# Corporate Social Responsibility and Banks' Financial Performance

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#### **Abstract**

This study analyzes whether and how corporate social responsibility (CSR) affects the financial performance of the European banking industry. According to agency theory, CSR engagement should be negatively related to financial performance. By contrast, from the stakeholder perspective and according to the resource-based view, CSR should positively impact banks' financial performance. Over a period of six years (2009-2015) following the explosion of the sub-prime crisis, the econometric estimates of the current study confirm a positive effect of CSR engagement on banks' financial performance. Net interest income and profitability increase with the increase in social performance. At the same time, CSR is negatively related to non-performing loans. Therefore, in contrast to the trade-off model, our results support a win-win vision of the relationship between the social and financial performance of banks.

**Keywords:** corporate social responsibility, banks, social performance, financial performance, reputation

#### 1. Introduction

The bursting of the real estate bubble in 2008, coupled with the spread of toxic assets linked to sub-prime mortgages, has increased interest in the modes by which banks manage their affairs. In particular, two aspects of the management crisis – the loss of trust among customers and the increase in bank bailouts – were experienced by the banking industry worldwide, including in most advanced European countries. The growth of non-performing loans (NPL) contributed to that crisis, resulting in reduced confidence in banks and financial institutions in general (Brunswick, 2016). This phenomenon renewed interest in the management of reputational risk as a topical issue for the banking industry (De Castro, López & Sáz, 2006; Dell'Atti & Trotta, 2016). In fact, for a long time, the banking sector was excluded from the broad debate in the field of CSR (Forcadell & Aracil, 2017; Wu, Shen & Chen, 2017). This has been generated by the collective perception that financial organizations, by the nature of their business, cannot be compared to the sectors that are considered most controversial (Kili ç Kuzey & Uyar, 2015). However, the turmoil related to the last financial crisis resulted in a reconsideration of the impact of banks' management on sustainable development of countries. Furthermore, over the years, many financial institutions (92 from 37 countries at April 2018) have decided to adopt the Equator Principles that were formally launched in 2003 for determining, assessing and managing environmental and social risk in project finance.

As asserted by Scholtens (2009), socially responsible banking is becoming a well-established concept, which binds the bank's license to operate to the ability of remunerating the investors, without neglecting expectations of the community. In this sense, due to the link between corporate social responsibility (CSR) and reputation (e.g., Margolis, Elfenbein & Walsh, 2009; Pérez & del Bosque, 2015; Yoon, Gürhan-Canli & Schwarz, 2006), increasing attention has been devoted to the effects of CSR on the financial performance of banks (e.g.: Esteban-Sanchez, de la Cuesta-Gonzalez & Paredes-Gazquez, 2017; Shen, Wu, Chen & Fang, 2016; Wu & Shen, 2013).

Therefore, the debate on costs-benefits of CSR activities in the banking industry is relatively recent. This topic has characterized years of investigation into non-financial companies and socially responsible investors (e.g.: Gangi & Trotta, 2015; Margolis &Walsh, 2003; Orlitzky, Schmidt & Rynes, 2003; Renneboog, Ter Horst & Zhang, 2008; Trinks & Scholtens, 2015). Consistent with the inconclusive results of wider analysis on the relationship between social and financial performance (Renneboog et al., 2008), previous evidence in the banking sector are not convergent in recognizing the CSR as a driver of higher banks' profit. Some studies

propend for a positive relationship (Cornett, Erhemjamts & Tehranian, 2016; Esteban-Sanchez et al., 2017; Forcadell & Aracil, 2017; Wu & Shen, 2013), whereas others found a neutral (Chih, Chih & Chen, 2010) or a negative influence of CSR engagement on the banks' profit (Cabeza-Garc ú, Mart nez-Campillo & Marbella-S ánchez, 2010; Makni, Francoeur, & Bellavance, 2009; Soana, 2011).

In recent decades, the mixed findings mentioned above have supported different interpretative frameworks, such as agency theory (Friedman, 1970; Jensen, 2001; Jensen & Meckling, 1976), stakeholder theory (Freeman, 1984) and the resource-based view (Barney, 1991). These frameworks arrive at opposing conclusions, leaving open a well-established question (Barnett & Salomon, 2012, p. 1304): "does it pay to be good?". On the one hand, the agency-conflict hypothesis assumes that CSR engagement is a driver of value destruction for shareholders. On the other hand, the conflict resolution-hypothesis highlights the economic benefits derived from good management of trust relationships with stakeholders.

The current study aims to enrich the debate on the relationship between corporate social performance (CSP) and corporate financial performance (CFP) by filling several gaps left by previous research. More specifically, as the impact of CSR varies significantly across countries and economic cycles (Dahlsrud, 2008; Ducassy, 2012), we focus our analysis on Europe, an economic context where the financial system is strongly characterized by an emphasis on the banking industry. Second, in that context, we study the long-term effects of the financial crisis that is generally assumed to have started in 2008 with the bankruptcy of Lehman Brothers in the United States. Unlike other countries, Europe experienced an additional significant turbulence in its capital markets due to the explosion of sovereign debt crisis in 2010-2011. For these reasons, compared with previous investigations prior or during the crisis (Bolton, 2013; Cornett et al., 2016; Esteban-Sanchez et al., 2017; Shen et al., 2016; Soana, 2011; Wu & Shen, 2013; Wu et al., 2017), the current study uses a more recent time horizon of 2009 to 2015, that covers both the above-mentioned crisis waves in Europe. In this way our study period responds to the call by Esteban-Sanchez et al et al. (2017) to extend the analysis to recent years. Finally, consistent with Jo and Harjoto (2011, 2012), our study of the relationship between CSP and CFP addresses the endogeneity bias by applying the two-step Heckman method (1976, 1979).

This empirical study adopts multiple financial indicators to gauge the causal relationship between CSR and bank performance. In addition to a profitability ratio (Return on Equity), we analyse the impact of CSR on specific drivers of a bank's profit, such as net interest income (NII) and non-interest income (NonII), both of which determine the intermediation margin. The latter indicator has been the subject of several prior studies (e.g.: Maudos & Fernandez de Guevar, 2004; Muados & Solis, 2009), but those studies have not focused on socially responsible policies. Moreover, to deepen our understanding of credit allocation efficiency, the current study analyses the impact of CSR on NPL.

The rest of the paper is organized as follows. Section 2 describes the design of the empirical study, and section 3 explains the empirical results. Finally, in Section 4 are presented and discussed conclusions and implications of the study.

### 1.1 Literature Review and Hypothesis

Banking activity interacts with CSR. It is well known that the efficiency of a country's banking system contributes to its social and economic development (King & Levine, 1993). Moreover, the moral standards that banks use in conducting business is a relevant issue, as banks are institutions that employ resources generated in the community in order to fund companies and families.

After the sub-prime crisis of 2008, media and governments began devoting more attention to the social role and reliability of banks. With the emergence of reputational and financial problems in the banking industry, there has been more interest in the causal relationship between CSR and banks' financial performance, and this topic warrants in-depth investigations. As asserted by Wu and Shen (2013), the results of prior studies are incomplete and conflicting.

The impact of CSR on financial performance in the banking industry belongs to the broader debate around a basic question: "does it pay to be good?" (Barnett & Salomon, 2012, p.104). Empirical studies have produced mixed findings and outlined opposing theoretical frameworks that support both a positive and a negative relationship between CSP and CFP. The following sub-sections will discuss these links.

# 1.2 The Positive Impact of CSR Engagement on Banks' Financial Performance

Although relevant theory (Carroll, 1999) identifies Bowen (1953) as a seminal work, there is not a universally accepted definition of CSR<sup>1</sup>. Based on a broad literature review, Dahlsrud (2008) showed that in conceptualizations of CSR, the prevailing reference is to stakeholder theory (Freeman, 1984). Academics and

practitioners are paying increasing attention to the integration between the social and economic responsibilities of business (Carvalho, 2014). This vision of CSR is consistent with a modern understanding of the function of banks.

CSR can contribute to a bank's competitiveness through different modes. From a relational perspective, the legitimacy of a bank is rooted not only in its financial performance but also in its good reputation among stakeholders. Reputation can be considered the missing link between CSR engagement and the social and economic legitimacy of a bank. In particular, reputation consists of the overall impression that stakeholders have developed about the characteristics, values and behaviours of an organization, thanks to their observations or direct interactions with it (Fombrun, 1996). In the banking sector, reputational risk, understood as the loss of trust by the community, is a risk that must be managed. The intangible nature of financial services requires that transaction costs be mitigated through trust relationships (Cravens, Oliver & Ramamoorti, 2003; Gaultier-Gaillard & Louisot, 2006). Academics and regulators agree that reputation has become an even more relevant resource following the financial crisis. For the Basel Committee (2009, p.19), reputational risk depends on the "negative perception on the part of customers, counterparties, shareholders, investors or regulators that can adversely affect a bank's ability to maintain existing, establish new, business relationships and continue access to sources of funding [..]".

Therefore, reputation may play a double role by acting as a driver of competitiveness and as a buffer against adverse scenarios (Cabral, 2012). The banks with the best reputations are associated with higher consumer retention (Aramburu & Pescador, 2017; Gatzert, 2015; Huang, Yen, Liu & Huang, 2014; Ruiz, Garc á & Revilla, 2016). Banks that are more profitable may gain the trust of stakeholders more easily (Fiordelisi et al., 2013), while at the same time, a good reputation may strengthen banks' performance (Wu & Shen, 2013).

CSR is a reputational driver that enhances the citizenship rights of an organization (Barnett & Salomon, 2012; Matten & Crane, 2005). In the case of banks, the accrual of reputational capital will depend on there being awareness that a bank's role in society goes beyond generating profits (Bushman & Wittenberg-Moerman, 2012; Dell'Atti & Trotta, 2016; Saeidi, Sofian, Saeidi, Saeidi, & Saaeidi, 2015; Wu et al., 2017).

From a strategic perspective (Porter and Kramer, 2006), complying with CSR does not remove banks from their economic role; rather, CSR helps banks differentiate themselves from their competitors and improves customer perceptions of quality. This can be especially true when socially oriented and highly involved customers evaluate the CSR engagement of banks (Pérez & del Bosque, 2015). In the context of the social impact approach (Freeman, 1984) and good management theory (Waddock & Graves, 1997), organizations are more likely to be successful when they develop trust relationships with stakeholders. Surroca et al. (2010) recognize that the link between CSP and optimal financial performance is associated with the accrual of intangible resources related to external and internal stakeholders.

An additional driver of competitiveness related to CSR can be found in the motivation (Asrar-ul-Haq, Kuchinke & Iqbal, 2017; Dolors Celma-Benaiges, Mart nez-Garc n, & Raya, 2016; Greening & Turban, 2000;) and retention of better-qualified employees. Even Friedman (1970), whose theoretical position contrasts with Freeman's (1984) social function view, recognizes the goodwill advantages that CSR can generate if it leads to attracting and hiring better employees. Several studies (Eren, Eren, Ayas & Hacioglu, 2013; Mention & Bontis, 2013; Esteban-Sanchez et al., 2017) show a positive impact of CSR on the financial performance of banks due to better human resource relations.

Finally, according to Renneboog et al. (2008), a broader view of CSR includes the best practices of corporate governance. Prior literature adopting this perspective identifies corporate governance as a pillar of CSR (Elkington, 2006; Gangi, Meles, Monferrà & Mustilli, 2018; Huse, 2005; Hancock, 2005; Jamali & Sidani, 2008). From the perspective of the conflict resolution thesis (Baron, 2009; Calton & Payne, 2003; Jo, Song & Tsang, 2016), CSR enhances financial performance by mitigating the costs of agency. Empirical research reveals CSR as the missing link between corporate governance and the improvement of a company's financial performance (Jo & Harjoto, 2011; 2012).

All the considerations above lead to a "win-win" vision of CSR (Benabou & Tirole, 2010). Thus, the first hypothesis of this paper is as follows:

**H.1** CSR engagement has a positive impact on financial performance of banks.

1.3 The Negative Impact of CSR Engagement on Banks' Financial Performance

The impact of CSR engagement on financial performance is a complex phenomenon, as confirmed by the conflicting theoretical positions that have been derived from mixed empirical findings over the past decades.

Carroll (2000), one of the major CSR theorists, recognizes that being both profitable and simultaneously engaged in social, ethical and philanthropic behaviour is challenging for companies in the new millennium. By contrast, Friedman's proposition (1970) asserts that the sole social responsibility of a company is profit. From this perspective, CSR underlies an agency problem between managers and shareholders (McWilliams et al., 2006). In particular, according to the path traced by Friedman and continued by Jensen and Meckling (1976), the manager is an agent whose primary responsibility is the protection of ownership. Therefore, if a manager opts for the implementation of social expenditures, he is applying a form of taxation to shareholders, thus violating his mandate. Moreover, as CSR is expensive, CSR engagement puts the bank at a disadvantage compared to competitors that are not engaged in such practices (Barnett & Salomon, 2006; McWilliams & Siegel, 1997).

For agency theorists, having too many goals in addition to profit is the same as having no goal at all (Jensen, 2001). The difficulty of measuring extra-financial results could make managers' decision-making power opaque, a situation that could favor the risk of excessive decisional discretion and inefficiencies in capital allocation. The problem, therefore, would be represented by the difficulty of controlling and measuring a manager's performance, thus encouraging opportunistic behaviors. According to Barnea and Rubin (2010), commitment to CSR is an agency issue because managers would have an interest in over-investing in CSP to achieve personal benefits in terms of building a reputation as "good citizens", but this would come at the cost of investing stakeholders. In this perspective, shareholders implicitly suffer residual losses deriving from the manager's decision to employ resources in CSR initiatives, instead of investing in other business opportunities. However, managers might not be driven only by personal benefits in satisfying social and environmental issues. In fact, in an ethical perspective, moral managers (Carroll, 1991) might engage in purely altruistic CSR activities, "negatively affecting FP" (Wu & Shen, 2013, p. 3530).

Furthermore, authors have argued that investing in CSR does not convey an automatic strategic advantage (Gangi & Varrone, 2018). Scholtens and Dam (2007, p.1316) observe that banks that adhere to the Equator Principles<sup>3</sup> "have a significantly lower return on average assets, indicating that there might be real costs associated with implementing the Principles". Moreover, Write & Rwabizambuga (2006) consider that CSR screening is difficult and costly. These additional expenses could be not sustainable by banks that suffer from financial constraints.

Finally, even if a bank does not experience such financial limitations, in the absence of an effective stakeholder influence capacity (Barnett, 2007), the CSR would not repay the resources invested by the banks. In this case, the more they spend on CSP, the more they lose (Barnett & Salomon, 2012). According to Porter and Kramer (2006), the achievement of economic benefits that surpass the costs of socially responsible practices is conditioned by the "acid test" of an effective strategic approach to CSR. Converging with this perspective, Zimmerman and Fliess (2017) found that banks that engage exclusively in philanthropic projects are organizations that do not include CSR in their business models.

Therefore, according to the considerations mentioned above, the relationship between CSP and CFP would entail a trade-off. CSR efforts can be a waste of resources, thus weakening the bank instead of strengthening its competitive capability. From the perspective of the agency model, the choice of managers to invest in CSR is an unjustified hazard (Jensen, 2001) due to the costs potentially being higher than the economic benefits.

Therefore, the second and opposing hypothesis with respect to H.1 is as follows:

H.2 CSR engagement has a negative impact on financial performance of banks.

#### 2. Method

# 2.1 Sample and Data Sources

The study aims to investigate how the CSR engagement of European banks impacts their financial performance. The data are assembled using multiple sources. Banks have been extracted from the Thomson Reuters dataset. For financials, the current study uses the Worldscope database, while for measures of CSR performance, the empirical analysis is based on the CSR scores provided by the Asset4 database. The time-horizon covers 7 years, from 2009 to 2015. We exclude banks that are not reported in Asset4 during one or more years of the study period. Therefore, the final sample contains 72 banks, for 504 bank-year observations.

# 2.2 Financial Variables

First, as a measure of a bank's profitability, the current study adopts the return on equity (ROE). Second, the analysis considers the net interest income (NII), which is calculated as the difference between the financial income and financial costs of the bank. Consistent with prior literature (Maudos & Solis, 2009), the NII is divided by the total assets (NII\_TA). Third, to capture the bank's performance related to additional services with

respect to loans, this study includes non-interest income (NonII) divided by total assets (NonII\_TA). Since the explosion of the financial crisis and the decline of interest rates in Europe, NonII has assumed greater importance in the diversification of a bank's profit (Stiroh, 2004). Finally, to measure the banks' efficiency in terms of credit allocation, this analysis includes the incidence of non-performing loans (NPL) to total loans (NPL Loans).

#### 2.3 CSR Score

To measure the CSP of banks, consistent with prior studies (Cheng, Ioannou & Serafeim, 2014; El Ghoul, Guedhami & Kim, 2017; Ferrell, Liangb& Renneboog, 2016; Halbritter & Dorfleitner, 2015; Ioannou & Serafeim, 2010; Luo, Wang, Raithel & Zheng, 2015;) the current analysis adopts data collected from Asset4-ESG. In particular, Asset4 provides more than 250 Key Performance Indicators (KPIs) based on 750 individual data points and rates companies across the pillars of environmental, social and corporate governance (ESG). As noted in previous studies (Schäfer, Beer, Zenker & Fernandes, 2006), Asset4 generates comparable and standardized indicators that provide an integrated measure of environmental, social and corporate governance performance (CSR).

Earlier studies in the banking industry dichotomize banks into those that adopt CSR and those that do not (e.g., Chih, Shen & Kang, 2008; Shen & Chang, 2012; Simpson & Kohers, 2002). Other investigations, however, adopt self-constructed scales of CSR engagement (Wu & Shen, 2013; Wu et al., 2017). Therefore, the current study, by adopting a continuous, integrated and objective measure of CSR, may enable a better distinction among the different degrees of engagement in CSR activities and their impact on CFP.

#### 2.4 Control Variables

Both CSR engagement and financial performance may be affected by several bank-specific characteristics, such as leverage, the incidence of loans on deposits, the coverage rate of NPL and the size of the bank (Wu and Shen, 2013). To that end, the current analysis adopts several controls by using the following variables: the debt to equity ratio (DebtEquity); the loan to deposit ratio (LoanDep); the loan loss reserves to NPL ratio (NPL\_Reserve); and the logarithmic transformation of the number of employees (logEmployees).

In addition to the bank-specific variables above, this study controls for macroeconomic factors. In particular, consistent with prior literature (Wu & Shen, 2013; Wu et al. 2017), the econometric estimates include the Gross Domestic Product at current price divided by the population (GDPper) and the growth rate of GDP per capita (GDPgrowth). Moreover, the study controls for the impact of the regulatory environment, taking into account each country's restriction rules (Res) on banking activities in securities (Barth, Caprio & Levine, 2012).

Finally, because Thomson Reuters returns data on a bank's type according to the Global Industry Classification Standards (GICS), the econometric analysis controls for the classification of banks through a dummy (Banks\_type), which takes into account three different categories of banks (Diversified Banks, Thrift and Mortgage Finance, and Regional Banks).

### 2.5 Models and Statistical Methods

This study tests the impact of CSR engagement on the financial performance of banks. Prior literature (Jo & Harjoto, 2011; 2012) has argued that the relationship between CSP and CFP may be biased by endogeneity. For example, higher quality banks may have a stronger inclination to engage in CSR. These banks may present better financial performance independently of their level of engagement in CSR activities. Consequently, the measure of CSP could indicate a positive relationship with financial performance, even in the absence of a real effect. The adoption of an ordinary least square (OLS) estimation procedure would not allow managing the endogeneity bias, thus creating problems with the parameter estimates. To address this issue, consistent with previous investigations (Jo & Harjoto, 2011, 2012), the current study adopts Heckman's two-stage estimation procedure (1976, 1979) to correct the specification for endogeneity. In particular, in the first stage, we run a probit analysis through the following model:

$$y_{(i,t)} = \alpha + Z_{(i,t)} \quad \beta \left[ (i,t) + \varepsilon_{(i,t)} \right]$$
(1)

where  $y_{i,t}$  is a dummy variable equal to one if bank i engages in high CSR (above the median value of the panel) in year t, and 0 if it engages in low CSR (below the median value of the panel),  $Z_{i,t}$  represents the explanatory variables, including firm characteristics,  $\beta_{i,t}$  represents the coefficients of the predictors, and  $\epsilon$  is the random error term. The probit model predicts the decision to engage in high or low CSR activities (decision equation). The estimates obtained through the probit model are used to calculate the inverse Mills' ratio (IMR), which is included as an additional explanatory variable in the following OLS estimation (performance equation):

$$y (j,k) = \alpha + [\beta CSR] _(j,k) + [\gamma X] _(j,k) + [\delta IMR] (j,k) + \varepsilon (j,k)$$
(2)

where,  $y_{j,\,k}$  denotes the financial performance indicators of bank j at time k,  $CSR_{j,k}$  represents the corporate social responsibility measure of bank j at time k,  $X_{j,\,k}$  represents the control variables related to both macro and bank-specific characteristics; and  $\epsilon$  is the random error term. B,  $\gamma$  and  $\delta$  are the coefficients of the independent variables.

A summary of variable definitions and symbols is reported in Table 1.

Table 1. Description of variables

Variables	Symbol	Description
Dependent Variables		
Financial performance indicator 1	NII_TA	Net Interest Income divided by Total Assets <sup>a</sup>
Financial performance indicator 2	NonII_TA	Non Interest Income divided by Total Assets <sup>a</sup>
Financial performance indicator 3	ROE	(Net Interest Income + Non Interest Income)/ Total Assets <sup>a</sup>
Financial performance indicator 4	NPL_Loans	Non-performing Loans divided by Total Loans b
Independent Variable		
Corporate social responsibility indicator	CSR	The CSR indicator is a standardized measure of corporate social performance issued by ASSET4. It gauges CSR as the company's ESG performance. c
Control Variables		
Leverage	DebtEquity	Total Debt divided by Equity <sup>b</sup>
Loan to Deposit	LoanDep	Total Loans divided by Total Deposits b
Size	logEmployees	Represents the logarithm of the number of employees. <sup>a</sup>
Coverage	NPL_Reserve	Non-Performing Loans divided by Loan Loss Reserve b
Bank's typology	Banks_type	Sub-industry classification <sup>d</sup>
Restriction	Res	The degree of restriction on banking activities in securities, ranging from 1 (less restriction) to 4 (higher restriction).
GDP per capita	GDPper	GDP based on current price/population <sup>1</sup>
Growth of GDP	GDPgrowth	GDP per capita growth rate <sup>f</sup>

Source: a Authors' calculation on data collected from Worldscope; b Worldscope; c Asset4; d Global Industry Classification Standards (GICS); e Barth et al. 2012; f The World Bank.

#### 3. Results

Table 2 provides the sample distribution by country. From the descriptive statistics reported in Table 3, we can note that banks with high CSR are more leveraged and are larger, with higher coverage and a higher loans-to-deposits ratio. Table 4 shows that there are statistically significant differences in banks characteristics between low-CSR banks and high-CSR banks. Specifically, the former are smaller, exhibit lower levels of leverage, loan to deposit ratio and coverage ratio. Furthermore, low CSR-banks are collocated in areas with a lower degree of restriction on securities activities lower GDP per capita. Table 5 reports the correlation matrix. All the correlation coefficients are sufficiently lower than the conventional threshold of 0.7 (Ratner, 2009). This indicates that multicollinearity is not an issue in the estimates of this study.

Table 6 shows the estimates of the decision equation (Model 1 and 2), where CSR\_0\_1 is the dependent variable, which assumes the value of 1 for banks with a CSR measure above the median, 0 otherwise. The models include several bank-specific characteristics, controls for time and countries. The estimates of the decision equations generate the IMR, which is then added to the performance equation (Eq. 2) to solve the endogeneity problem. In models 1 and 2, the DebtEquity and the logEmployees are significantly positive. These results indicate that larger banks are more likely to engage in more CSR activities. The same is true for banks with higher leverage. The insignificant coefficients of the loan to deposit ratio indicate that the propensity of banks to lend more (in comparison to deposits) does not influence the probability of higher engagement in CSR activities.

Tables 7 and 8 display the estimators of the impact of CSR engagement on banks' financial performance. The dependent variables are NII\_TA (Model 1 and 2), NonII\_TA (Model 3 and 4), ROE (Model 5 and 6), and NPL\_Loans (Model 7 and 8). The results reported in Tables 7 and 8 show that the CSR coefficients that correspond with the first three financial performance indicators are significantly positive, while in the case of the NPL-to-total loans ratio, the CSR measure presents a negative significant value.

Therefore, the results confirm the first research hypothesis (H.1) as opposed to the second hypothesis (H.2). In particular, after the explosion of the financial crisis, the more a bank engaged in CSR, the more it experienced an increase in the components of its intermediation margin (NII e NonII) and ROE. Consequently, due to this significant positive relationship, a strategic approach could be a valid motive for CSR engagement. In addition,

the more a bank is engaged in CSR, the lower is the NPL-to-loans ratio. Given a positive link between CSR and reputation (Yoon al., 2006), the results confirm that banks with better reputations are associated with better credit allocations (Bushman & Wittenberg-Moerman 2012; Chemmanur & Fulghieri, 1994).

It is noteworthy that the results of the current analysis are aligned with the outcomes of prior studies in different contexts and less-recent time horizons (Bolton, 2013; Sanchez & Garcia-Meca, 2017; Shukla, 2016; Wu & Shen, 2013; Wu et al., 2017). At the same time, our findings contrast with those of authors who have found a negative association between banks' engagement in CSR activities and their financial performance (e.g. Cabeza-Garcia et al., 2010; Makni et al., 2009; Soana, 2011). Furthermore, the results of this study are not consistent with Forcadell and Aracil (2017), who find that the CSR efforts do not contribute to improved returns in period of crisis, and with Scholtens and Dam (2007), even if their test is not designed to establish a formal causality between CSP and CFP.

Table 2. Sample distribution by country

Country of Headquarters	N.	%
Austria	2	2,78%
Belgium	2	2,78%
Cyprus	1	1,39%
Czech Republic	1	1,39%
Denmark	3	4,17%
France	4	5,56%
Germany	2	2,78%
Greece	4	5,56%
Hungary	1	1,39%
Republic of Ireland	3	4,17%
Italy	10	13,89%
Netherlands	2	2,78%
Norway	1	1,39%
Poland	8	11,11%
Portugal	2	2,78%
Russia	3	4,17%
Spain	6	8,33%
Sweden	4	5,56%
Switzerland	2	2,78%
United Kingdom	11	15,28%
Tot.	72	100%

Table 3. Descriptive statistics

This table compares the descriptive statistics related to banks characterized respectively by low engagement in CSR activities with banks characterized by a high engagement in CSR activities.

Variables	Banks with low CSR					Banks with high CSR			
	Obs.	Std.	Min	Max	Obs.	Std.	Min	Max	
CSR	237	23,424	3,200	78,130	224	5,148	78,310	96,930	
Leverage	230	12,184	-93,577	61,035	224	4,340	-15,325	30,606	
LoanDep	219	0,780	0,597	5,883	219	0,618	0,794	5,043	
Size	228	1,283	6,253	12,708	223	1,103	7,843	12,594	
Coverage	187	0,852	0,002	6,127	202	0,918	0,155	7,640	
Res	221	0,844	1,000	3,000	191	0,466	1,000	3,000	
GDPper	237	18.101,33	10.219,52	75.800,02	224	13.755,28	13.025,79	89.590,81	
GDPgrowth	237	0,483	-0,321	0,255	224	0,026	-0,089	0,055	

Table 4. Differences test

This table compares the means, medians and displays the difference tests related to banks characterized respectively by low engagement in CSR activities with banks characterized by a high engagement in CSR activities.

Variables	Banks w	Banks with low CSR		Banks with high CSR		Differences test	
	Mean	Median	Mean	Median	t-stat	z-stat	
CSR	37,193	34,08	90,082	91,725	-33,0447***	-18,567***	
Leverage	4,338	3,722	5,918	5,552	-1,8305*	-4,856***	
LoanDep	1,482	1,31	1,542	1,382	-0,8782	-2,361**	
Size	9,036	9,046	10,631	10,496	-14,1434***	-12,105***	
Coverage	1,677	1,662	1,900	1,795	-2,4735**	-2,223**	
Res	1,466	1	1,157	1	4,4974***	3,592***	
GDPper	33.394,25	33.889,25	39.136,860	39.225,08	-3,8189***	-4,156***	
GDPgrowth	0,003	0,008	-0,001	0,005	1,4174	1.812**	

Table 5. Correlation Matrix

Variables	CSR	DebtEquity	LoanDep	logEmployees	NPL_Reserve	Res	GDPper	GDPgrowth
CSR	1.0000							
DebtEquity	0.0138	1.0000						
LoanDep	0.0004	0.2806	1.0000					
logEmployees	0.6308	-0.0786	-0.1933	1.0000				
NPL_Reserve	0.0053	-0.0266	0.0951	-0.0668	1.0000			
Res	-0.2505	-0.0267	-0.0159	-0.2908	-0.0267	1.0000		
GDPper	0.1339	0.0179	0.2775	-0.0428	0.0238	-0.3024	1.0000	
GDPgrowth	-0.0517	-0.0048	-0.1340	-0.0972	-0.1374	0.2659	0.0291	1.0000

Table 6. Propensity to engage in CSR activities

This table shows the coefficients of estimates from the probit model (columns 1 and 2) and OLS model (columns 3 and 4) explaining the determining factors of CSR engagement. The dependent variable of the models 1 and 2 (CSR\_0\_1) is a dummy variable that is set to 1 if a firm exhibits an CSRscore above the median, 0 otherwise. T-statistics are adjusted for robust and clustered (by firm) standard errors and reported in round brackets. Table 1 provides the definitions of independent variables. \*, \*\* and \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively. R-squared means Pseudo R-squared in columns 1 and 2, Adj R-squared in columns 3 and 4.

o data				
	(1)	(2)	(3)	(4)
	CSR_0_1	CSR_0_1	CSR	CSR
DebtEquity	0.0270**	0.0268**	0.140*	0.137*
	(2.12)	(2.12)	(1.79)	(1.72)
LoanDep	0.235	0.219	8.983**	8.519**
	(0.94)	(0.87)	(2.39)	(2.28)
logEmployees	1.259***	1.241***	15.34***	14.77***
	(4.46)	(4.27)	(5.59)	(5.27)
NPL_Reserve	0.370*	0.365*	0.212	0.207
	(1.79)	(1.78)	(0.07)	(0.07)
GDPper	-0.00009	-0.00009	0.0006	0.0006
	(-1.29)	(-1.31)	(1.40)	(1.26)
GDPgrowth	2.115	2.147	28.86	32.16
	(0.57)	(0.58)	(0.86)	(0.97)
Res	-2.540***	-2.530***	-14.03**	-16.93**
	(-6.38)	(-6.40)	(-2.13)	(-2.43)
Year	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes
Banks_type	No	Yes	No	Yes
Intercept	-6.216*	-5.947*	-137.0**	-118.4**
	(-1.77)	(-1.65)	(-2.54)	(-2.14)
R-squared	0.588	0.579	0.626	0.632
Observations	301	295	352	352

Table 7. Regression models based on the Heckman two-stage treatment effect model

This table presents 2-step Heckman (1979) regression coefficients and (in parentheses) associated t-statistics. In a first step, we run the probit model with the same specification as in Table 4. The Inverse Mills ratio estimated from the 1st-step regression is used in the second stage with the CSR indicator and control variables. The dependent variables in the second stage are NII\_TA (Model 1 and 2) and NonNII\_TA (Model 3 and 4). \*, \*\*\*, and \*\*\* denote coefficient estimates significantly different from 0 at the 10%, 5%, and 1% levels, respectively.

	(1) NII_TA	(2) NII_TA	(3) NonII_TA	(4) NonII_TA
CSR	0.0002*** (4.42)	0.0002*** (4.41)	0.0003** (2.24)	0.0003** (2.24)
	(4.42)	(4.41)	(2.24)	(2.24)
DebtEquity	-0.0002***	-0.0002***	-0.0004**	-0.0004**
	(-3.23)	(-3.23)	(-2.16)	(-2.16)
LoanDep	0.0013**	0.0013**	0.0025*	0.0025*
······································	(2.40)	(2.39)	(1.95)	(1.95)
logEmployees	0.0032***	0.0032***	0.0017	0.0017
	(6.92)	(6.90)	(1.52)	(1.52)
GDPper	0.00001**	0.00001**	0.00001	0,00001
•	(2.32)	(2.30)	(0.04)	(0.04)
GDPgrowth	0.00748	0.00753	-0.0277	-0.0277
<u> </u>	(0.44)	(0.44)	(-0.65)	(-0.65)
Res	-0.0046**	-0.0046*	-0.0007	-0.0008
	(-2.09)	(-2.08)	(-0.14)	(-0.15)
Year	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes
Banks_type	No	Yes	No	Yes
Intercept	-0.0699***	-0.0697***	-0.0362	-0.0361
•	(-6.15)	(-6.12)	(-1.29)	(-1.29)
Inverse Mills Ratio	0.0029*	0.0029*	0.0015	0.0016
	(1.90)	(1.88)	(0.39)	(0.39)
Wald chi-square	1760.06***	1755.91***	96.34***	96.30***
Observations	352	352	352	352

Table 8. Regression models based on the Heckman two-stage treatment effect model

This table presents 2-step Heckman (1979) regression coefficients and (in parentheses) associated t-statistics. In a first step, we run the probit model with same specification as in Table 4. The Inverse Mills ratio estimated from the 1st-step regression is used in the second stage with the CSR indicator and control variables. The dependent variables in the second stage are ROE (Model 5 and 6) and NPL\_Loans (Model 7 and 8). \*, \*\*, and \*\*\* denote coefficient estimates significantly different from 0 at the 10%, 5%, and 1% levels, respectively.

	(5) ROE	(6) ROE	(7) NPL Loans	(8) NPL_Loans
CSR	1.965*	1.974*	-0.408***	-0.407***
CSK	(1.71)	(1.68)	(-3.29)	(-3.20)
DebtEquity	4.168*	4.155*	0.399**	0.397**
. ,	(2.55)	(2.49)	(2.50)	(2.44)
LoanDep	-7.748	-7.609	-2.934**	-2.922*
	(-0.65)	(-0.63)	(-2.57)	(-2.50)
logEmployees	-7.730	-7.828	-1.608	-1.623
	(-0.87)	(-0.86)	(-1.64)	(-1.62)
GDPper	0.00122	0.00130	-0.00368***	-0.00367***
	(0.26)	(0.27)	(-7.12)	(-6.92)
GDPgrowth	8.624**	8.604**	65.03*	64.84*
	(2.64)	(2.59)	(1.83)	(1.78)
Res	-14.36	-13.83	-0.143	-0.0789
	(-0.33)	(-0.31)	(-0.03)	(-0.02)
Year	Yes	Yes	Yes	Yes
Country Banks_type	Yes No	Yes Yes	Yes No	Yes Yes
Danks_type	110	ies		
Intercept	-154.2	-157.9	210.0***	209.6***
	(-0.70)	(-0.70)	(8.83)	(8.60)
Inverse Mills Ratio	-55.95*	-57.11*	-6.167*	-6.311*
	(-1.91)	(-1.88)	(-1.91)	(-1.88)
Wald chi-square	37.35***	35.95***	633.94***	605.37***
Observations	349	349	352	352

#### 4. Discussion

This study investigates the relationship between CSR and CFP in the European banking industry and discusses the different theoretical perspectives that can justify a positive or a negative sign in that relationship. Over the years, this theme has attracted relatively limited interest compared to the wider debate on the link between CSP and CFP in other economic sectors. However, the deterioration of the quality of loans and of banks' reputations – triggered by the sub-prime mortgage crisis – have called for increasing attention to the impact of socially responsible policies on banks' financial performance.

The first empirical step reveals interesting evidence related to banks' willingness to invest in CSR. Specifically, our results denote that the leverage and the size significantly predict the banks' CSR engagement. Looking at the leverage ratio, the study detects a positive influence of debt-to-equity on CSR engagement of a bank. This is consistent with Wu and Shen (2013), that find a positive impact of the leverage on the second degree of CSR activities. Moreover, as for more leveraged financial firms (Cooper & Uzun, 2015), banks with higher debt-to-equity ratio tend to balance their financial risk through good CSR practices. In fact, the CSR engagement is expected to lead to a reduction in the risk perception by the majority of investors, thus increasing the company value (El Ghoul, 2011).

With reference to the size effect, our findings are consistent with prior studies for which larger company is more likely to invest in CSR practices than smaller ones (Perrini, Russo & Tencati, 2007; Perrini & Minoja, 2008).

Moreover, larger banks are associated with a greater resource-slack (Jonshon and Greening, 1999) and they are more exposed to social judgment. In this perspective, size predicts the banks' CSR engagement, by revealing that larger banks employ the CSR as a legitimation lever to manage reputational risk more effectively.

In the second phase of the empirical analysis, minimizing the endogeneity bias, findings of the current study confirm that CSR engagement positively affects financial performance of European banks. In contrast to the trade-off approach, banks that conduct more socially responsible initiatives outperform banks that are less engaged in CSR. The missing link between better CSP and better CFP, as suggested by the first set of evidences, can be found in the improvement of a bank's reputation and in its capability to attract deposits and lend credit under economic conditions that are better for the bank's balance sheet. By increasing a bank's reliability among stakeholders, CSR offers multiple opportunities for banks (Venturelli et al., 2017). First, banks may attract better employees and acquire higher market shares than non-CSR banks. Second, the customers of CSR banks may be less price-sensitive; they may be willing to exchange lower remuneration on deposits for higher reliability. At the same time, companies may prefer to be financed by banks with better reputations, even if this comes at a higher cost. The combination of these factors may explain why CSR engagement plays a positive role in the improvement of NII as a source of banks' profit. Moreover, the efficiency of credit allocation seems to derive benefits from CSR. Banks that are more highly engaged in CSR have a lower NPL-to-total loans ratio.

In line with the findings above, CSR engagement leads to higher profitability for banks. Other factors being equal, a better NII offers a better intermediation margin. Moreover, higher quality loans offer a lower need for risk provisions. This conclusion is further confirmed by the lower number of debt covenants for firms with higher CSR investments (Shi & Sun, 2015).

Our findings indicate that banks with higher CSR have higher financial performance and experience better credit allocation. These results suggest that CSR is a reputational driver of value creation during the post-crisis period. According to a modern vision of relationship lending, the building of stronger and more trusting relationships with customers may mitigate information barriers through a mix of hard and soft information (Stein, 2002). The positive relationship between CSR and reputation confirms that those banks with the best reputation have higher standards of selection and monitoring.

The current study has some limitations. First, given the context of the analysis, the results cannot necessarily be generalized outside the European banking industry. Second, the use of the ASSET4-ESG dataset means that static rather than dynamic data are applied to the measurement of CSP scores. Third, similarly to previous investigations (e.g., Shukla, 2016; Wu & Shen, 2013; Wu et al., 2017), our analysis uses accounting measures as a proxy of banks' financial performance. Thus, the adoption of market-based measures (e.g., Tobin's Q, 1969) and distress predictors (e.g., Z-scores, Roy, 1952) may complement and further validate our findings on the causal relationship between CSR and financial performance in the banking industry.

The outcomes of the current study have theoretical and practical implications. First, bank managers should be encouraged to implement and disclose socially responsible practices, to the extent that this creates an opportunity to more effectively fulfil the mandate given by owners. This contrasts with the agency vision of CSR. Second, thanks to the contribution of CSR in terms of differentiation and reliability, a win-win model removes the consequences of CSR that are seen in the trade-off approach, making the expected impact of CSR more consistent with stakeholder theory and the resource-based view. Third, our findings contribute to an evolutionary vision of the interaction between banks and customers (depositors and financed companies), leading from a transactional to a more relational approach. Fourth, the results of the current study should attract the attention of policy makers and authorities. Most European countries are bank-based economic systems. Their state of health depends heavily on banks competitiveness. Therefore, economic benefits can result if banks are incentivized to engage in CSR practices. Fifth, banks affect the way money is invested. Banks' greater awareness of CSR means that firms have an additional incentive to adopt more sustainable business models. As argued by van Riel and Fombrun (2007), behavior is the most important medium through which the identity of an organization is expressed. This means that a bank may reveal its personality to customers through the initiatives it supports and the behaviors in which it engages. According to Pérez and del Bosque (2012), the CSR policies and strategies of a bank represent ways in which it manages its identity, thus distinguishing itself from other organizations Finally, our findings confirm that an investment in reputational capital gives banks more resistance against the consequences of financial crises. The positive relationship between CSR and financial performance supports the concept of reputational capital as a buffer against adverse circumstances.

We propose a research agenda consisting of several lines of investigation. By administering surveys to banks' customers, further analysis may deepen our understanding of perceptions of quality and reputation. Next, studies

might explore the application of CSR as a landing criterion. The impact of social disclosure on customer loyalty could be the focus of future investigations. Finally, the effects of CSR engagement can be further understood by controlling for the governance modes of CSR projects.

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# Notes

- Note 1. CSR is concerned with treating stakeholders ethically or in a responsible manner. Social responsibility includes economic responsibility. The stakeholders to which CSR is addressed are both internal and external to the organization (Hopkins, 2003). According to Renneboog et al. (2008, p. 1723), CSR refers to "corporate decisions fostering social, corporate governance, ethical and environmental issues." In the current study, CSP refers to the level of a bank's engagement in social, environmental and corporate governance issues.
- Note 2. In addition to the strategic and altruistic reasons, the literature also identifies CSR activities inspired by the logic of greenwashing (Baron, 2001; B énabou & Tirole, 2010; Dam et al., 2009). Wu and Shen (2013) argue the greenwashing would be neutral from a financial point of view, as it consists of mere attempts to improve the aesthetic image of the bank but without substantially changing the business.
- Note 3. The Equator Principles (EP) are a voluntary set of guidelines to promote social and environmental responsibility in funding projects. They are designed to ensure sustainable development in project finance. According to Scholtens and Dam (2007), the social, ethical and environmental policies of the adopters of the EP differ significantly from the policies of banks that do not adopt the EP.

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