

Green finance as a driver for ecological transition

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Abstract: *This paper investigates the model of green bonds as a legal tool designed to offer to private actors on financial markets legal and economic incentives to pursue the protection of environment as a socially desirable goal. The risk of greenwashing that green finance typically entails has prompted different regulatory approaches throughout the world. Whilst the US system still mainly relies on private governance tools, the European Union has recently enacted a more effective regulation based on a harmonized taxonomy of sustainable investments and on detailed duties of disclosure upon participants to financial markets. The comparative analysis of those regulatory approaches offers the opportunity to assess whether and to what extent private law tools succeed in aligning private benefits with social benefits to achieve sustainable development goals.*

Contents: 1. Private and social benefits of green finance - 2. The need for a regulatory framework - 3. Regulatory models - 4. Private law remedies and social goals.

1. Private and social benefits of green finance.

According to a widely shared opinion, public finance alone is deemed insufficient to provide the economic resources needed to foster the transition of structures of production and consumption towards ecological and sustainable models. Therefore, as a number of international and supranational documents contend, resorting to financial markets appears to be the more viable option in collecting the resources needed to support and encourage ecological transition¹.

The practical outcome of those ideas was the development of “green

¹ See UNITED NATIONS, *Transforming our World: the 2030 Agenda for sustainable development*, 2015, <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>; UNITED NATIONS, *Addis Ababa Action Agenda of the Third International Conference on Financing for Development*, 2015 https://sustainabledevelopment.un.org/content/documents/2051AAAA_Outcome.pdf; UNITED NATIONS, Paris Agreement, 2015; EUROPEAN COMMISSION, Action Plan: Financing Sustainable Growth, COM(2018) 97 final; OECD, *Green bonds: mobilizing bond markets for a low-carbon transition*, Oecd Publishing, Paris, 2017, p. 22 ff., https://read.oecd-ilibrary.org/environment/mobilising-bond-markets-for-a-low-carbon-transition_9789264272323-en#page24.

finance”, “social finance” or “impact” finance and in particular, the widespread diffusion of specific “environment-oriented” financial instruments commonly labeled as “green bonds”². The definition of a bond as “green” essentially means that the proceeds of its issuance are to be used for the development of specific projects aimed at the improvement or protection of the “environment”³.

The analysis of how those instruments are implemented and regulated in different legal systems offers the opportunity to investigate how economic incentives and private law models operate as a means for entrusting private actors with the task of pursuing “social goals” as regards the protection of the environment⁴.

From a comparative law perspective, green bonds and, more generally, sustainable finance have undergone different regulatory approaches. Whilst the US system still relies on private governance and soft law models, the EU has recently adopted a more stringent regulatory framework. A comparative analysis of those regulatory approaches offers the opportunity to assess if and how legal regulation manages to align private goals and social (environmental) goals to achieve the desired level of environmental protection and improvement.

In the last decade the green bond market has experienced constant growth due to the engagement of several private issuers, such as banks,

² See generally, as regards Italian scholarship, D. LENZI, *La finanza d'impatto e i green e social bonds. Fattispecie e disciplina tra norme speciali e principi generali*, in *Banca Impresa Società*, XL, 1, 2021, pp. 115-156.

³ See OECD, *Green bonds: mobilizing bond markets for a low-carbon transition*, cit., p. 23 ff.: «Green bonds are debt instruments used to finance green projects that deliver environmental benefits. A green bond is differentiated from a regular bond by its commitment to use the funds raised to finance or refinance “green” projects, assets or business activities»; for a critical assessment of the model of green bonds see D. LENZI, *La finanza d'impatto e i green e social bonds*, cit., p. 115 ff.; T. ASHRAF, *Bond, green bond: a licence to tackle climate change*, in *Butterworths Journal of International Banking and Financial Law*, 4, 2016, pp. 228-229; B. FASKE, *Turning Billions into (Green) Trillions: Tracking the Growth and Development of the Green Bond Market in China, France, India, and the United States*, in *Tulane Environmental Law Journal*, 31(2), 2018, pp. 293-325; S. K. PARK, *Investors as Regulators: Green Bonds and the Governance Challenges of the Sustainable Finance Revolution*, in *Stanford Journal of International Law*, 54(1), 2018, pp. 1-48; J. MATHEW, *Shades of green in financing: a discussion on green bonds and green loans*, in *Butterworths Journal of International Banking and Financial Law*, 5, 2018, pp. 311-314.

⁴ On private environmental governance as a ‘second-best alternative’ to public regulation see v. M.P. VANDENBERGH, J.M. GILLIGAN, *Beyond Gridlock*, in *Columbia Journal of Environmental Law*, 40(2), 2015, pp. 217-304.

pension funds and private corporations. This growth has also been induced by reputational concerns and the increasing importance of the idea of “corporate social responsibility”⁵.

In strict legal terms, since the green bond is still a bond, the basic structure of the transaction between issuer and investor amounts to a loan whereby the capital lent by the investor is paid for through interest payments made by the borrower. However, the specific character of the investment loan as oriented towards “environmental goals” reveals a peculiar encroachment of “private” and “social” gains expected from the transaction.

The social gains expected from such a bond loan are quite straightforward to perceive because they are directly linked to the environmental value of the project that the proceeds are intended to finance. In economic terms, though, such sustainability-oriented investment is typically expected to produce further and diversified gains for both businesses and financial markets as a whole, as well as for the individual economic actors involved in each bond issuance.

On the one hand, a “green” investment contributes to the reduction of systemic environment-related risks that in the medium-long term may have disruptive effects on costs and revenues of production and may significantly reduce the value of assets. In addition, the use of financial proceeds to improve the ecological sustainability of production processes reduces the so-called “transition risk”, namely the possibility of a future increase in costs due to the obligation to comply with stricter environmental standards imposed by the law. Therefore, a re-orientation of production and investments towards sustainability is in fact consistent with some current basic needs of firms and the economic system in general⁶.

⁵ See B. FASKE, *Turning Billions into (Green) Trillions*, cit., p. 297 ff.; K. M. TALBOT, *What Does Green Really Mean: How Increased Transparency and Standardization Can Grow the Green Bond Market*, in *Villanova Environmental Law Journal*, 28(1), 2017, pp. 127-146; on corporate social responsibility recently for an Italian perspective, M. LIBERTINI, *Economia sociale di mercato e responsabilità sociale dell'impresa*, in *Orizzonti del diritto commerciale*, 1, 2013, pp. 1-27; C. ANGELICI, *Divagazioni sulla “responsabilità sociale” d'impresa*, in *Rivista delle Società*, 1, 2018, pp. 3-19; as regards the European approach, G. RIOLFO, *La “visione” europea di impresa “sostenibile”: mito o realtà?*, in *Contratto e Impresa/Europa*, 3, 2021, pp. 533-562.

⁶ See N. LINCIANO *et al.*, *La finanza per lo sviluppo sostenibile. Tendenze, questioni in corso e prospettive alla luce dell'evoluzione del quadro regolamentare dell'Unione europea*, Consob, Roma, 2021, pp. 53 ff.; in general, on the relationship between sustainability factors and investment strategies of institutional investors, see G. STRAMPELLI,

On the other hand, green projects financed with the use of the proceeds usually generate in the meantime also individual economic gains, as, for instance, cost savings and increased efficiency stemming from the renovation of assets or energy production processes, as well as the revenue generated by the construction of a sustainable building. Therefore, the environmental sustainability of an investment project generally couples private economic gains with the production of reputational benefits for each actor involved.

Finally, some surveys show that investors are usually willing to pay a “green premium” (greenium) on the financial instrument because the green character of the bond induces them to accept a lower interest rate compared to a “non-green” instrument⁷. This means, first, that the green character of the bond amounts to an “added value” that may allow issuers to borrow money at a lower cost, and, second, that the actual achievement of the green project should be deemed as part of the benefits that the investor is legally entitled to receive from the transaction⁸.

2. The need for a regulatory framework

Since the system of green bonds entrusts private actors and the market mechanism with the task of pursuing environmental goals, they must be ascribed to “economic” or “market” models according to the usual taxonomy

Gli investitori istituzionali salveranno il mondo? Note a margine dell'ultima lettera annuale di BlackRock, in *Rivista delle società*, 1, 2020, pp. 51-71.

⁷ R. PRECLAW, A. BAKSHI, *The cost of being green*, Barclays Bank plc, London, 2015, https://www.environmental-finance.com/assets/files/US_Credit_Focus_The_Cost_of_Being_Green.pdf; for a deeper analysis on the formation of the price of *green bonds* and on the so-called *green bond premium* see E. AGLIARDI, R. AGLIARDI, *Financing environmentally-sustainable projects with green bonds*, in *Environment and Development Economics*, 24, 2019, pp. 608–623; O. D. ZERBIB, *The effect of pro-environmental preferences on bond prices: Evidence from green bonds*, in *Journal of Banking and Finance*, 98, 2019, pp. 39-60; T. EHLERS, F. PACKER, *Green bond finance and certification*, in *BIS Quarterly Review*, 2017, pp. 89-104, p. 95 ff.

⁸ From the perspective of civil law systems (in particular, Roman law systems according to R. David's taxonomy) this conclusion may be expressed in terms of a specific configuration of the “cause” of the contract, in that the cause should involve the achievement of both economic (receiving the agreed interest rate) and non-economic interests (the social benefit coming from the green project), see e.g. with reference to the Italian system LENZI, *La finanza d'impatto e i green e social bonds*, cit., p. 124; R. ROLLI, *L'impatto dei fattori ESG sull'impresa. Modelli di governance e nuove responsabilità*, Il Mulino, Bologna, 2020, p. 172.

of legal models for the protection of the environment⁹. Those models typically employ private law tools and economic incentives to align private and social gains in order to instrumentalize the utilitarian attitude of economic actors and the market to achieve social objectives. In other words, in the case of green bonds, issuers and investors would play a “regulative” role, in which they would push financial markets towards the achievement of an increased environmental sustainability of industrial processes.

From a regulatory perspective, two issues relating to the legal structure of the green bond model appear to be critical. The first issue concerns what is “green”, which requires defining what projects or activities actually foster the protection of the environment so as to deserve a “green label”. Furthermore, it necessitates specifying how and to what extent the proceeds should contribute to the project so that the financial instrument may legitimately qualify as green. Indeed, in absence of any regulation, investors would be affected by a typical informational asymmetry and would bear the full cost for the assessment of the green nature of the project and the actual connection between the use of the proceeds and the achievement of the project (once it is qualified as green).

The second issue concerns the risk that eventually the environmental benefit that justifies the green label may not be achieved. Whilst the first problem may be described as an informational asymmetry issue, the risk of non-performance of the environmental project raises a typical principal-agent problem, since the beneficiary of the proceeds could have incentives to behave opportunistically and deviate the resources from the environmental project declared. Such risk requires assessing what legal mechanisms or remedies could in fact bind the issuer to pursue the environmental objective communicated.

Those two problems (informational asymmetry and principal-agent) illustrate the risk of “greenwashing” – an opportunistic use and exploitation of the green label – which typically affects green finance, since the actors involved might be tempted to capture the advantages attached to the green label (such as the so-called “greenium”, reputational gains and, possibly, a favorable tax regime) without bearing the costs of effective measures

⁹ V. U. MATTEI, *I modelli nella tutela dell’ambiente*, in *Rivista di diritto civile*, 1985, pp. 389-427; M. MELI, *Il principio comunitario “chi inquina paga”*, Giuffrè, Milano 1996; EAD., *Oltre il principio chi inquina paga: verso un’economia circolare*, in *Rivista critica del diritto privato*, 35(1), 2017, pp. 63-80; M. CLARICH, *La tutela dell’ambiente attraverso il mercato*, in *Diritto Pubblico*, 1, 2007, pp. 219-239.

beneficial to the environment¹⁰.

3. Regulatory models

Unlike other “economic models” for the protection of the environment¹¹, green bonds – though often invoked by international organizations – owe their initial fortune to the autonomous and unregulated initiative of market actors¹². Without a regulatory framework, the green character of a bond would essentially depend on the “green” label assigned by issuers and explained through their representations and commitments as to the environmental value of the project and the use of proceeds¹³. Such an initial approach would fundamentally rely on the trustworthiness of issuers and would in fact shift the burden of assessing the actual environmental benefit of the transaction onto investors, leaving their informational asymmetry untouched.

In order to increase the trust of potential investors in those new financial instruments, market actors built a system based on private governance and self-imposed standards intended to perform some basic regulatory functions. Private actors – typically associations of issuers, brokers, and other stakeholders – developed voluntary certification systems of the green character of financial instruments, based on several tools, such as standards decided by a certification entity¹⁴, the publication of so-called “second party opinions” on behalf of external auditors¹⁵, and the inclusion of

¹⁰ On *greenwashing* from an economic perspective see F. BERNINI, F. LA ROSA, *A Conceptual Framework for the Greenwashing Strategy Research*, in *University of Catania Law Review*, 1, 2024, p. 5 ff. (highlighting the implications of environmental misdisclosure in terms of costs and benefit for businesses).

¹¹ Such as, for instance, the well-known emission trading system, see V. JACOMETTI, *Lo scambio di quote di emissione*, Giuffrè, Milano, 2010; B. POZZO, *La nuova direttiva sullo scambio di quote di emissione*, Giuffrè, Milano, 2003; EAD., *Il nuovo sistema di emission trading comunitario*, Giuffrè, Milano, 2010.

¹² See PARK, *Investors as Regulators*, cit., pp. 17-36.

¹³ On the meaning of “*labeled green bond*” and its distinction from the “*unlabeled green bond*” see PRECLAW, BAKSHI, *The cost of being green*, cit., p. 6.

¹⁴ Such as the *International Capital Market Association* which publishes the *Green Bond Principles* (see *infra*) and the *Climate Bond Initiative* (which certifies the green character of bonds according to its standards).

¹⁵ One of the most relevant providers of “second party opinions” is CICERO (*Centre for International Climate and Environmental Research Oslo*) which applies three different “shades of green” (based upon the expected environmental performance: dark green, medium green, light green) to qualify each bond submitted to its evaluation.

the bond in indices measuring the performance of green instruments as compared to non-green financial investments¹⁶. Within such a scenario, the “Green Bond Principles” developed by the International Capital Market Association offer today a significant example of a private and soft law regulatory framework intended to guide market actors in assessing the green character of bonds¹⁷. The GBP define green bonds as «any type of bond instrument where the proceeds or an equivalent amount will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects [...] and which are aligned with the four core components of the GBP». The distinctive feature of the GBP is that they do not take any specific «position on which green technologies, standards, claims and declarations are optimal for environmentally sustainable benefits», but rather provide issuers with some «voluntary process guidelines» that should assure a certain degree of «transparency and disclosure» to allow investors and other stakeholders to understand «the characteristics of any given Green Bond»¹⁸.

Therefore, those four “core components” do not refer to the content and features of projects and investments, as substantive bases for the qualification of the issuance as “green”. They instead provide some requirements of transparency and disclosure regarding four key aspects of the issuance procedure (*Use of Proceeds; Process for Project Evaluation and Selection; Management of Proceeds; Reporting*) and, in addition, recommend the involvement of external auditors to certify the compliance of the procedure with the requirements of the GBP. This approach has not prevented some issuances to be labeled as green according to the GBP even though their actual aptitude to determine beneficial effects for the environment had raised significant controversies¹⁹.

¹⁶ For a detailed analysis of such private governance systems see PARK, *Investors as Regulators*, cit., pp. 17-36; EHLERS, PACKER, *Green bond finance and certification*, cit., pp. 92 ff.

¹⁷ See INTERNATIONAL CAPITAL MARKET ASSOCIATION, *Green Bond Principles*, 2021, <https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-Bond-Principles-June-2021-140621.pdf>.

¹⁸ See INTERNATIONAL CAPITAL MARKET ASSOCIATION, *Green Bond Principles*, cit., p. 3-5.

¹⁹ On controversial cases (green bond issuances that complied with the GBP though raising significant doubts as to their actual environmental value), see PARK, *Investors as Regulators*, cit., p. 46; P. CRIPP, *Of Repsol and reputation*, in *Environmental finance*, 2017, <https://www.environmental-finance.com/content/analysis/green-bond-comment-june-of-repsol-and-reputation.html>; K. MULLIN, *Time the green bond market grew up*, in *Environmental finance*, 2017, <https://www.environmental-finance.com/content/analysis/>

Some important national systems, such as the Chinese and Indian ones, have adopted formal legal rules that provide specific requirements and constraints applying to issuances of bonds defined as “green”²⁰.

However, the most significant advancement in the regulation of green finance occurred in the EU system in 2019 and 2020, with the adoption of two European regulations²¹ specifically aimed at preventing “greenwashing” and fostering the development of sustainable finance markets²². Those

[time-the-green-bond-market-grew-up.html](#); BANKTRACK, *Open Letter on the 2015 update of the green bond principles*, 2015, in https://www.banktrack.org/ems_files/download/150430_open_letter_to_green_bond_principles_pdf/150430_open_letter_to_green_bond_principles.pdf, p. 2; E. K. WANG, *Financing green: reforming green bond regulation in the United States*, in *Brooklyn Journal of Corporate, Financial & Commercial Law*, 12(2), 2018, pp. 467-491, pp. 482-486; S. BREEN, C. CAMPBELL, *Legal Considerations for a Skyrocketing Green Bond Market*, in *Natural Resources and Environment*, 31, 3, 2017, pp. 16-20.

²⁰ As regards the Chinese system, see the *Guidelines on Green Bonds* adopted by the Chinese central Bank in 2015 (*People’s Bank of China Announcement* (2015) n. 39), *Guidelines on Green Bond Issuance* adopted by the National Development and Reform Commission (2015), and the *Guiding Opinions for Supporting the Green Bonds* adopted by China Securities Regulatory Commission in 2017; see B. FASKE, *Turning Billions into (Green) Trillions: Tracking the Growth and Development of the Green Bond Market in China, France, India, and the United States*, in *Tulane Environmental Law Journal*, 31(2), 2018, pp. 293-325, p. 303; PARK, *Investors as Regulators*, cit., p. 41; H. ZHANG, *Regulating Green Bonds in the People’s Republic of China: Definitional Divergence and Implications for Policy making*, ADBI Working Paper, n. 1072, 2020 <https://www.adb.org/publications/regulating-green-bonds-prc-definitional-divergence-implications>; on the Guidelines adopted by the *Security and Exchange Board of India* see FASKE, *Turning Billions into (Green) Trillions*, cit., p. 313.

²¹ REGULATION (EU) 2020/852 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 and REGULATION (EU) 2019/2088 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 November 2019 on sustainability-related disclosures in the financial services sector.

²² See recital n. 11 of REGULATION (EU) 2020/852 «Making available financial products which pursue environmentally sustainable objectives is an effective way of channelling private investments into sustainable activities. Requirements for marketing financial products or corporate bonds as environmentally sustainable investments, including requirements set by Member States and the Union to allow financial market participants and issuers to use national labels, aim to enhance investor confidence and awareness of the environmental impact of those financial products or corporate bonds, to create visibility and to address concerns about “greenwashing”. In the context of this Regulation, greenwashing refers to the practice of gaining an unfair competitive advantage by marketing a financial product as environmentally friendly, when in fact basic environmental standards have not been met».

regulations pursue the goals expounded in the “Action Plan on sustainable growth” of 2018²³ and have the ambition to set up a European “green bond standard” premised on a harmonized taxonomy of green investments and on the provision of specific legal duties – mainly duties of disclosure – upon issuers and financial intermediaries.

In particular, Regulation 2020/852 (“Taxonomy Regulation”) defines a harmonized taxonomy of “environmentally sustainable” investments according to EU law²⁴ and details their technical requirements, on the basis of the net benefit that the underlying project confers to the achievement of one of the “environmental objectives” set out in art. 9 of the Regulation (climate change mitigation; climate change adaptation; sustainable use and protection of water and marine resources; transition to a circular economy; pollution prevention and control; protection and restoration of biodiversity and ecosystems)²⁵. It also provides specific and harmonized duties of disclosure upon issuers, intermediaries, and advisors, regarding how and to what extent the investments support environmentally sustainable activities that contribute to the achievement of one or more environmental objectives²⁶.

In the global scenario, the EU legal initiative signals a relevant

²³ EUROPEAN COMMISSION, *Action Plan: Financing Sustainable Growth*, COM(2018) 97 final.

²⁴ See recital n. 14 of Regulation 2020/852: «To address existing obstacles to the functioning of the internal market and to prevent the emergence of such obstacles in the future, Member States and the Union should be required to use a common concept of environmentally sustainable investment when introducing requirements at national and Union level regarding financial market participants or issuers for the purpose of labelling financial products or corporate bonds that are marketed as environmentally sustainable».

²⁵ See recital n. 34 of Regulation 2020/852: «For each environmental objective, uniform criteria for determining whether economic activities contribute substantially to that objective should be laid down. One element of the uniform criteria should be to avoid significant harm to any of the environmental objectives set out in this Regulation. This is in order to avoid that investments qualify as environmentally sustainable in cases where the economic activities benefitting from those investments cause harm to the environment to an extent that outweighs their contribution to an environmental objective».

²⁶ See recital n. 13 of Regulation 2020/852: «If financial market participants do not provide any explanation to investors about how the activities in which they invest contribute to environmental objectives, or if financial market participants use different concepts in their explanations of what an environmentally sustainable economic activity is, investors will find it disproportionately burdensome to check and compare different financial products», and see D. BUSCH, *Sustainability Disclosure in the EU Financial Sector*, European Banking Institute Working Paper Series, n. 70, 2021 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3650407.

advancement in the approach to regulating environmentally sustainable finance. The new and stringent standards provided for by the EU legal sources sharply distinguish the European context from the model of procedural private governance and soft law. This denotes the adoption of a different regulatory approach that directly sets out the essential features that allow projects – and the underlying investments – to be qualified as green²⁷. However, since the EU regulatory model is built around duties of disclosures and the provision of substantive requirements that should cut the cost of assessing the actual green character of investments, it appears to be essentially directed to the problem of informational asymmetry of investors.

On the one hand, this change of regulatory perspective marks an advance in the legal treatment of green finance as regards the prevention of the risk of greenwashing. However, on the other hand, this approach may not be sufficient enough to address the second issue sketched above, namely the “principal-agent” problem that is likely to affect green bond transactions. In other words, once the green character of a given bond has been ascertained (with regard to the environmental value of the project and to the actual contribution that the use of proceeds is expected to give to it), there remains the risk that the environmental objective may in fact not be achieved (or not exactly achieved) due to a negligent or fraudulent use of the proceeds, inconsistent with the representations and commitments of the issuer.

4. Private law remedies and social goals

From a legal perspective, the placement of those transactions within the realm of contract should imply the availability of contractual remedies aimed at assuring the actual fulfilment of the interests pursued through the agreement. Given the peculiar characterization of those bonds as “environmentally sustainable”, it is reasonable to believe that the interests pursued by the investor include both the remuneration of the capital borrowed by the issuer and the further benefit arising from the contribution given to the achievement of the “environmental objective”²⁸. While the former interest

²⁷ On the aptitude of such EU approach to determine actual harmonization of Member States’ regulations and on the possibility of a global impact of the European standards (as a “Brussel effect” on sustainable finance) see D. BUSCH, *Sustainability Disclosure in the EU Financial Sector*, cit., pp. 32-42.

²⁸ From a civil law perspective such inclusion of the achievement of the environmental objective within the scope of contractual interests can be expressed as a peculiar arrangement of the “cause” of the contract, see D. LENZI, *La finanza d’impatto e i green e social bonds*, cit., p. 124 and 135 ff.

lies exclusively on the private economic sphere of the investor, the latter, though framed within a private contractual scheme, also shows a social relevance that represents the very reason why those financial instruments are typically promoted as “market models” for the protection of the environment as a socially beneficial goal.

However, the typical structure of those financial instruments usually excludes the achievement of the environmental objective from the scope of the contractual obligation existing upon the issuer and treats it as a mere pre-contractual representation. The contractual scheme, often by virtue of explicit disclaimers, limits the scope of the contractual obligation to the payment of the agreed interest rate and typically excludes that a defect or failure of the performance of the environmental objective amounts to breach of contract²⁹. Therefore, any such nonperformance or defective performance of the environmental objective would only allow investors to seek compensatory remedies grounded on misrepresentations or infringement of duties of disclosure to the market³⁰.

Contractual practices and some national rules (for instance in the Chinese system) in certain cases provide “self-executing” remedies that operate a modification of the economic terms of the bargain agreed upon by the parties. Contractual clauses or legal rules may provide for instance an automatic increase of the interest rate in case of failure of the environmental objective or the enforcement of a put option that obliges the issuer to buy the

²⁹ As regards the US market see P. LUDVIGSEN, *Advanced topics in green bonds: risk*, in *Environmental finance*, 2015, <https://www.environmental-finance.com/content/analysis/advanced-topics-in-green-bonds-risks.html>; WANG, *Financing green: reforming green bond regulation in the United States*, cit., pp. 485 ff.; S. BREEN, C. CAMPBELL, *Legal Considerations for a Skyrocketing Green Bond Market*, cit., p. 20; the central role of contractual provisions as to the binding force of the environmental objective is stressed by LENZI, *La finanza d'impatto e i green e social bonds*, cit., pp. 154 ff.

³⁰ As regards the US system see S. BREEN, C. CAMPBELL, *Legal Considerations for a Skyrocketing Green Bond Market*, cit., p. 20; K. CZERNIECKI, S. SAUNDERS, *Green Bonds: An Introduction and Legal Considerations*, in *Bloomberg Law*, 2016, <https://news.bloomberglaw.com/environment-and-energy/green-bonds-an-introduction-and-legal-considerations>; on specific duties of disclosure for “ethical” or “socially responsible” financial products in the Italian system see D. LENZI, *La finanza d'impatto e i green e social bonds*, cit., pp. 142 ff.; for the legal bases of a liability for inaccurate information of the environmental sustainability of a financial product in the Italian system see R. ROLLI, *L'impatto dei fattori ESG sull'impresa*, cit., pp. 186 ff.; with reference to the Portuguese system see M. M. BARBOSA, *Green bonds: riscos e responsabilidade*, in *Boletim de Ciencias Economicas*, 62, 2019, pp. 77-120.

bond back when an external audit concludes that the use of the proceeds has not adequately advanced the achievement of the environmental objective³¹.

It is true that all remedies that impose an economic burden on the issuer in case of failure of the environmental objective perform a deterrent function since they determine economic incentives that increase the likelihood that the environmental benefit is in fact achieved. However, the green bond model raises some more radical concerns as to whether private law models are actually suited to channel the behavior of economic actors towards the production of social benefits and to perform a socially beneficial regulatory function. Such an “instrumentalization” of private law models and remedies – that attempts to use them as incentives to produce social benefits – appears to be problematic for the fundamental reason that they are in fact structurally oriented towards the private economic sphere and are equipped to give legal relevance to costs and benefits mainly from a private economic perspective.

As regards green bonds, this problem emerges if one looks at the structural misalignment between the social character of the benefit that they are expected to produce (improvement of the environment) and the ability of private law tools and remedies to catch and protect only private and (mainly) economic interests. While the regulatory function of green bonds concerns society as a whole and the protection of collective interests, the private law tools (contract, liability for false information, compensatory remedies) that this model employs would treat the failure to perform the environmental objective as a mere “private wrong” and would only give redress to investors’ private economic interests. So, even though green bonds describe the social (environmental) benefit that they are expected to produce, so making it legally relevant as a pre-contractual representation or, hypothetically, as a contractual obligation, this benefit, from a private law perspective, would be given consideration only in its private and economic dimension. A court could thus,

³¹ The Chinese system regulates the enforcement of a put option as a legal consequence of the failure of the environmental objective and this model is often applied by contractual practice throughout the world, see A. OCHE, *Comparative Analysis of Green Bond Regimes*, in *Journal of Sustainable Development Law and Policy*, 11, 2020, pp. 160-184, p. 179; on contractual practice in the US system see S. BREEN, C. CAMPBELL, *Legal Considerations for a Skyrocketing Green Bond Market*, cit., p. 20; K. CZERNIECKI, S. SAUNDERS, *Green Bonds: An Introduction and Legal Considerations*, cit.; in Italy, Sustainability-linked bonds issued by ENEL Group provide for the increase of the interest rate in case of nonperformance of the environmental objective, see D. LENZI, *La finanza d’impatto e i green e social bonds*, cit., p. 128.

for instance, award the reputational damage suffered by the investor or the damage arising from the diminution of the value of the bond in the secondary market, once it is proven defective as to the environmental performance. But, since there is no necessary correlation between the actual production of the environmental benefit and the economic value of the bond (as long as the issuer keeps on paying the agreed interests), the mere failure of the environmental objective could be insufficient to cause any recoverable (economic) damage upon the investor.

This conclusion applies to the US context, where the constitutional “standing” requires plaintiffs to prove a specific and redressable injury for their action to be cognizable to a court, because such injury would be absent as long as the issuer continues to pay interests and the bond maintains its value on the secondary market³². But the same also applies to the European scenario, where the recent regulations, though capable of grounding new forms of civil liability for incorrect information to the market, leave the structural features of national private law models untouched³³.

The technical requirements for “environmentally sustainable investments” and the related duties of disclosure set out in EU law, do in fact represent a distinctive feature of the European approach and provide possible legal bases for the imposition of liability upon issuers and intermediaries for economic losses suffered by investors because of an incorrect disclosure of the sustainability factors of financial instruments³⁴. Yet, even under European rules a recoverable economic loss would be absent when the defects of sustainability of the instrument or an incorrect disclosure of its environmentally related aspects do not affect the profitability of the bond or its value in the secondary market³⁵.

A possible legal basis for the inclusion of the environmental benefit within the scope of recoverable damages might result, though, within some European national systems, from the notion of “non-pecuniary loss”. In the Italian system, for instance, the failure of the environmental objective might amount to a recoverable non-pecuniary loss of investors under art. 2059 civil

³² See S. BREEN, C. CAMPBELL, *Legal Considerations for a Skyrocketing Green Bond Market*, cit., p. 20.

³³ D. BUSCH, *Sustainability Disclosure in the EU Financial Sector*, cit., pp. 38 ff.

³⁴ See, as regards the Italian system, R. ROLLI, *L’impatto dei fattori ESG sull’impresa*, cit., pp. 174 ff.; LENZI, *La finanza d’impatto e i green e social bonds*, cit., pp. 151 ff.

³⁵ See D. BUSCH, *Sustainability Disclosure in the EU Financial Sector*, cit., pp. 38 ff.

code and art. 2 of the Constitution, as currently interpreted by Courts and many scholarly opinions³⁶.

In any case, any compensatory remedy would produce economic effects in terms of costs and benefits on the individuals involved in the transaction, but it would not add anything to the actual achievement of the environmental objective underlying the bond. Even the possible inclusion of the interest in the production of the environmental objective within the scope of recoverable damage (as a non-pecuniary loss) would only benefit the investor as an individual and would not produce any factual advance in the achievement of the social objective.

In the end, the actual achievement of the environmental objective underlying the bond would only rest on the scope of the contractual obligation lying on the issuer and on the related availability of specific performance, rather than damages, as a remedy for disappointed investors. But this aspect, even under the recent European regulation, depends entirely on the agreed terms of the transaction and, therefore, ultimately on the willingness of issuers to take on an explicit contractual obligation as to the actual accomplishment of the environmental objective underlying the bond³⁷.

The assumed regulatory function of sustainable finance – as a legal model that gives private economic actors economic incentives to pursue social objectives - would then need a further effort to devise some remedies for a stronger “corporate social responsibility”. These remedies would drive economic actors to the actual production of the intended social benefit, such as injunctions for specific performance or other orders to adopt specific measures directly contributing to the environmental objective declared to the market³⁸. After all, those remedies are typical in the field of environmental liability but, as regards financial instruments specifically oriented to the production of social benefits for the environment, they still appear to need further substantial development.

³⁶ See R. ROLLI, *L'impatto dei fattori ESG sull'impresa*, cit., p. 197 ff.

³⁷ D. LENZI, *La finanza d'impatto e i green e social bonds*, cit., pp. 154 ff.

³⁸ See D. BUSCH, *Sustainability Disclosure in the EU Financial Sector*, cit., p. 39.