



UNIVERSIDADE CATÓLICA PORTUGUESA

ESG and the banking sector: An overview

Evolution of the sustainability perception by
banks and its impact on financial performance

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Católica Porto Business School

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banks and its impact on financial performance

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Resumo

Esta dissertação pretende estudar e investigar a evolução da componente ESG no setor bancário e do efeito da responsabilidade social corporativa na performance financeira de instituições no mesmo setor.

Para realizar a análise, informação financeira e não-financeira foi extraída da base de dados Refinitiv Datastream usando um apropriado índice de bancos europeus (a regulamentação estudada neste estudo é para empresas na União Europeia). Um dos grandes objetivos é analisar a evolução das pontuações ESG nos últimos anos, os 15 melhores e 15 piores bancos em cada categoria (ambiental, social e governativa), a sua relação com a implementação da regulamentação pela Comissão Europeia, principalmente a Non-Financial Reporting Directive que tem como objetivo mitigar o efeito “greenwashing” e aumentar a transparência nas instituições europeias. Os resultados obtidos neste sentido são mostrados no capítulo dos resultados e das conclusões, mas é possível verificar um impacto negativo na performance ambiental no ano de 2017, o primeiro ano de requisitos obrigatórios de divulgação não-financeira. Uma queda brutal da pontuação ambiental média dos bancos em 2017 demonstra que muitos bancos vinham a partilhar informação financeira que não seria transparente e com os requisitos mandatórios, estes resultados diminuíram imenso.

Para além do estudo aprofundado das pontuações ESG e da regulamentação a nível de sustentabilidade, este trabalho tem como outro objetivo fazer uma breve análise ao impacto das pontuações de Responsabilidade Social Corporativa ou ESG na performance financeira do setor bancário europeu.

Palavras-chave: ESG, Responsabilidade social corporativa, Non-Financial Reporting Directive, Taxonomia, performance financeira

Número de palavras: 9088

Abstract

This dissertation aims to study and investigate the ESG evolution in the banking sector and the corporate social responsibility effect on the financial performance of institutions in the same industry.

To perform the analysis, non-financial and financial data was extracted from Refinitiv Datastream using an appropriate European index of banks (the regulation mentioned in this dissertation is for firms in the European Union). One of the goals was to analyze the evolution of the ESG scores over the years, the top 15 and bottom 15 banks in each category (environmental, social and governance), its relationship with the implementation of regulation by the European Commission, mainly the Non-Financial Reporting Directive that aims to mitigate greenwashing and increase transparency among institutions in Europe. The results obtained are shown in the section of results and conclusions, but it demonstrated a negative impact on the environmental score in 2017, the first year of certain mandatory disclosures of non-financial information of large institutions. A brutal downfall in 2017 of the mean environmental score in the banking sector shows that, on average, various banks provide voluntary misleading information to the public and, with mandatory disclosures, their score dropped a lot.

Along with the objective of studying the ESG Scores and regulations related to sustainability, this dissertation also aims to perform a brief analysis of the impact of Corporate Social Responsibility on the financial performance of the European banking sector.

Keywords: ESG, Non-Financial Reporting Directive, EU Taxonomy, corporate social responsibility, financial performance

Number of words: 9088

Table of content

Agradecimientos.....	iv
Resumo	vi
Abstract.....	viii
1. Introduction	1
2. Literature Review	5
2.1. Corporate Social Responsibility and ESG	5
2.2. ESG and the banking sector	6
2.3. Greenwashing and regulation in the EU	8
2.3.1. Greenwashing	8
2.3.2. Non-Financial Reporting.....	9
2.3.3. Non-Financial Reporting Directive.....	10
2.3.4. EU Taxonomy	12
2.4. Corporate Social Responsibility and Financial Performance.....	14
3. Methodology and Data.....	17
3.1. Sample Selection.....	17
3.2. Variables description	18
3.2.1. Independent variables	18
3.2.2. Dependent variables	20
3.2.3. Control Variables.....	20
3.3. Regression models.....	22
3.4. Summary statistics	23
4. Results.....	26
4.1. Overview of the banking sector	26
4.1.1. ESG Score.....	26
4.1.2. Environmental Score.....	29
4.1.3. Social Score	32
4.1.4. Governance Score	34
4.2. CSR and financial performance.....	36

5. Conclusions	39
5.1. ESG in the banking sector	39
5.2. CSR and financial performance.....	42
5.3. Difficulties and suggestions for the future	42
References.....	46

List of tables

Table 1- Distribution of banks by country	18
Table 2- Description of Scores	19
Table 3-Summary statistics	24
Table 4- OLS Estimation results for ESG Score	36
Table 5- OLS estimation results for ENVscore, SOCscore and GOVscore.....	37

List of graphs

Graph 1- Evolution of the ESG Score.....	27
Graph 2- ESG Score by Institution	28
Graph 3- Last ESG Score.....	29
Graph 4- Environmental score	30
Graph 5- Environmental score by institution.....	31
Graph 6- Last environmental score.....	31
Graph 7- Social score.....	32
Graph 8- Social score by banks.....	33
Graph 9- Last ESG scores	33
Graph 10- Governance Score	34
Graph 11- Governance score by banks.....	35
Graph 12- Last Governance scores.....	35
Graph 13- ESG evolution.....	41

1. Introduction

In 1992, the United Nations started to pay attention to climate change and agreed to measure and stabilize greenhouse gas concentration, after realizing that states individually can't tackle climate change (Savaresi, 2016). The Paris Agreement was adopted in December 2015 making the efforts of the United Nations against climate change and 3 objectives were stated related to stabilizing the temperature, improving the ability to fight climate change and creating conditions to transfer funds consistent to the objectives mentioned.

The importance of sustainability around the world is becoming very relevant to the environmental, social and governance issues in our society. Climate change has become one of the main concerns of institutions and regulators along with social matters like the well-being of employees, their protection, equality or how responsibilities are distributed inside an organization. To mitigate these problems, some actions are being performed and others are being prepared for its implementation in a near future.

Sustainable finance can be defined, according to the European Commission, as "the process of duly taking environmental and social considerations into account when making investment decisions, leading to higher and more long-term investments in sustainable activities". Redirecting funds to sustainable activities that really contribute to a better institutional world regarding the environment and social aspects is fundamental and is the key aspect of the sustainable finance definition.

Nowadays, Corporate Social Responsibility (CSR) is one of the most important topics in the sustainable finance field and it is an interchangeable and very near concept with Environmental, Social and Governance (ESG)

corresponding with the integration of ESG considerations in the investment and portfolio decision of investors and organizations.

The banking sector is in a delicate moment at this time and regulation increased a lot since 2008 with the sub-prime crisis. Regulators must be very careful analyzing the risks incurred by capital, liquidity, profitability, and others. However, another risk is being gradually included in the analysis made by central banks: the climate risk. Climate risk is fundamental to be managed because banks are under pressure from its stakeholders due to the impact of regulation on climate change (Eceiza et al, 2020). Banks should, gradually, increase its share in capital markets and improve its risk management on climate change.

In Europe, regulations have been increasing in the last years. The main regulations to be discussed in this dissertation is the Non-Financial Reporting Directive (NFRD) and the EU Taxonomy. The NFRD was introduced in 2014 by the European Commission (EC) and marks the transition from a voluntary disclosure regarding non-financial information to a certain mandatory disclosure by large organizations. The objective of the EU Taxonomy, also introduced by the EC, in 2020, is to help investors and organizations doing the transition to a circular economy and consists in the first system classification of sustainable activities. The Taxonomy may be seen as the first serious effort made by regulators in the EU in pursuing a sustainable target that is achieving carbon neutrality by 2050.

It is very important that the banking sector represents good ESG performances because it represents the stability of the financial system but is also important the profitability of these institutions and we aimed to understand the impact of CSR in the financial performance of European banks.

The structure of this dissertation is the follow one. Firstly, some literature review is presented regarding key sustainable finance aspects and subjects relevant for this dissertation. Concepts like CSR or ESG, some past studies about the impact of CSR in the financial performance of firms and in the banking sector. Some detailed regulation is going to be presented, specifically the NFRD and the EU Taxonomy and how they are changing the sustainable finance view from the view of shareholders and investors. Also, the greenwashing is going to be approached as the main problem in the disclosure of non-financial information and its connection with regulation and the ESG Scores obtained in the empirical research.

Next, it comes the methodology where is presented the tools used to obtain non-financial and financial data and to analyze the results. In this section, the sample selection is explained along with its context, the dependent, independent and control variables, regression models and what they aim to conclude.

After the methodology, some results are presented. Firstly, an analysis to the ESG results is made regarding, the evolution all over the years of the scores and possible connection with the regulation being implemented, which banks perform better, and which pillar is performing better. Secondly, an analysis to the impact of CSR in FP is performed, specifically the impact of ESG Score and its individual pillar scores (environmental, social and governance) in the ROA, ROE of European banks.

Finally, conclusions are presented regarding the evolution of the ESG Scores in the period for the empirical study, the correlation of ESG performance and FP of banks and some difficulties and recommendations for future empirical studies.

2. Literature Review

2.1. Corporate Social Responsibility and ESG

Corporate Social Responsibility has had a relevance increase in the last years mainly because of the pressure of stakeholders over companies that stimulate them in pursuing responsible activities (McWilliams et al., 2000). According with Ward (2004), CSR “is the commitment of business to contribute to sustainable economic development- working with employees, their families, the local community, and society at large to improve the quality of life, in ways that are both good for business and good for development”. According to Carroll and Shabana (2010), the main point of the CSR definition is the requirement for organizations to make substantial contributions to the well-being of society, while Farcane and Bureana (2015) say that CSR is characterized as the commitment of a company to take economic, social and environmental matters in its behavior and activities.

CSR goes against the idea that businesses only have a financial purpose. Instead, other matters and purposes are important like environment, economic and social and should guide firms in their activities. The pursue of a CSR strategy can bring significantly advantages to a company. According to Porter and Kramer (2002), including CSR in the business strategy may create competitive advantage and McWilliams and Siegel (2001) looks to CSR as a differentiation point between firms.

The definition of ESG and CSR seems close, but they are not the same thing, far from that. CSR is more related to corporate economic, legal, ethical, and philanthropic obligations while ESG can be defined as an indicator to quantify

social initiatives and how these contribute to environment, social and governance issues providing sustainable and long-term growth.

Exploiting the concept of ESG, it can be seen as an investment strategy considering environmental, social and governance factors when valuing companies or activities (Leins, 2020). When a company have to decide which businesses or practices is going to put in practice, may have into consideration certain aspects related to the protection of the environment corresponding to specific objectives defined by the EU, social matters like the wellbeing of the workforce or projects that contribute to a social cause and governance aspects related to how a company have their CSR strategy defined or how the responsibilities inside the organization are distributed.

2.2. ESG and the banking sector

The banking sector must be seen as the center of the financial ecosystem because of the impact that a failure of a bank can have. Since the subprime crisis in 2008, there was an understanding that the complexity and several effects that can impact the activity of a bank (Ferrouhi, 2018). The regulation imposed by regulators in Europe and imposed by the central banks or the European Banking Authority (EBA) has the main goal of limit the activity of the banks in terms of capital in relation with risk-weighted assets, liquidity or, more recently, the climate risk that is being slowly introduced by the central banks in the supervision of banks.

Banks need to accept that climate change is going to affect their activities and a lot of attention is needed (Arndt, Loewald & Makrelov; 2020). As an example, the fast transition to a low-carbon technologies and economy may lead

to the deterioration of the financial position of carbon-intensive companies and their counterparties as well.

Banks are under pressure to protect themselves from climate risk issues, having into account the sustainability agenda in the EU. According to the Eceiza, Harreis, Hartl and Viscardi (2020), commercial imperatives are growing, and banks must develop sustainable finance offerings, incorporating climate allocations, mainly portfolio monitoring and loan approvals.

According to Bruno and Lagasio (2021), many efforts have been executed to improve non-financial disclosures to banks and financial intermediaries. The main ones are the NFRD, the Taxonomy Regulation, the CRR2 already requires banks to address ESG risks and how they plan to face these risks and the Financial Services Sustainability Disclosure Regulation (SFRD) with the goal of making the sustainability profile of funds to provide a better comparison between them for the investors and other interested stakeholders.

A discussion that has been made recently is about the possibility of banks of lending capital to borrowers and the taxonomy-aligned activities. Sautner et al. (2022) demonstrated that, between 2005 and 2018, firms with a higher share of Taxonomy-aligned activities received cheaper loans which means that banks already priced the loan having into account some desired effects of the EU Taxonomy.

2.3. Greenwashing and regulation in the EU

2.3.1. Greenwashing

Before introducing the regulation and its importance in the sustainable finance in Europe, we must understand its connection with the greenwashing. The need to defining greenwashing arises in the beginning of the 21st century. Lauffer (2003) indicates that, at the time, there was many companies engaging in complex strategies to shift the focus, create confusion to costumers or undermine credibility. Ramus and Montiel (2005) associate greenwashing with false advertising and the practice of companies creating green images in the mind of the public.

Other authors came up with more definitions. Delmas and Burnabo (2011) defined greenwashing as the practice of organizations to mislead costumers regarding its environmental practices. A deeper definition by Ingram and Frazier (1980) says that greenwashing lays in the difference between symbolic and substantive actions by firms. Steiner et al. (2018) states the gap between the intention of an institution to demonstrate its awareness with the environment contrasting with its sustainability performance. Khalil and O'Sullivan (2017) went a little bit far and associate the behavior to deceptive and hypocrite by enterprises.

The quality of the reports regarding environmental and social matters were very poor before any regulation and so the problem of providing miscommunication about environmental and social actions of firms was serious.

To mitigate the problem of greenwashing, we defend that the role of the regulators is fundamental. According to Lauffer (2003), regulators didn't have, in that time, tools to evaluate corporate sustainable performance due to the lack

of metrics to evaluate the commitment to certain practices. Regulators may be able to determine the effectiveness of firms' engagement in sustainable activities.

Institutions and regulators in the EU must be able to prevent the greenwashing effect although it is impossible to be fully eliminated. In the last decade, some regulation has been implemented in the EU with the goal of helping companies increasing their investments according to ESG criteria and to obligate them disclosing information to the public, increasing transparency. Regulators have an important role in avoiding asymmetric information and consequently, moral hazard and adverse selection and so leading to the allocation of resources in the best way possible to protect financial stability. Regulators must also know what is sustainable-oriented to affect investments to the right sustainable path.

With the objective of creating an action plan to Financing Sustainable Growth, the European Commission created a task force, constituted by experts in the area that worked and created the Action Plan. The Action Plan seeks to improve the sustainable finance strategy and integrate it, incorporating environmental, social and governance considerations in the European Financial System.

2.3.2. Non-Financial Reporting

The importance of non-financial reporting(NFR) is increasing all over the years, describing a company's performance in environmental, social, governance and human resources management issues (Eugénio et al, 2022).

The role of the financial reporting is no longer enough to investors and other stakeholders because financial information only demonstrates historical performance, while non-financial information provides value to the firm by

helping investors predicting its future performance. According to Godfrey, Merrill and Hansen (2009), the relevance of non-financial information is huge by increasing shareholder value and transparency between the firm and the investor. Nowadays, good-quality non-financial information is fundamental to robust the relationship and transparency between stakeholders and companies.

The literature review about non-financial reporting is increasing over the years. The definition of NFR is not clear and there is a lack of convergence (Haller et al., 2017) because most articles made about NFR include concepts related with NFR mainly corporate social responsibility, so the terminology used to define NFR is not consistent in terms of meaning and vocabulary (La Torre et al, 2020).

2.3.3. Non-Financial Reporting Directive

According to the European Commission (2011), despite some evolution in the sustainability reporting, it was concluded that there was an inadequacy in the way companies reveal that information to the market.

The NFRD was created with the objective of improving transparency among institutions in their non-financial reports to accelerate the transition to a circular and sustainable economy (Aureli, Magnaghi and Salvatori, 2018). Before 2014, non-financial reports or non-financial information included in the annual reports of organizations were provided voluntarily as the EU believed that was enough. However, this important step marked the importance of non-financial information in these days.

The Directive implemented by the EU marks a historic breakthrough obligating certain organizations revealing its commitment to the society and to contribute to a more responsible transition to a sustainable development (Fiandrino and Tonelli, 2021). Through this improve in the non-financial

disclosure, better and more complete information may be available for all stakeholders with more transparency, mitigating the greenwashing effect in a certain way.

Until the implementation of the Directive, many years ago, institutions provided non-financial information with the goal of demonstrate to the public their intentions on behaving in a responsible way to contribute to the solution of environmental and social problems. The information disclosed was in a voluntary basis (Aureli, Magnaghi and Salvatori, 2018), because of lack of legislation obligating companies to reveal certain environmental, social and governance (ESG) information.

The NFRD marks the transition from a voluntary to a mandatory report regarding certain information for some institutions, establishing some minimum legal requirements in non-financial reporting with the goal of increasing transparency in non-financial reporting among institutions in Europe and internal processes are likely to change in organizations (La Torre et al., 2020). The Directive requires companies to disclose non-financial key performance indicators, different from happened before, when KPIs were established by the management team.

One characteristic of the NFRD and the disclosure imposed by the Directive is the flexibility allowed to institutions. According to Beerbaum (2021), the NFRD is principles-based which means that companies have an option of preparing a non-financial report separately or to include it in the management report. The disclosure requirements are not detailed and there isn't a framework for the report.

The main legal requirements established by the Directive are applied to public interest entities exceeding 500 employees, in average, during the fiscal year and, at least, 20 billion euros of total net asset value or, at least, 40 billion

euros of total net revenues from sales and services. The non-financial statement required by the Directive demands a brief description of the business model of the organization, policies adopted in pursuing certain goals defined by the company, the results of these policies, the main risks of the policies adopted and how to hedge these risks and certain key performance indicators relevant to each industry.

2.3.4. EU Taxonomy

Although the EU Taxonomy is not directly used in this empirical research due to lack of time to observe results in the ESG scores, I decided to include a section about the EU Taxonomy due to its importance in the sustainable finance framework in Europe and future papers will mention a lot the Taxonomy and its role in the transition of companies to a better sustainable economy and use of resources.

The EU Taxonomy arises from the awareness of the EC to transform the economy in order to meet the climate goals established by them, mainly the reduction in, at least, of 55% of the greenhouse gas emissions and climate neutrality by 2050 (Och, 2020)

The EU Taxonomy can be defined as the first science-based classification system that allows investors and other stakeholders analyzing in a more transparent way if an economic activity is sustainable or not (Schutze and Stede, 2021). Although the main goal of the Taxonomy is similar to the NFRD, increasing transparency and help investors to transfer funding to sustainable economic activities, the definition and characteristics are different because through the disclosure of certain requirements it is possible to classify an economic activity as taxonomy-aligned or not.

In the definition of sustainable activities, the EU Taxonomy is based in six environmental objectives: climate change mitigation, climate change adaptation, protection and restoration of biodiversity and ecosystems, pollution prevention and control, sustainable use and protection of water and marine resources and the transition to a circular economy. To be considered a sustainable activity, it must make a substantial contribution to at least one environmental objective, do not significant (DNSH) harm to any other environmental objective, complying with minimum social safeguards and complying with some screening criteria.

For supporting the implementation of the EU Taxonomy, the EC developed Delegated Acts to define technical screening criteria for each environmental objective with specific parameters that help the public understanding if an institution is, in fact, contributing positively to an environmental objective (Dusík & Bond, 2022).

The main applications of the EU Taxonomy are 2, the firm level and the project level. The firm level may be used to evaluate a portfolio of assets when lending capital to the company (Schutze and Stede, 2021). In this perspective, a firm can be evaluated based on its revenues or expenses that are taxonomy-aligned (Schutze et al, 2020). The other application, in the project level, the use of the Taxonomy regards a specific investment and its impact one environmental objective (Schutze and Stede, 2021). Through these 2 applications, we can automatically observe benefits to the firm by lowering its cost of capital. By investing a new sustainable project (project level), a company can borrow capital at a lower interest rate (banks have incentives to fund sustainable economic activities) and a good classification of the firm in its balance sheet in terms of sales or expenses taxonomy-aligned allow them to profit through a higher demand in the capital markets.

2.4. Corporate Social Responsibility and Financial Performance

As stated before, one of the factors that dictates the success of a company's strategy and profitability is their level of sustainability. However, there is no consensus among academics when concluding if there is a positive, negative or neutral link.

Some authors, such as Baron (2001) and Frankental (2001) argue that the impact of CSR on the FP of a company depends on the motives a bank is incurring in more sustainable activities. Baron (2001) stated that if a company is being altruistic but doesn't have any specific objective, the impact will be negative. Frankental (2001) states that a strategic decision involving sustainability projects will impact positively the financial performance.

According to McWilliams and Siegel (2001), there is no correlation between CSR and FP performance and also stated that studies concluding a positive or negative link between those 2 are badly constructed. Also, Nelling and Webb (2009) conclude that there is no link between performance and sustainability engagement.

However, we have academics that conclude the positive relationship between the 2. Garcia et al. (2011) using a KLD Index and, as financial metrics the ROA, ROE or the Tobin Q concluded a positive relationship. Waddock and Graves (1997) found positive relationship between CSR and FP in the ROA. Flammer (2013) stated that the adoption of CSR practices is clearly positive impacting the productivity and sales. In the banking sector, the studies are not much, but Wu and Shen (2013) showed that banks adopting a CSR strategy presents better results.

It is important to notice that the main defenders of the positive relationship between CSR and FP know the concept of the stakeholder theory. This theory, according to Freedman, consists in that “organizational management and business ethics that addresses morals and values in managing an organization is in favor of the positive correlation between CSR and financial performance through the alignment of interests between firms and stakeholders increasing corporate value and financial performance”.

3. Methodology and Data

The first step of the empirical research is present a deep analysis regarding the evolution of the aggregate ESG score of banks in the Stoxx 600 Europe Banks and perform some analysis regarding the best banks in each category, the evolution of the top 15 and bottom 15 banks in environmental, social and governance and also comparisons regarding each of the three pillars. To help explaining the results, some graphs will be performed in order in order to understand better the results.

This empirical study aims to understand the ESG/CSR (remember is not the same concept but both are associated with sustainability) perception by banks in the European financial system and to study the hypothesis that CSR is positive correlated with FP in the industry.

After the overview of the ESG evolution in the banking sector in terms of scores provided by the Refinitiv Datastream, we proceed to analyze the impact of CSR/ESG performance of institutions in the its respective FP.

3.1. Sample Selection

The first step is to choose the sample selection of this study. To extract sustainability and financial data about firms, the platform used was the Refinitiv Eikon Datastream.

The sample to be studied had to be selected very carefully due to the characteristics of the industry and regulation mentioned in the literature review. So, we selected the Stoxx Europe 600 Banks, which is an index composed by companies from the European banking sector. Since the regulation presented in the literature review is in Europe and one of the goals is to understand the

evolution of ESG Scores of banks in the last 10 years, the banks chosen must be from Europe.

The Stoxx Europe 600 Banks comprise credit institutions from 18 countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, and the United Kingdom). The follow distribution indicates how many banks the index has *per* country.

Table 1- Distribution of banks by country

Country	Nº of banks
Ireland	2
Spain	6
Sweden	4
Greece	4
France	4
Italy	10
Portugal	1
Denmark	4
Germany	2
Norway	1
Netherlands	2
Czech Republic	1
Austria	3
Belgium	1
Finland	2
Poland	3
Switzerland	6
United Kingdom	9
Total	65

3.2. Variables description

3.2.1. Independent variables

The deep analysis to the evolution of the ESG Score in the banking sector demands the presentation of the independent variables that are the most important for this study because they are going to allow us to make conclusions

about the banks in the sector and to study the relationship between CSR activities of the bank and FP.

The main independent variable is the ESG Score aggregating the environmental pillar score, the social pillar score and the governance pillar score and functioning as a relative sum of category weights (10 categories). The score measures the company’s performance based on public available data and varies from 0 to 100 and are evaluated as follows:

Table 2- Description of Scores

Score Range	Description
0-25	Poor
<25-50	Satisfactory
<50-75	Good
<75-100	Excellent

Note: The Scores are classified according to Refinitiv

The environmental Pillar Score concerns aspects like emissions, waste, product innovation, sustainable packaging, energy, green revenue and capital expenditures, environmental supply chain or greenhouse gas emissions.

The Social Pillar Score have different type of considerations and its gaining attention in the last years. The score is based in human rights, responsible marketing, product equality, health and privacy, product responsibility, career development and training, diversity and inclusion or data privacy.

The “G” component of ESG is measured in the Governance Pillar Score and is composed by the evaluation of shareholders’ rights, CSR strategy, ESG reporting and strategy or the structure of the management team regarding independence or diversity.

3.2.2. Dependent variables

The dependent variables in this research are the ones that allow us to measure in an appropriate way the profitability of banks.

The dependent variables used in this study are the Return on Equity (ROE) and the Return on Assets (ROA). According to Abreu et al. (2022) these are the main profitability ratios and more useful to the banking sector. Although the net interest margin could be another one, it's very close to the ROA and, because of that, i decided to only include the 2 variables mentioned.

ROE is arguably the best ratio to evaluate a profitability of a bank and can be measured by dividing the net profit by the total equity of the bank representing the rate of return earned on capital invested by shareholders. The ROE impacts the capability of the bank generating cash internally.

The ROA is another important variable (not so much for shareholders) that shows the profitability of the bank and can be obtained by dividing the net profit by the total assets of the bank. It demonstrates the ability of the bank's management to generate income by utilizing its assets or, in others words, the efficiency on how they use their resources.

3.2.3. Control Variables

Although the point is to study the impact of ESG/CSR variables in the FP in the banking sector, there are other variables that influence the financial performance of a credit institution.

Besides the dependent and independent variables, it is important to address the importance of the control variables. According to the sector to be studied, it was decided to include in the model the logarithm of total assets

(SIZE), the loan-to-deposit ratio (LoanDep), the Leverage and the logarithm of non-performing loans (LogNPLs).

Total assets (SIZE) is one important variable to include in the regression models because it measures the size of the bank. Due to regulation imposed and pressure from stakeholders and investors are associated to big companies, it is assumed that bigger companies with higher responsibilities, duties in the reporting and transparency have a higher ESG Score.

Loan-to-deposit ratio (LDR) can be obtained by dividing the total loans of the banks by its total deposits in the same period. The LDR shows a bank's ability to provide funds to its debtors with capital held by banks and funds the public can collect that. This ratio may show if a bank is managed properly. Normally, the LDR impacts the financial performance of banks because it is expected that an higher LDR improves the ability of the bank to generate profit.

Leverage (LEV) corresponds to the ratio between total debt and total capital. This financial leverage ratio indicates the amount of debt used by an organization to finance its business operations. Normally, institutions used more debt of equity to increase their ROE or earnings per share, however it provokes higher risk by having a large amount of debt in its operations.

The other control variable is the is the logarithm of non-performing loans (LogNPL) that represent the amount of loans that are subject to late repayment or are unlikely to be repaid (default). This is metric that the European Central Bank (ECB) follows very closely as it is a very relevant metric in the banking sector.

3.3. Regression models

As explained in the literature, invest, or get into sustainable activities improving the ESG performance does not impact immediately, we used a 1-year lag in FP. It is used data from 2012 to 2020 to the CSR and control variables and 2013 to 2021 data to financial variables.

To analyze the impact of CSR in FP of banks, the regression models had to be constructed to obtain results in Stata. They are presented next.

The first regression models aim to study the impact of overall ESG Score in both financial variables, ROA, and ROE. The control variables are also included in the model.

$$ROA_{i,t} = \beta_0 + \beta_1 ESGscore_{i,t-1} + \beta_2 Control_{i,t-1} + \varepsilon_{i,t} \quad (1)$$

$$ROE_{i,t} = \beta_0 + \beta_1 ESGscore_{i,t-1} + \beta_2 Control_{i,t-1} + \varepsilon_{i,t} \quad (2)$$

Where ROA_{it} (profitability ratio) represents the net income divided by the total assets of bank i in year t ; ROE_{it} (other fundamental profitability ratio) represents the net income divided by total shareholders' equity of bank i in year t ; $ESGscore_{it}$ indicates the ESG commitment and performance and ranges 0 to 100, of bank i in year t ; LDR_{it} (loan-to-deposit ratio) represents the percentage of loans relative to its deposits of bank i in year t ; LEV_{it} (leverage) consists in the percentage of total debt issued by bank i in year t relative to its total capital; $SIZE_{it}$ (LogTA) represents the logarithm of total assets of bank i in year t ; $LogNPL_{it}$ (non-performing Loans) is the amount of loans that are lately paid or are unlikely to be paid of bank i in year t .

The third and fourth regression models have the objective of study the individual impact of the environmental, social and governance pillar scores in ROA and ROE. As the previous regression models, the control variables are also present. These regression models are the follow ones:

$$ROA_{i,t} = \beta_0 + \beta_1 ENV_{score_{i,t-1}} + \beta_2 SOC_{score_{i,t-1}} + \beta_3 GOV_{score_{i,t-1}} + \beta_4 Control_{i,t-1} + \varepsilon_{i,t} \quad (3)$$

$$ROE_{i,t} = \beta_0 + \beta_1 ENV_{score_{i,t-1}} + \beta_2 SOC_{score_{i,t-1}} + \beta_3 GOV_{score_{i,t-1}} + \beta_4 Control_{i,t-1} + \varepsilon_{i,t} \quad (4)$$

Where the financial variables have the same meaning and interpretation as above and the control variables are the same. However, the independent variables are not the same, with the $ENV_{score_{i,t}}$ (environmental pillar score) representing the environmental commitment and effectiveness of banks' activities of bank i in year t ; the $SOC_{score_{i,t}}$ (social pillar score) demonstrates the social awareness by the bank i in year t ; the $GOV_{score_{i,t}}$ (governance pillar score) indicates the inclusion of governance considerations into business of bank i in year t .

3.4. Summary statistics

Summary statistics are important for this empirical study to perform a simple analysis and present, in an understandable way, data visualization and interpretation of its distribution, measures of central tendency and variability. Table 1 shows the descriptive statistics for this study and they are the median, mean, standard deviation, the minimum and the maximum value the cleaned data (some data were eliminated because some banks in certain years showed empty values for 1 or more variables) and presents 417 observations of 56 institutions in the banking system for the 10-year period (some institutions were eliminated to study the impact of CSR in FP due to lack of values in the data). The table shows the variables and its more detailed description. The next table is as follows:

Table 3-Summary statistics

Variable	Mean	Std. Dev	Min	Median	Max
ESG	63.357	18.212	11.6	67.42	94.79
ENV	71.100	23.806	1.66	80.6	97.52
SOC	65.043	19.914	9.35	69.06	97.65
GOV	60.770	21.381	10.36	63.92	97
ROA	0.603	0.826	-4.29	0.65	4.99
ROE	5.014	16.923	-225.7	7.16	98.14
SIZE	8.495	0.681	6.707	8.360	9.800
LEV	75.518	14.282	17.96	78.52	107.37
LDR	133.562	54.528	12.86	119.07	370.45
LogNPL	6.878	6.878	0.737	7.027	7.926

Note: The summary statistics presented are across 417 observations from 2012 to 2021.

From the summary statistics presented, it is possible to understand that, in the period studied, the ESG component better perceived in the banking sector in Europe, is the environmental pillar. With a mean of 71.10 and a median of 80.6 for this data selected, it possible to understand that the industry have a good environmental score. The social score is a little bit down of what is considered a good score (>70), however better than the governance score.

The mean for the ROA is 0,603 and 5,014 for the ROE which indicates that the ROE are higher than the ROA in the banking sector. Also, summary statistics for SIZE, LEV, LDR and LOGNPL are presented with the mean bank having a 75,518% debt to its capital, 133,562% total loans of its total deposits. Total assets and NPLs are in logarithm to facilitate the analysis.

4. Results

In presenting the results for this empirical research, I divided this section in 2 parts: i) an overview of the evolution of the ESG, environmental, social and governance scores between 2012-2021 in the index (the sample selection for this part is not the same explained in the summary statistics because for this analysis I only needed information about the independent variables), its possible reasons and which banks perform better in each category; ii) the results of the OLS regressions in analyzing the impact of CSR in FP in the banking sector in Europe.

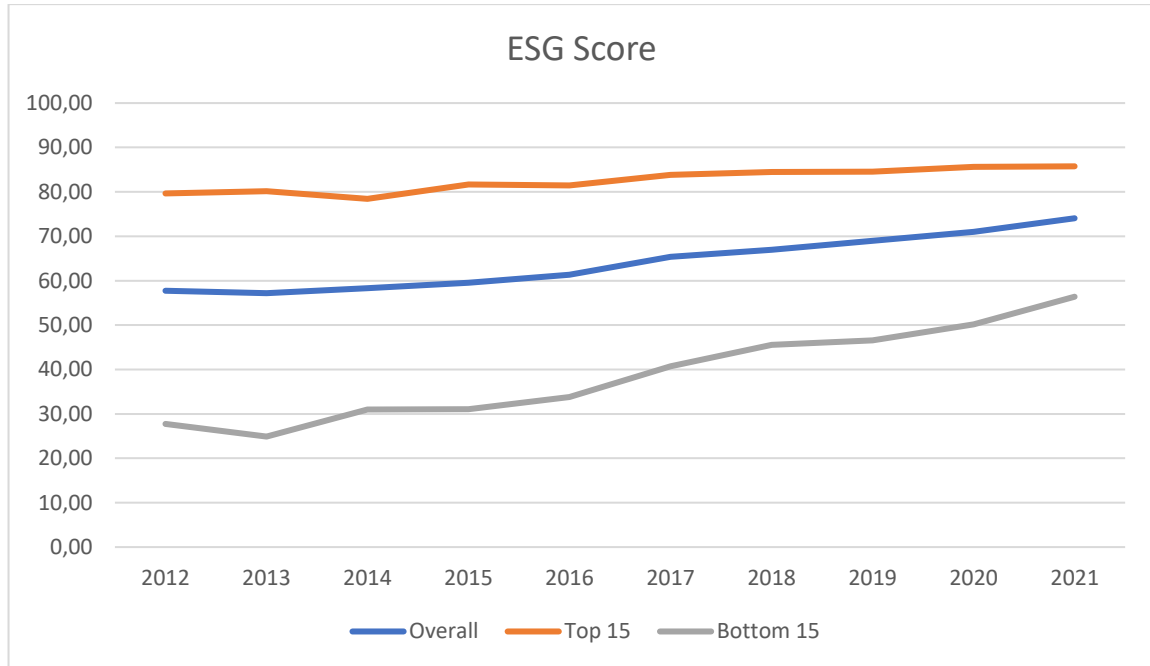
4.1. Overview of the banking sector

4.1.1. ESG Score

In the ESG Score variable is possible to observe that the metric is improving a lot in the since 2012. The overall score in 2012 is 57,71 and in 2021 is 74,05 which represents an improve of 16,34 points. Banks with lower performance (Bottom 15) registered a considerable improve from 27,74 to 56,39 (28,65 improvement) and banks with higher performance (Top 15) improve, in average, 6,08 points.

From this analysis, we can observe that the majority of banks with very bad performances in 2012 improved to acceptable levels of ESG engagement of its activities. Banks that already have good ESG performances to the market are improving very slowly its activities in terms of CSR. In overall, banks are very close to a “Good” score according to the thresholds established by Refinitiv DataStream.

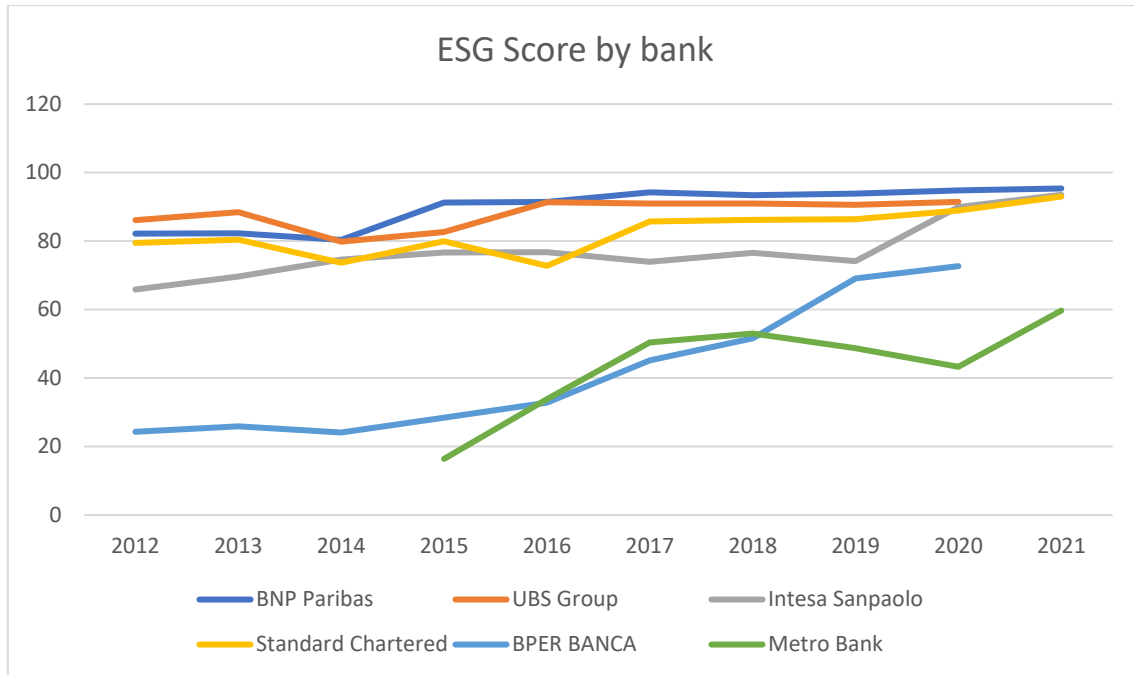
Graph 1- Evolution of the ESG Score



Note: The value by year is the mean of the ESG score among banks

Individually, it is possible to identify the BNP Paribas and the UBS Group as the 2 banks with higher ESG performance. In the top 15, Intesa Sanpaolo is the bank the most improved with 27,65 points, followed by Standard Chartered (13,57 points). In the Bottom 15 we can underline Bper Banca with 48,37 points improvement and Metro Bank with 43,31 points. In the next graph, I show the evolution of the mentioned banks.

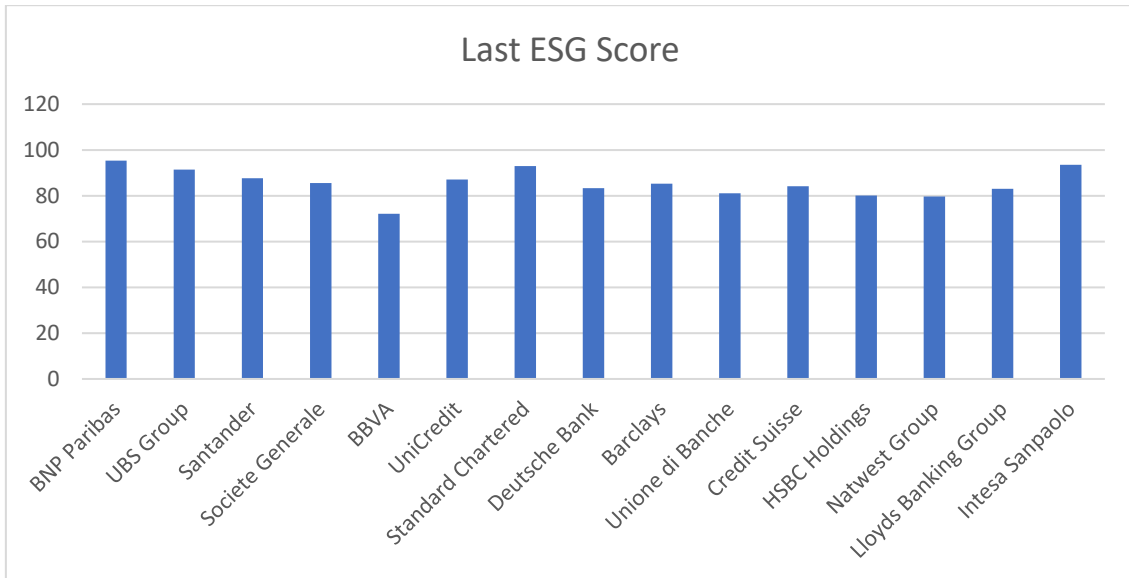
Graph 2- ESG Score by Institution



Note: The countries analyzed were selected regarding their score and improvement in the period

In the top 15 banks it is important to underline that we have 4 banks from the UK (Standard Chartered, HSBC Holdings, Natwest Group and the Lloyds Banking Group) along with three Italian banks (Unicredit, Unioni di Banche and Intensa Sanpaolo). In the next graph, countries are ordered by its median score all over the years and indicates the 2021 ESG Score (UBS Group, UniCredit and Natwest Group are represented by the 2020 score and Unioni de Banche by 2019 ESG Score). The BNP Paribas, Intesa Sanpaolo and Standard Chartered have the best 2021 ESG Scores of the Index.

Graph 3- Last ESG Score



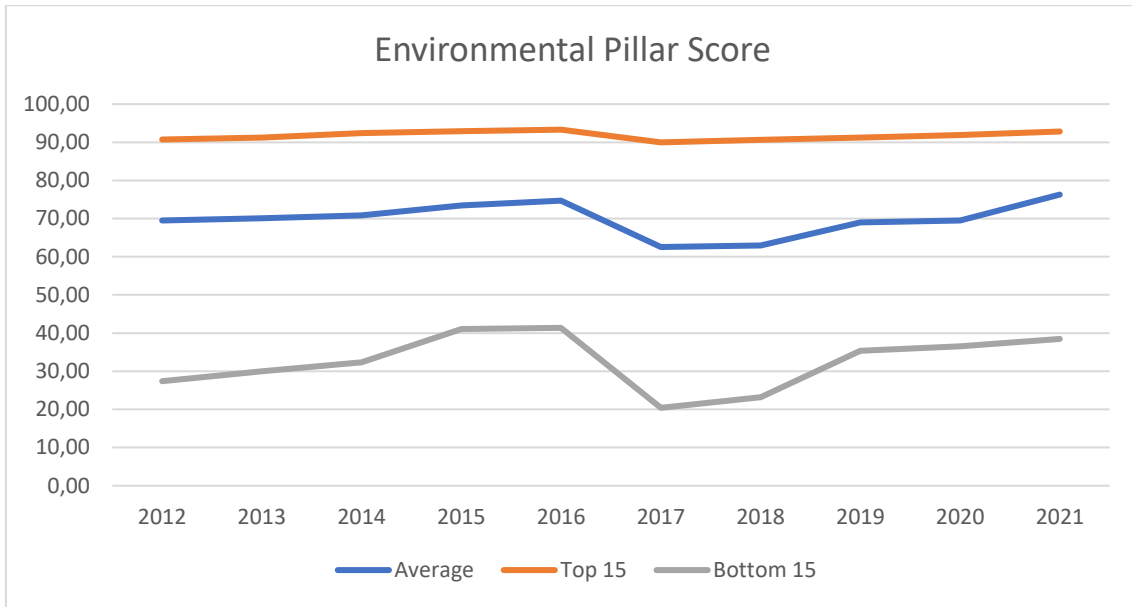
Note: 2021 scores except UBS Group, UniCredit, Natwest Group (2020) and Unione di Banche (2019)

4.1.2. Environmental Score

An analysis to the three pillars of the ESG sigla was also made. The environmental pillar score represents the bigger average score of the three, what means that organizations have a higher focus on the environmental component rather than the social or governance part.

In average, it is possible to observe an upgrade of almost 7 points between 2012 and 2021. Every year, the ESG score improved except in 2017, when the NFRD started to be applicated in the EU and registered a deterioration of more than 12 points, which is significant in one year. The top 15 banks in environmental score registered around a 2 points improve between 2012 and 2021, however, registering a decrease of more than 4 points. In the bottom 15, the case is more serious in 2017, when, in average, the score went from 41,37 to 20,41. Despite this downfall, the bottom 15 registered an improve of 27,39 to 38,48 points.

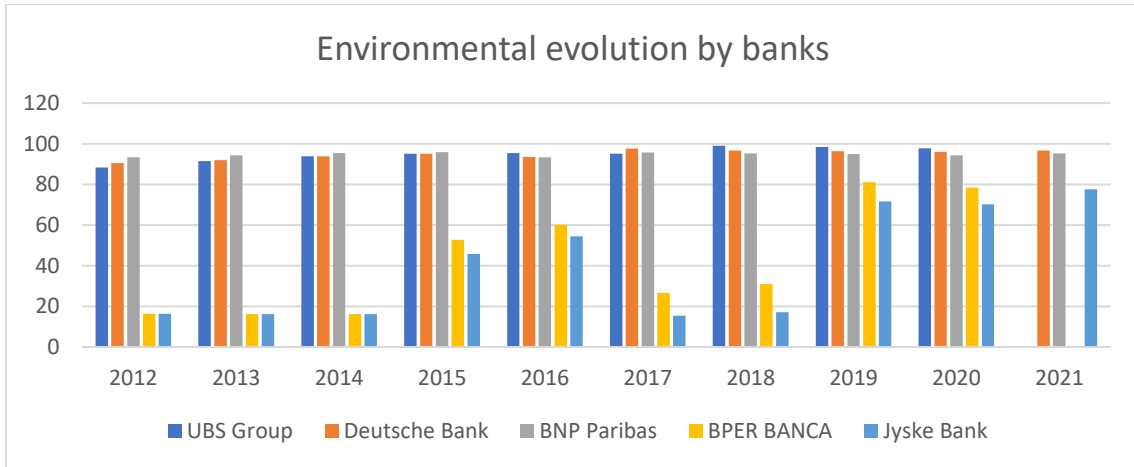
Graph 4- Environmental score



Note: The value in each year is the mean of the environmental score

Although in the top 15 scores, there are a lot of institutions with scores over 90 points, the banks with higher environmental performance were the UBS Group, the Deutsche Bank, and the BNP Paribas. These 2 banks also have the best evolutions in the environmental pillar score considering the top 15 banks. In the bottom 15, there are 2 institutions that raised a lot their environmental performances and they are the Bper Banca with a 62,11 points evolution and the Jyske Bank with 61,2 points evolution which is very considerable.

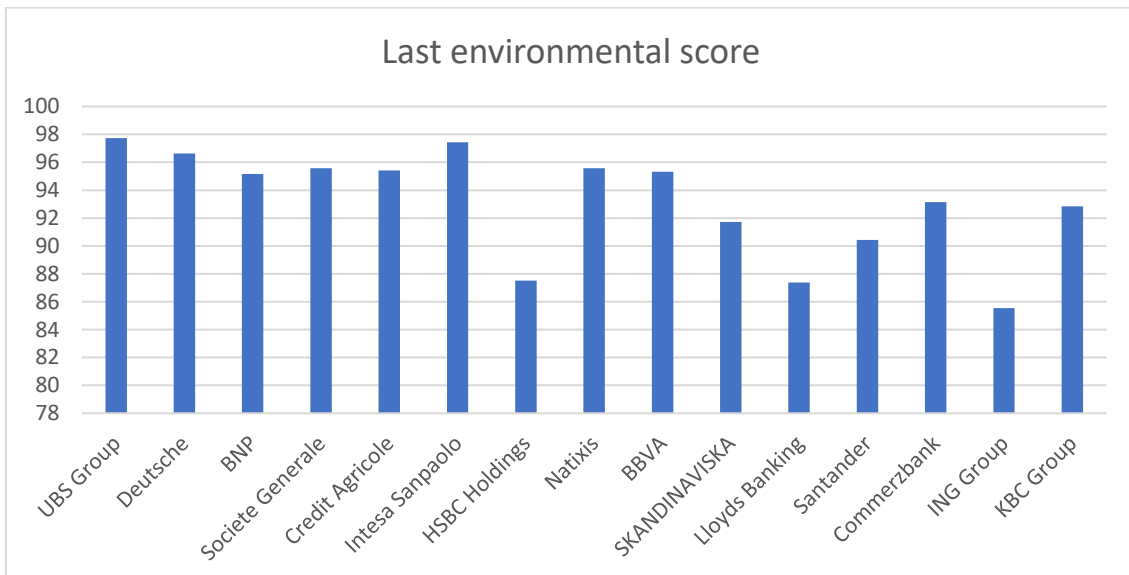
Graph 5- Environmental score by institution



Note: Institutions selected are based on their score and evolution

In the next graph, it's presented the 2021 best scores according to the top 15 between 2012 and 2021 and we can observe that the most representative country is France (BNP Paribas, Societe Generale, Credit Agricole and Natixis).

Graph 6- Last environmental score

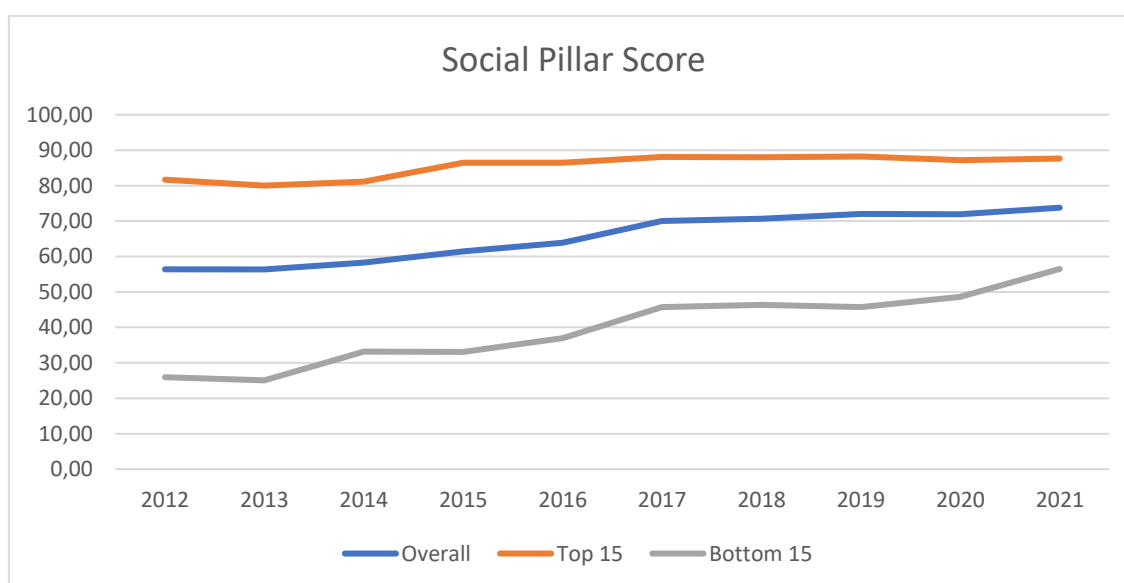


Note: 2021 scores except UBS Group and KBC (2020)

4.1.3. Social Score

In the Social component of ESG, we observe a constant evolution of the pillar during the last years. In the top 15 social scores, it is possible to observe an evolution of 6 points. In the bottom 15 institutions, the evolution is brutal with more than 30 points of evolution. Comparing to the environmental pillar score, the evolution is higher because the scores in 2012 were, at the time, very good.

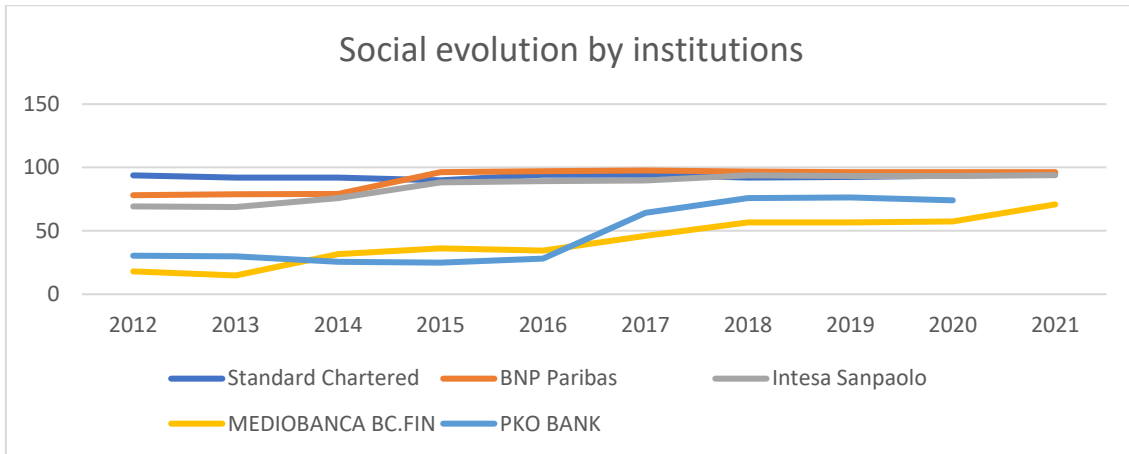
Graph 7- Social score



Note: The value in each year represents the mean of social score of banks

Relative to the banks with higher social performances, Standard Chartered, BNP Paribas and Unioni di Banche are at the top. The banks that improve the most were the Intesa Sanpaolo (24,62 points) and the BNP Paribas with 18,08 points. In the category of banks with lower performance, the Mediobanca and the Pko Bank improved the most with 52,92 and 43,97 points respectively. However, the improvement was general by institutions within the bottom 15.

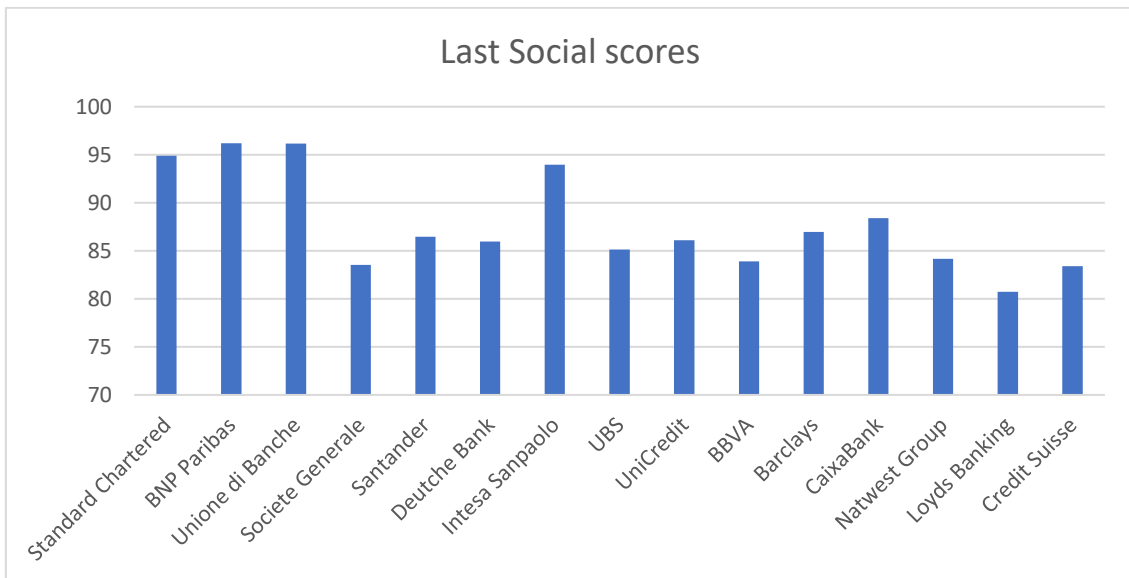
Graph 8- Social score by banks



Note: Institutions are selected based on their scores and improvement

In their last Social score in 2021 (there are some banks which was used their last score in 2020 or 2019), it is possible to notice that BNP Paribas represents the higher governance score in 2021, followed by Unione di Banche in 2019 (their last score) and Intesa Sanpaolo).

Graph 9- Last ESG scores

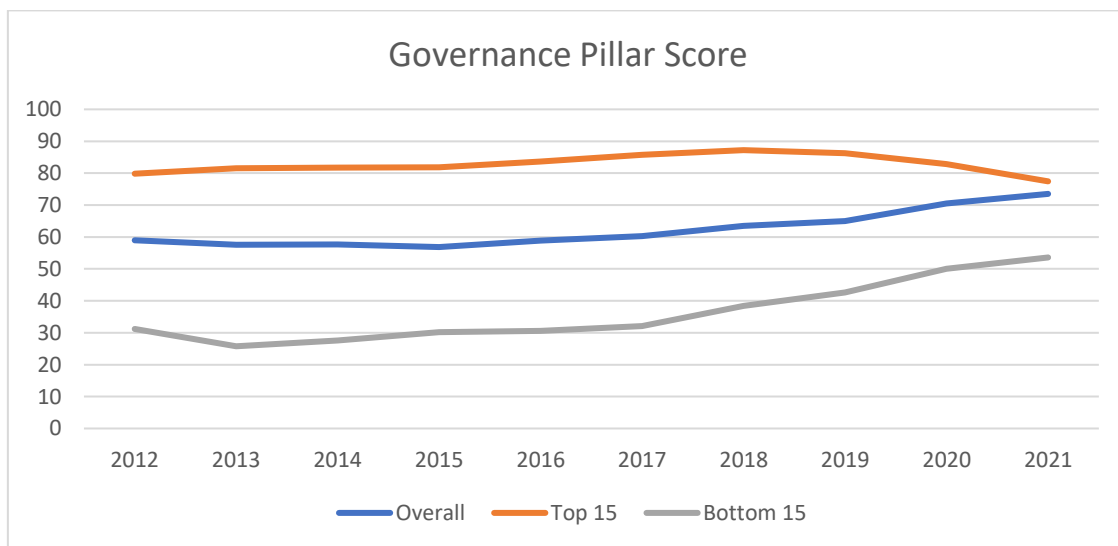


Note: 2021 scores except Unione di Banche (2019), UBS Group, UniCredit and Natwest Group (2020)

4.1.4. Governance Score

The last individual analysis is about the governance score. The evolution of the average Governance Score of Stoxx Europe 600 Banks is very close from the Social variable, a little less considerable, from 58,94 to 73,51 points. The Top 15 banks registered, in average, a slightly decrease in the governance pillar score from 79,88 in 2012 to 77,44 in 2021 despite in 2019 the average was 86,30. The bottom 15 in this category presented a different behavior with a constant evolution from 31,14 in 2012 to 53,59 in 2021.

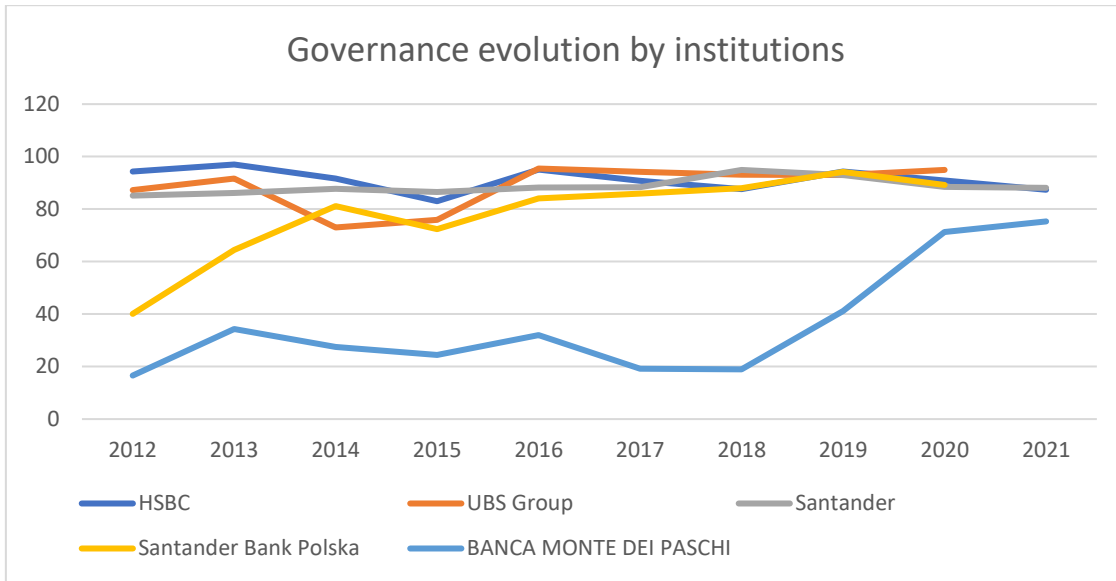
Graph 10- Governance Score



Note: The scores presented are the mean of governance scores in each year

In the period studied, the HSBC Holdings was the bank with higher performance in the governance component followed by the UBS Group and Santander. Santander Bank Polska registered the higher evolution with 49,07 points in the top 15 and, in bottom 15, the improve was general but Banca Monte Dei Paschi improved from 16,59 points in 2012 to 75,31 points in 2021.

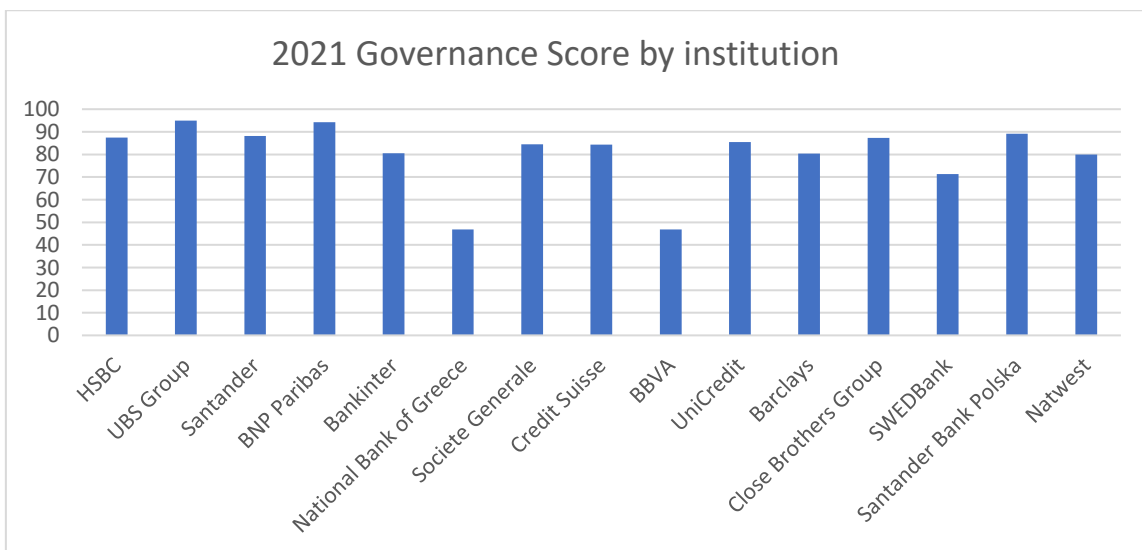
Graph 11- Governance score by banks



Note: Banks are selected based on their score and improvement

Like the other pillars, the BNP Paribas registered a positive evolution and, in 2021, registered the best governance score (behind the 2020 UBS Group Score). In the next table, we present the evolution of 2021 or the last available score of the top 15 institutions. Beside the UBS Group and the BNP Paribas, also the Santander Bank Polska and Santander presents very good metrics for 2021.

Graph 12- Last Governance scores



Note: 2021 scores except UBS Group, BBVA, UniCredit, Swedbank and Santander Bank Polska (2020)

4.2. CSR and financial performance

In the following table, the results are presented according to the regression models presented. The individual impact of ESGscore in the ROA (1), the impact of ESGscore in the ROA with all control variables in the regression model (2). The same procedure is made to the other financial variable, the ROE.

Table 4- OLS Estimation results for ESG Score

Variables	ROA(1)	ROA (2)	ROE (3)	ROE (4)
ESGscore	-0.003 * (0.002)	-0.004* (0.002)	0.052 ** (0.046) **	0.017 * (0.050)
SIZE		0.522 (0,075) ***		9.029 (1.610) ***
LEV		-0.015 (0,003) ***		-0.149 (0.699) **
LDR		0.002 (0,001) **		-0.006 (0.187) *
LogNPL		-0.042 (0,065) ***		-7.320 (1.379) ***
R-squared	0.0074	0.1598	0.0032	0.0979

Note: All specifications include a constant term and are based in 417 observations. The standard errors are in parenthesis. *** p-value < 0.01; ** p-value < 0.05 and * p-value < 0.10

As we can observe in the results obtained, when we analyze the solely impact of the ESG Score in the ROA, the coefficient is negative. Adding the control variables to the regression model (2), the impact of ESGscore in the ROA is still negative. Contrary to the result of ROA, the ESGscore impact positively the ROE of banks (with a p-value lower than 0,05)

Parallel to these conclusions, we can conclude a positive effect of SIZE in the ROA and ROE of banks, the use of Leverage impact negatively both financial metrics as expected, non-performing loans are also negative correlated with financial performance and it's curious to notice that the higher the loan-to-deposit ratio, the higher ROA but lower the ROE.

Table 5- OLS estimation results for ENVscore, SOCscore and GOVscore

Variables	ROA(1)	ROA (2)	ROE (3)	ROE (4)
ENVscore	-0.004 (0.002) **	-0.003 (0.002) *	-0.017(0.040) *	-0,002 (0.05) *
SOCscore	-0.0028 (0.003) *	-0.001 (0.003) *	0.011 (0.058) *	0,025 (0.058) *
GOVscore	0.003 (0.002) *	-0.0002 (0.002) *	0.061 (0.045) **	-0,005 (0.045) *
SIZE		0.533 (0.077) ***		9,08 (1.639) ***
LEV		-0.01 (0.0036) ***		-0,150 (0.075) **
LDR		0.0017 (0.0009) *		-0,005 (0.0188) *
LogNPL		-0.41 (0.067) ***		-7,417 (1.438) ***
R-squared	0.0249	0.1626	0.0059	0.0981

Note: All specifications include a constant term and are based in 417 observations. The standard errors are in parenthesis. *** denotes p-value < 0,01; ** denotes p-value < 0,05 and * denotes p-value < 0,10. It was used a 1-year lag for ROA and ROE

From the table above, it is possible to observe that the environmental score has a negative impact in both ROA and ROE. However, the p-value is higher than 0,10 for these situations which means that is no significance. For the Social score and Governance score we observe that there is no significance on the impact of each variable in the ROA and ROE because the p-values are too high.

Like the analysis made above, the impact of SIZE is, as expected, positive in the ROA and ROE, Leverage has a negative impact again in both, LDR has a positive impact in ROA and is negative correlated with ROE. Non-performing loans impact negatively the financial performance of a bank which, according to the definition, is the correct output.

5. Conclusions

My objective going into this dissertation was to show the ESG perception in the European banking sector along with its evolution in the past years and concluding about the link between CSR and FP. The chapter of conclusions is divided into the overall analysis of the ESG scores and each individual component and the impact of CSR in FP in the banking industry.

5.1. ESG in the banking sector

Through the analysis made in the chapter of results, it is possible to write some conclusions about the ESG perception specifically in the banking sector and its evolution through the years and the implementation of specific regulation mentioned in the Literature Review chapter, particularly the NFRD.

The expectation before analyzing the ESG data in the banking sector is that there was going to have some evolution in the scores all over the years and transparency would increase because of the benefits banks may have in being recognized as CSR contributors to the financial system. In fact, these expectations were confirmed. ESG variables registered considerable improvements in the index Stoxx Europe 600 Banks. However, the financial year in which the NFRD entered into force, the environmental variable deteriorated considerably the scores.

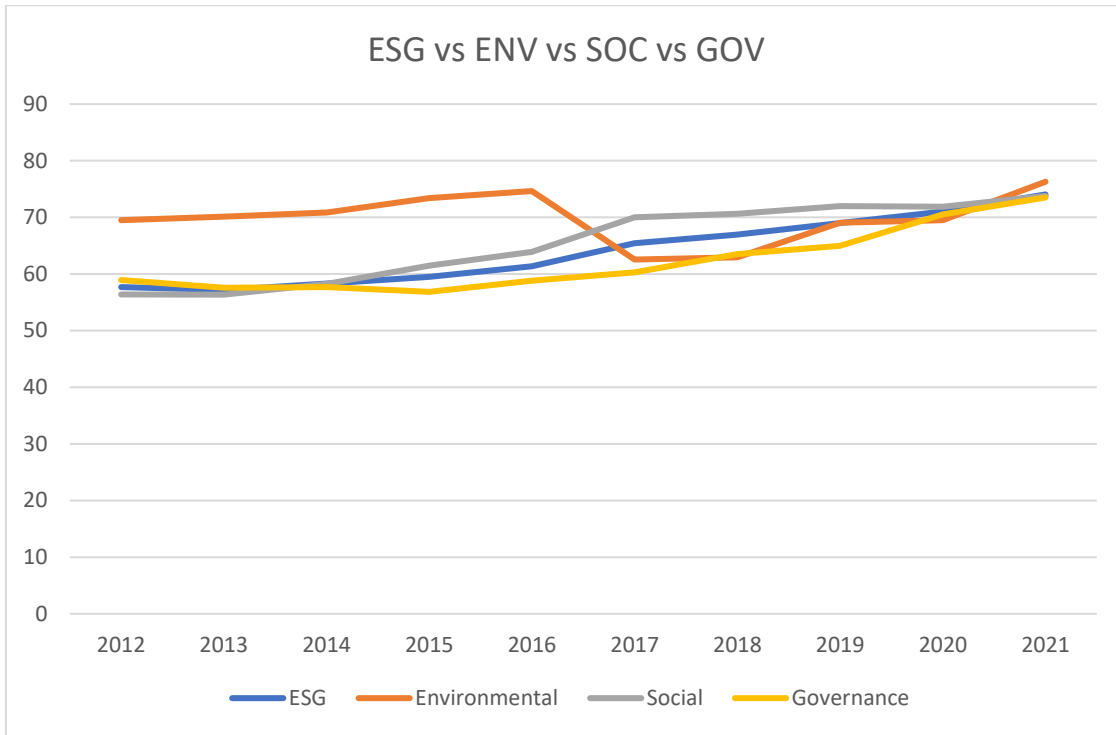
From this deterioration in 2017, it is possible to detect some facts. From 2016 to 2017 banks activities didn't get worse, probably continued to improve in that year. The evaluation of these activities was more demanding to the banks because of the mandatory requirements specified before obligating the banks to disclose certain sustainability information to the public.

These results play in favor of the EU and the success of the NFRD. The evolution of the ESG scores, particularly, the Environmental Pillar Score variable is much higher between 2012 to 2021 because, in the meantime, regulation was imposed to organizations and evaluation of CSR became harder and demanding not only for banks, but for all the scope of the NFRD. With the deterioration it's also possible to prove that banks practiced greenwashing in their reporting and the need to disclose mandatory non-financial information instead of a voluntary-basis reporting eliminated some greenwashing although it is impossible to eliminate it at all, but was a great step to demonstrate to the public the veridic sustainable information about institutions. Institutions with lower environmental score practiced more greenwashing than the top environmental organizations.

The evolution of the three pillars is quite different among them. In general, we observe an improve between 2012 and 2021 in the 3 ESG components. About 10 years ago, the focus was more on the environment or in demonstrate good contributions to it rather than social or governance. Social and Governance have been shown a great evolution demonstrating that they are also important.

However, it is important to note that there was a "2017 effect" but it impacted mainly the environmental score of institutions, not social or governance scores. In the banking sector, the Directive impacted more the environmental transparency of organizations when comparing to the transparency of social or governance reporting. Also, it demonstrates that efforts to demonstrate compromise in showing to the public wrong information were higher to the environment pillar.

Graph 13- ESG evolution



Note: Comparison among ESG, environmental, social and governance scores (2012-2021)

From the graph above, we can conclude that, in 2012, environmental scores were higher than social and governance scores in the banking industry. However, in 2021, the mean of the scores is very close from each other. We have 2 possibilities: i) greenwashing in environmental disclosure is lower due to regulation obligating firms to higher transparency; ii) banks are investing more in improving their social and governance scores. However, the ESG Score registered a positive evolution over the years and the banking sector is slightly better evaluated in 2021 rather than in 2012.

5.2. CSR and financial performance

About the second part of the results, we focus on the impact of the aggregate ESG score and the individual impact of environmental, social and governance scores.

Through the analysis made before and looking to the summary statistics, we can observe that the mean of the environmental score presents higher values than the social and governance score. Banks focus more on the environmental disclosures and practices in their activity than social and governance. Social score presents slightly higher values than the governance score.

In terms of financial performance, the results didn't show the significance expected. Although the literature shows ambiguous conclusions regarding the positive, negative or, simply, no impact of CSR activities in the banking sector, the banking sector is still an industry that doesn't have as many results as desired. In this section, we conclude that there wasn't significance in the results achieved.

5.3. Difficulties and suggestions for the future

The main goal of this dissertation is to contribute to the literature review already existent in the sustainable finance framework about the regulation in the EU about non-financial reporting, particularly the EU Taxonomy, implemented in 2020. As explained, the EU Taxonomy is the first standardized classification system that aims to help institutions doing the transition to a circular economy.

My first objective and preview of my dissertation was to study the impact that the EU Taxonomy may have in some metrics of companies. These metrics could be financial, ESG metrics (as the same used in the empirical study) or the

quality of non-financial reports of institutions. Comparisons along different sectors or even doing a deep analysis in one sector can be very interesting academically.

At this moment, it is possible to have some data results related to the EU Taxonomy, however, very few. Companies covered by the NFRD only needed to report on taxonomy-alignment in the financial year of 2022. However, it is possible to observe that some institutions and banks that already started with the disclosure in the financial year of 2021 although was not mandatory at the time.

It is very likely that in the next decade, academics will start exploring taxonomy effects due to its importance in sustainable finance in Europe and because this is the decade of sustainability. Climate risk is being introduced in supervisory role of central banks and, complementary, we have the Pillar III ESG risks issued by the European Banking Authority (EBA). Pillar III ESG requests information to the banks on the environmental, social and governance risks, how the balance sheet is affected and how banks act to hedge these risks. These requirements are qualitative and quantitative with templates, including the green asset ratio specified in the Taxonomy.

After this dissertation, and particularly taking into account the growth of the literature about sustainable finance framework and its importance complemented by the supervision and regulation on institutions with metrics to be applied, it's predictable that organizations will invest in the recruitment of human capital specialized in ESG and Sustainable Finance. Having competent staff in this area is fundamental because investors want transparency to invest their capital, regulators are more committed in supervising institutions in ESG matters and the requirements in the disclosure of non-financial information are increasing very quickly. If certain requirements are not respected by companies, the ESG Score can go very low, the competition will outperform them, investors don't want to put their money and, consequently, the cost of capital may become

higher causing more costs to the institution. As we can see, in a near future, having a low ESG rating can be very harmful to a firm.

References

- Ahern, D. (2016). Turning Up the Heat? EU Sustainability Goals and the Role of Reporting under the Non-Financial Reporting Directive. *European Company and Financial Law Review*, 13(4). <https://doi.org/10.1515/ECFR-2016-5007>.
- Arndt, C.; Loewald, C.; Makrelov, K. (2020). Climate change and its implications for central banks in emerging and developing economies. Economic Research and Statistics Department, South African Reserve Bank, Working Paper Series WP/20/04.
- Aureli, S., & Magnaghi, E. & Salvatori, F. (2018). The Transposition of the Non-Financial Reporting Directive in the UK, France and Italy, *Symphonia. Emerging Issues in Management* (symphonia.unimib.it), 1, 48-67. <http://dx.doi.org/10.4468/2018.1.04aureli.magnaghi.salvatori>.
- Baron, D. P. (2001). Private politics, corporate social responsibility, and integrated strategy. *Journal of economics & management strategy*, 10(1), 7-45.
- Beerbaum Dr., Dirk Otto, Green Quadriga? - EU - Taxonomy, TCFD, Non-Financial-Reporting Directive and EBA ESG Pillar III/ IFRS Foundation (April 11, 2021). Available at SSRN: <https://ssrn.com/abstract=3824397> or <http://dx.doi.org/10.2139/ssrn.3824397>
- Bernal, A. & García, T. (2022). Analysis of ESG Disclosures in Pillar 3 Reports. A Text Mining Approach. *Documentos Ocasionales*. N.º 2204, March, Banco de España.
- Bruno, M.; Lagasio, V. (2021). An Overview of the European Policies on ESG in the Banking Sector. *Sustainability*, 13, 12641. <https://doi.org/10.3390/su132212641>.
- Buallay, A. (2019), "Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector", *Management of Environmental Quality*, Vol. 30 No. 1, pp. 98-115. <https://doi.org/10.1108/MEQ-12-2017-0149>.
- Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research and practice. *International journal of management reviews*, 12(1), 85-105.
- Delmas, Magali A., and Vanessa Cuerel Burbano. "The drivers of greenwashing." *California management review* 54.1 (2011): 64-87.
- Dusík, J. & Bond, A. (2022). Environmental assessments and sustainable finance frameworks: will the EU Taxonomy change the mindset over the contribution of EIA to sustainable development?. *Impact Assessment and Project Appraisal*, 40:2, 90-98, <https://doi.org/10.1080/14615517.2022.2027609>.

- Eceiza, J.; Harreis, H.; Härtl, D. & Viscardi, S. (2020). Banking imperatives for managing climate risk. McKinsey & Company, n.d.
- Eugénio, T., Gomes, S., Branco, M. C., & Morais, A. I. (2022). Non-Financial Reporting and Assurance: A New Opportunity for Auditors? Evidence from Portugal. *Sustainability*, 14(20), 13469.
- Eurosystem and Europ, Zentralbank (2021). ESCB Legal Conference 2020: 11 September - 2 November 2020. European Central Bank. ISBN9789289947022, <https://books.google.pt/books?id=FfV9zgEACAAJ>.
- Farcane, N. & Bureana, E. (2015). History of “Corporate Social Responsibility” Concept. *Annales Universitatis Apulensis Series Oeconomica*, 17(2), 2015, 31-48.
- Ferrouhi, M. (2018). Determinants of banks’ profitability and performance: an overview. Faculty of Law, Economics and Social Sciences, Ibn Tofail University. <https://mpira.ub.uni-muenchen.de/89470/>.
- Fiandrino, S.; Tonelli, A. (2021). A Text-Mining Analysis on the Review of the Non-Financial Reporting Directive: Bringing Value Creation for Stakeholders into Accounting. *Sustainability* 2021, 13, 763. <https://doi.org/10.3390/su13020763>.
- Flammer, C. (2013). Does product market competition foster corporate social responsibility?. In *Academy of Management Proceedings* (Vol. 2013, No. 1, p. 10714). Briarcliff Manor, NY 10510: Academy of Management.
- Frankental, P. (2001), "Corporate social responsibility – a PR invention?", *Corporate Communications: An International Journal*, Vol. 6 No. 1, pp. 18-23. <https://doi.org/10.1108/13563280110381170>
- Gallego-Álvarez, I., Manuel Prado-Lorenzo, J., & García-Sánchez, I. M. (2011). Corporate social responsibility and innovation: A resource-based theory. *Management decision*, 49(10), 1709-1727.
- Godfrey, P.C., Merrill, C.B. and Hansen, J.M. (2009), The relationship between corporate social responsibility and shareholder value: an empirical test of the risk management hypothesis. *Strat. Mgmt. J.*, 30: 425-445. <https://doi.org/10.1002/smj.750>
- Haller, A., Link, M., & Groß, T. (2017). The term ‘non-financial information’—a semantic analysis of a key feature of current and future corporate reporting. *Accounting in Europe*, 14(3), 407-429.
- Ingram, Robert W., and Katherine Beal Frazier. “Environmental Performance and Corporate Disclosure.” *Journal of Accounting Research*, vol. 18, no. 2, 1980, pp. 614–22. JSTOR, <https://doi.org/10.2307/2490597>.

- La Torre, M.; Sabelfeld, S.; Blomkvist, M.; Dumay, J. (2020). Rebuilding trust: sustainability and non-financial reporting and the European Union regulation. *Meditari Accountancy Research* Vol. 28 No. 5, pp. 701-725, Emerald Publishing Limited 2049-372X. DOI 10.1108/MEDAR-06-2020-0914.
- Laufer, William S. "Social accountability and corporate greenwashing." *Journal of business ethics* 43 (2003): 253-261.
- Leins, S. (2020). 'Responsible investment': ESG and the post-crisis ethical order. *Economy and Society*, 49:1, 71-91, DOI: 10.1080/03085147.2020.1702414.
- Lucarelli, C.; Mazzoli, C.; Rancan, M.; & Severini, S. (2020). Classification of Sustainable Activities: EU Taxonomy and Scientific Literature. Department of Management, Università Politecnica Delle Marche, Piazzale R. Martelli 8, 60121 Ancona, Italy, <https://doi.org/10.3390/su12166460>.
- Malik, M. & Nadeem, M. (2014). Impact of corporate social responsibility on the financial performance of banks in Pakistan. *International Letters of Social and Humanistic Sciences*, Vol. 21 pp 9-19, SciPress Ltd., Switzerland. DOI:10.18052/www.scipress.com/ILSHS.21.9.
- McWilliams, A. & Siegel, D. (2001). Corporate Social Responsibility: A Theory of the Firm Perspective. *The Academy of Management Review*, January, Vol. 26, No. 1 (January, 2001), pp. 117-127. <https://www.jstor.org/stable/259398>.
- Nelling, E., & Webb, E. (2009). Corporate social responsibility and financial performance: the "virtuous circle" revisited. *Review of Quantitative finance and accounting*, 32, 197-209.
- Och, M. (2020). Sustainable Finance and the EU Taxonomy Regulation—Hype or Hope?. *Jan Ronse Institute for Company & Financial Law Working Paper*, (2020/05).
- Persons, Obeua S. (2006). Corporate Governance and Non-Financial Reporting Fraud. *The Journal of Business and Economic Studies; Eastchester* Vol. 12, Ediç. 1, 27-39,79.
- Porter, M. & Kramer, M. (2002). The Competitive Advantage of Corporate Philanthropy. *Harvard Business Review*.
- Ramus, Catherine A., and Ivan Montiel. "When are corporate environmental policies a form of greenwashing?" *Business & society* 44.4 (2005): 377-414.
- Sautner, Z., Yu, J., Zhong, R., & Zhou, X. (2022). The EU Taxonomy and the Syndicated Loan Market. Available at SSRN.
- Savaresi, A. (2016). Climate Change, Justice and Human Rights: Where to Next?.
- Schütze, F.; Stede, J.; Blauert, M.; Erdmann, K. (2020). EU Taxonomy Increasing Transparency of Sustainable Investments, *DIW Weekly Report*, ISSN 2568-7697, Deutsches Institut für

Wirtschaftsforschung (DIW), Berlin, Vol. 10, Iss. 51, pp. 485-492, https://doi.org/10.18723/diw_dwr:2020-51-1.

Steiner, G., Geissler, B., Schreder, G. et al. Living sustainability, or merely pretending? From explicit self-report measures to implicit cognition. *Sustain Sci* 13, 1001–1015 (2018). <https://doi.org/10.1007/s11625-018-0561-6>

Stolowy, H. & Paugam, L. (2018). The expansion of non-financial reporting: an exploratory study. *Accounting and Business Research*, 48:5, 525-548, DOI:10.1080/00014788.2018.1470141.

Ward, H. (2004). Public sector roles in strengthening corporate social responsibility: taking stock. Washington, DC: World Bank.

Wu, M. W., & Shen, C. H. (2013). Corporate social responsibility in the banking industry: Motives and financial performance. *Journal of Banking & Finance*, 37(9), 3529-3547.

Zaman Khan, H.; Bose, S.; Taher Mollik, A. & Harun, H. (2021). “Green washing” or “authentic effort”? An empirical investigation of the quality of sustainability reporting by banks. *Accounting, Auditing & Accountability Journal* Vol. 34 No. 2, pp. 338-369. Emerald Publishing Limited 0951-3574. DOI 10.1108/AAAJ-01-2018-3330.

List of acronyms

CSR	Corporate Social Responsibility-
ESG	Environmental, social and governance
FP	Financial performance
EC	European Commission
EU	European Union
EBA	European Banking Authority
NFRD	Non-Financial Reporting Directive
CSR	Corporate Social Responsibility
ESG	Environmental, Social and Governance
EU	European Union
EBA	European Banking Authority

Table 6 - Top 15 performance ESG Score 2012-2021

Bank	Country	Average	improvement
BNP Paribas	FR	89,93	13,21
UBS Group	SW	88,05	5,31
Santander	SP	87,40	6,13
Societe Generale	FR	86,24	1,33
BBVA	SP	84,04	-11,23
UniCredit	IT	83,52	4,11
Standard Chartered	UK	82,65	13,57
Deutsche Bank	GER	81,96	-1,42
Barclays	UK	81,35	3,49
Unione di Banche	IT	81,12	1,46
Credit Suisse	SW	80,22	-1,16
HSBC Holdings	UK	78,58	10,93
Natwest Group	UK	77,40	3,56
Lloyds Banking Group	UK	77,19	10,48
Intesa Sanpaolo	IT	77,19	27,65

Table 7- Bottom 15 performance ESG Score 2012-2021

Bank	Country	Average	Improvement
Banca Carige	IT	26,9938	-0,03
SydBank	DK	26,998	36,69
Banca PPO. Di Sondrio	IT	28,36	33,08
Ringkjøbing Bank Landbobank	DK	32,0533	40,63
BC Vaud	SW	33,94	31,46
Jyske Bank	DK	37,925	41,66
BPER Banca	IT	41,5911	48,37
Virgin Money UK	UK	41,7014	32,78
PKO Bank	PO	43,1933	19,95
Metro Bank	UK	43,6414	43,31
Avanza Bank Holding	SD	44,025	17,05
MedioBanca BC.FIN	IT	44,967	37,32
Valiant	SW	45,1589	1,03
AIB Group	IR	45,553	35,11
Komerční Banka	CZ	46,61	-15,16

Table 8- Top 15 Environmental scores 2012-2021

Bank	Country	Average	Improvement
UBS Group	SW	94,92	9,5
Deutsche	GER	94,82	6,09
BNP	FR	94,76	1,79
Societe Generale	FR	94,35	1,27
Credit Agricole	FR	93,18	4,25
Intesa Sanpaolo	IT	92,97	4,89
HSBC Holdings	UK	91,21	-4,17
Natixis	FR	94,35	1,27
BBVA	SP	90,73	4,15
Skandinaviska		90,07	2,48
Lloyds Banking	UK	89,65	-2,4
Santander	SP	89,60	0,25
Commerzbank	GER	88,51	2,44
ING Group	NL	88,38	-4,36
KBC Group	BG	88,00	5,85

Table 9- Bottom 15 Social Scores 2012-2021

Bottom 15	Country	Average	Improvement
Sydnank	DK	27,863	36,04
BC Vaud	SW	31,09	39,19
Ringjobing Landbobank	DK	33,38	18,21
Banca PPO. Di Sondrio	IT	34,60	33,4
Banca Carige	IT	35,87	-3,06
Jyske Bank	DK	36,22	30,83
Virgin Money UK	UK	38,97	9,15
MedioBanca BC.FIN	IT	42,28	52,92
Valiant	SW	42,47	3,19
Metro Bank	UK	43,68	34,35
Avanza Bank Holding	SD	46,05	23,6
Komercni Banca	CZ	46,95	32,37
Julius Baer Group	SW	47,47	32,3
Pko Bank	PO	47,72	43,77
Close Brothers Group	UK	47,96	22,69

Table 10- Top 15 Social Scores 2012-2021

Bank	Country	Average	Improvement
Standard Chartered	UK	92,926	1,17
BNP Paribas	FR	91,28	18,08
Unione di Banche	IT	88,49	17
Societe Generale	FR	87,10	0,21
Santander	SP	86,45	8,86
Deutsche Bank	GER	86,32	-3,71
Intesa Sanpaolo	IT	85,57	24,62
UBS	SW	85,40	0,12
UniCredit	IT	84,70	0,24
BBVA	SP	84,61	2,79
Barclays	UK	84,17	4,32
CaixaBank	SP	83,21	11,33
Natwest Group	UK	82,48	0,82
Loyds Banking	UK	79,99	7,25
Credit Suisse	SW	79,09	-1,83

Table 11- Bottom 15 Social scores 2012-2021

Bank	Country	Average	Improvement
Sydbank	DK	27,86	36,04
BC Vaud	SW	31,09	39,19
Ringkjøbing Landbobank	DK	33,38	18,21
Banca PPO.Di Sondrio	IT	34,60	33,4
Banca Carige	IT	35,87	-3,06
Jyske Bank	DK	36,22	30,83
Virgin Money UK	UK	38,97	9,15
Mediobanca BC.FIN	IT	42,28	52,92
Valiant	SW	42,47	3,19
Metro Bank	UK	43,68	34,35
Avanza Bank Holding	SD	46,05	23,6
Komerční Banca	CZ	46,95	32,37
Julius Baer Group	SW	47,47	32,3
Pko Bank	PO	47,72	43,77
Close Brothers Group	UK	47,96	22,69

Table 12- Top 15 performances Governance scores 2012-2021

Bank	Country	Average	Improvement
HSBC	UK	91,21	-6,86
UBS Group	SW	88,73	7,62
Santander	SP	88,66	2,98
BNP Paribas	FR	86,97	9,33
Bankinter	SP	86,04	-9,76
National Bank of Greece	GR	81,41	-38,4
Societe Generale	FR	82,65	1,19
Credit Suisse	SW	81,87	-0,33
BBVA	SP	81,41	-38,4
UniCredit	IT	81,10	7,25
Barclays	UK	80,35	-6,83
Close Brothers Group	UK	80,37	14,69
SWEDBank	SD	79,48	1,71
Santander Bank Polska	PO	77,71	49,07
Natwest	UK	75,87	9,8

Table 13- Bottom 15 Governance performances 2012-2021

BANK	Country	Average	Improvement
Banca PPO. Di Sondrio	IT	18,43	23,89
Ringkjøbing Landbobank	DK	22,61	8,56
Banca Carige	IT	23,53	5,21
Raiffeisen bank intl	OE	26,75	8,94
Sydbank	DK	28,41	39,98
BPER Banca	IT	34,63	37,27
Banca Monte dei Paschi	IT	36,09	58,72
AIB Group	IR	38,32	44,55
DNB Bank	NW	38,46	10,28
KBC Group	BG	38,72	-7,63
Natixis	FR	40,84	-18,85
Banco BPM	IT	42,66	44,35
Bank of Ireland Group	IR	43,02	27,17
Jyske Bank	DK	44,04	42,67
Pko Bank	PO	45,11	-25,41