance, net of cost, but also depending on how they score in terms of the EU Taxonomy and related indicators, both currently (turnover alignment) and prospectively (capital expenditure alignment). Being committed not to exit, large index funds will have a stronger incentive to cater to this demand by engaging with key portfolio companies to improve the taxonomy alignment.

Active fund managers, which can exit, can be expected to use their voice differently. Those participating in a fund family will likely follow the lead of index funds, where the bulk of voting power lies, albeit offering also green funds that underweight companies with a lower taxonomy alignment—at least until they score better. Independent funds may compete more aggressively on the degree of taxonomy alignment, but as discussed, funds pursuing this exit strategy risk underperforming compared with conventional funds on both risk diversification and return; for instance, if they “green” too quickly. In the

end, the market will set the pace of transition that satisfies beneficiaries' preferences for environmental sustainability and financial return.

It has been argued that the pursuit of sustainability by institutional shareholders may increase, instead of decrease, the agency cost of corporate governance [32]. Institutional investors pursuing alignment with the EU Taxonomy may monitor management less carefully and focus excessively on environmental sustainability at the expense of financial performance. Not knowing the "true" preferences of beneficiaries, whose revelation has been so far undermined by greenwashing, it is impossible to rebut this claim. However, as EU mandatory disclosure will align the incentives of institutional investors with the interest of their beneficiaries, it is reasonable to expect that the agency cost of corporate governance will at least not increase. Beneficiaries will be prompted to choose mutual funds based on a standard metric which, however flawed, will signal a specific constraint on the pursuit of financial return. Mutual funds will compete not only on setting this constraint, namely a target in terms of taxonomy alignment, but also on maximizing net financial return under this constraint to meet the financial and nonfinancial preferences of beneficiaries. This profit maximization under a negative externalities constraint will also inform the monitoring of management by institutional investors.

Rather than agency cost, institutional investors' engagement in sustainable corporate could raise concerns of "principal cost" [80] because, by exercising their influence, institutional investors might undermine the corporate controller's vision of sustainability. Institutional investors are monitors, not entrepreneurs. They can and arguably will prompt listed companies to reduce negative externalities to attract sustainability-minded beneficiaries. However, institutional investors cannot tell their portfolio companies *how* to become more sustainable and *how quickly*. The transition to environmental sustainability is a fundamentally uncertain process that is the responsibility of entrepreneurs. In corporate governance, entrepreneurial choices are made by managers or controlling shareholders depending on the ownership structure [81]. Institutional investors, with their large ownership, only act as a curb on agency cost. Although they have no views of their own on how to carry out the transition in specific industries and how quickly, institutional investors, often alerted by activists, may replace management that is more inefficient—meaning either too fast or too slow—than competitors in the transition. They can also put pressure on controlling shareholders.

The sustainable corporate governance model envisioned in this article will not necessarily increase principal cost. Institutional shareholders are only supposed to challenge the controller's discretion when it fails to deliver the promised performance, either financial or nonfinancial; for instance, because of dishonesty or incompetence. Adding environmental sustainability as a constraint to financial performance does not change this logic or the powers of institutional investors. Mandatory disclosure, curbing greenwashing, only harnesses institutional investors' incentives to monitor sustainability on behalf of their beneficiaries. The market will reveal which combinations of return and sustainability, in terms of taxonomy alignment, beneficiaries demand. Within the limits of their business model, asset managers will engage with the portfolio companies that more significantly depart from these combinations because of engaging in too little or too much sustainability.

5. Conclusions

In this article, I have analyzed the potential of the new EU rules mandating sustainability disclosure to establish a sustainable corporate governance. I have argued that EU securities regulation has this potential because mandatory disclosure is based on quantitative indicators, including a unique regulatory taxonomy of environmentally sustainable activities and investments. When this taxonomy will become effective, it will frame institutional investors' disclosure towards their beneficiaries in more credible and salient terms, curbing greenwashing. Such regulation will reduce the agency cost of sustainable corporate governance, potentially improving social welfare.

In the absence of data on how the new rules will play out, this analysis has been based on theory. Institutional investors are expected to increasingly cater to the preferences of sustainability-minded investors by way of voice instead of exit. On the one hand, large index investors will have to engage on cross-cutting issues broadly affecting their portfolio, such as environmental sustainability, because they will compete with active funds on the degree of taxonomy alignment. Active funds, on the other hand, will not be in the position to pursue taxonomy alignment only by way of negative screening because this undermines risk diversification. Both categories of institutional investors will, therefore, push corporate managers to be more environmentally sustainable, although it is impossible to predict at which pace. The pace of the transition will be set, in different industries, by the market revealing the desired combinations of environmental sustainability and financial return through the beneficiaries' choice of institutional investors.

Future research should exploit the first years of application of the EU Taxonomy Regulation as an opportunity to collect data on the choices of institutional investors, their beneficiaries, and their portfolio companies. Different research designs could establish how beneficiaries balance financial and nonfinancial preferences and the reactions by asset managers and allow the testing of this article's claim that institutional investors will increasingly pursue sustainable corporate governance by using voice.

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