

Evaluating the sustainability profile of banks: A comprehensive benchmarking analysis in the Italian context

Mario La Torre | Lucilla Bittucci | Cosimo Paccione  | Alessia Palma 

Department of Management, Sapienza
University of Rome, Rome, Italy

Correspondence

Alessia Palma, Department of Management,
Sapienza University of Rome, Rome, Italy.
Email: alessia.palma@uniroma1.it

Abstract

The integration of sustainability factors in banking activities is becoming more urgent and necessary since banks are asked by regulatory and supervisory authorities to integrate Environment, Social and Governance (ESG) components in their risk management and governance frameworks. In literature, there is a lack of studies that assess the sustainability orientation of banks. We tried to fill this literature gap by providing a formal approach to evaluate the sustainability profile of Italian banks against the requirements of Article 111 bis of the National Normative Framework, which defines specific criteria for “sustainable banks”. Exploiting a mixed-method approach, we analyze banks' compliance with the requirements of Article 111 bis and develop a distance metric that allows us to evaluate the distance of traditional banks from a selected benchmark compliant with Article 111 bis. While our findings reveal that Italian banks fall short of complete compliance with Article 111 bis, positive trends, particularly in sustainable lending, are discernible. Our paper represents an initial reflection on the definition of a sustainable business strategy, identifying crucial aspects that can be considered in harmonizing the bank's transition path to sustainability.

KEYWORDS

banking regulation, ESG, nonfinancial disclosure, sustainability strategies, sustainable banking

1 | INTRODUCTION

Over the last few years, sustainability has gained increasing significance for financial institutions, and it is widely recognized that integrating these practices into bank strategies can represent a significant

opportunity for developing new businesses and better managing traditional and emerging risks (Zioto et al., 2023). By incorporating Environment, Social and Governance (ESG) considerations into business strategies, banks could enhance their profitability by attracting new customers, offering new products, and engaging with clients on their own climate risks and sustainable preferences (Galletta et al., 2023). Consequently, measuring sustainability is now a key priority for comparing banks across the system and monitoring the current state of the art.

From an academic perspective, some proposals for principles and codes of conduct are suggested, at various levels, by associations or spontaneous networks of intermediaries. Weber (2012) attempted to

Abbreviations: CONSOB, Commissione Nazionale per le Società e la Borsa; EBA, European Banking Authority; EC, European Commission; ECB, European Central Bank; ESG, Environmental Social and Governance; EU, European Union; FEBEA, Fédération Européenne des banques Ethiques et Alternatives; GRI, Global Reporting Initiative; LOM, Loan and Monitoring; LSI, Less Significant Institution; NCA, National Competent Authorities; NFD, Nonfinancial Disclosure; PIE, Public Interest Entity; ROA, Return on Asset; ROE, Return on Equity; SASB, Sustainability Accounting Standards Board; SI, Significant Institution; SSM, Single Supervisory Mechanism.

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identify how and to what extent banks have integrated sustainability into their policies, strategies, and business models. Rebai et al. (2016) established a new sustainability index for banks. More recently, Galletta et al. (2021) investigated banks' climate strategies by examining governance. Adu (2022) defines sustainable banking strategies by creating a disclosure index for sustainable banking in alignment with GRI standards.

From a policy maker/institutional perspective, at the EU level, in addition to the actions of the EC, financial regulators and supervisors have also outlined a precise ESG path that will lead banks to include ESG factors in their risk appetite framework (ECB, 2020; European Commission, 2018). The European Banking Authority (EBA) has identified priorities and objectives for integrating ESG factors into the EU banking regulatory and supervisory framework (EBA, 2021). For example, the European Central Bank (ECB) has adopted a specific Climate Agenda to manage and mitigate ESG risks (European Central Bank, 2022a, 2022b, 2022c), and as far as the Single Supervisory Mechanism (SSM) is concerned, it has confirmed the exposure to climate and environmental risks as a critical priority for 2023–2025 EU banking supervision. Along this line, the ECB clarified its supervisory expectations relating to risk management and ESG disclosure in its Guide on climate-related and environmental risks (ECB, 2020) and conducted various supervisory exercises, including the 2022 Thematic Review and 2022 Climate Stress Tests. Although these measures were taken to define the perimeter of the ESG phenomenon, there is currently no precise and binding definition at the European level unless the one proposed by the Italian legal framework on ethical and sustainable finance, represented by the adoption in 2016 of the Article 111 bis of the Italian Banking Law (Testo Unico Bancario: T.U.B.). However, despite extensive attention in the literature, a consensus on standard definitions is lacking, hindering the ability to unequivocally categorize a bank as “sustainable” (Arvidsson & Dumay, 2021; Friedrich et al., 2022).

In order to fill this gap, our paper evaluates the sustainability orientation of traditional banks. Without anchors in harmonized European legislation, we opt to deal with this issue by leveraging the Italian legislation, referring to Article 111 bis of the T.U.B. This article identifies quantitative and qualitative requirements for ethical and sustainable banks. We quantify the sustainability gap of Italian traditional banks, elucidating how far they deviate from a sustainable benchmark, compliant with Article 111 bis.

Assuming these requirements as a yardstick, the paper measures how distant Italian traditional banks are from the prescription of Article 111 bis and whether they comply with the six requirements the legislator considers as distinguishing features of ethical and sustainable banking.

The article assumes relevance for scholars and supervisory authorities, providing a preliminary analysis of Italian banks' current orientation toward sustainability. Moreover, it could serve as a helpful guideline to orient the definition of sustainable banking across different countries, assuming identified variables as proxies to construct a standardized approach to evaluate the trajectory of traditional banks toward sustainable transition. In this regard, the work serves as a

starting point for future investigations to strengthen the reference sample and analyze the business models of sustainable banking in Italy. A better understanding of the status of art of “sustainability” in banking would allow supervisors to monitor and compare European banks and facilitate banks in adopting sustainability policies fostering long-term sustainable development.

The article is also relevant for bank management bodies and practitioners, since providing a first comparison across Italian banks could stimulate the integration of ESG factors to improve bank reputation and profitability.

The remainder of this paper is organized as follows: Section 2 provides a literature review of sustainable finance concepts and the integration of ESG factors in the banking sector. Section 2.1 describes the Italian regulatory framework for ethical and sustainable banks and the requirements set out in Article 111 bis of T.U.B. Section 3 reports the qualitative (first stage of methodology mentioned above) and quantitative analysis (second stage) to measure banks' sustainability condition, leveraging on the requirements of Article 111 bis. Section 4 provides the main results of the analysis, and Section 5 concludes.

2 | LITERATURE REVIEW

The literature review outlined in the provided paragraphs is structured to address key aspects related to ethical and sustainable finance, with a specific focus on banking activities and the integration of ESG factors. Specifically, we break down the literature in the following aspects: (i) analysis of ethical finance and sustainable finance definitions and (ii) analysis of the integration of ESG factors in banking.

2.1 | Ethical finance

Among the few positive effects of financial crisis of 2008, there is undoubtedly the growing interest of banks, financial intermediaries, and client-investors in ethical finance. This trend had a significant impact on the financial world, leading the entire banking system being scrutinized. However, the literature still needs to identify a univocal definition of Ethical finance and different terms indiscriminately indicate the same reality (La Torre et al., 2021; Guzmán et al., 2023). Consequently, a leading definition of this concept is not accepted among academics and users, making it hard to distinguish which is ethical from which is not (Chew et al., 2016).

De-Clerck (2009) underlines that there is no clear definition of ethical banking because “Social, ethical, alternative, sustainable development, and solidarity banking and finance” are denominations currently used to express ways of working with money based on nonfinancial deliberations. Even if there is no consensus on the Ethical banking definition, San-Jose et al. (2011), in trying to systematize this issue, establish that Ethical banking could be defined by looking at two different characteristics: the search for social profitability, intended as the funding of economic activities that add social value, and the economic profitability. Both aspects are necessary because

the social dimension makes the bank ethical, while the benefit dimension makes the bank economically sustainable. Other authors and international institutions also commented on this idea. The European Federation of Ethical and Alternative Banks and Finances (from here FEBEA - acronym in French) and various authors (Karl, 2015; Relano, 2008) recognize that these banks' primary objective is to positively impact the collection and use of money. FEBEA also states that ethical banks should primarily address two target groups: savers and investors. The first category consists of those who are excluded from the banking system. In contrast, the second category consists of investors who are interested in understanding what their savings are being used for. Guzmán et al. (2023) compile some essential characteristics that make up the profile of an ethical bank, from fairness and equity in dealing with customers to cooperation with the environment, commitment to customers, attention to employee welfare, environmentally friendly practices, maintenance of a good reputation, and finally, an emphasized transparency at all organizational levels and practices.

2.2 | Sustainable finance

Alongside ethical finance, recent years have seen a proliferation of the concept of sustainable finance, driven mainly by regulatory frameworks and the emerging need to reorient resources toward sustainable investments (European Commission, 2018). Given the definitions in the referring literature, there appears to be a partial overlap between ethical finance and sustainable finance concepts. For this reason, much of the literature considers them synonyms and uses them interchangeably (Goyal & Joshi, 2011; Karl, 2015), categorizing both as belonging to the alternative banking class.

2.2.1 | Sustainable banking

The literature provides several definitions of sustainable banking. According to Yip and Bocken (2018), a sustainable bank is an institution devoted to employing its resources to meet the needs of people and safeguard the environment while generating profits. According to Karl (2015), sustainable banking can instead be defined as a particular form in which environmental, sustainable, ethical, and social are the key components of a business strategy, while for Imeson and Sim (2010), sustainable banking can be studied according to different interpretations: corporate social responsibility, corporate responsibility, environmental, social and governance, and several other variants. Babalola and Adedipe (2014) consider sustainable bank as the intermediaries that satisfy not only shareholders needs but also the ones of customers and the entire economy; according to that vision, a sustainable bank is a bank that aims to achieve an environmental and social impact with its activities.

According to Weber (2012), sustainable banking was born at the end of the 1900s by integrating some aspects of the banking business model. Over the past few years, not only scholars but also regulators

have recognized the role of financial intermediaries in achieving sustainable development, which is essential for mobilizing financial resources toward sustainable goals (Aracil et al., 2021), as specified by the European Commission in the Action Plan on financing sustainable growth. In particular, in the works of Nájera-Sánchez (2019) and da Silva Inácio and Delai (2022), it is underlined that the banking sector can contribute to sustainable development by providing sustainable products and by supporting clients' sustainable transitions.

According to Weber (2012), internal environmental management and environmental risk management should be included by financial intermediaries to be considered as "sustainable".

2.3 | Integration of sustainability and ESG factors in banking

Some authors have analyzed the potential benefits for banks of implementing sustainability principles. However, this topic has not yet been sufficiently researched, and it will take some time before we reach a clear conclusion. For example, some researchers aimed to study the difference between commercial banks and ethical banks, especially using case studies or leveraging on performance indicators of ethical or sustainable banks, finding that sustainable banks seem to be more efficient and productive (Shah et al., 2019) and that there is a significant positive impact of sustainability on the performance (Buallay, 2019). Gangi et al. (2018) find evidence that sustainable policies have a positive impact on performance through reputation channels, while Wu and Shen (2013) show that the adoption of corporate social responsibility has a positive relationship with Return On Asset (ROA), Return On Equity (ROE), and a negative relation with the amount of nonperforming loans. The study is also relevant as it investigates motivations that push banks to adopt these policies such as strategic choices, altruism, and greenwashing. Some of the academic literature also explores integrating ESG factors in banking. It considers ESG business models integrating climate and environmental risks into strategies, governance, and risk management practices and frameworks. Indeed, there is a growing awareness among professionals and researchers that ESG risks have an impact on bank stability beyond traditional financial risks and that they will soon need to be integrated and managed. In this sense, Ziolo (2021) and El Khoury et al. (2023) conducted a relevant study exploring how ESG risk can influence a bank's financial performance.

To conclude, it is reasonable to assume that academic literature does not express a univocal vision of a sustainable bank, and there is no apparent difference between various types of alternatives, green, sustainable, and social business models. From our perspective, ethical banking is mainly limited to banks that promote social benefits instead of economic profitability. In contrast, sustainable banking includes banks that integrate sustainable development principles and ESG factors in their policies, strategies, and governance frameworks by adopting a more comprehensive and holistic approach. Nevertheless, a framework emerges in which operators, researchers and regulators must find a common path that defines shared and transparent

standards and criteria for alternative finance beyond the nomenclature one would like to attribute to 'positive finance.'

3 | THE REGULATORY FRAMEWORK OF SUSTAINABLE BANKING IN ITALY: ARTICLE 111 BIS

Looking at the legislator's perspective, while the EU legislator is oriented toward a taxonomic effort of sustainable finance, the Italian legislature is committed to ethical and sustainable finance. In Italy, Article 111 bis of the Italian Banking Law (Testo Unico Bancario: TUB) introduces the regulatory framework for ethical and sustainable banks. The article is optional for traditional Italian credit institutions. However, it is a useful ESG yardstick since it considers sustainability aspects shared by academic literature and the European Ethical Bank's network. The starting point of the legislator request may be identified in the provision that asks ethical and sustainable banks to direct their funding to projects with social or environmental purposes and in line with the supervisory authorities' requests on disclosure. This is consistent with the European Action Plan on Financing Sustainable Growth (CE, 2018), according to which banks should act as enablers toward firms and households, helping other activities reduce adverse effects or events and improving the value generated by these sustainably. Indeed, for the bank, as can be seen within the materiality matrix elaborated by SASB, the ability to support companies that are pursuing the transition process is more relevant than the *self-ESG* sustainability (i.e., activities carried out on their production, employees, etc.); the significant contribution that banks offer on the path to sustainability lies in the ability to support the transition of economic activities. Since banks produce services, their primary impact is related to what they do on the customer and investment side. Banking activity is labeled "greening by," or more in general, "enabling activity" because it supports other sectors in the transition process.

In more detail, Article 111 bis provides six requirements related to credit rating, disclosure, loan portfolio, governance, and remuneration. Below, the criteria are presented considering the "Decree art. three c.1 let. (a)," which clarifies some aspects of the text.¹

Requirement 1: Ethical banks are called to assess their counterparties according to internationally recognized ethical rating standards, with particular attention to social and environmental impacts. Ethical rating standards must be defined based on principles and initiatives developed by the European Union, the United Nations, the Organization for Cooperation and Development Economic, International Labor Organization, or other international organizations. The evaluation can consider corporate social responsibility policies adopted, programs promoted by National Organizations, and sustainability indicators or certifications acquired by legal entities. Loans to legal entities involved in (i) production or exchange of goods or services that violate human rights, (ii) consumption of energy exclusively from nonrenewable

sources, and (iii) systematic human rights violations, situations of war or conflict, or severe environmental damage are excluded.

Requirement 2: At least annually, ethical banks are called to give public evidence, also via the web, of the lending provided referred to in Requirement 1, taking into account the current privacy regulations. Banks should indicate in a special annual report the funding provided to legal persons and the criteria used for their payment.

Requirement 3: Ethical banks are requested to finance at least 20% of their credit portfolio to nonprofit organizations and entities registered in the Single National Register of the Third Sector (Legislative Decree no. 117 of 3 July 2017) and to social enterprises (Legislative Decree 3 July 2017, n.112).

Requirement 4: Ethical banks are called not to distribute, even indirectly, dividends or profits and to reinvest them in their own business.

Requirement 5: Ethical banks must adopt a public company model with a solid democratic orientation. According to the side decree, banks should have more than 200 shareholders, and (i) no shareholder entitled to vote may exercise voting rights for more than 5% of the voting share capital, (ii) the participation of individual members is facilitated by voting remotely or by correspondence, and (iii) recipients of funding should be involved in consultations through their representative associations.

Requirement 6: Ethical banks are called to adopt remuneration policies to limit the difference between the highest and the average remuneration paid by the bank. The ratio between the two values cannot exceed 5; that is, the highest salary must not exceed five times the average employee's salary.

The calculation should consider the highest remuneration (total, fixed and variable) at the numerator and the average remuneration of all bank staff.

In addition to the benefits studied and identified in the literature (i.e., a positive correlation between sustainability performance and financial performance), the Italian legislator provides a tax incentive for banks that meet the requirements outlined in Article 111 bis.

In the Italian landscape, only Banca Popolare Etica meets all the conditions of Article 111 bis. Banca Popolare Etica was founded in 1998 by the union of associations and organizations of the third sector, inspired by the principles and values of ethical finance. Today, Banca Etica has about 46,000 shareholders and over 13,000 financed customers. The criteria of transparency, participation, and solidarity inspire its values.

4 | METHODOLOGY

4.1 | Design approach

Our research is based on a mixed methods design. For this article, we use the following definition of mixed methods research (Johnson et al., 2007, p. 123): "mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e. g., use of qualitative and

¹Please note that the Decree is still under approval.

quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration.” A mixed methods study involves collecting or analyzing quantitative and/or qualitative data in a single study in which the data are collected concurrently or sequentially, given priority, and integrating the data at one or more stages in the research process. (Creswell, 2012). Moreover, the mixed-methods approach is particularly appropriate when prior research exists but is incomplete or needs further exploration (Kopinak, 1999) and when one type of research (qualitative or quantitative) is not enough to address the research problem or answer the research questions (Creswell, 2012). For this last purpose, Venkatesh et al. (2013) produce meta-inferences that can address inconsistencies in the research approach, often not ideally designed for the research purpose. We employ a sequential exploratory design that, as illustrated in Creswell et al. (2003), is characterized by an initial phase of qualitative data collection and analysis followed by a phase of quantitative data collection and analysis. The proposed analysis is developed in two stages as follows:

- a qualitative analysis, in which we assess Italian commercial banks against the requirements of Article 111 bis, defining whether banks are compliant, compliant-oriented, or noncompliant;
- a quantitative analysis, in which we measure, in quantitative terms, how far Italian commercial banks deviate from the benchmark concerning each Requirement. We consider Banca Etica—fully compliant with Article 111 bis—our benchmark, quantifying the gap between each bank and the former. This allows us to classify the observed banks according to the intensity of sustainability achieved.

4.2 | Sample and data collection

Historically, Italy has had a diverse and fragmented banking sector, characterized by large, nationwide banks and numerous smaller regional and local banks. At the end of 2021, the Italian banking system consisted of 141 intermediaries (149 in 2020), which included 54 groups and 87 individual banks; the latter together was composed of 39 cooperative credit banks (BCC) not part of group 36 joint stock companies and 12 popular banks. As of November 2021, Italian groups classified as significant under the SSM were 13. Our study considers all the Italian commercial banks that annually publish the nonfinancial disclosure (NFD) according to the list of entities published by the Italian Financial Market Authority (CONSOB) following Article 3 of the CONSOB Regulation of 19 January 2018. According to the latter, 37 banks meet the criteria described in the Regulation mentioned above, of which 13 are significant, and 21 are less significant institutions; among them, two credit institutions publish the document voluntarily. Banca Etica, despite it does not meet the criteria to be classified as PIE, was included in the analysis and used as a benchmark, as aligned with all the requirements of Article 111 bis (T.U.B.), and as it provides the NFD. In particular, Article 2 of Legislative Decree N. 254 of December 30, 2016 introduced for “Public Interest

Entities” (PIEs) the obligation to publish, at the individual or consolidated level, a nonfinancial statement that describes banks' commitment to adopting social and environmental policies. The Legislative Decree no. 39 of January 27, 2010 provides the requirements to be classified as a “PIE”: The entities included in this scope are Italian companies issuing listed securities on a regulated market in Italy or EU banks, insurance companies and reinsurance companies that have had, on average, during the financial year:

- Several employees greater than 500 and on the balance sheet date have exceeded at least one of the two following size limits:
- Total asset: €20,000,000;
- Total net revenues from sales and services: €40,000,000.

Article 7 of the Decree above No. 254/2016 provides that entities other than relevant PIEs may, on a voluntary basis, publish a declaration of a nonfinancial nature. The choice of this sample is justified by the fact that the selected banks are the largest and most significant institutions in the country: Indeed, significant banks alone—all included in our sample—represent around 80%² of the Italian banking system's assets by 2021. Moreover, they should also be proactive in promoting and raising awareness about sustainable finance in a context where environmental and social issues are assuming relevance at the national and supra-national levels.

Four banks were eliminated from the sample because they could not be compared due to certain extraordinary events that changed their internal structure (acquisitions, mergers, joint ventures, etc.) or because they performed a loss in the reference year that affected their resource allocation choices. The final sample, therefore, consists of 34 banks.

Table 1 provides some descriptive information about the sample.

Once the sample identification has been performed, the dataset has been manually constructed by extrapolating the variables directly from the financial and nonfinancial documents published by banks in 2021. The data collection phase, carried out in 2022, collected the previous year's information, and for each institution, the following documents have been reviewed: (i) NFDs,³ (ii) Financial Statement (iii) Report on Remuneration Policy, (iii) Public Disclosure (Pillar III), (iv) Annual Report⁴, and (v) Report on Corporate Governance.

The data and information under analysis were obtained through a “keyword” research based on a content analysis. Content analysis is a qualitative research methodology that systematically analyzes information material through specific keywords (Flick et al., 2004; Weber, 1990) and is useful in examining trends and patterns (Stemler, 2001).

The keywords used reflect the requirements of Article 111 bis. This research makes it possible to identify whether there is any information, data, or references concerning the individual requirements of Article 111 bis and represents the starting point for the compliance analysis of the Italian banking system.

²Relazione annuale Banca d'Italia 2022.

³Please note that the document is also titled “Non-Financial Statement” for some banks.

⁴Intended as “Relazione sulla gestione”.

TABLE 1 Additional information about the sample.

Sample	Total assets th EUR 2021	Net loans & advances to customers th EUR 2021	Tier 1 capital th EUR 2021	Number of employees 2021
Bank 1	5.179.859	3.524.775	531.149	773
Bank 2	15.099.712	12.515.889	818.500	1.489
Bank 3	3.427.427	2.371.159	198.107	522
Bank 4	16.191.610	9.636.409	758.963	990
Bank 5	12.977.891	10.352.391	1.457.000	1.849
Bank 6	73.522.370	31.417.625	2.361.412	3.318
Bank 7	137.868.562	83.060.742	5.234.741	21.244
Bank 8	101.452.667	70.350.005	5.638.672	11.153
Bank 9	13.283.390	10.316.340	752.393	1.335
Bank 10	5.831.476	4.108.340	263.299	1.124
Bank 11	55.016.149	39.833.364	3.149.177	3.395
Bank 12	2.934.325	2.326.374	144.708	438
Bank 13	5.478.809	3.901.106	334.683	769
Bank 14	20.478.562	12.263.056	1.070.362	4.980
Bank 15	6.692.507	5.144.882	352.707	752
Bank 16	200.489.216	124.223.199	9.735.665	20.437
Bank 17	17.804.781	13.884.922	1.131.495	2.141
Bank 18	136.347.873	93.761.184	6.258.528	18.622
Bank 19	25.839.822	3.861.695	1.153.969	604
Bank 20	6.968.247	2.690.573	414.658	229
Bank 21	14.564.420	8.631.766	894.400	1.875
Bank 22	11.290.928	9.335.713	868.694	1.146
Bank 23	104.942.913	77.799.539	4.803.469	13.096
Bank 24	67.579.187	40.191.178	2.653.839	6.608
Bank 25	30.512.899	20.226.686	2.038.688	3.192
Bank 26	51.076.896	9.167.803	1.132.145	1.307
Bank 27	33.867.175	24.945.177	1.368.214	1.305
Bank 28	91.150.000	45.833.000	7.278.000	11.207
Bank 29	7.121.551	5.959.460	392.714	829
Bank 30	178.985.382	148.846.758	10.192.209	22.084
Bank 31	4.660.590	2.961.797	639.250	725
Bank 32	1.069.003.000	457.182.000	51.999.000	97.698
Bank 33	8.679.674	6.604.218	449.057	928
Bank 34	82.598.700	49.801.901	7.613.541	4.921

Table 2 details the keywords⁵ used to extract the information, the documents consulted, and the sought information for each Requirement defined in Article 111 bis.

4.3 | Qualitative analysis

This analysis made it possible to classify the banks into three categories for each Requirement of Article 111 bis.

⁵The keyword search was carried out in Italian as the banks publish the documents consulted in the Italian language.

Based on the information collected, the banks can be considered as follows:

- i. *compliant* with Article 111 bis, that is, the bank is in line with the regulator's specific request;
- ii. *compliant-oriented*, that is, oriented toward adopting a sustainability policy that can be ascribed to Article 111 bis, even if they do not fully comply with the specific provisions;
- iii. *noncompliant*, that is, banks that do not fulfill the regulatory Requirement or do not provide public information that allows verification.

TABLE 2 Keyword research for compliance assessment.

Requirement Article111 bis	Keywords	Documents consulted	Sought information
ESG rating in funding assessment	Rating Counterparty Assessment Valuation LOM	Nonfinancial disclosure	Use of an ESG rating in funding assessment
Sustainable loans	Lending Credit Portfolio Environment Social	Nonfinancial disclosure Financial statement	Share of sustainable loans provided
Loans to third sector (no profit organizations and social firms)	No profit Third sector Association Social Enterprise	Nonfinancial disclosure Financial statement	Share of credit provided to the nonprofit sector
Distribution of profits	Dividend Profit Payout Net income	Nonfinancial disclosure Financial statement Annual report	Information on the distribution of profits and reinvestment in its business
Public shareholding	Publicly traded Governance Shareholder Member Vote	Nonfinancial disclosure Report on corporate governance Annual report	Number of members or shareholders
Remuneration policy	Remuneration Salary Pay	Nonfinancial disclosure Public disclosure (pillar III) Report on remuneration policy	Ratio between the higher and the average remuneration of the bank

For some requirements, the outcome is binary and allows banks to be classified as compliant or noncompliant; for example, for Requirement 2, which requires disclosure of the sustainable funds provided, the bank is assessed as compliant if there are explicit references to the share of the sustainable loan portfolio in the nonfinancial report and as noncompliant if there are no specific references.

Table 3 illustrates, for each Requirement, the actions, projects, and strategies that apply to classify a bank as compliant, compliant-oriented, or noncompliant.

The classification process involves a nuanced assessment of each Requirement. The classification is binary for specific criteria, resulting in either a compliant or noncompliant categorization. For instance, the evaluation of the disclosure on the share of the sustainable loan portfolio is binary, with a bank being classified as compliant if explicit references are made in the nonfinancial report and noncompliant if such references are absent.

The analysis assesses the level of compliance per Requirement for the selected sample. The results are summarized in Section 4.

4.4 | Quantitative analysis

Before describing the procedure for estimating the distances between banks based on their position, the methodological approaches to

address the problem of missing components in the data matrix are outlined below. The provision of the information required by the article above is optional for banks, as there are no strict rules for reporting nonfinancial information. This self-regulated area leads to a lack of transparency that often leads to complacency, as Jackson et al. (2020) suggest. This premise justifies using the soft imputation algorithm called *k-nearest neighbor imputation* (Fix, 1985). This algorithm fills the missing entries of the matrix based on the distance between incomplete (some features missing) and complete observations. In brief, the first step involves evaluating the distance between an incomplete observation (\mathbf{x}_i) and all the complete ones (\mathbf{x}_j), which is typically the Euclidean norm with the sum running over the index of missing features ($h = 1 \dots \beta(i)$):

$$d(\mathbf{x}_i, \mathbf{x}_j) = \sqrt{\sum_{h=1}^{\beta(i)} (x_{i,h} - x_{j,h})^2} \quad \forall \mathbf{x}_j \in C \quad (1)$$

where C is the set of all complete observations. After fixing the k hyper-parameter, which represents the number of the three nearest complete observations to \mathbf{x}_i (the cardinality of the so-called neighborhood of \mathbf{x}_i , N_i), the missing values are estimated as the mean value of the corresponding feature's value of the complete observations related to \mathbf{x}_i :

TABLE 3 Methodology for the assessment of compliance to Article 111 bis.

Requirement Article 111 bis	Type of information	Classification
ESG rating in credit risk assessment	Evaluation of the funding provided to the counterparty according to internationally recognized ethical rating standards, with a focus on social and environmental impact	<i>Compliant</i>
	Integration of ESG factors into credit policies without the use of ratings	<i>Compliant oriented</i>
	No integration of ESG factors or lack of information, data or references to the specific aspect	<i>Noncompliant</i>
Sustainable loans	Disclosure on the share of the sustainable loan portfolio on total loans granted	<i>Compliant</i>
	Lack of information, data or references to the specific aspect	<i>Noncompliant</i>
Loans to third sector (no profit organizations and social firms)	Loans to the third sector for at least 20% of the credit portfolio	<i>Compliant</i>
	Loans to the third sector range from 0.1% to 19.99% of the loan portfolio.	<i>Compliant oriented</i>
	No loans to the third sector or lack of information, data or references to the specific aspect	<i>Noncompliant</i>
Distribution of profits	No profit distribution and reinvestment in its business	<i>Compliant</i>
	Dividend distribution	<i>Noncompliant</i>
Public Shareholding	200 + members and/or shareholders	<i>Compliant</i>
	Presumably more than 200 members and/or shareholders but not declared	<i>Compliant oriented</i>
	Number of members and/or shareholders less than 200	<i>Noncompliant</i>
Remuneration policy	Ratio of highest to average bank remuneration less than or equal to 5	<i>Compliant</i>
	Ratio of highest and average bank remuneration above 5	<i>Noncompliant</i>

$$\hat{x}_{i,h} = \frac{1}{K} \sum_{p \in N_i} \beta^{(i)} x_{p,h} \quad h = 1 \dots \beta^{(i)} \quad (2)$$

This sequence of operations is naturally repeated for all the incomplete observations to populate the dataset. This method was for completing the fifth feature, incorporating. These variables serve as additional information to better profile the banks and enhance the estimation of similarities among them. The total equity and total asset variables were chosen to fill the vacancy components. Conversely, for variables 2 and 3, the dataset was completed by setting the values to 0% for banks that did not provide disclosure on these variables. This arduous imputation process penalizes banks that do not disclose, ensuring the integrity of the data ecosystem, given that requisites 2 and 3 typically have values around 0% (mostly no more than 1%). To execute the previous algorithm, the hyperparameter j is required, set to \sqrt{n} , where n is the number of features in the dataset, as suggested by (Duda & Hart, 2006). Therefore, the neighborhood for all incomplete observations comprises six complete observations.

Having completed the data matrix, the next step involves estimating the distances between the ethical benchmark bank and the other banks of the sample. In doing so, we have assumed independence among the sample variables. This methodological choice is justified due to the limited information in the small sample that does not allow us to make robust estimations of the relationships among variables or for the fallacy of literature on this theme that has yet to prove these links. Consequently, the distance metric chosen to evaluate how far from the ESG pivot are the Italian banks is simply the sum of the absolute difference for each variable. Therefore, the distance between the j -th bank and the benchmark is as follows:

$$d_{j,benchmark} = \sum_{i=1}^6 |x_{j,i} - x_{benchmark,i}| \quad (3)$$

where $\mathbf{x}_{benchmark}$ is the benchmark bank vector. Subsequently, to trace the vector of distance \mathbf{d} to the interval [0,1] (\mathbf{d}_r), the following normalization of the distance is operated:

$$d_r = \frac{d - \min(d)}{\max(d) - \min(d)} \quad (4)$$

A sketch of the results is visualized in Table 4; meanwhile, the full list is in Appendix A.

5 | RESULTS

The results of our analysis are heterogeneous across Italian banks. We decided to exclude it from the synthesis metrics to avoid a possible bias due to the observation of the benchmark bank that meets all the requirements. Therefore, the following estimates result from the analysis of 33 out of the 34 banks.

TABLE 4 Distance output.

	Dist_1	Dist_2	Dist_3	Dist_4	Dist_5	Dist_6	Dist
Benchmark							0
Bank 1	0.5	0.223313687	0.969220.694	0	0.133412393	0.15035963	0.498287
Bank 2	0.5	0.030779306	0.969220.694	z5128	0.004643656	0.208471287	0.560256
Bank 3	0.5	0.969220694	0.969220694	0.2113	0.000697419	0.061765042	0.680984
Bank 4	0.5	0.936476752	0.96678167	0	0.085893988	0.262358717	0.690743
Bank 5	0.5	0.969220.694	0.969220694	0.4	0.001474194	0.039068387	0.72239
Bank 6	0.5	0.969220694	0.969220694	0.3499	0.001276559	0.217148076	0.754113
Bank 7	0.5	0.969220694	0.969220694	0.4	0.004898173	0.182897591	0.758947
Bank 8	1	0.969220694	0.969220694	0	0.00496613	0.103664802	0.76412
Bank 9	0	0.63064833	0.8797898	0.7	0.035173552	0.887886745	0.785577
⋮							⋮
Bank 31	1	0.760969221	0.962310125	0.9167	0.00496613	0.20025117	0.962266
Bank 32	1	0.912246234	0.969220694	1	0.002705551	0.085283708	0.993115
Bank 33	1	0.798952194	0.957025572	0.6249	0.011562098	0.604749401	1

5.1 | Qualitative analysis

The qualitative analysis reveals that most banks need to meet the requirements of Article 111 bis, as summarized in Tables 5 and 6.

Overall, on average, significant banks meet two Article 111 bis requirements, while less significant banks meet only one Requirement. Tables 7 and 8 show that significant banks are more inclined to (i) provide funding for impact-oriented projects by making sustainable loans by Requirement 2 and (ii) elect democratic governance with a membership of more than 200. Specifically, concerning Requirement 2, all significant banks share information on sustainable loans granted. At the same time, less attention is paid to requirement 6—remuneration—as no significant bank complies with the ratio required by the article, and the values are much higher than those of less significant institutions.

Otherwise, the less significant banks are less proactive in requirements 1, 2, 3, 4, and 6, while they only score slightly better in Requirement 5 regarding introducing a public company model.

Further considerations of the results are also presented below for each Requirement:

For Requirement 1—banks must assess their counterparties according to internationally recognized ethical rating standards, with particular attention to social and environmental impacts - only one bank is rated as compliant. This bank distinctly demonstrates its consideration of environmental and social factors when evaluating the creditworthiness of legal entities. Specifically, the bank employs an innovative corporate rating model validated by the ECB, incorporating social and environmental aspects into the assigned rating calculation. Meanwhile, 13 credit institutions are classified as compliance-oriented. Although they lack a specific validated rating model, they include ESG factors in their qualitative assessment or plan to integrate these factors in the coming years. There is no evidence of this aspect for the remaining banks in the sample.

Concerning *Requirement 2*—banks must publicly demonstrate funding provided according to Requirement 1 at least annually—we considered all banks that quantitatively report the share of the sustainable loan portfolio as compliant. In this regard, Italian banks actively provide financial resources to projects with social or environmental impact. Twenty banks in the sample, including both significant and less significant, were classified as compliant. Analyzing *Requirement 3*—banks are required to finance at least 20% of their credit portfolio to nonprofit organizations and entities registered in the Single National Register of the Third Sector—we found that only 12 banks lent to the third sector or nonprofit organizations in 2021, ranging from 0.1% to 19.99% and were thus classified as compliant. Each bank needs to comply with the 111 bis requirement; 5 significant and 16 less significant banks need to provide information on this Requirement.

Regarding Requirement 4—no profits distribution—most banks examined do not comply with this request. However, four credit institutions were found to be compliant because they indicated in their records that they did not distribute dividends for 2021. It is worth noting that specific policies were only found to reduce dividends' distribution if requested explicitly by the ECB or the national competent authority. *Regarding Requirement 5*—banks are required to adopt a public company model with a solid democratic orientation—banks in the sample reported several shareholders in their nonfinancial statement above 200, as required by the Decree. Meanwhile, we considered the other 14 financial institutions compliant because they are believed to have more than 200 shareholders, even though the banks do not officially report this characteristic. Three banks in the sample were considered noncompliant because they reported a single shareholder or several shareholders below 200. *Regarding Requirement 6*—remuneration policy—none of the banks of the sample appears to meet the Requirement of Article 111 bis, as they all report a ratio above 5. In summary, the qualitative results indicate that none of the

Requirements	Non compliant	Compliant - oriented	Compliant	Total
Requirement 1	19	13	2	34
Requirement 2	13	-	21	34
Requirement 3	21	12	1	34
Requirement 4	29	-	5	34
Requirement 5	3	14	17	34
Requirement 6	33	-	1	34

TABLE 5 Results of the assessment of compliance to Article 111 bis by requirement.

TABLE 6 Heatmap of compliance results.

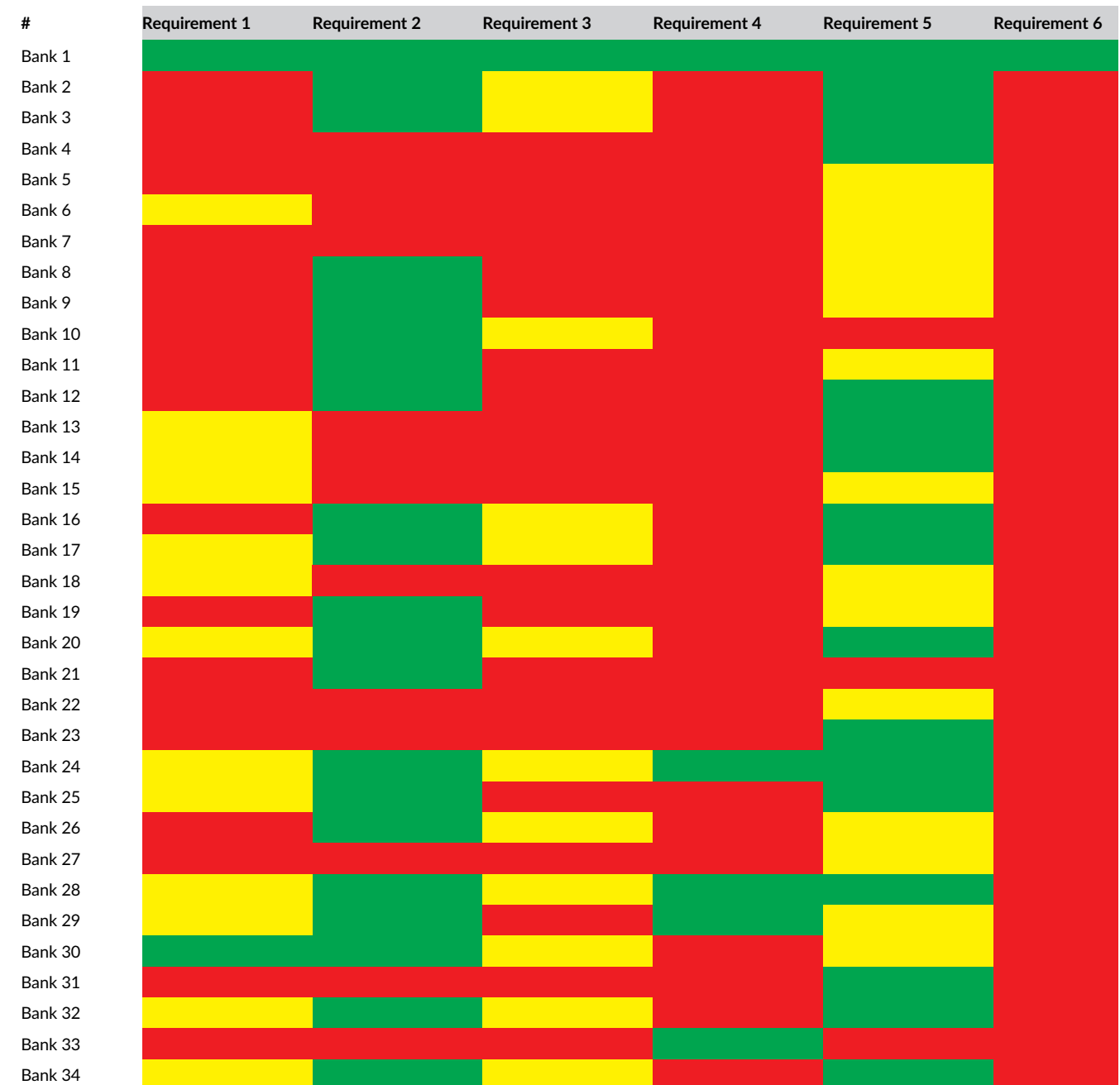


TABLE 7 Compliance analysis for significant institutions.

13 SI	Noncompliant	Compliant-oriented	Compliant
Requirement 1	5	7	1
Requirement 2	0	0	13
Requirement 3	5	8	0
Requirement 4	11	0	2
Requirement 5	0	5	8
Requirement 6	13	0	0

TABLE 8 Compliance analysis for less significant institutions.

20 LSI	Noncompliant	Compliant-oriented	Compliant
Requirement 1	14	6	0
Requirement 2	13		7
Requirement 3	16	4	0
Requirement 4	18		2
Requirement 5	3	9	8
Requirement 6	20		0

observed banks complies with Article 111 bis. On average, Italian commercial banks comply with one or two of the six Requirements of Article 111 bis.

5.2 | Quantitative analysis

We observed a significant distance between Banca Etica (our benchmark) and the other commercial banks in the sample. This discrepancy could be partially attributed to the nature of Banca Etica, an ethical and sustainable bank, being inherently compliant with all the requirements of Article 111 bis. As a result, Banca Etica can be identified as an outlier compared to the rest of the sample. The estimated distances reflect this large discrepancy in values, suggesting that achieving the ideal configuration of ethical banks is a mirage for the other banks, given the current state of the market.

Moreover, penalties imposed by banks for nondisclosure of some variables further drive away the observations from the benchmark. Another reason for the significant distance lies in the heterogeneity of banks' disclosure policies. Indeed, as mentioned above, the NFD Directive needs more specific guidance on the content or information to be disclosed, particularly regarding requirements 1, 2, 3, and 5. Banks arbitrarily decide which information to disclose, resulting in variations in reporting. On the contrary, Requirement 4 and Requirement 6, related to dividend distribution and remuneration policies, are mandatory and consistently reported by each bank. In quantitative terms, since distances between banks are normalized, and the results are reported in a range between 0 and 1, the closest bank is 0.5 distant from the benchmark. It is worth mentioning that the distribution

of distances is mainly concentrated in the neighborhood on the value reported for the least compliant bank.

Table 9 reports the average distances from the benchmark by Requirement. According to these values, banks are more distant from the benchmark concerning Requirements 2, 3, and 6, consistent with the results of the qualitative analysis. Indeed, concerning Requirement 3, it has been demonstrated that no bank grants loans to the Third Sector for a value above 20%, and no one bank complies with the salary ratio imposed by Requirement 6. Regarding Requirement 2, a specific clarification needs to be made: Although banks achieve compliant results in the qualitative analysis by publishing the number of sustainable loans granted, from a quantitative point of view, we found that the amount of the sustainable portfolio (about 2%) is, on average, significantly lower than the value reported by Banca Etica (about 14.8%).

Requirement 5 is where banks appear closer to the benchmark, with a gap of 0.47. This result aligns with the qualitative analysis and can be justified because the banks analyzed are classified as PIE and are generally listed on Italian markets. Excluding banks for which the number of members is presumably more than 200, on average, they have several shareholders of around 445.945.

Table 9 also reveals exciting insights concerning SIs and LSIs: Both groups have, on average, quite similar distance values, indicating that compliance with sustainable standards is not necessarily a matter of size or cross-country influence.

Two concluding remarks from a quantitative standpoint can be made for Requirements 4 and 6: Regarding Requirement 4, banks, on average, distribute 44.9% of profits, indicating a clear tendency to compensate shareholders rather than retain profits. Only four banks meet the Requirement and do not distribute dividends, choosing to reinvest them within the bank.

TABLE 9 Average distances from the benchmark by requirement.

#	Requirement 1	Requirement 2	Requirement 3	Requirement 4	Requirement 5	Requirement 6
Total average distance	0.772	0.819	0.960	0.449	0.047	0.253
SI average distance	0.765	0.814	0.960	0.443	0.048	0.253
LSI average distance	0.772	0.819	0.960	0.449	0.047	0.253

For Requirement 6, the average is represented by the value of 24.7, meaning that, on average, the highest-paid person in the bank receives a salary about 25 times higher than the average employee salary in the same bank.

Moreover, the average gap is represented by the value of 0.2536, indicating a substantial distance from the ideal ESG model for the compensation gap. This value is influenced by observations with a high compensation discrepancy (one bank has a huge discrepancy: the top manager received 90 times the average compensation in the bank in 2021).

In summary, we find a general delay in the transition to the sustainability of the commercial banks studied.

6 | DISCUSSION

The idea of sustainable development cannot ignore the role of the banking system. Market participants' awareness about the strategic long-term role of sustainable finance is increasing, as investors and consumers are starting to prefer financial products and services with a clear and well-defined social and environmental impact. In this context, it will be inevitable for banks to respond to this request and build ad-hoc products and services, orienting their business model toward the logic of sustainability (Timpano & Fedeli, 2019).

Banks will need to be proactive and will be called to face complex internal challenges, such as the reorganizing of their internal policies and procedures, as well as revising their business models considering social and environmental criteria in their decisions toolkit (e.g., pricing models, risk appetite frameworks, and risk-adjusted performance-based indicators).

As we have seen, the regulatory provisions on ethical and sustainable finance in Italy represent the first regulatory attempt in Europe: The introduction of the Article 111-bis TUB must be read as an enormous step forward in the recognition by the legal system of enterprises aimed not only at satisfying the interests of investors but also at realizing the common good.

Moreover, this path could be simulated and taken up by the legislative frameworks of other countries, both European and non-European, which currently lack them.

It should also be emphasized that in Italy, the reality of ethical finance has anticipated legislation for almost two decades: The current Banca Popolare Etica Spa seems to have succeeded in imposing itself to such an extent that it has come to realize that not only is ethical finance in Italy possible but that it can also become a model to be

imitated and thus regulated as an autonomous species concerning other banks.

The analysis of Requirements 4, 5, and 6 (respectively, distribution of profits, public shareholding, and remuneration policy) also highlights an area that in the following years will need more attention: governance. While the interest in the environment is commonly shared among market participants and authorities, governance-related topics are not under the spotlight. Further dedication should be requested from regulators to clarify the essence of this factor and how it can be integrated into business model activities and strategies. In this regard, sustainable governance should be understood as a prerequisite for achieving the entire spectrum of ESG goals, and it has consistently been recognized as a crucial tool for advancing sustainable development and incorporating sustainable development strategies in firms and financial institutions (Kardos, 2012). Indeed, governance ensures explicitly that business practices are ethical, transparent, and accountable.

Today, at the national level, the parameters imposed by the legislator are limited, and they need to be analyzed within the ongoing perimeter of the new sustainable finance framework. In this path toward sustainability, looking beyond compliance to integrate the sustainability factors more holistically may be helpful. In this perspective, requirements set by Article 111 bis of the T.U.B. may be a valuable reference for banks willing to serve the system as ESG leaders.

In conclusion, at the micro level, individual banks must recalibrate their management strategies, incorporating ESG criteria to navigate the complexities of environmental, social, and governance risks and opportunities. ESG integration at the micro level extends beyond risk management to shape the very fabric of customer relations and reputation: This establishes banks as responsible stewards of societal and environmental concerns and, on the other side, improves the reputation of the institutions (Murè et al., 2021).

Moving to the macro level, sustainable players extend their influence on economic development, wherein banks, through strategic financing, contribute to projects and initiatives that promote sustainable growth and social welfare. The macro implications also encompass enhanced market transparency, as stakeholders demand greater visibility into the sustainable performance of financial institutions, fostering an environment of trust and accountability.

Finally, the macro-level implications transcend immediate financial considerations, embracing a vision of long-term value creation. In essence, ESG integration emerges as a responsible business practice and an instrumental force in shaping a global financial ecosystem that prioritizes the well-being of society and the planet.

7 | CONCLUSION

Our analysis of the Italian banking system demonstrates that Italian banks still need to catch up to the requirements of Article 111 bis. In the coming years, they will have to re-adapt their strategies and governance structure according to sustainability criteria translated by banking authorities into ESG regulatory requirements. A unified framework and a harmonized green and social taxonomy will allow banks to direct private capital toward green and responsible projects. At the same time, supervisory guidelines from the ECB and NCAs will help the banking system to integrate risks deriving from ESG factors in risk management policies, governance, and strategies. Future commitment is expected from financial regulators: A common definition of a “sustainable-compliant” business model is a crucial need to measure the commitment of each bank toward this direction. It will help financial institutions in modeling their new sustainable policies. This aspect has to be filled also from a quantitative perspective: sustainability measures, and data need to be considered to quantify banks' devotion to sustainable finance. In this sense, the analysis of Requirement 1 of Article 111 bis—customer credit risk assessment by using ethical standards—clearly shows that the lack of risk metrics and guidelines in this field makes the integration of the new risk factors challenging, as well as the comparison among financial intermediaries extremely difficult to perform. In addition, the integration of ESG factors in credit risk assessment is further limited by the fact that data and historical series are currently missing.

Further progress in methodological and quantitative areas is needed to harmonize the integration of sustainability factors and to ensure that banks are ready to face these emerging risks. In this regard, a better understanding of “sustainability” in banking would allow supervisors to monitor and compare European banks. It would facilitate and stimulate banks in adopting sustainability policies fostering long-term sustainable development. Although the research provides exciting considerations on the orientation to sustainability for the Italian banking system, the analysis presents some limitations and caveats that must be considered and for which the authors are committed to improving in future research. Firstly, this kind of analysis is quite limited for the time being since it cannot be extended to European banks. Indeed, Article 111 bis is strictly related to the Italian regulatory framework. The authors plan to replicate a similar analysis involving requirements provided by international associations such as FEBAF, making the analysis expansion to European institutions feasible.

Coming down to a national level, it is worth mentioning that Article 111 bis is not binding for traditional banks, and the disclosure of the topics expressed in the Article only sometimes appears consistent in bank's nonfinancial information reports. This aspect made data collection less manageable and, compared with peers, challenging. Finally, further research will be performed to improve the method to measure sustainability in banking. In particular, one of the main objectives will be to include a specific weighting for requirements considered crucial by supervisory authorities. Efforts will be made to build an ad-hoc index to measure the integration of ESG factors in banks.

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CONFLICT OF INTEREST STATEMENT

We declare no conflict of interest.

ORCID

Cosimo Paccione  <https://orcid.org/0009-0000-8795-5421>

Alessia Palma  <https://orcid.org/0000-0003-4897-5934>

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APPENDIX A: FULL LIST OF DISTANCE ANALYSIS RESULTS

	Dist_1	Dist_2	Dist_3	Dist_4	Dist_5	Dist_6	DiST
Benchmark							0
Bank 1	0.5	0.223313687	0.969220694	0	0.133412393	0.15035963	0.498287
Bank 2	0.5	0.030779306	0.969220694	0.5128	0.004643656	0.208471287	0.560256
Bank 3	0.5	0.969220694	0.969220694	0.2113	0.000697419	0.061765042	0.680984
Bank 4	0.5	0.936476752	0.96678167	0	0.085893988	0.262358717	0.690743
Bank 5	0.5	0.969220694	0.969220694	0.4	0.001474194	0.039068387	0.72239
Bank 6	0.5	0.969220694	0.969220694	0.3499	0.001276559	0.217148076	0.754113
Bank 7	0.5	0.969220694	0.969220694	0.4	0.004898173	0.182897591	0.758947
Bank 8	1	0.969220694	0.969220694	0	0.00496613	0.103664802	0.76412
Bank 9	0	0.63064833	0.8797898	0.7	0.035173552	0.887886745	0.785577
Bank 10	1	0.727570399	0.969220694	0.42	0.011634087	0.043954789	0.795229
Bank 11	0.5	0.595939751	0.928570288	0.5175	0.043996886	0.586482475	0.795257
Bank 12	1	0.969220694	0.969220694	0.19	0.002278065	0.061308369	0.800107
Bank 13	1	0.8978389	0.902960532	0.38	0.003409033	0.047037333	0.809844
Bank 14	1	0.755075311	0.969220694	0.161	0.132678993	0.229478251	0.813867
Bank 15	1	0.969220694	0.969220694	0.2534	0.002278065	0.10514899	0.826731
Bank 16	0.5	0.916830386	0.936700369	0.506	0.026216562	0.447425505	0.835149
Bank 17	1	0.56254093	0.941984922	0.8	0.003248065	0.04658066	0.840407
Bank 18	1	0.969220694	0.969220694	0.4001	0.004958925	0.034821327	0.846357
Bank 19	1	0.969220694	0.969220694	0.2446	0.00248289	0.210982989	0.850872
Bank 20	1	0.969220694	0.969220694	0.39	0.004378065	0.094417171	0.858501
Bank 21	0.5	0.659462999	0.968001182	0.3	0.025893981	1	0.864986
Bank 22	0.5	0.969220694	0.969220694	0.705	0.00287828	0.317958671	0.867697
Bank 23	1	0.876227898	0.958651588	0.4532	0.000450108	0.199566161	0.87361
Bank 24	1	0.681074001	0.969220694	0.599	0.002572796	0.281744491	0.88491
Bank 25	1	0.969220694	0.969220694	0.505	0.001572258	0.144194543	0.898713
Bank 26	0.5	0.69875573	0.968001182	0	0.99503387	0.430231762	0.899412
Bank 27	0.5	0.956123117	0.967594678	0.7	2E-05	0.530540016	0.914867
Bank 28	1	0.969220694	0.969220694	0.63	0.002169288	0.198995319	0.943499
Bank 29	1	0.838244925	0.969220694	0.93	0.002705551	0.08185866	0.956514
Bank 30	1	0.969220694	0.969220694	0.6285	0.000712527	0.27411805	0.961415
Bank 31	1	0.760969221	0.962310125	0.9167	0.00496613	0.20025117	0.962266
Bank 32	1	0.912246234	0.969220694	1	0.002705551	0.085283708	0.993115
Bank 33	1	0.798952194	0.957025572	0.6249	0.011562098	0.604749401	1